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SESSIONAL PAPERS ³²⁸

VOLUME 8

SECOND SESSION OF THE NINTH PARLIAMENT

OF THE

DOMINION OF CANADA

SESSION 1902

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VOLUME XXXVI ✓



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1. Report of the Auditor General for the fiscal year ended 30th June, 1901. Presented 18th February, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*

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2. Public Accounts of Canada, for the fiscal year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
3. Estimates of sums required for the services of Canada, for the year ending on the 30th June, 1903, Presented 17th February, 1902, by Hon. W. S. Fielding.
..... *Printed for both distribution and sessional papers.*
4. Supplementary Estimates for the year ending 30th June, 1902. Presented 6th March, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
5. Further Supplementary Estimates for the year ending 30th June, 1902. Presented 30th April, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 5a. Supplementary Estimates for the year ending 30th June, 1903. Presented 7th May, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 5b. Further Supplementary Estimates for the year ending 30th June, 1902. Presented 7th May, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
- 5c. Further Supplementary Estimates for the year ending 30th June, 1902. Presented 14th May, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
6. List of Shareholders in the Chartered Banks of Canada, as on the 31st December, 1901. Presented 21st April, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
7. Report of dividends remaining unpaid, unclaimed balances and unpaid drafts and bills of exchange in Chartered Banks of Canada, for five years and upwards, prior to December, 1901. Presented 9th May, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*

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8. Report of the Superintendent of Insurance, for the year ended 31st December, 1901.
..... *Printed for both distribution and sessional papers.*
9. Abstract of Statements of Insurance Companies in Canada, for the year ended 31st December, 1901, Presented 26th March, 1902, by Hon. W. S. Fielding.
..... *Printed for both distribution and sessional papers.*

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10. Report of the Department of Trade and Commerce, for the fiscal year ended 30th June, 1901. Presented 18th February, 1902, by Sir Richard Cartwright.
Printed for both distribution and sessional papers.

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11. Tables of the Trade and Navigation of Canada, for the fiscal year ended 30th June, 1901. Presented 18th February, 1902, by Hon. W. Paterson.*Printed for both distribution and sessional papers.*

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12. Inland Revenues of Canada. Excise, etc., for the fiscal year ended 30th June, 1901. Presented 27th February, 1902, by Hon. W. S. Fielding.*Printed for both distribution and sessional papers.*
13. Inspection of Weights, Measures, Gas and Electric Light, for the fiscal year ended 30th June, 1901. Presented 27th February, 1902, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.
14. Report on Adulteration of Food, for the fiscal year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. S. Fielding.*Printed for both distribution and sessional papers.*
15. Report of the Minister of Agriculture, for the year ended 31st October, 1901. Presented 21st February, 1902, by Hon. S. A. Fisher*Printed for both distribution and sessional papers.*
16. Report of the Directors and Officers of the Experimental Farms, for the year 1901. Presented 8th April, 1902, by Hon. S. A. Fisher.*Printed for both distribution and sessional papers.*

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17. Criminal Statistics for the year 1901.*Printed for both distribution and sessional papers.*
18. Report on Canadian Archives, 1901. Presented 23rd April, 1902, by Hon. S. A. Fisher.
Printed for both distribution and sessional papers.
19. Report of the Minister of Public Works, for the fiscal year ended 30th June, 1901. Presented 17th February, 1902, by Hon. J. I. Tarte.*Printed for both distribution and sessional papers.*

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20. Annual Report of the Department of Railways and Canals, for the fiscal year ended 30th June, 1901. Presented 19th February, 1902, by Hon. A. G. Blair.*Printed for both distribution and sessional papers.*
- 20a. Reports upon Railway Commissions, Railway Rate Grievances, and Regulative Legislation.
Printed for both distribution and sessional papers.

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21. Report of the Department of Marine and Fisheries (Marine), for the fiscal year ended 30th June, 1901. Presented 19th February, 1902, by Hon. J. Sutherland.
Printed for both distribution and sessional papers.
- 21a. Third Annual Report of the Geographic Board of Canada, 1901.
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- 21b. List of Shipping issued by the Department of Marine and Fisheries, being a List of Vessels on the registry books of Canada, on the 31st December, 1901.
Printed for both distribution and sessional papers.
22. Report of the Department of Marine and Fisheries (Fisheries), for the fiscal year ended 30th June, 1901. Presented 26th February, 1902, by Hon. J. Sutherland.
Printed for both distribution and sessional papers.
- 22a. Contributions to Canadian Biology, being studies from the Marine Biological Station of Canada, 1901.
Printed for both distribution and sessional papers.

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- 22b. Special Reports on the Hatching and Planting of Trout; the Propagation and Planting of Predaceous Fish, and the Aim and Basis of Fishery Regulations.

Printed for both distribution and sessional papers.

23. Report of the Harbour Commissioners, etc., 1901. . . . *Printed for both distribution and sessional papers.*

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24. Report of the Postmaster General, for the year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. Mulock. *Printed for both distribution and sessional papers.*

25. Annual Report of the Department of the Interior, for the fiscal year ended 30th June, 1901. Presented 20th February, 1902, by Hon. C. Sifton. *Printed for both distribution and sessional papers.*

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26. Summary Report of the Geological Survey Department for the calendar year 1901. Presented 14th April, 1902, by Hon. C. Sifton. *Printed for both distribution and sessional papers.*

27. Annual Report of the Department of Indian Affairs, for the fiscal year ended 30th June, 1901. Presented 20th February, 1902, by Hon. C. Sifton. *Printed for both distribution and sessional papers.*

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28. Report of the North-west Mounted Police, 1901. Presented 12th March, 1902, by Sir Wilfrid Laurier. *Printed for both distribution and sessional papers.*

29. Report of the Secretary of State of Canada, for the year ended 31st December, 1901. Presented 27th February, 1902, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*

30. Civil Service List of Canada, 1901. Presented 19th February, 1902, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*

31. Report of the Board of Civil Service Examiners, for the year ended 31st December, 1901. Presented 20th March, 1902, by Hon. H. G. Carroll. *Printed for both distribution and sessional papers.*

32. Annual Report of the Department of Public Printing and Stationery, for the year ended 30th June, 1901. Presented 27th February, 1902, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*

33. Report of the Joint Librarians of Parliament for the year 1901. Presented 13th February, 1902, by the Hon. The Speaker. *Printed for sessional papers.*

34. Report of the Minister of Justice as to Penitentiaries of Canada, for the year ended 30th June, 1901. Presented 17th February, 1902, by Hon. C. Fitzpatrick. *Printed for both distribution and sessional papers.*

35. Report of the Department of Militia and Defence of Canada, for the year ended 31st December, 1901. Presented 17th March, 1902, by Hon. F. W. Borden. *Printed for both distribution and sessional papers.*

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36. Report of the Department of Labour, for the year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. Mulock. *Printed for both distribution and sessional papers.*

37. Statement of Governor General's Warrants issued since the last session of parliament, on account of the fiscal year 1901-02. Presented 17th February, 1902, by Hon. W. S. Fielding. *Not printed.*

38. Statement of all superannuations and retiring allowances in the civil service during the year ended 31st December, 1901, showing name, rank, salary, service, allowance and cause of retirement of each person superannuated or retired, also whether vacancy filled by promotion or by new appointment, and salary of any new appointee. Presented 17th February, 1902, by Hon. W. S. Fielding. *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

39. Statement of receipts and expenditures of the Ottawa Improvement Commission, for the fiscal year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. S. Fielding. *Not printed.*
40. Return showing the expenditure on account of unforeseen expenses from the 1st July, 1901, to the 13th February, 1902. Presented 17th February, 1902, by Hon. W. S. Fielding. *Not printed.*
41. Statement in pursuance of section 17, of the Civil Service Insurance Act, for the fiscal year ended 30th June, 1901. Presented 17th February, 1902, by Hon. W. S. Fielding. *Not printed.*
42. Return to an address of the House of Commons, dated 19th February, 1902, for copy of all papers and correspondence exchanged between Canadian and British authorities, with reference to the embargo imposed by the British government on Canadian cattle. Presented 6th March, 1902.—*Mr. Bourassa*. *Not printed.*
43. Return of over-rulings by the treasury board of the auditor general's decisions between the commencement of the session of 1901 and the session of 1902. Presented 18th February, 1902, by Hon. W. S. Fielding. *Not printed.*
44. Detailed statement of all bonds and securities registered in the department of the secretary of state of Canada, since last return, 11th February, 1901, submitted to the parliament of Canada under section 23, chapter 19 of the Revised Statutes of Canada. Presented 19th February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
45. Orders of the Exchequer Court. Presented 19th February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
- 45a. Rules of the Exchequer Court, pursuant to 52 Victoria, chapter 38, section 2. Presented 19th March, 1902, by Hon. H. G. Carroll. *Not printed.*
46. Ordinances passed by the Yukon council during the year 1901. Presented 19th February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
47. Return of the names and salaries of all persons appointed to or promoted in the Civil Service of Canada during the year 1901. Presented 19th February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
48. Copy of a report of the committee of the honourable the privy council, approved by his excellency on the 23rd January, 1902, relative to a proposed increase of the capital stock of the Canadian Pacific Railway Company, by twenty millions of dollars and correspondence relating thereto. Presented 19th February, 1902, by Sir Wilfrid Laurier. *Printed for sessional papers.*
49. Copy of a report of the committee of the honourable the privy council, approved by his excellency on the 31st May, 1901, relating to a contract with the American Bank Note Company and correspondence relating thereto. Presented 20th February, 1902, by Hon. W. S. Fielding. *Printed for sessional papers.*
50. Annual return under chapter 131 (R.S.C), intituled: "An Act respecting Trade Unions." Presented 21st February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
51. Return to an order of the House of Commons, dated 26th February, 1902, for a copy of the correspondence relating to an agreement made between the government of Canada and the Marconi's Wireless Telegraph Company, Limited. Presented 26th February, 1902, by Sir Wilfrid Laurier. *Not printed.*
- 51a. Memorandum of agreement made the seventeenth day of March, 1902, between Marconi's Wireless Telegraph Company, Limited, and the Marconi International Marine Communication Company, Limited, and His Majesty King Edward Seventh, represented herein by the Right Honourable Sir Wilfrid Laurier, G.C.M.G., President of the King's Privy Council for Canada. Presented 15th April, 1902, by Sir Wilfrid Laurier. *Printed for sessional papers.*
52. Report of the Commissioner, Dominion Police Force, for the year 1901. Presented 26th February, 1902, by Hon. C. Fitzpatrick. *Not printed.*
53. Report of Commissioner and other documents in connection with the Royal Commission in *re* the alleged combination of paper manufacturers and dealers. Presented 21st April, 1902, by Hon. W. S. Fielding. *Printed for both distribution and sessional papers.*
54. Report of the Royal Commission on Chinese and Japanese Immigration. Part I.—Chinese Immigration. Presented 27th February, 1902, by Sir Wilfrid Laurier. Part II.—Japanese Immigration, together with all the evidence taken before the said Commission. Presented 14th April, 1902, by Sir Wilfrid Laurier. *Printed for both distribution and sessional papers.*

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55. Statement of the affairs of the British Canadian Loan and Investment Company, as on the 31st December, 1901. Presented 3rd March, 1902, by the Hon. The Speaker. *Not printed.*
56. Return to an order of the House of Commons, dated 19th February, 1902, showing the names and number of men employed on the 200 acres set apart at the Central Experimental Farm, Ottawa, as a farm proper to be handled as a farm, that is, as any farmer's farm might be handled: mentioned in the evidence of J. H. Grisdale, Esq., given Thursday, April 11th, 1901, at the morning session of the select standing committee on agriculture and colonization. The number of employees and the wages paid to each employee. The total crop of various kinds grown on said 200 acres, and the amount said total crop was sold for. Presented 4th March, 1902.—*Mr. Wilson.* *Not printed.*
57. Supplementary return to an order of the House of Commons, dated 18th February, 1901, for copies of all correspondence, telegrams, letters, notes and memoranda exchanged between the Canadian commissioner at the Paris exhibition, or any member of the Canadian commission, and Lord Strathcona or the royal commission or the colonial secretary, in relation to the representation of Canada at the exhibition. Presented 4th March, 1902.—*Mr. Bourassa.* *Not printed.*
- 57*a*. Report of the Canadian Commission at the Paris exhibition. Presented 22nd April, 1902, by Hon. S. A. Fisher. *Not printed.*
58. Return to an order of the House of Commons, dated 19th February, 1902, for correspondence between the department of the interior or the minister of the interior, and Mr. C. R. Devlin, with reference to a letter that appeared in *United Canada* on 11th May, 1901, and a letter that appeared in the *Montreal Herald* on the 18th May, 1901; in both of said letters Mr. C. R. Devlin made certain statements regarding members of this house. Presented 6th March, 1902.—*Mr. Wilson.* *Not printed.*
59. Return to an order of the House of Commons, dated 19th February, 1902, showing: 1. The names of all employees in the post office at Belleville, Ontario, on June 30th, 1896, together with the age of each, date of entry in the service, and the salary of each on the said date. 2. The number of employees dismissed from the Belleville post office since June 30th, 1896, with cause and date of dismissal. 3. The number of employees superannuated, the date of their superannuation, reason for their superannuation, how much superannuation allowance has been allowed to each: giving the names of all said employees so superannuated who have asked to be superannuated. 4. How many employees were employed in the Belleville post office on 1st January, 1902: what were their names and the age and salary of each employee on said date, and date of appointment. Presented 7th March, 1902.—*Mr. Wilson.* *Not printed.*
- 59*a*. Return to an order of the House of Commons, dated 10th March, 1902, for a list of the names of all permanent and temporary officials employed in the Winnipeg post office since the 1st of July, 1896; date of appointment, length of service, and salary up to the 1st of January, 1902. Presented 3rd April, 1902.—*Mr. LaRivière.* *Not printed.*
- 59*b*. Return to an order of the House of Commons, dated 28th April, 1902, of copies of all tenders received by the post office department in June, 1901, for carrying mail between Hamilton and Guelph. Presented 7th May, 1902.—*Mr. Smith (Wentworth).* *Not printed.*
- 59*c*. Return to an order of the House of Commons, dated 14th April, 1902, for copies of all petitions, correspondence and any and all other documents addressed by any person or persons to the honourable the postmaster general upon which he or the department acted in dismissing, or which led to the dismissal of David Clinton, lately postmaster at Wellington, Ontario. Presented 9th May, 1902.—*Mr. Atcorn.* *Not printed.*
- 59*d*. Return to an order of the House of Commons, dated 28th April, 1902, for a copy of the petition sent to the government asking for the dismissal of Mr. H. Therien, postmaster at Grandes Piles, in the province of Quebec; and copies of all correspondence between the government and all persons interested in the subject of such dismissal. Presented 14th May, 1902.—*Mr. Ball.* . . . *Not printed.*
- 59*e*. Return to an order of the House of Commons, dated 9th April, 1902, for copies of all correspondence, petitions, affidavits and documents relating to the dismissal of Alphonse Thomas as postmaster at La Prairie, P.Q. Presented 14th May, 1902.—*Mr. Monk.* *Not printed.*
60. Return to an order of the House of Commons, dated 27th February, 1902, for copies of all letters, telegrams and other correspondence between the department of labour and the Canadian Pacific Railway, Mr. John Wilson and other parties, in respect of alleged violations of the Alien Labour Law, between June 1st and September 1st, 1901. Also between officers of the immigration department and the Canadian Pacific Railway. Presented 7th March, 1902.—*Mr. Puttee.* *Not printed.*

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61. Return to an order of the House of Commons, dated 3rd March, 1902, showing:—1. All contracts awarded by the department of railways and canals during the year ending June 30th, 1901, in which the "Current Wages" clause was incorporated, and the amount of such contracts. 2. The number of such contracts in which the schedule of wages was prepared by the fair wages officers. 3. The number of such contracts in which the schedule of wages was prepared by the contractors and accepted by the department. 4. The number of such contracts which were unaccompanied by schedule of wages. 5. The number of contracts awarded by the department of railways and canals which did not contain either the "Current Wages" clause or a schedule of wages. Presented 11th March, 1902.—*Mr. Puttee* *Not printed.*
62. Report on the trend of farm land values as indicated by the selling price. Presented 11th March, 1902, by Hon. S. A. Fisher. *Not printed.*
63. Return to an order of the House of Commons, dated 27th February, 1902, showing: 1. Whether the government or any member thereof, by letter or otherwise, gave any public or private assurance that in the selection of officers for the Canadian South African constabulary, which left for South Africa, last year, preference would be given to those Canadian officers who have served in South Africa and to other officers of the Canadian militia. 2. What persons, officers or others, applied for commissions in said constabulary. What is the military record of each, either in Canada, South Africa or elsewhere. 3. (a). What officers were selected and appointed; (b). What is the military record of each. 4. Who of those selected as officers had never before been officers. 5. Whether there were enough applications from officers of the Canadian militia to officer the constabulary, and the reason for their being passed over, and men without qualification, if there were any such, selected. 6. How many commissioned officers of the Canadian militia were enlisted in the first and second contingents, in the Royal Canadian Regiment, the Canadian Mounted Infantry, the Royal Canadian Dragoons, and the Canadian Artillery, as (a.) non-commissioned officers and (b.) as men. 7. How many non-commissioned officers and men of the permanent corps were enlisted in the corps named in question. How many of these were non-commissioned officers in South Africa. (c.) Why were the commissioned officers enlisted in the corps as privates, not given the non-commissions. Presented 11th March, 1902.—*Mr. Monk* *Not printed.*
64. Return to an address of the House of Commons, dated 19th February, 1902, for a copy of all papers and correspondence relating to the coronation of his majesty the king; the imperial conference which is to be held in London, and the appointment of Canadian delegates to the same. Presented 11th March, 1902.—*Mr. Bourassa* *Printed for sessional papers.*
65. Return to an address of the House of Commons, dated 19th February, 1902, for: 1. Copies of all applications for any portion of the ground covered by the Matson concession (so-called), or lease No. 9, in the Yukon district. 2. Copies of all applications for any portion of the ground covered by the Doyle concession (so-called), in the Yukon district. 3. Copies of all applications for any portion of the ground covered by the Bronson & Ray concession, in the Yukon district. 4. A memorandum showing the date on which the application in the Bronson & Ray concession was granted. 5. Copy of the application for all lay-overs in all these cases. 6. Copies of orders in council or other authority under which the minister of the interior granted any lay-over in these cases; and copy of the material, reports or other evidence upon which such lay-overs were granted. 7. A description of the Boyle concession and a map of same. 8. Copy of the application for Boyle concession. 9. The exact terms of the application in the case of the Milne concession. 10. The dates on which this application was made and granted. 11. Map showing ground covered. 12. The date when the application for the Slavin & Gates concession was made and filed. 13. Copy of Green's original map, with copy of field notes attached in the case of the Slavin & Gates concession. 14. Copy of telegram from the deputy minister of interior to E. C. Senkler as to the boundaries of this concession, dated on or about the 5th June, 1901. Presented 12th March, 1902.—*Mr. Taylor* *Not printed.*
66. Return to an order of the House of Commons, dated 20th February, 1902, for a statement in detail showing the quantity of vegetables imported from the United States and entered at the ports of Montreal and Toronto during the years 1900 and 1901, respectively, as well as of the amount of duties collected by the government of Canada during the said two years at each one of the said ports. Presented 14th March, 1902.—*Mr. Leonard* *Not printed.*
- 66a. Return to an order of the House of Commons, dated 20th February, 1902, for copies of all petitions, resolutions, letters, etc., addressed to the government in relation to an increase or a readjustment of the duties on vegetables, and of all replies sent by the government to said resolutions, petitions and letters. Presented 24th March, 1902.—*Mr. Leonard* *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

67. Return to an address of the House of Commons, dated 19th February, 1902, for a copy of all papers and correspondence relating to the disallowance of chapters 11 and 14 of the Statutes of 1900, province of British Columbia, viz.: "An Act to regulate immigration into British Columbia," and "An Act relating to the employment on works carried on under franchises granted by Private Acts." Presented 17th March, 1902.—*Mr. Bourassa*..... *Not printed.*
68. Return to an order of the House of Commons, dated 19th February, 1902, showing: 1. The amount of money spent each year from June 30th, 1891, to June 30th, 1901, on immigration. 2. The number of immigrants reported each year to have settled each year in the Dominion of Canada during the ten (10) years from 1891 to 1901, and the total for the ten years. 3. The number of immigrant agents employed by the Dominion government each year in Great Britain and Ireland from 1891 to 1901, and the total amount paid each year to the said agents, and the amount spent each year for printing and other expenses by the said agents. 4. The number of immigrant agents employed by the Dominion government each year in the continent of Europe from 1891 to 1901, and the total amount paid each year to the said agents, and the amount spent each year for printing and other expenses by the said agents. 5. The number of immigrant agents employed by the Dominion government each year in the United States of America from 1891 to 1901; and the total amount paid each year to the said agents; and amounts spent each year for printing and other expenses by the said agents; and by the government of the Dominion of Canada. Presented 18th March, 1902.—*Mr. Wilson*..... *Printed for sessional papers.*
69. Statement for parliament relative to fishing bounty payments for the year 1900-1901, required under section 4, of chapter 96, of the Revised Statutes of Canada, intitled: "An Act to encourage the development of the sea fisheries and the building of fishing vessels." Presented (Senate) 19th March, 1902, by Hon. R. W. Scott..... *Not printed.*
70. Return of all lands sold by the Canadian Pacific Railway Company, from the 1st October, 1900, to the 1st October, 1901. Presented 21st March, 1902, by Hon. W. S. Fielding..... *Not printed.*
- 70*a*. Return (in so far as the department of the interior is concerned) of copies of all orders in council, plans, papers and correspondence which are required to be presented to the House of Commons, under a resolution passed on 20th February, 1882, since the date of the last return under such resolution. Presented 21st March, 1902, by Hon. W. S. Fielding..... *Not printed.*
71. Return to an address of the House of Commons, dated 3rd March, 1902, for copies for all applications for water powers and other similar rights on or connected with the Soulages canal, and all correspondence with respect thereto, and all reports, letters and communications of or from engineers or other experts respecting the same. Also all leases granted to any person, firm or corporation of water powers or other similar rights on or connected with the above named canal. Presented 20th March, 1902.—*Mr. Bennett*..... *Not printed.*
72. Return to an order of the House of Commons, dated 26th February, 1902, showing amount of the rebate paid on agricultural implements exported from Canada for the fiscal year ending 30th June, 1901, specifying amount paid to each firm. Presented 20th March, 1902.—*Mr. Henderson.* *Not printed.*
73. Return to an order of the House of Commons, dated 6th March, 1902, showing: 1. The amount of refined sugar imported into Canada (*a*) from the first of January to 31st December, 1900; (*b*) from the first of January to the 31st of December, 1901; 2. The amount of raw sugar imported within same dates, each year separate, and the name of the country from which it has been imported. Presented 20th March, 1902.—*Mr. Mudore*..... *Not printed.*
74. Return to an order of the House of Commons, dated 10th March, 1902, for a tracing showing the principal railway lines in operation in New Brunswick, and showing the railway lines, or portions of such lines, over which postal cars are run. Presented 24th March, 1902.—*Mr. Costigan.* *Not printed.*
75. Return of orders in council, which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, between 1st January and 31st December, 1901, 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 21st March, 1902, by Hon. W. S. Fielding..... *Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

- 75*a*. Return of orders in council which have been published in the *Canada Gazette* between 1st January and 31st December, 1901, in accordance with the provisions of clause 91 of the Dominion Lands Act, chapter 51 of the Revised Statutes of Canada and its amendments. Presented 21st March, 1902, by Hon. W. S. Fielding. *Not printed.*
76. Return of orders in council which have been published in the *Canada Gazette* between 1st January and 31st December, 1901, in accordance with the provisions of section 52 of the North-west Irrigation Act, chapter 35 of 61 Victoria. Presented 21st March, 1902, by Hon. W. S. Fielding.—*Not printed.*
77. Return to an address of the House of Commons, dated 19th February, 1902, for copies of all letters, telegrams and other correspondence between the governments of Canada, Australia and New Zealand or any member thereof, respecting trade transportation, cable and other subjects of intercolonial concern. Presented 26th March, 1902.—*Mr. Campbell* *Printed for sessional papers.*
78. Return to an order of the House of Commons, dated 10th March, 1902, for list of the names of all permanent and temporary officials of the several branches of the department of the interior, date of appointment, and their salaries, on the 1st July, 1896; also a similar list on the 1st July, 1901. Presented 26th March, 1902. —*Mr. LaRivière* *Not printed.*
79. Return to an order of the House of Commons, dated 21st February, 1901, of all papers, reports and other data relative to the lowering of the waters of Lake Simcoe, with a view towards reclaiming certain flooded lands. Presented 26th March, 1902.—*Mr. McLeod* *Not printed.*
80. Return to an address of the House of Commons, dated 27th February, 1902, for a copy of the report from the judicial committee of the privy council, dated the 8th day of December, 1901, in the matter of an appeal from the court of king's bench for the province of Quebec (appeal side) between the Canadian Pacific Railway Company, appellant, and Adrien Roy, respondent. Presented 7th April, 1902.—*Mr. Lentricux* *Not printed.*
81. Orders in council with respect to the application made by Messrs. Ewing, Treadgold and Barwick, to divert water for mining purposes. Presented 8th April, 1902, by Hon. C. Sifton.
Printed for both distribution and sessional papers.
- 81*a*. Partial return to an address of the House of Commons, dated 9th April, 1902: 1. For copies of all orders in council, petitions, applications, reports, telegrams, correspondence, grants, contracts, agreements, documents, and communications in writing, relating to or concerning the grant to or concession to A. N. C. Treadgold and others, or to the Hydraulic Mining Syndicate, either separately or associated with A. N. C. Treadgold, of any claims, rights, and privileges on Bonanza, Bear and Hunker Creeks or their tributaries, or elsewhere in the Yukon territory. 2. A description and plan showing the situation, location, area, and other particulars of all the claims, rights, and privileges so granted or conceded to the said A. N. C. Treadgold and others, or to the said Hydraulic Mining Syndicate, as aforesaid. Presented 23rd April, 1902.—*Mr. Borden (Halifax)*.
Printed for both distribution and sessional papers.
- 81*b*. Return to an order of the House of Commons, dated 9th April, 1902, indicating: 1. The names of all grantees of permits to cut timber in the Yukon, to whom permits, licenses or leases have been issued since the 1st January, 1899. 2. The location of such grants. 3. The annual amount payable by the grantee, licensee or lessee. 4. The price or consideration of the grant. 5. The name in each case of the present holder of grant or lease, if transferred. 6. Whether each and every grant was publicly advertised for sale by auction. Presented 29th April, 1902.—*Mr. Monk*. *Not printed.*
82. Return showing the reductions and remissions under section 141 as added to the Indian Act by section 8, chapter 35, 58-59 Victoria, during the fiscal year ended 30th June, 1901. Presented (Senate) 8th April, 1902, by Hon. R. W. Scott. *Not printed.*
83. Return to an address of the Senate, dated 20th February, 1902, for copies of all orders in council, documents, memoranda, or other papers, relating to the transfer, from the federal to the provincial control, of public lands allotted for education in Manitoba, or relating to the payment by this government to the Manitoba government of any money—whether it be on the capital or on the interest—derived from the sales of such lands: also copies of all correspondence between the government or any member thereof, and the government of Manitoba or any member thereof, or any other persons, up to this date, in connection with the above matters. Presented (Senate) 9th April, 1902.—*Hon. Mr. Bernier* *Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 13—*Continued.*

- 83*a*. Return to an address of the House of Commons, dated 19th February, 1902, for a copy of all correspondence, petitions, orders in council, and any and all documents in connection with the demands of the provincial legislature, with regard to the school lands in Manitoba: moneys derived from sales thereof, together with interest accrued thereon. Presented 25th April, 1902.—*Mr. La Rivière.*
Incorporated with 83.
84. Return to an address of the House of Commons, dated 9th April, 1902, for copies of all correspondence, papers, letters, telegrams, etc., between the department of justice and the authorities of the St. Vincent de Paul Penitentiary, relating to the leave granted to the present warden, as well as that which passed respecting the superannuation of the said warden. Presented 21st April, 1902.—*Mr. Léonard.*.....*Not printed.*
- 84*a*. Return to an order of the House of Commons, dated 9th April, 1902, for copies of all correspondence, letters, claims, etc., addressed to the government in regard to the indemnity of Trefle Nantel, a guard at the St. Vincent de Paul Penitentiary, who died on or about the 12th September, 1900; as well as all documents relating to that matter. Presented 21st April, 1902.—*Mr. Léonard.*
Not printed.
85. Return to an order of the House of Commons, dated 9th April, 1902, for a copy of the report of Inspector McRae of the Indian department relating to the investigation held by him respecting the complaint by the Restigouche Indians against Indian Agent Peters, together with all correspondence and documents in connection therewith. Presented 21st April, 1902.—*Mr. Fowler.*.....*Not printed.*
86. Report of the Commissioner for Canada at the Pan-American exhibition. Presented 22nd April, 1902, by *Hon. S. A. Fisher.*.....*Not printed.*
87. Report of the Canadian Commissioner at the Glasgow exhibition. Presented 22nd April, 1902, by *Hon. S. A. Fisher.*.....*Not printed.*
88. Return to an order of the House of Commons, dated 13th March, 1902, showing:—1. The number of timber limits, and where located, that have been disposed of by the government since July, 1896, in the province of Manitoba and North-west Territories. 2. The names of the purchasers in each case, and price paid for each limit. 3. Copies of tenders for each limit, and names of newspapers in which advertisements appeared. Presented 23rd April, 1902.—*Mr. Roche (Marquette).*
Not printed.
89. Return to an order of the House of Commons, dated 9th April, 1902, for any communications, reports, or other documents received by the government, or any member or department thereof, from Colonel Taylor, of Pittsburg, U.S.A., with reference to the deposits of coal and coal mining in South British Columbia, particularly the Crow's Nest Pass coal fields. Presented 25th April, 1902.—*Mr. Bennett.*.....*Not printed.*
90. Return to an order of the House of Commons, dated 9th April, 1902, for copy of petition dated on or about November 29th, 1901, from the president of the Quebec Trades and Labour Council to the department of labour, and of all documents connected with said petition or mentioned therein, or correspondence ensuing therefrom in reference to the arbitration controversy or conflict between the Shoe Workers' Union of Quebec city and Mgr. L. N. Bégin, Archbishop of Quebec. Presented 28th April, 1902.—*Mr. Puttee.*.....*Not Printed.*
- 90*a*. Return to an order of the House of Commons, dated 9th April, 1902, for copies of all letters, telegrams and other correspondence between the department of labour and the officers of the Rossland Miners' Union and other persons, in reference to the alleged violations of the Alien Labour Act in connection with the Rossland miners' strike. Presented 9th May, 1902.—*Mr. Smith (Vancouver).*.....*Not printed.*
91. Return to an address of the House of Commons, dated 14th April, 1902, for copies of all memorials, petitions or protests received respecting the erection of a monument to General Montgomery at Quebec, with dates; also copies of replies sent thereto. Presented 29th April, 1902.—*Mr. Clarke.*
Not printed.
92. Return to an address of the House of Commons, dated 9th April, 1902, for a statement of all moneys paid by the Dominion government to the province of Ontario during the calendar years 1900 and 1901, respectively; stating in each case how much of such moneys so paid was on account of subsidy, allowance for government, and interest, respectively. Also copies of all telegrams, letters, or correspondence of any kind in any way relating to or connected with the transmission of such moneys. Presented 30th April, 1902.—*Mr. Henderson.*.....*Not printed.*

CONTENTS OF VOLUME 13—*Continued.*

93. Return to an order of the House of Commons, dated 26th February, 1902, showing (1st) the number of commutations of sentences that have been granted through the department of justice to prisoners convicted of arson or incendiarism during the years 1899, 1900 and 1901, respectively; (2nd) the places where the crimes were committed; (3rd) the sentences imposed. Presented 1st May, 1902.—*Mr. Monk*.....*Not printed.*
94. Return to an address of the Senate, dated 9th April, 1902, for a copy of the orders in council appointing: 1. The Honourable Mr. Wurtele, one of the judges of the court of appeal for the province of Quebec, chairman of the commission for the revision of the statutes of the Dominion of Canada. 2. The Honourable Justice François Langelier, one of the judges of the superior court of the province of Quebec, a judge of the court of appeal of the same province, in the room and place of the said Honourable Judge Wurtele. 3. Cancelling the aforesaid appointments; together with a copy of all correspondence exchanged on the subject of these appointments and the cancellation thereof. Presented (Senate) 2nd May, 1902.—*Hon. Mr. Landry*.....*Not printed.*
95. Return to an order of the House of Commons, dated 14th April, 1902, showing: 1. The number of seine licenses issued for the province of British Columbia for the year 1901. 2. To whom the said licenses were issued. 3. The number operated by those to whom they were issued, and by whom. 4. By whom those were operated which were not used by the parties to whom they were issued. Presented 5th May, 1902.—*Mr. Earle*.....*Not printed.*
96. Return to an address of the House of Commons, dated 19th February, 1902, for a copy of all papers and correspondence exchanged between his excellency the governor general, the Canadian government, or any of its members or departments, the officer commanding the Canadian militia, and the British authorities, in relation to the South African war, its conduct and its settlement; and the sending or recruiting of Canadian troops to South Africa,—for the three last years. Presented 7th May, 1902.—*Mr. Bourassa*.....*Not printed.*
97. Return to an order of the House of Commons, dated 3rd March, 1902, for copies of all contracts made during two years past between the government of Canada and all steamship companies with whom it is agreed that a subsidy, bonus or grant of any kind shall be given by the government of Canada for services to be rendered in connection with transatlantic, transpacific or West Indian business. Presented 9th May, 1902.—*Mr. Smith (Wentworth)*.....*Not printed.*
98. Copy of the finding of the judge of the exchequer court of Canada, in the matter between William Mackenzie and Donald D. Mann, claimants, and His Majesty the King, defendant. Presented 9th May, 1902, by Hon. C. Fitzpatrick.....*Not printed.*
99. Return to an order of the House of Commons, dated 9th April, 1902, showing what licenses, during the year 1900, were issued, entitling the persons named therein to fish for oysters on the beds planted by the government in the harbour of Shediac. And also showing to whom such licenses were issued, and on what dates they were respectively issued, and by whose authority they were issued in each instance, and whether such licenses, or any, and which of them were cancelled; and if so, how many, and on what date, and for what reason, such licenses were cancelled; and what quantity of oysters was secured under such licenses during the period they were in force. Presented 9th May, 1902.—*Mr. Borden (Halifax)*.....*Not printed.*
100. Return to an order of the House of Commons, dated 9th April, 1902, for a statement showing: 1. Into how many classes the employees of the Intercolonial Railway are divided. 2. The name, residence and the salary of each of the employees of the first class. 3. The name, residence and salary of each of those of the second class. 4. The number of those of the third class, and the total amount of the yearly salary paid them. Presented 10th May, 1902.—*Mr. Léonard*.....*Not printed.*
101. Return to an address of the Senate, dated 23rd April, 1902, of all correspondence which has taken place within the last two years between the government of Canada or any department or officer thereof, and any steamship company or agent of such company, engaged in the transportation of the produce of Canada from any port in Canada to Europe, regarding the ventilation of space on steamships used for storage during transportation of perishable products such as apples and cheese; also copies of all clauses in contracts with steamship companies relating to the ventilation of the holds or spaces between the decks of steamers employed as aforesaid; also a statement giving the names of all steamships and the owners thereof which have been equipped with means of generating cold air and distributing the same throughout their holds and between decks, in terms of the appropriation made for such purpose during last session of parliament, giving the cost to the government in the

CONTENTS OF VOLUME 13—*Concluded.*

- case of each steamer: also a statement showing the daily minimum and maximum temperatures maintained during each voyage in the holds or between the decks of steamers equipped in terms of the said parliamentary appropriation of last session; also a statement showing the comparative results in the transportation of apples between steamers equipped as above described and steamers without any special means of ventilation; and also a statement giving the names and owners of steamers which it is proposed to equip as aforesaid, for the approaching season, and giving the port of departure from Canada of such steamers as well as of those already equipped as aforesaid. Presented (Senate) 13th May, 1902.—*Hon. Mr. Ferguson* *Not printed.*
102. Return to an order of the House of Commons, dated 15th May, 1902, for copies of all papers relating to preferential trade. Presented 15th May, 1902.—*Mr. Belcourt*.. . . . *Not printed.*

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR

FROM JULY 1, 1900, TO JUNE 30, 1901

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 KING'S MOST
EXCELLENT MAJESTY

1902

[No. 20—1902]

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

MAY IT PLEASE YOUR EXCELLENCY,—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year, from July 1, 1900, to June 30, 1901.

All of which is respectfully submitted.

ANDREW G. BLAIR,
Minister of Railways and Canals.

OTTAWA, February 4, 1902.

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3. Manitoba and Assiniboia and part of Saskatchewan.
4. Ontario and Manitoba.
5. Ontario and Quebec.
6. Nova Scotia, New Brunswick, Prince Edward Island and part of Quebec.

CANAL SYSTEM.

7. St. Lawrence, Ottawa, Rideau and Richelieu Canals.
8. Welland Canal, between Lakes Erie and Ontario.
9. Trent Navigation and Murray Canal.
10. Canadian Ship channel, also St. Mary's Falls Canal, Michigan.
- 11-12. Two maps showing progress of surveys on Montreal, Ottawa and Georgian Bay Canal.
13. Map showing the exploration made on proposed railway to Yukon District.

[These maps are to be found in a separate pocket.]

57.

REPORT OF THE DEPUTY MINISTER

To the Honourable

ANDREW G. BLAIR,

Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal year ended June 30, 1901.

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

In Part II. will be found statements showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department ; also statements showing total expenditure on each canal since its construction, and on each of the government railways ; also a statement showing 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 granted or authorized.*

In an appendix will be found a special statistical report, embodying returns for the fiscal year ended June 30, 1901, made by Canadian railway companies, as required by statute. This report gives detailed information as to railroad operations in Canada, including the government roads.

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

The Act requiring from street railway and tramway companies the same statistics as are demanded from ordinary railway companies was not passed until the 18th of July, 1900 : consequently the past fiscal year is the first in which these lines constitute a definite feature of railway statistics.

In view of the rapid developments that are taking place in the use of electricity as applied to traction, not only within town and city limits, but on lines of considerable length extending beyond such limits, it is impossible to say how the question of classification of railways for statistical purposes may require to be handled in the future. In the present report, the statistics of railways the motive power of which

* 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 October 1, 1901.

1-2 EDWARD VII., A. 1902

is *steam* form one set of statements, and a separate set deals with those lines which are operated by electricity.

In the statements presented in the last annual report, however, returns were included which had been received from 13 lines operated by electricity (none of them being street railways proper) but which lines are now removed from the steam line statements and placed in their proper position with the other electric systems.

For purposes of comparison between the two years the financial and traffic figures relating to these 13 electric roads have been deducted in the comparative statements relating to steam railways.*

Steam Railways.

The number of *Steam Railways* in actual operation, including the two government roads, the Intercolonial and the Prince Edward Island Railways, at that date was 163 ; some of these, however, are amalgamated or leased, making the total number of controlling companies 80, not including the government railways. The number of companies absorbed by amalgamation was 36, and the number of leased lines was 34.

At the close of the fiscal year, June 30, 1901, the number of miles of completed railway was 18,294, an increase of 658 miles, besides 2,710 miles of sidings. The number of miles laid with steel rails was 18,184, of which 634 miles was double track. The number of miles in operation was 18,140.

The paid-up capital amounted to \$1,042,785,539, an increase of \$51,593,893. The gross earnings amounted to \$72,898,749, an increase of \$2,694,396, and the working expenses aggregated \$50,368,726, an increase of \$2,987,037 compared with those of the previous year, leaving the net earnings \$22,530,023, a decrease of \$292,642. The number of passengers carried was 18,335,722, an increase of 1,281,379, and the freight traffic amounted to 36,999,371 tons, an increase of 1,286,149 tons. The total number of miles run by trains was 53,349,394, an increase of 727,870. The accident returns show 16 passengers killed.

Electric Railways (including street railways and tramways).

At the close of the fiscal year ended June 30, 1901, there were 675 miles completed of which 670 miles were laid with steel rails, 158 miles being double track. The paid up capital amounted to \$39,076,019, of which the municipal aid amounted to \$173,000 (including \$100,000 subscription to shares and \$40,000 loan). The number of miles in operation was 672. The gross earnings aggregated \$5,768,283 and the working expenses \$3,435,163, leaving the net earnings \$2,333,120. The number of passengers carried was 120,934,656† and the freight carried amounted to 287,926 tons. The car mileage was 31,750,754 miles ; 3 passengers were killed. Power was supplied in 11 cases by water and in 30 cases by steam. Ontario has 386 miles, Quebec 197, New Brunswick 12, Nova Scotia 10, Manitoba 18, and British Columbia 51 miles. Returns were received from 40 companies.

*These 13 electric railways are responsible for the figures of the report of 1889-1900 to the following extent :—Miles completed, 187.83 ; capital paid up, \$7,081,758 ; gross earnings, \$535,917 ; working expenses, \$318,110 ; net earnings, \$217,807 ; passengers carried, 4,395,832 ; tons freight carried, 282,961 ; train miles, 2,556,347.

†The City street railways carried passengers as follows :—Montreal, 45,833,652 ; Toronto, 37,620,583 ; Ottawa, 7,469,304 ; Quebec, 3,715,675 ; Hamilton, 3,693,677 ; Winnipeg, 3,196,489 ; Halifax, 2,968,811 ; St. John, 1,710,223, and Vancouver, Victoria and New Westminster (operated by one company and returns amalgamated), 5,336,310.

SESSIONAL PAPER No. 20

All Railways, Steam and Electric.

At the close of the fiscal year ended June 30, 1901, the conjoined statistics of steam and electric roads (including street railways), show the following results. The number of companies making returns was 120. There were 18,969 miles of railway completed, 18,812 miles being in operation. The paid up capital amounted to \$1,081,861,558. The gross earnings were \$78,667,032, and the total working expenses \$53,803,889, making the net earnings \$24,863,143 ; of passengers 139,320,378, and 37,287,297 tons of freight were carried ; 19 passengers were killed.

The Federal government expenditure on railways prior to and since the date of confederation (July 1, 1867) amounts, on capital account, to 131,559,977 (including \$25,000,000 granted to the Canadian Pacific Railway Company for its main line), which, together with \$296,872 expended on the Nova Scotia Railway and the European and North American Railway, and transferred to the Consolidated Fund, and for railway subsidies charged against the Consolidated Fund the further sum of \$25,737,891*, makes a total expenditure of \$157,594,740. In addition, there has been an expenditure since confederation for working expenses \$87,130,523, covering the maintenance and operation of the government roads, or a grand total of \$244,725,263* ; of which amount the sum of \$13,881,460.65 was paid out before confederation.

GOVERNMENT RAILWAYS IN OPERATION.

The railways maintained by the government are : The Intercolonial, the Windsor Branch (maintained only), and the Prince Edward Island Railways.

Details respecting these railways and their operations will be found in the appendices, Part I., containing reports from the chief engineer of the department, the general manager of government railways, and the officials of these roads.

The gross earnings of all the government roads for the past fiscal year, 1900-1901, amounted to \$5,213,381.24, and compared with those of the preceding year show an increase of \$439,219.37. The gross working expenses amounted to \$5,739,051.54, an increase of \$1,073,823.48.

The net loss on the operations of the year was \$525,670.30.

The Intercolonial gave a loss of \$488,186.77 ; the Windsor branch (one-third of total earnings), gave a profit of \$30,399.23, and the Prince Edward a loss of \$67,882.76.

The above figures include rental, \$140,000, paid for the extension of the Intercolonial into Montreal.

* This includes the annual subsidy of \$186,600 to the Atlantic and North-west Railway Company for 20 years from July 1, 1899, which is paid through the Finance Department. It does not include the annual payment of \$119,700 as interest at 5 per cent. on the sum of \$2,394,000, payable to the province of Quebec for the line from Quebec to Ottawa, which sum has been transferred to the public debt.

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169.81 miles to the operation of the government line ; its length being 1,314.67 miles, instead of 1,145.

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

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

The accountant of the railway has dealt with the rental paid under these leases as an addition to the ordinary working expenses and in his comparative statement of averages gives such averages for each year, both with the rental included, and also with rental omitted. The statements of the general manager, however, are based on figures from which these rentals are omitted. This explanation will cover any seeming discrepancy of statement in the matter. The accountant of the department, in his statements (Part II.), includes these rentals, and they are also included in my present report.

CAPITAL ACCOUNT.

During the fiscal year there was an addition of \$3,652,313.46 to the capital account expenditure, making the total expenditure chargeable to 'capital' on the whole road as amalgamated under the Acts 54-55 Vic., chap 50 (1891), and 62-63 Vic., chap. 5 and 6, (1899), up to June 30, 1901, \$63,975,261.78.*

In the General Manager's present report, herewith, the total cost of the Intercolonial Railway up to June 30, 1900, is set down as \$59,987,715.29, whereas in his report of last year, 1899-1900, p. 59, Part I., it was stated to be \$58,547,192.18 up to that date, a difference of \$1,440,523.11. This difference is explained by the fact that the payment made for the Drummond County Railway \$1,459,000 has now been included, and the sum of \$18,476.89, representing the amount of certain cheques in payment for lands taken, issued against capital account in previous years, but not used, and, therefore, cancelled during the year 1900-1901, has been deducted.

The General Manager, in his present report, sets down the total cost to June 30, 1901, as \$63,640,023.75. The total cost up to that date is set down by the accountant of the department (Part II., p. 32), as \$63,975,261.78. This agrees with the public accounts. The difference, \$335,233.03, is made up of two items, viz., expenditure on the old Montreal and European Short Line Railway, \$333,942.72, and expenditure on the Governor General's car, \$1,290.31.

* See statement of the accountant of the department, Part II, p. 32.

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The additions made during the year included : for increased accommodation at Halifax, \$31,969, at St. John, \$221,932, at Sydney, \$96,000, and at Lévis, \$90,000 ; for increased sidings, station and other facilities, \$353,577 ; for strengthening bridges, \$142,678 ; for engine-houses, \$132,422 ; for additional rolling stock, \$1,563,705 ; for applying air-brakes to freight cars, \$25,485, and for steel rails and fastenings, \$402,549. Information as to these items will be found in the reports of the General Manager, Chief Engineer and other officers of the railway.

REVENUE ACCOUNT.

The gross earnings of the year amounted to \$4,972,235.87, an increase of \$120,164.16, and the working expenses to \$5,460,422.64 (including \$140,000 rent paid for the extension into Montreal), being an increase in comparison with the previous year (when \$164,694.47 was paid for such rental), of \$1,029,017.95, the excess of expenditure over earnings being \$488,186.77, against an excess of earnings over expenditure in the previous year of \$120,667.02. Of the expenditure for the past year, the item of 'locomotive power,' is answerable for \$1,970,987.70, an increase of \$585,917.80.

Comparing the earnings with those of the previous year, the passenger traffic produced \$1,607,166.79, or 32.32 per cent of the gross earnings, an increase of \$202,696.92 ; the freight traffic amounted to \$3,121,006.15, or 62.77 per cent of the gross earnings, an increase of \$208,215.63, and the carriage of mail and express freight produced \$244,062.93, or 4.91 per cent of the gross earnings, an increase of \$9,251.61. The earnings per mile of railway were \$3,782.11, an increase of \$319.59. The mileage of the railway was the same as in the previous year, namely, 1,314.67 miles.

GENERAL OBSERVATIONS.

The following is a comparison of the traffic of the past fiscal year with that of the previous year :—

[The number of passengers carried was 2,025,295, an increase of 233,542 ; of freight, 2,111,310 tons were carried, a decrease of 39,898 tons. The through freight increased 40,359 tons, and the local freight decreased 80,257 tons.

Of flour and meal, 1,292,106 barrels were carried, an increase of 58,030. Of grain, 3,535,364 bushels were carried, an increase of 814,911. Lumber showed an increase of 17,508,890 superficial feet, the total quantity carried being 396,858,890 feet. There was an increase of 3,110 in the number of live stock, of which 95,923 head were carried. Five hundred and six thousand five hundred and ninety tons of coal, a decrease of 96,619 tons, were carried. Of raw sugar, 489 tons were carried, an increase of 383 tons. Of refined sugar, 25,821 tons, a decrease of 3,186 tons, were carried. A total of 9,318 tons of fresh fish, an increase of 371 tons, and a total of 9,768 tons of salt fish, an increase of 3,125 tons, were carried. Of manufactured goods, 476,528 tons were carried, a decrease of 30,496 tons.

Of ocean borne goods, other than deals, to and from Europe, via Halifax, the aggregate was 163,833 tons, an increase of 124,044 tons. Of this, 155,514 tons was local traffic.]

The removal of snow and ice entailed an expenditure of \$96,855, exceeding by \$7,982 the cost of the previous year.

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

The train mileage (or number of miles run by trains) of the year was 6,262,674, an increase of 788,964 miles. The cost per train mile was 87.19 cents, 6.24 cents more than the previous year (in both years the rental of leased lines is included).

The working expenses per mile of railway amounted to \$4,153.45,* an increase of \$782.72 per mile. The rental of leased lines is included in both years.

The value of stores on hand at the close of the fiscal year, including fuel, rails, and old material, was \$1,824,977.04.

The work of fitting quick action air brakes to freight cars has been continued ; these brakes have been placed on 1,307 cars during the year, making the total number now so fitted 3,978. In July, 1899, the Dominion Iron Steel Company commenced the construction of extensive iron works at Sydney, Cape Breton. These works are rapidly approaching completion, and blast furnaces were started in the spring of 1901. The establishment of so important an industry has naturally created a demand for more extensive equipment and accommodation on the Intercolonial, which is being met as rapidly as possible.

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

WINDSOR BRANCH.

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

This railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the government taking the remaining one-third, and assuming all costs of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends, for a further term of 21 years, arrangements similar to those made in 1871.

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

The gross earnings of the government (one-third of gross receipts) credited to this branch, amounted to \$47,261.89, an increase of \$89.54. The expenses of main-

*These figures are based on a mileage for both 1899-1900 and 1900-1901 of 1,314.67 miles.

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tenance amounted to \$16,862.66, an increase of \$3,971.10, leaving a profit to the government of \$30,399.23.

The road has been maintained in good order. Details will be found in the appendices.

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

The total cost of the road and equipment chargeable to Capital Account at the close of the past fiscal year was \$4,123,827.21 ; there being an addition during the year of \$280,173.93 ; the principal items being an expenditure of \$115,663 on the branch to Murray Harbour, and \$92,828 for a combined railway and carriage bridge over the River Hillsborough, Charlottetown.

REVENUE ACCOUNT.

The gross earnings amounted to \$193,883.48, and the working expenses to \$261,766.24 ; the expenditure in excess being \$67,882.76.

Compared with the previous year, the gross earnings show an increase of \$19,144.75, and the working expenses an increase of \$40,834.43. The railway carried 157,793 passengers, an increase of 10,322, producing \$78,689.73, an increase of \$5,691.31. Of freight, there were carried 73,696 tons, an increase of 11,469 tons, producing \$97,425.85, an increase of \$13,798.44, while the earnings from mails and sundries amounted to \$17,767.90, a decrease of \$345.

Compared with the previous year, the working expenses were greater by the sum of \$40,834.43.

The train mileage (the number of miles run by trains) was 270,255, an increase of 5,360 miles.

The cost per mile run by trains was 96.88 cents, an increase of 13.48 cents ; and the cost per mile of railway \$1,246.50, an increase of \$194.45.

The value of stores on hand at the close of the fiscal year was \$68,608.51.

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

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

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

During the seasons of 1898, 1899 and 1900, in accordance with parliamentary provisions, surveying parties have been engaged in the work of endeavouring to find a feasible route for a railway, on Canadian territory entirely, to give communication with the Yukon district from a point on an existing Canadian railway, and also from

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a Canadian port on the Pacific coast, and the approximate cost of such a railway. Reports from the officers in charge of these surveys were printed in the annual reports of 1898-99 and 1899-1900. In the present volume will be found a lengthy report, dated June 1, 1901, from Mr. J. S. O'Dwyer, the engineer in charge, dealing with the explorations made, indicating a feasible route and furnishing estimates of the cost of construction and equipment.

EDMONTON TO TESLIN.

Starting from Edmonton, the present northerly terminus of the Calgary and Edmonton Railway (leased to the Canadian Pacific Railway), a point distant 192 miles north of Calgary on the main line of that company, a feasible route has been found to Lake Teslin. The distance to the head (southerly end) of this lake is 1,240 miles, and the estimated cost of construction at prices for similar work in the eastern section of Canada is set down at \$22,908,609 ; to this estimate, the Chief Engineer adds, for the difference between eastern and western prices, 60 per cent, making the estimate for construction \$36,653,774 ; the cost of equipment is estimated at \$1,866,000, making the total estimate for the construction and equipment of this 1,240 miles, \$38,519,774.

BRANCH—SESTOOT TO PORT SIMPSON.

By the construction of a line of railway from a point on this railway—the confluence of the Rivers Sestoot and Skeena—about 432 miles from Lake Teslin, an excellent ocean terminus would be obtained at Port Simpson, 500 miles north from Victoria, the climatic and other advantages of which make it a desirable site for the purpose. This branch runs down the valley of the Skeena ; its length would be 307 miles, and the estimated cost of its construction, at eastern prices, \$9,298,400, or, adding 60 per cent for western prices, \$14,877,440. The cost of equipment is set down as \$488,100, making the total estimated cost of this 307 miles \$15,317,540.

ROUTE—PORT SIMPSON TO TESLIN.

For a line of railway from Port Simpson to Lake Teslin, following the route above indicated, a distance of 739 miles, the estimated cost would be, at western prices, \$28,050,560, and of rolling stock, \$1,060,100, or a total for construction and equipment of \$29,110,660.

The following observations as to Port Simpson, made in my report of last year, are here repeated :

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

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TESLIN TO DAWSON CITY.

From the head (southerly end) of Lake Teslin, by a descending navigation, lake and river, communication, except at certain stages of low water, can be made with Dawson City, a further distance of about 625 miles. By the construction, however, of 150 miles of railway from the head of Lake Teslin, northerly and westerly, communication would be made at White Horse—the present northerly terminus of the White Pass and Yukon Railway—with the existing system of river navigation, now in full operation to Dawson City, a distance of about 450 miles.

The cost of building this 150 miles of railway may be estimated, Mr. O'Dwyer states, in the absence of definite data, at \$20,000 a mile (eastern rates), which, allowing an addition of 60 per cent for the difference between eastern and western prices, would bring the cost of building this 150 miles to about \$4,800,000, or with equipment, \$5,000,000, and would make the total cost of building and equipment for a road from Edmonton to White Horse \$43,520,000 and for a road from Port Simpson to the same point, \$34,110,000.

RAILWAY SUBSIDIES.

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to July 1, 1900.

A tabulated statement of payments will be found in Part II., 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, 1896 and 1898.

Information has been brought down to the end of the fiscal year 1900-1901, only, but, in supplement, the following list shows also the additional contracts entered into and the payments made between that date and December 1, 1901.

SUBSIDY CONTRACTS DURING 1900-1901, TO JUNE 30, 1901.

Great Northern Railway Company.—Shawenegan Falls Branch, 6½ miles, contract dated July 4, 1900.

Great Northern Railway Company.—Montcalm to St. Tite, 53½ miles, contract dated July 26, 1900.

Central Ontario Railway Company.—Coe Hill or Rathbun to Bancroft, 21 miles, contract dated August 29, 1900.

Cape Breton Railway Extension.—Port Hawkesbury to St. Peters, 30 miles, contract dated September 15, 1900.

St. Mary's River Railway Company.—From Alberta Railway and Coal Co.'s line to Cardston, Alberta, 30 miles. Contract dated September 10, 1900.

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Montreal and Province Line.—Farnham to Frelighsburg and Boundary, 21 miles, contract dated October 31, 1900.

Ottawa and New York Railway Company.—Bridge over the St. Lawrence at Cornwall, \$90,000, contract dated October 4, 1900.

Quebec Bridge Company.—Bridge over the St. Lawrence at Chaudière Basin, \$1,000,000, contract dated November 12, 1900.

Pontiac Pacific Junction and Ottawa and Gatineau Railway Companies.—Bridge over the River Ottawa between Ottawa and Hull, additional \$100,000, supplemental contract dated November 26, 1900.

Chateauguay and Northern Railway Company.—Railway bridge over east and west channels of Rivière des Prairies, contract dated January 19, 1901.

Chateauguay and Northern Railway Company.—From Hochelaga ward, Montreal, to a point on Great Northern Railway, near Joliette with a spur into L'Assomption, contract dated January 19, 1901 ; 42 miles.

Chateauguay and Northern Railway Company.—Railway bridge over Lac Ouareau, contract dated January 19, 1901.

South Shore Railway Company.—Railway bridge over St. Francis river, contract dated June 29, 1901.

Thousand Islands Railway Company.—Extension from present northerly terminus to a point easterly, 2 miles, contract dated March 15, 1901.

ADDITIONAL SUBSIDY AGREEMENTS FROM JUNE 30 TO DECEMBER 1, 1901.

Atlantic and Lake Superior Railway Company.—From Caplin to Paspébiac, 30 miles, contract dated July 25, 1901.

Algoma Central and Hudson Bay Railway Company.—From Sault Ste. Marie, Ontario, towards Michipicoten river and harbour, and towards main line of the Canadian Pacific Railway, 40 miles, contract dated September 28, 1901.

Bruce Mines and Algoma Railway Company.—From a point on Algoma branch of the Canadian Pacific Railway at or near Bruce Lake station, northerly to a point at or near Rock lake, 9 miles, contract dated November 19, 1901.

Kootenay and Arrowhead Railway Company.—From Duncan lake towards Lardo or Arrow lake, B.C., or from Lardo to Arrow lake, 30 miles, contract dated August 26, 1901.

Montreal and Province Line Railway Company.—From Farnham, Quebec, to Frelighsburg, 19 miles, contract dated August 2, 1901.

Red Deer Valley Railway and Coal Company.—From Calgary to a point in township 29, range 23, 4th meridian, 55 miles, contract dated July 30, 1901.

Tilsonburg, Lake Erie and Pacific Railway Company.—From Tilsonburg to Ingersoll or Woodstock, Ontario, 28 miles, contract dated October 15, 1901.

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SUBSIDY PAYMENTS DURING THE FISCAL YEAR 1900-1901,
TO JUNE 30, 1901.

Great Northern Railway Company	\$345,323 11
Canadian Pacific Railway Company (Crow's Nest Pass)	205,524 00
Ottawa and New York Railway Company	90,000 00
Grand Trunk Railway Company (Victoria Jubilee Bridge)	228,371 75
South Shore Railway Company	88,400 00
Massawippi Valley Railway Company	5,376 00
Inverness and Richmond Railway Company	132,800 00
Canadian Northern Railway Company	537,600 00
Canadian Pacific Railway Company (Pipestone Branch)	92,800 00
Central Ontario Railway Company	67,200 00
Midland Railway Company	170,264 00
Quebec Bridge Company	74,570 00
St. Mary's River Railway Company	75,000 00
Pontiac Pacific Junction and Ottawa and Gatineau Valley Railway Companies (Interprovincial Bridge)	212,500 00
Atlantic and North Western Railway Company	186,600 00
	<hr/>
	\$2,512,328 86
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ADDITIONAL PAYMENTS FROM JULY 1, 1901, TO DECEMBER 1, 1901.

Quebec Bridge Company	\$ 99,760 00
Canadian Northern Railway Company	699,970 00
Atlantic and Lake Superior Railway Company ..	14,800 00
Montreal and Province Line	32,000 00
York and Carleton Railway Company ..	18,336 00
Thousand Islands Railway Company	5,440 00
Canadian Pacific Railway Company (Pipestone Branch)	67,200 00
Inverness and Richmond Railway Company ..	36,800 00
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	\$974,306 00
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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.

The following shows the aggregate of the payments made on subsidy account :—

For the fiscal year 1883-84, ended on June 30, 1884	\$ 208,000 00
do 1884-85 do 1885	403,245 00
do 1885-86 do 1886	2,171,249 00
do 1886-87 do 1887	1,406,533 00
do 1887-88 do 1888	1,027,041 92
do 1888-89 do 1889	846,721 83
do 1889-90 do 1890	1,678,195 72*
do 1890-91 do 1891	1,265,705 87*
do 1891-92 do 1892	1,248,215 93*
do 1892-93 do 1893	811,394 07*
do 1893-94 do 1894	1,229,885 10*
do 1894-95 do 1895	1,310,549 10*
do 1895-96 do 1896	834,745 49*
do 1896-97 do 1897	416,955 30*
do 1897-98 do 1898	1,414,934 78*
do 1898-99 do 1899	3,201,220 05*
do 1899-1900 do 1900	725,720 35*
do 1900-01 do 1901	2,512,328 86*
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	\$22,712,641 37

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

The Canada Central Railway, paid between 1878-83	1,525,250 00
The Canadian Pacific Railway extension from St. Martin's Junction to Quebec, paid in 1885....	1,500,000 00
Total subsidies paid from 'Consolidated Fund' up to June 30, 1901.....	\$25,737,891 37
The main line subsidy to the Canadian Pacific Railway was paid from 'Capital,' amounting to..	25,000,000 00
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Total paid as subsidies	\$50,737,891 37

* In these amounts the subsidy of \$186,600 a year payable to the Atlantic and North-west Railway Company, for 20 years from July 1, 1889, is included. Payment is made by the Finance Department.

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The above does not include the amount, \$2,394,000, due to the province of Quebec for the railway between Ottawa and Quebec, which has been transferred to the public debt, and on which interest at 5 per cent is paid, amounting to \$119,700 a year. (See note on page 44 of the accountant's statement, Part II.)

Albert Southern Railway Company.

(See Annual Report of 1891-92.)

Atlantic and North-west Railway Company.

(See Annual Report of 1899-90.)

Baie des Chaleurs Railway Company.

(See Annual Report of 1895-96.)

Beauharnois Junction Railway Company.

(See Annual Report of 1895-96.)

Belleville and North Hastings Railway Company.

(See Annual Report of 1888-89.)

Boston and Nova Scotia Coal Company.

(See Annual Report of 1895-96.)

Brockville, Westport and Sault Ste. Marie Railway Company.

(See Annual Report of 1896-97.)

Brantford, Waterloo and Lake Erie Railway Company.

(See Annual Report of 1895-96.)

Buctouche and Moncton Railway Company.

(See Annual Report of 1893-94.)

Canada Atlantic Railway Company.

(See Annual Report of 1888-89 ; also see in present report under head of Ottawa, Arnprior and Parry Sound Railway Company.)

Canada Eastern Railway Co. ; formerly Northern and Western Railway Company of New Brunswick.

(See Annual Reports of 1894-95 and 1899-90.)

Canadian Northern Railway Company.

(See Ontario and Rainy River Railway Company.)

Canadian Pacific Railway Company.

Revelstoke to Arrow Lake.

(See Annual Report of 1896-97.)

Pipestone Branch—Antler Station to Moose Mountain.

(See No. 447.)

By the Subsidy Act 62-63 Vic., ch. 7 (1899), a subsidy of \$3,200 a mile, with an addition of 50 per cent on cost in excess of \$15,000 per mile, but not exceeding in all \$6,400 a mile, was authorized for a railway from some point near Antler Station to a point near Moose Mountain, Man., not exceeding 50 miles.

The Canadian Pacific Railway Company having applied, were admitted to contract for this work on December 18, 1899. During the past fiscal year there has been paid the sum of \$92,800. This is the total of payments up to June 30, 1901.

Canadian Pacific Railway Company.

(Crow's Nest Pass Railway.)

(See No. 415.)

By the special Act 60-61 Vic., ch. 5 (1897), authority was given for the grant to the Canadian Pacific Railway Company, of a subsidy towards the construction of a railway from Lethbridge, through the Crow's Nest Pass, to Nelson, such subsidy being to the extent of \$11,000 a mile, not exceeding in the whole \$3,630,000. A contract for this work was entered into with the company on September 6, 1897. The total distance is 342·75 miles. The road has been built and is in operation from Lethbridge to the south end of Lake Kootenay, a distance of 288·75 miles, except that at one point a temporary way will be replaced by a permanent straightened line. Of the remaining 54 miles to Nelson, the 20 miles between Nelson and Proctor are practically completed. During the past fiscal year the further sum of \$205,524 was paid from the subsidy, making the total payments up to June 30, 1901, \$3,321,774.

Cap de la Madeleine Railway Company.

(See Annual Report of 1896-97.)

Cape Breton Railway Extension Company.

(See Annual Report of 1895-96.)

(See No. 420.)

By the Subsidy Act of 1899, 62-63 Vic., ch. 7, the grant of a subsidy of \$3,200 a mile, with an addition of 50 per cent on the cost in excess of \$15,000 a mile, in all not exceeding \$6,400 a mile, was authorized in aid of a railway from Port Hawkesbury, on the Strait of Canso, N.S., to St. Peter's, thirty miles.

The above company, having applied, were admitted to contract for the work on September 15, 1900. No portion of the subsidy has been paid up to the close of the fiscal year, June 30, 1901.

Caraquet Railway Company.

(See Annual Report of 1888-89.)

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Central Railway Company of New Brunswick.

(See Nos. 40, 143, 156, 205, 353, 382 and 445.)

By the Act of 1884, 47 Vic., ch. 8, a subsidy not exceeding \$123,000 was granted in aid of the construction of about 40 miles of the Central Railway, from the head of the Grand Lake to a point on the Intercolonial Railway between Sussex and St. John, N.B.

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

On December 1, 1890, a new contract was made with the company for this work under the Subsidy Act of 1889, the limit of subsidy being \$128,000; this contract covered also a subsidy for $4\frac{1}{2}$ miles, the limit of which was \$14,400, authorized by the Act, 53 Vic., chap. 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 December 1, 1891.

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

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

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

The Subsidy Act 62-63 Vic., chap. 7 (1899), authorized the grant of a subsidy of \$3,200 a mile, with an addition of 50 per cent of cost over \$15,000 a mile, the total subsidy not to exceed \$6,400 a mile for an extension from Newcastle coal fields to Gibson, 30 miles. An agreement was entered into with the company for this work on February 8, 1900.

Up to the end of the fiscal year 1898-99 there had been paid, including the value of the said rails, the sum of \$226,012.54. No further payments have been made up to June 30, 1901.

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Central Ontario Railway Company.

(See No. 415.)

This company was incorporated by the Ontario Act of 1873, chap. 73, under the name 'The Prince Edward County Railway Company'; the name was changed by the Ontario Act of 1882, chap. 61.

By the Dominion Subsidy Act 62-63 Vic., chap. 7, the grant of aid to the company for 21 miles of railway, from Coe Hill or Rathbun station to Bancroft, was authorized to the extent of \$3,200 a mile, with an addition of 50 per cent on the cost in excess of \$15,000 a mile; the whole not exceeding \$6,400 a mile.

The company were admitted to contract for this work on August 29, 1900, and during the past fiscal year have been paid the sum of \$67,200.

Chateauguay and Northern Railway Company.

(See Nos. 507, 508, 509.)

This company was incorporated by the Quebec Act of 1895 (1), chap. 64, its powers of construction being modified by the Act, chap. 75 of 1896.

By the Dominion Subsidy Act of 1900, 63-64 Vic., chap. 8, the grant to this company of a subsidy of \$3,200 a mile, with an addition of 50 per cent on the cost in excess of \$15,000 a mile, not exceeding in all \$6,400 a mile, was authorized for 42 miles of a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the town of Joliette, with a spur into that town.

The company were admitted to contract for this work on January 19, 1901.

On the same date they were admitted to contract for two other works, specially subsidized by the same Act, viz., for a railway, vehicular and foot-passenger bridge from Bout de L'Isle to Charlemagne, at the junction of the Rivers Ottawa and St. Lawrence, \$150,000, and for a bridge across the Lac Ouareau river, \$15,000. No portion of these three subsidies has been paid during the past fiscal year.

Chatham Branch Railway Company.

(See Annual Report of 1893-94.)

Chignecto Marine Transport Company.

(See Annual Report for 1894-95.)

Coast Railway Company of Nova Scotia.

(See No. 403.)

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

By the Dominion Subsidy Act, 60-61 Vic., chap. 4 (1897), the grant of a subsidy to this company for 61 miles of their railway from Yarmouth to Port Clyde was autho-

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rized, the amount being \$3,200 a mile, with an addition of 50 per cent on the cost in excess of \$15,000 a mile, the whole subsidy not to exceed \$6,400 a mile.

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

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

Cobourg, Northumberland and Pacific Railway Company.

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

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

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

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

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

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

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

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

No payments have been made up to June 30, 1901.

Columbia and Kootenay Railway and Navigation Company.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report for 1891-92.)

Cornwallis Valley Railway Company.

(See Annual Report for 1891-92.)

Cumberland Railway and Coal Company.

(See Annual Report for 1894-95.)

Dominion Atlantic Railway Company.

(See Western Counties Railway Company.)

Dominion Eastern Railway Company.

(No. 399.)

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

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

Dominion Lime Company.

(See Annual Report for 1888-89.)

Dominion Coal Company.

(See Annual Report for 1895-96.)

Drummond County Railway Company.

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

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

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

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

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

By the Subsidy Act, 53 Vic., ch. 2 (1890), authority was given for a 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 February 2, 1891, the company were admitted to contract for this work.

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

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

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

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

The total payments up to June 30, 1895, amounted to \$287,936. During the fiscal year, 1898-99 the further sum of \$135,000 was paid, as subsidy for the line from Moose Park to Chaudière, making a total of \$423,936.

The Act 62-63 Vic., ch 6 (1899), authorized the Government to acquire the property of the company for the sum of \$1,600,000, less the subsidy above mentioned; and under date November 7, 1899, the company, by deed, conveyed their railway from Ste. Rosalie to Chaudière, together with the branch from St. Leonard to Nicolet to the Crown accordingly.

East Richelieu Valley Railway Company.

(See Annual Report of 1888-89.)

Elgin, Petittcodiac and Havelock Railway Company.

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

Erie and Huron Railway Company.

(See Annual Reports for 1886-87.)

Esquimalt and Nanaimo Railway Company.

(See Annual Reports for 1886-87.)

Fredericton and St. Mary's Bridge Company.

(See Annual Report for 1888-89.)

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Grand Trunk, Georgian Bay and Lake Erie Railway Company.

(See Annual Report for 1893-94.)

Grand Trunk Railway Company.

(See Nos. 410 and 491.)

By the Subsidy Act, 60-61 Vic., ch. 4 (1891), the grant of a subsidy to the Grand Trunk Railway Company towards the rebuilding and enlargement of the Victoria Bridge over the River St. Lawrence at Montreal was authorized, namely, 15 per cent of the cost of the work, not exceeding \$300,000, and a contract to this effect was made with the company on January 14, 1898.

By the Subsidy Act of 1900, 63-64 Vic., ch. 8, authority was given for increasing the grant of assistance to \$500,000, on condition that the tariff of tolls for passengers and vehicular traffic should be approved by the Governor in Council. On October 1, 1900, a supplementary agreement was made with the company accordingly.

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

The new bridge was completed in the fall of 1899, with an expenditure of \$1,810,-555.69.

During the past fiscal year the sum of \$228,371.75 was paid, making, up to June 30, 1901, a total of \$500,000, the whole amount of the subsidy granted.

Great Eastern Railway Company.

(See Annual Report for 1896-97.)

Great Northern Railway of Canada, formerly the Great Northern Railway Company.

(Name changed by the Act 62-63 Vic., ch. 68, 1899.)

(See Nos. 33, 37, 72, 79, 154, 215, 231, 308, 309, 346, 371, 380, 405, 407, 413, 416.)

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 ten miles.

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

The line was duly completed and inspected. Under an Order in Council of March 2, 1885, payment was made therefor, namely, 7.84 miles, \$25,088.

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

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

By the Act 53 Vic., ch. 2 (1890), the grant of a subsidy was authorized, limited to \$48,000, for a line from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, 15 miles.

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

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

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

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

By the Subsidy Act, 60-61 Vic., ch. 4. (1897), payment was authorized of unpaid balances for 67 miles of railway, between Montcalm and the junction with the Lower Laurentian Railway near St. Tite, not exceeding \$182,400 ; also a subsidy of 15 per cent, not exceeding \$52,500, of the cost of a bridge over the River Ottawa at Hawkesbury. Also, for 9 miles shortage in distance between Montcalm and St. Tite ; also, for 35 miles from St. Jérôme to Hawkesbury ; the last two being subsidies of \$3,200 per mile with 50 per cent of expenditure in excess of \$15,000 per mile, the total not to exceed \$6,400 per mile. Under this Act, an agreement was entered into with the company on September 5, 1898, for the construction of the 67 miles and the 9 miles mentioned, and an agreement under the same Act was made with them on October 12, 1899, for the construction of the 35 miles from St. Jérôme to Hawkesbury.

By the Subsidy Act, 62-63 Vic., ch. 7 (1899), the grant of a subsidy for 52½ miles of the company's railway between Montcalm and St. Tite Junction was authorized ;

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also for a branch from their main line to Shawenegan Falls, $6\frac{1}{2}$ miles, such subsidies being of \$3,200 a mile with an addition of 50 per cent of cost in excess of \$15,000 a mile, the whole subsidy not to exceed \$6,400 a mile.

The company were admitted to contract for the above by two separate agreements, that for the branch being dated July 4, 1900, and that for the railway between Montcalm and St. Tite Junction on the 26th of that month.

By the Subsidy Act, 62-63 Vic., ch. 7 (1899), authority was given for the grant of aid to this company towards the construction of three bridges to the extent of 15 per cent of the amount expended ; such subsidies being limited as follows :—

For the bridge across River St. Maurice.	\$ 16,425
“ “ du Loup.	15,000
“ “ Maskinongé.	15,000

Contracts in respect of all three bridges were made with the company under date December 21, 1899.

Under date February 28, 1900, a subsidy contract was made with the company for the construction of a bridge across the River Ottawa at Hawkesbury, the subsidy, limited to \$52,500, being that authorized by the Act 60-61 Vic., ch. 4 (1897). The line as subsidized and either built or under construction extends from Hawkesbury to St. Tite Junction with the Lower Laurentian Railway, a distance of 225 miles; passing through Grenville, Lachute, St. Jérôme, New Glasgow, Montcalm, Joliette and St. Boniface. The sections between St. Jérôme and Montcalm, 27·84 miles, and 20 miles westward from St. Tite to St. Boniface, on all of which the subsidy was \$3,200 a mile, making a total of \$153,088, have been built and paid for; also a short line, 6·75 miles from Lachute to St. Andrews, the subsidy for which amounted to \$21,600.

During the past fiscal year the subsidy has been paid to the extent of \$345,323.11 making the total payments to the company \$520,011.11 up to the 30th of June, 1901.

Gulf Shore Railway Company of New Brunswick.

(See Annual Report for 1899-1900.)

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, 357 and 400.)

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

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

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

During the past fiscal year the sum of \$132,800 has been paid, this being the total up to June 30, 1901.

Irondale, Bancroft and Ottawa Railway Company.

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

By the Act 47 Vic., ch. 8 (1884), the Irondale, Bancroft and Ottawa Railway Company were subsidized, to an extent not exceeding \$160,000, for a line about 50 miles long, to connect the Victoria branch of the Midland Railway with the village of Bancroft.

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

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

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

The total payments amounted to \$144,000, up to June 30, 1897. No further payments have been made up to June 30, 1901.

Joggins Railway Company.

(See Annual Report for 1891-92.)

Kingston, Napanee and Western Railway Company.

(See Napanee, Tamworth and Quebec Railway.)

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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 Reports for 1889-90 and 1893-94.)

(See No. 463.)

Up to the end of the fiscal year 1893-94, this company had received subsidies to the extent of \$338,731.

By the Subsidy Act, 62-63 Vic., ch. 7 (1899), the grant of a subsidy to this company was authorized, namely, for a line from Ridgetown, Ont., to St. Thomas, 44 miles, the subsidy to be payable only in the event of adequate running rights over the Canada Southern Railway being granted them on terms to be approved by the Railway Committee of the Privy Council.

The matter came before the Railway Committee, who decided that such rights could not be assured on terms that they could approve, and advised that a subsidy contract should be granted to the company.

On the 23rd of June, 1900, the company were admitted to contract accordingly.

No further payments have been made up to June 30, 1901.

L'Assomption Railway Company.

(See Annual Report of 1886-7.)

Leamington and St. Clair Railway Company.

(See Annual Report of 1888-9.)

Lake Temiscamingue Colonization Railway Company.

(See Annual Report of 1896-7.)

Lotbinière and Megantic Railway Company.

(See Annual Report of 1896-7.)

Massawippi Valley Railway Company.

(See No. 442.)

This company was incorporated by the Act of Canada of 1887, ch. 94.

By the Subsidy Act, 62-63 Vic., ch. 7, the grant of a subsidy to this company of \$3,200 a mile, with an addition of 50 per cent on cost in excess of \$15,000 a mile, but limited, in all, to \$6,400 a mile, was authorized for an extension of their railway to the village of Stanstead Plain, P.Q., 2½ miles.

A subsidy agreement was entered into with them for the work on December 18, 1899.

During the past fiscal year the sum of \$5,376 has been paid to the company, being the whole amount applicable.

SESSIONAL PAPER No. 20

Midland Railway Company.

(See Nos. 336, 421, 427.)

This company was incorporated by the Act of the province of Nova Scotia, 59 Vic., ch. 85 (1896), with power to build a railway from Windsor to a point at or near Maitland, thence, via Clifton, to a point between Truro and Stewiacke, on the Intercolonial; thence to Eastville; with extensions and branches to coal and iron fields, and shipping ports.

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

The Midland Railway Company having applied, were admitted to contract for these works on July 30, 1896.

By the Subsidy Act, 62-63 Vic., ch. 7 (1899), in lieu of the foregoing, there was authorized a grant of \$3,200 per mile, with a further grant of 50 per cent on cost in excess of \$15,000 per mile, up to a limit of \$6,400 per mile, for a railway from Windsor, N.S., to Truro via Clifton; and the Midland Railway Company having applied for it they were admitted to contract on December 7, 1899.

During the past fiscal year subsidy has been paid to the extent of \$170,264, being the total up to June 30, 1901.

Montfort Colonization Railway Company.

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

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

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

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

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

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

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

The total payments, up to June 30, 1899, amounted to \$167,440.

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 Annual Report for 1898-99.)

Napanee, Tamworth and Quebec Railway Company.

(Name changed to the Kingston, Napanee and Western Railway Company by the

Act 53 Vic., ch. 62.)

(See Annual Report of 1895-96.)

Nakusp and Slocan Railway Company.

(See Annual Report for 1894-95.)

New Brunswick and Prince Edward Island Railway Company.

(See Annual Report for 1888-89.)

New Glasgow Iron, Coal and Railway Company.

(See Annual Report of 1895-96.)

Northern and Pacific Junction Railway Company.

(See Annual Report of 1890-91.)

Northern and Western Railway Company.

(See Annual Report of 1889-90.)

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

SESSIONAL PAPER No. 20

Nova Scotia Central Railway Company.

(See Annual Report for 1898-99.)

Nova Scotia Southern Railway Company.

(See Annual Report for 1896-97.)

(See No. 431 and 432.)

No payments were made to this company under the subsidies previously granted, which lapsed ; and in 1899, by the Subsidy Act of that year, 62-63 Vic., ch. 7, the grants of the following were authorized, viz. : For a railway from a point on the Central Railway in the county of Lunenburg, N.S., 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 ; also for a railway from Indian Gardens, Queen's County, N.S., to Shelburne, 35 miles. In each case the subsidy was \$3,200 a mile, with an addition of 50 per cent of cost in excess of \$15,000 a mile, but not exceeding all \$6,400 a mile.

The above company having applied, were admitted to contract under both subsidies, the two agreements being dated January 27, 1900.

No payments have been made up to June 30, 1901.

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, 375 and 490.)

By the Act 47 Vic., ch. 8 (1884), the grant of a subsidy to the Ontario and Pacific Railway Company was authorized, namely, to the extent of \$262,400, on an estimated distance of 82 miles, for a line from Cornwall to Perth ; and on July 27, 1886, a contract was made with the company, under the authority of an Order in Council of the first day of that month, for the construction of such line, via Newington, Chrysler, Manotick and Franktown ; the road to be completed by July 1, 1888. This subsidy lapsed on July 1, 1888.

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

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

By the Subsidy Act of 1892, 55-56 Vic., ch. 5, the subsidy granted in 1899 was revoked, the length being set down as 53 87-100 miles. Under date June 1, 1895, a contract was entered into with the company for the construction of this line from Cornwall to Ottawa, 53.87 miles.

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

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

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

At the close of the year 1898-99 they had been paid \$172,384.

By the Subsidy Act 63-64 Vic., ch. 8 (1900), the grant of aid to the extent of \$90,000 was authorized for the company's bridge over the River St. Lawrence at Cornwall, and on October 10, 1900, they were admitted to contract for the work ; for which, being completed, they have been paid during the past fiscal year the said sum of \$90,000, making the total payments to this company, \$262,384, up to June 30, 1901.

Ontario and Quebec Railway Company.

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

Ontario and Rainy River Railway Company.

(Amalgamated with and under the name of the Canadian Northern Railway Company under the Act 62-63 Vic., ch. 80.)

(See Nos. 390, 433, 444 and 466.)

This company, incorporated by the Ontario Act 49 Vic., ch. 75, with powers to construct a railway from the town of Port Arthur to Rainy River and certain branches, was declared to be a work for the general advantage of Canada by the Dominion Act 54-55 Vic., ch. 82 (1891), which also extended the time for completion to August, 1898, and ratified agreements made by the company for running powers over the line of the Port Arthur, Duluth and Western Railway Company ; it further gave powers for the construction of a bridge across Rainy River. By the Act 61 Vic., ch. 81, the company were empowered to construct their railway either from Port Arthur or from a point on the Port Arthur, Duluth and Western Railway to a point on the boundary between the provinces of Ontario and Manitoba, and the time for completion of their works was extended.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), a subsidy to this company was authorized towards the construction of 80 miles of their railway from the Port Arthur, Duluth and Western Railway to Rainy Lake, namely, \$3,200 a mile, with an addition of 50 per cent, limited to \$3,200 a mile, on the cost in excess of \$15,000 a mile. This subsidy was definitely increased to \$6,400 a mile by the Subsidy Act 62-63 Vic., ch. 7 (1899).

The company were admitted to contract under these two subsidies by agreements dated July 29, 1899, and April 21, 1900, respectively.

By the Subsidy Act 62-63 Vic., ch. 7 (1899), authority was given for the grant to this company of a subsidy of \$6,400 a mile for 140 miles of railway from a point 80 miles west of Stanley Station, on the Port Arthur, Duluth and Western Railway, to Fort Frances. The company were admitted to contract thereunder on February 14, 1900.

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By the same Act the grant of a subsidy was authorized for 70 miles of railway from Fort Frances to or near the mouth of Rainy River. This company applied and were admitted to contract thereunder on February 14, 1900. By a special covenant in this contract they waived claim to any subsidy for this 70 miles in excess of \$3,200 a mile.

Under authority of the Act 62-63 Vic., ch. 80 (1899), the company was amalgamated with, and under the name of, the Canadian Northern Railway Company, the agreement in this regard being approved by an Order in Council of May 4, 1900. The Canadian Northern Railway Company was formed by the amalgamation of the Winnipeg Great Northern Railway Company and the Lake Manitoba Railway and Canal Company under the Act 61 Vic., ch. 70 (1898), the agreement for that purpose being approved by an Order in Council of January 13, 1899. With the same company there is also amalgamated the Manitoba and South Eastern Railway Company under the Act 62-63 Vic., ch. 75 (1899), the agreement to that effect being approved by an Order in Council of May 2, 1900. The above railways are comprised in the Canadian Northern Railway system and under the name of that company.

During the past fiscal year payments of subsidies have been made to the extent of \$537,600, the total amount paid up to June 30, 1901.

Ontario, Belmont and Northern Railway Company.

(See Annual Report for 1896-97.)

Orford Mountain Railway Company.

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

Ottawa and New York Railway Company.

(See Ontario and Pacific Railway Company.)

Ottawa, Arnprior and Parry Sound Railway Company.

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

(See Annual Report for 1898-99.)

Ottawa and Gatineau Valley Railway Company.

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

(Name further changed to the Ottawa Northern and Western Railway Company, by the Act 1 Edw. VII., ch. 80.)

(See Nos. 8, 26, 58, 151, 305, 349, 379, 409, 414 and 492.)

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).

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

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

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

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), in lieu of this subsidy, the said 20 miles was 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.

The company were admitted to contract under this subsidy on July 29, 1899.

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), the unpaid balance, \$35,872, of the vote of 1893 was revoted, and a contract was made with the company thereunder on July 29, 1899.

The total payments up to June 30, 1894, amounted to \$284,128. No further payments have been made up to June 30, 1901.

Under dates September 21, 1899, and November 26, 1900, contracts were entered into for the construction, under subsidy, of a bridge across the River Ottawa at Ottawa, being made with this company conjointly with the Pontiac Pacific Junction Railway Company (which see.)

Ottawa Northern and Western Railway Company.

(See Ottawa and Gatineau Valley Railway Company.)

Oshawa Railway and Navigation Company

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

(See Annual Report for 1895-96.)

Parry Sound Colonization Railway Company.

(See Annual Report for 1895-96.)

Pembroke Southern Railway Company.

(See Annual Report for 1899-1900.)

Philipsburg Junction Railway and Quarry Company.

(See Annual Report for 1894-95.)

Now the Philipsburg Railway and Quarry Company. Name changed by 58 Vic., ch. 65 (1895).

(See Annual Report for 1899-1900.)

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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 1899-1900.)

Pontiac Pacific Junction Railway Company.

(See Nos. 25, 138, 211, 294, 329, 330, 331, 335, 408 and 492.)

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

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

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

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

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

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

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

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

By the Subsidy Act 55-56 Vic., ch. 5, clause 4 (1892), the balance unpaid of the subsidy voted in 1884 was revoked; and by the special Act of 1892, ch. 56, the time

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for the commencement of a bridge over the River Ottawa, at or near Ottawa, was extended for two years, and its completion for five years from July 9, 1892. The time for the completion of the line to Pembroke was also extended for four years from that date.

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

By the same Act the unpaid balance of the subsidy voted by ch. 8 of the Act of 1884, less \$24,000 for the $7\frac{1}{2}$ 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 for 85 miles from Aylmer to Pembroke, and for bridging the River Ottawa, granted by the Acts of 1894, such balances amounting to \$114,272, were revoked. A contract was made with the company thereunder on July 29, 1899.

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. The company were admitted to contract thereunder on July 29, 1899.

By the end of the fiscal year, 1894-95 the total subsidy paid amounted to \$193,578. No further payment has been made under the above subsidies up to June 30, 1901.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), authority was given for the grant of subsidy for a railway and traffic bridge over the River Ottawa at Ottawa, to the extent of 15 per cent of its cost but not exceeding \$112,500. A contract thereunder was made with the Pontiac Pacific Junction Railway Company and the Ottawa and Gatineau Railway Company, jointly, on September 21, 1899. This subsidy was increased to \$212,500 by the Subsidy Act of 1900, on the condition that free vehicular and foot passenger facilities should be provided, and a further contract was made with the companies named on November 26, 1900.

During the past fiscal year, the bridge and its approaches being fully completed, the whole of the subsidy for it was paid, namely, \$212,500.

The structure is composed of one cantilever span of 555.9 feet, two anchor arm spans of 247 feet each, one truss span of 247 feet and one of 140 feet, with a long steel trestle approach. It comprises a single railroad track, two tramway tracks and two roadways for ordinary traffic.

Quebec Bridge Company.

(See No. 467.)

This company was incorporated by the Dominion Act 50-51 Vic., ch. 98 (1887), with powers to construct a railway bridge over the River St. Lawrence near Quebec, and to arrange the same for the use of foot passengers and vehicles, and to construct

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and operate lines of railway to connect with existing or future lines of railway on each side of the river.

By the Act 60-61 Vic., ch. 69 (1897), the powers of the company were revised, and the time for construction was extended to June 29, 1902.

By the Act 63-64 Vic., ch. 115 (1900), the time for completion was extended to June 14, 1905, and the company were further empowered to arrange for the placing of electric wires on the bridge and connecting railways, and for the passage of electric street railway or tram cars.

By the Railway Subsidy Act 62-63 Vic., ch. 7 (1899), the grant of a subsidy to this company of \$1,000,000 was authorized, for a railway bridge over the River St. Lawrence at Chaudière Basin, and by the Act of 1900, ch. 8, clause 10, it was made applicable, one-third to the substructure and approaches and two-thirds to the superstructure.

On November 12, 1900, the company were admitted to contract for this subsidy work.

The site and plans of the bridge were approved by the Railway Committee of the Privy Council, and by an Order in Council dated May 16, 1898.

The structure is to be a cantilever bridge, composed of two approach spans of 220 feet each two anchor spans of 500 feet each, and a centre span of 1,800 feet from centre to centre of the piers. The under side of the bridge will give a height of 150 feet above high water. The pneumatic system is adopted in the construction of the piers. When completed, it will comprise a double track railroad, two lines for electric tramways, and two ordinary roads for vehicles and foot passengers.

The company have been paid a total of \$75,000 up to June 30, 1901.

Quebec Central Railway Company.

(See Annual Report of 1895-96.)

Quebec and Lake St. John Railway Company.

(See Annual Report of 1895-96.)

Quebec, Montmorency and Charlevoix Railway Company.

(See Annual Report for 1894-95.)

Restigouche and Western Railway Company.

(See No. 384.)

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

By the Subsidy Act 60-61 Vic., ch. 4 (1897), there was authorized a subsidy for a railway from Campbellton, on the I.C.R., towards Grand Falls, N.B., 20 miles,

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\$3,200 a mile, with an addition of 50 per cent on the cost in excess of \$15,000 a mile ; the whole not to exceed \$6,400 a mile. This was in lieu of a previous subsidy to a specified company.

The Restigouche and Western Railway Company having applied were admitted to contract for the work on December 24, 1897. The total payments up to June 30, 1900, amounted to \$46,930 ; no further payment has been made during the past fiscal year.

Schomberg and Aurora Railway Company.

(See No. 386.)

This company was incorporated by the Dominion Act 59 Vic., ch. 34 (1896), with powers to build a line of railway from a point on the Grand Trunk Railway between King and Newmarket to the village of Schomberg.

By the Subsidy Act 60-61 Vic., ch. 4 (1897), the grant of a subsidy of \$3,200 a mile for 15 miles between the point named above, with addition of 50 per cent of the cost in excess of \$15,000 a mile, but not exceeding in all \$6,400 a mile was authorized.

A subsidy agreement was entered into with the company accordingly on July 29, 1899.

No payments have been made up to June 30, 1901.

Shuswap and Okanagan Railway Company.

(See Annual Report of 1894-95.)

South Norfolk Railway Company.

(See Annual Report of 1888-89.)

South Shore Railway Company.

(See Annual Report of 1896-97.)

South Shore Railway Company, Quebec.

• (See Nos. 441, 468, 469 and 513.)

This company was incorporated by the Quebec Act of 1894, ch. 72, and this undertaking was declared to be a work for the general advantage of Canada by the Dominion Act, 60 Vic., ch. 10 (1896), which authorized the construction of a line of railway from a point in the town of Lévis to a point on the Canada Atlantic Railway at or near Valleyfield.

By the Subsidy Act, 62-63 Vic., ch. 7 (1899), the grant of a subsidy to this company for 82 miles of railway from Sorel Junction to Lotbinière was authorized, \$3,200 a mile, with an addition of 50 per cent of cost in excess of \$15,000 a mile, but not exceeding in the whole \$6,400 a mile. The company were admitted to contract for this work on May 9, 1900.

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By the same Act the grant of a subsidy was authorized towards the construction of a bridge over the River Richelieu at Sorel, not exceeding \$35,000. The company were admitted to contract for this work on December 23, 1899.

By the same Act the grant of a subsidy to this company was authorized towards the renewal of the railway bridge over the River Yamaska at Yamaska, the amount being \$50,000. They were admitted to contract for the work on May 9, 1900.

By the Subsidy Act, 63-64 Vic., ch. 8 (1900), the grant of subsidy to the extent of \$50,000 was authorized for a railway bridge over the River St. Francis, such bridge to be free to foot passengers and vehicles. A contract was entered into with the company for the work on June 29, 1901.

During the past fiscal year there was paid the sum of \$88,400, making the total payments up to June 30, 1901, \$119,290.19. This, however, includes the sum of \$16,-164.63 for completing the Montreal and Sorel Railway (see report of 1899-1900).

St. Catharines and Niagara Central Railway Company.

(See Annual Report for 1895-96.)

St. Clair Frontier Tunnel Company.

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

St. Gabriel de Brandon and Ste. Emélie de l'Energie Railway Company.

See (No. 381.)

By the Subsidy Act, 60-61 Vic., ch. 4 (1897), in lieu of a previous subsidy authorized in 1894, a subsidy of \$3,200 a mile, with an addition, not exceeding \$3,200 a mile, of 50 per cent of cost in excess of \$15,000 a mile, was authorized to be granted to this company for 15 miles of railway from St. Gabriel to Ste. Emélie de l'Energie and for 5 miles from a point on the main line to St. Jean de Matha.

A subsidy agreement for this work was entered into with the company on July 29, 1899.

No portion of the subsidy has been paid up to June 30, 1901.

St. John Valley and Rivière du Loup Railway Company.

(See Annual Report for 1893-94.)

St. Stephen and Milltown Railway Company.

(See Annual Report for 1895-96.)

(No. 393.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for 41 miles of their railway from Milltown to St. Stephen, \$3,200 a mile, with 50 per cent additional on the cost in excess of \$15,000 a mile, not exceeding in all \$6,400 a mile. The company were admitted to contract for this work on September 29, 1897. Under the previous subsidy \$14,848 was paid. No payments have been made under the present subsidy up to June 30, 1901.

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Stewiacke Valley and Lansdowne Railway Company.

(See Annual Report for 1895-96.)

St. Lawrence and Adirondack Railway Company.

(See Annual Report for 1893-94.)

(No. 394.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for $13\frac{1}{2}$ miles of their railway from Beauharnois to Caughnawaga, \$3,200 a mile, with an addition of 50 per cent on expenditure in excess of \$15,000 a mile, such subsidy not to exceed in the whole \$6,400 a mile.

The company was admitted to contract on October 16, 1897. No payments have been made under this subsidy up to June 30, 1901. The payments under the previous subsidy aggregated \$149,481.60.

St. Lawrence, Lower Laurentian and Saguenay Railway Company.

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

(See Annual Report for 1891-92.)

St. Louis and Richibucto Railway Company.

(See Annual Report for 1884-85.)

St. Mary's River Railway Company.

(See No. 495.)

This company was incorporated by the Dominion Act 63-64 Vic., ch. 79 (1900), with powers to construct a railway from some point between Lethbridge and Sterling, on the railway of the Alberta Railway and Coal Company, to some point on the international boundary between ranges 24 and 30 west of the fourth meridian, N.W.T., and, with the approval of the Governor General in Council, to build branches, limited to 15 miles in length each.

By the Subsidy Act of 1900, 63-64 Vic., ch. 8, the grant of aid to the extent of \$2,500 a mile for 30 miles of railway, from the Alberta Railway and Coal Company's Railway, towards Cardston, Alberta, was authorized, and the above company having applied for it, they were admitted to contract on September 10, 1900.

Up to June 30, 1901, they have been paid subsidy to the extent of \$75,000.

Témiscouata Railway Company—Rivière du Loup to Edmundston.

(See Annual Report for 1892-93.)

Thousand Islands Railway Company.

(See Annual Report for 1895-96.)

By the Subsidy Act 63-64 Vic., ch. 8 (1900), a further subsidy was authorized for 2 miles of an extension from the present northerly terminus, \$3,200 a mile, with an

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addition of 50 per cent on cost in excess of \$15,000 a mile, not exceeding in all \$6,400 a mile.

A contract was made with the company accordingly on March 15, 1901 : no payment has been made during the past fiscal year.

Tilsonburg, Lake Erie and Pacific Railway Company.

(See Annual Report for 1895-96.)

(No. 387.)

A further subsidy to this company was authorized by the Act 60-61 Vic., ch. 4 (1897), namely, for 3.50 miles from the then terminus, through Tilsonburg to the Michigan Railway, \$3,200 a mile, with an addition of 50 per cent of the cost in excess of \$15,000 a mile, the whole not to exceed \$6,400 a mile.

Under date, December 4, 1897, the company were admitted to contract. During the past fiscal year the sum of \$7,159.48 was paid from this subsidy, making, with their previous subsidy of \$51,200, paid in 1895-96, a total of \$69,271.48, up to June 30, 1901.

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, toward Sorel, was authorized.

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

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

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

During the past fiscal year no payments were made, leaving the total payments \$188,816, up to June 30, 1901.

Vaudreuil and Prescott Railway Company.
(See *Montreal and Ottawa Railway Company*.)

Waterloo Junction Railway Company.
(See Annual Report for 1891-92.)

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

(Name further changed to **The Dominion Atlantic Railway Company** by 57-58 Vic.,
ch. 69.)
(See Annual Report for 1894-95.)

West Ontario Pacific Railway Company.
(Leased to *Ontario and Quebec Railway Company—C. P. R.*)
(See Annual Report of 1890-91.)

Woodstock and Centreville Railway Company.
(See Annual Report for 1895-96.)

Yarmouth and Annapolis Railway Company.
(See *Western Counties Railway Company*.)

York and Carleton Railway Company.
(See No. 423.)

This company was incorporated by the Act of New Brunswick, 1887, ch. 44.

By the Subsidy Act 62-63 Vic., ch. 7 (1899), the grant of a subsidy of \$3,200 a mile, with a further subsidy of 50 per cent on the cost in excess of \$15,000 a mile, the total subsidy not to exceed \$6,400 a mile, was authorized for 6 miles of railway from Cross Creek Station, on the Canada Eastern Railway, to Stanley village, N.B., for which this company applied.

A subsidy agreement thereunder was entered into with them on November 23, 1899.

No payments have been made up to June 30, 1901.

LAND SUBSIDIES.

A number of companies have been aided by subsidies in land, duly authorized by Parliament and granted by the Department of the Interior, to whose report reference must be had for information as to their position. Certain details in respect of these roads will, however, be found in the annual report of this department for 1895-96.

CANALS.

The total expenditure charged to Capital Account on the original construction and the enlargement of the several canals of the Dominion, up to June 30, 1901, was \$81,404,543.98. A further sum of \$17,218,448.67 has been expended on the repairs, maintenance and operation of these works, making a total of \$98,622,992.65.* The total revenue derived, including tolls, and rentals of lands and water powers, amounted to \$12,717,343.01. (See the Accountant's statements, Part II., p, 28, 41 and 45.)

The total expenditure for the fiscal year ended on June 30, 1901, including 'canals in general,' was as follows :—

On construction and enlargement a total of \$2,514,214.93, and a further sum of \$638,909.72 for repairs, renewals, and operation, making a total for the year of \$3,153,124.65.

The total net revenue collected for the fiscal year was \$315,425.69, a decrease compared with the net revenue of the previous year of \$7,217.87. The net canal tolls amounted to \$26,129.40, a decrease of \$11,404.42. On July 1, 1900, the balance of rents unpaid was \$68,735.52. The rents accrued during the year amounted to \$60,034.92, and the rents received to \$54,386.82, an increase of \$4,277.78, leaving a balance of rents uncollected on June 30, 1901, amounting to \$70,760.32.

The total expenditure on canal staff and maintenance, repairs and renewals amounted, for the year, to \$638,909.72, a decrease of \$72,690.34, and the total net receipts amounting as above, to \$315,425.69, the amount of expenditure in excess of receipts was \$323,484.03, compared with an excess expenditure the previous year of \$388,957.20.

The above figures relate to the fiscal year 1900-1901, but very voluminous statistics relating to the canal traffic, and various commercial statistics for the *season of navigation* of the year 1900, will be found in Part V., 'Canal Statistics.'

The total traffic through the several canals of the Dominion for the season of 1900, amounted to 5,013,693 tons, a decrease of 1,212,231 tons compared with the previous year. This includes 2,035,667 tons passing through Sault Ste. Marie Canal, which is free of toll.

The following features of the principal canal traffic during the season of 1900, will be of interest :—

On the Welland Canal, 719,360 tons of freight were moved, a decrease of 70,410 tons, of which 379,658 tons were agricultural products, a decrease of 82,865 tons, and 115,217 tons produced of the forest ; of coal, 47,392 tons were carried. 601,130 tons passed eastward and 118,230 westward ; 688,557 tons were through freight, of which 579,312 tons passed eastward.

Of this through freight, Canadian vessels carried 319,497 tons, an increase of 9,911 tons, and United States vessels 369,060 tons, a decrease of 91,012 tons.

* These figures give the aggregate expenditure on specific canals and also include the sum of \$232,851.01 miscellaneous canal expenditures.

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The total freight passed eastward and westward through this canal from United States ports to United States ports was 318,529 tons, a decrease of 42,000 tons compared with the year 1899.

The quantity of grain passed down the Welland and the St. Lawrence canals to Montreal was 244,661 tons, a decrease of 88,085 tons compared with the previous year; of this, 38,403 tons were transhipped at Ogdensburg, as against 48,828 tons transhipped in 1899. The further quantity of 51,267 tons of grain passed down the St. Lawrence canals, only, to Montreal, making the total 295,928 tons.

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

On the St. Lawrence canals, 1,115,171 tons of freight were moved, a decrease of 233,922; of which 667,584 were eastbound through freight, and 29,979 tons westbound through freight; 693,734 tons were agricultural products, 437,423 tons merchandise, 375,239 tons coal, and 95,518 tons forest products.

Fifteen cargoes of grain, aggregating 7,924 tons, were taken down direct to Montreal through the Welland and St. Lawrence canals, as against two cargoes, aggregating 558 tons, in 1899.

On the Ottawa River canals, the total quantity of freight moved was 389,145 tons, a decrease of 130,960, of which 378,801 tons were produce of the forest.

On the Chambly Canal, 348,561 tons were moved, a decrease of 14,074, of which 205,160 tons were produce of the forest, and 92,598 tons coal.

On the Rideau Canal, 75,432 tons were carried, an increase of 5,527; 37,925 tons being the product of the forest, and 17,292 tons coal.

On the St. Peter's Canal, 73,813 tons were carried, an increase of 3,009, of which 42,548 tons were merchandise, and 32,418 tons coal.

On the Murray Canal, 19,067 tons passed, an increase of 2,279, and 4,496 tons of this were the product of the forest.

On the Trent Valley Canal, 43,572 tons were moved, of which 42,292 tons were the product of the forest.

On the Sault Ste. Marie Canal, the total movement of freight was 2,035,677 tons, being a decrease of 970,987 tons, carried in 3,081 vessels, the number of lockages being 2,205. Of wheat, 9,291,114 bushels, and of other grain 1,113,414 bushels were carried; 647,944 barrels of flour, 999,591 tons of iron ore, 530,298 tons of coal, and 7,435,806 feet, board measure, of lumber; all these items show a considerable decrease. The total traffic at this point, accommodated by the two canals, the American and Canadian, amounted to 25,643,031 tons, an increase of 384,228 tons, carried in 19,450 vessels, a decrease of 779. The total quantity of wheat carried was 40,616,807 bushels, a decrease of 17,684,875, and of other grain 16,439,208 bushels, a decrease of 13,898,147. Of lumber, the total was 905,528,806 feet, board measure, a decrease of 127,073,191.

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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 peas passed down to Montreal through the Welland and St. Lawrence canals to the extent of 244,661 tons, a decrease of 88,085 tons, compared with the previous year, the quantity carried to Montreal via the Canadian Pacific and Grand Trunk Railways amounted to 229,624 tons, an increase of 20,434 tons. In addition, during the past three seasons, a new system of grain traffic has come into operation, viz., from Depot Harbour, on Georgian Bay, Lake Huron, over the line of the Canada Atlantic Railway to Coteau Landing, at the head of the Soulanges Canal, thence by barge to Montreal. In the season of 1899, the total freight carried by this route to Montreal was 309,573 tons, of which 259,531 tons were grain. In the season of 1900, 319,865 tons were carried, of which 303,259 tons were grain (including 153 tons of peas and buckwheat). Of the grain so carried in 1899, 66,635 tons were wheat and 174,932 corn, and in 1900, 126,963 tons were wheat and 154,815 tons corn.

The quantity of grain carried to tidewater on the New York State canals was 308,945 tons, a decrease of 107,755 tons, while the quantity carried by the railways of the state to tidewater amounted to 4,396,441 tons, a decrease of 246,511.

Of the total east and west-bound freight carried by the canals of the State of New York (the Erie, the Champlain, the Black River, the Cayuga and Seneca and the Oswego) and the competing railways (the New York Central and the Erie Railroad) respectively (amounting in 1900 to 65,433,541 tons—greater by 13,730,780 tons than in 1899), the proportion carried by the canals has fallen steadily from 68·9 per cent in 1859 and 47·0 per cent in 1869, to 6·8 per cent in 1898, 7·2 per cent in 1899, and 5·2 in 1900. These canals carried, in 1900, 3,345,941 tons, a decrease of 340,110 tons; of this quantity, 857,607 tons were through freight eastwards to tide-water, 596,246 tons coming through the Erie Canal. This eastward bound through freight is answerable for the total decrease to the extent of 307,958 tons.

The falling-off in the United States canal traffic is officially ascribed to the rate war between shippers and boatmen, the unusually late opening of navigation, the strike in the coal regions, which reduced shipments, and the fact that a number of old boats were put out of commission on account of their condition, and there were but few boats built to take their place, owing to uncertainty as to the action that might be adopted in regard of improvement to canal navigation.

In attempting to draw deductions from the above figures in dealing with the great question of waterways versus railways as freight carriers, the dimensions of these United States canals, their length, and the difficulties of lock passage must be kept in mind. The enlarged Erie Canal between Buffalo and Albany, which is, of course, the main factor, is 850½ miles long, comprises 72 locks, 110 x 18 feet, with a depth of seven feet of water, accommodating, as a maximum, vessels of 240 tons burden.

On the opening of navigation in the spring of 1900, by means of the enlarged Canadian canal systems and the intermediate waterways (though not fully completed).

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a minimum depth of fourteen feet of water from Lake Superior to the head of ocean navigation at Montreal was afforded.

The extent of the improved facilities of communication so obtained, and their value to commercial interests may be understood from the fact that in place of the old limit of lock dimensions, viz., length, 200 feet ; width, 45 feet ; depth of water on the sills, 9 feet, the enlarged locks are 270 feet in length, 45 feet in width, with 14 feet of water on the sills, accommodating vessels 255 feet long and 44 feet wide. As an index to the carrying power of the new canal works, it may be observed that a typical vessel, the propellor *Aragon*, whose length is 247 feet and width 42.6 feet, has passed through the enlarged Welland Canal, drawing 14 feet of water and carrying 2,212 tons of corn.

The through route between Montreal and Port Arthur, at the head of Lake Superior, now open as a 14-foot navigation, comprises 73 miles of canal, with 48 locks, and 1,150 miles of river and lake waters, or a total of 1,223 miles. To Duluth the total distance is 1,357 miles, and to Chicago 1,286 miles. A summary of this route will be found in the Chief Engineer's report, Part I., and further details of the several works in the pages immediately following.

The approaches to the canals and the channels through the intermediate river reaches are well defined, and are lighted with gas buoys, admitting of safe navigation, if in the hands of competent pilots, both by day and night. In the case of the Soulanges Canal, the canal is well lighted throughout by electricity, and will next season be operated by the same power ; contracts have been made for electrical installation for similar purposes on the Cornwall and Lachine canals.

The time has not yet arrived, though probably it is not far distant, for appraising the full value of the Canadian through canal system from Lake Superior to tide-water. The decrease for the season of 1900, noted in the case of the canals of the State of New York, was shared by the Canadian route, and probably the causes were, in some respects, similar. The facilities for the passage of vessels of large tonnage are now, it is true, in good working order, but any great increase in traffic cannot be looked for until the last contractor's dredge has been moved out of these waters, and the full system of channel buoying and lighting has been completed, as time and experience may show its requirements ; further, until the pilots acquire the necessary experience and confidence (a point the importance of which can hardly be over-estimated), and, lastly, until ship-owners build in greater numbers the larger type of vessel which this route is capable of accommodating.*

*NOTE.—From 'the Blue-book of American Shipping,' 1900.

'The approximate value of vessels built in ship yards of the great lakes during the past year is \$10,500,000. Nearly all of these vessels are steel freight steamers of 450 to 500 feet in length and of 7,000 to 8,000 net tons capacity, equipped with quadruple engines of 1,800 to 3,000 horse power, and in most cases with water tube boilers. The year has, of course, been one of the most prosperous in the history of lake ship building, on account of the boom in iron and steel lines. There are still a large number of ships under construction in the lake yards, some of them not to come out until the spring of 1901, and there is every reason to expect, in view of the profits assured to ship owners, by reason of contracts made last fall, a renewal of orders that will give the yards nearly as much work for another winter as they have had in the past year.'

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The advantages, however, of the Canadian route are so enormously preponderant, that appreciation of its commercial value is simply a question of time. Considerable progress has been made with the improvements at Port Colborne, the Lake Erie entrance of the Welland Canal. These improvements comprise the deepening of the approach to the canal to 22 feet, and the construction of two docks, with piers, 200 feet wide, upon which grain elevators will be erected for the transference of grain to vessels adapted to the canal navigation, when required. In addition to the works undertaken by this department a breakwater, about a mile in length, is being constructed across the entrance to the harbour by the Department of Public Works, who will also dredge out the area so contained, thus greatly increasing the accommodation, and ensuring safety at this important point.

The deepening of the approaches to the Sault Ste. Marie is being carried on at the lower entrance. The present depth of these approaches is limited to the accommodation of vessels of 17 feet 6 inches draught ; they will be deepened to 21 feet 6 inches, thus enabling the depth of the lock (which is the same as that of the United States lock, on the other side of the river) to be utilized to its full extent.

The construction of the new works for the improvement and extension of the Trent Canal system is proceeding. When the present contracts are completed, a six feet navigation will be afforded from Lake Simcoe to Heely's Falls, a distance of about 160 miles, leaving the portion between Heely's Falls and Lake Ontario, and the portion from the head of Lake Simcoe to Georgian Bay, Lake Huron, still to be dealt with ; the total distance between the Bay of Quinté, Lake Ontario and Georgian Bay is about 192 miles.

During the years 1899 and 1900, under special appropriations voted by parliament, surveys have been conducted on the upper River Ottawa with a view to ascertaining the feasibility and probable cost of constructing a canal system, which will give a 14 feet navigation from Georgian Bay down that river to Montreal, a scheme proposed many years ago and lately revived by private parties with considerable energy. The results of these surveys will be found in a special report from the engineer in charge, Mr. H. A. F. Macleod, attached as an appendix to the present volume.

His conclusions are that the canal can be constructed at an estimated cost, for a 14 feet navigation of \$23,898,000, and for a 20 feet navigation of \$72,627,000. The distance from Georgian Bay to Montreal is set down at 430 miles.

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

If the number of new ships ordered for lake trade should be limited, the difference will probably be made up in steel freight steamers of about 3,000 tons capacity, to be built for both lake and Atlantic service—vessels suited to passage through the Canadian canals from the lakes to the sea board. The canal type of steamer is about 255 feet over all, 42 feet beam and 26 feet moulded depth. About a dozen such vessels are now in commission on the lakes, and they might be sent on to the seaboard for coast service at any time. The few that have gone to the Atlantic have proven so successful in the trade to Porto Rico and down the United States coast, that it is proposed to equip four others, now under construction at the works of the American Ship Building Company, for all kinds of service on salt water as well as on the lakes. Companies are forming for the construction and operation of a very large fleet of steamers of this kind, and it is expected that the lake builders will profit largely on this score.

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to the progress and position of the works of enlargement and construction now being carried on.

As being responsible for the efficient working of the department, and as very practically conscious of its needs and deficiencies, I desire to emphatically repeat here the observations with which I closed my last year's report :—

‘ In concluding this report, it is only proper that I should draw attention to the rapid growth of the country during the last few years ; specially in the enormous increase in the area of its development, and the interest of its business operations, which involve important questions, directly and indirectly affecting the great transportation problems with which this department is concerned, and which it is called upon to deal with authoritatively. With this rapid growth, the inner or departmental staff proper, has not kept pace, and I must strongly urge the necessity, which is very apparent, of its amplification and its adjustment to the conditions of the times, if the wide and ever expanding field it is required to cover, is to be properly and comprehensively treated.

‘ In addition to the very voluminous correspondence with the general public, its necessary record and filing, the supervision of the expenditure entailed by the government railway and canal works in operation and under construction, and the revenue derivable from them, the leasing of lands and water powers, the settlement of claims, the letting of contracts, and the preparation of (often very extended) returns, giving information required by the House of Commons and the Senate, there is also the inspection of completed portions of subsidized railways, and of all railways before opened to traffic ; the inspection of railway bridge structures, with the examination of all their plans, required to be sent in for approval ; inspection of railways subject to complaint of any kind ; the examination for approval of railway by-laws, whether of tariff or otherwise, and the carrying out of varied and complicated duties entailed on the Railway Committee of the Privy Council ; further, the compilation, analysis and printing of extensive statistics relating to all Canadian railways, and of similar statistics relating to the traffic on the canals of the Dominion. In justice to the work to be done and to those who are required to perform it, I am compelled to state that the staff is inadequate.’

I have the honour to be, sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Deputy of the Minister 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



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 :—

Halifax to Montreal.

	Miles.
1. Intercolonial Railway, via Lévis, to Montreal	837
2. Intercolonial Railway to St. John	275
Canadian Pacific Railway, from St. John to Montreal	480
Total	755
3. Intercolonial Railway to St. John	275
Canadian Pacific Railway, from St. John to Vanceboro'...	90
Maine Central Railway, from Vanceboro' to Danville Junction	224
Grand Trunk Railway, from Danville Junction to Montreal.	270
Total	859
4. Intercolonial Railway to St. John	275
Canadian Pacific Railway from St. John to Edmundston..	170
Temiscouata Railway, from Edmundston to Rivière du Loup	81
Intercolonial Railway, from Rivière du Loup to Montreal ..	278
Total	804

St. John to Montreal.

1. Intercolonial Railway, via Lévis, to Montreal.....	740
2. Canadian Pacific Railway to Montreal	480
3. Canadian Pacific Railway to Edmundston	170
Temiscouata Railway, from Edmundston to Rivière du Loup	81
Intercolonial Railway, from Rivière du Loup to Montreal..	278
Total	529

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MONTREAL, OR QUEBEC, TO THE PACIFIC COAST.

Montreal to Vancouver.

	Miles.
1. Canadian Pacific Railway to Vancouver..	2,906
2. Grand Trunk Railway to North Bay....	560
Canadian Pacific Railway from North Bay to Vancouver.	2,542
Total..	3,102

Quebec to Vancouver.

	Miles.
1. Canadian Pacific Railway to Vancouver..	3,052
2. Grand Trunk Railway to Montreal..	172
Canadian Pacific Railway from Montreal to Vancouver..	2,906
Total	3,078
3. Grand Trunk Railway to North Bay..	732
Canadian Pacific Railway from North Bay to Vancouver..	2,542
Total	3,274

The Canadian Pacific Railway was opened for through traffic on June 28, 1886.

INTERCOLONIAL RAILWAY.

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

The total length of the road operated during the year ended June 30, 1901, was 1,301 miles, and for freight branches 27 miles, making a total of 1,328 miles.

The following are the through distances :—

	Miles.
Halifax to Montreal, via Lévis..	837
St. John to Montreal, via Lévis	740
Sydney to Montreal, via Lévis	990
North Sydney to Montreal, via Lévis..	983

Freight is carried direct via St. Henri to Montreal, which would reduce each of the above distances by 6 miles.

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WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial Railway, to Windsor, a distance of 32 miles.

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
Total	<u>211</u>

Communication between the Prince Edward Island Railway and the Intercolonial Railway is afforded in summer by steamer between Summerside and Point du Chene, 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 ice boats between Cape Traverse on Prince Edward Island and Cape Tormentine on the mainland, a distance of about 9 miles, at which latter place connection is made with the New Brunswick and Prince Edward Railway about 40 miles in length, connecting with the Intercolonial Railway at Sackville. This winter service across the Straits of Northumberland is efficiently worked by the Marine and Fisheries Department.

CANALS.

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

First.—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine Canal.	8½
Lake St. Louis and River St. Lawrence.	16
2. Soulanges Canal.	14
Lake St. Francis and River St. Lawrence.	33
3. Cornwall Canal	11
River St. Lawrence	5

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	Miles.
4. Farran's Point Canal	1
River St. Lawrence	10
5. Rapide Plat Canal	3½
River St. Lawrence	4
6. Galops Canal	7½
River St. Lawrence and Lake Ontario	236
7. Welland Canal	26½
Lake Erie, Detroit River, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie Canal	1½
Lake Superior to Port Arthur	266
Total	1,223½
To Duluth	1,357
Chicago	1,286

Second.—Ottawa to Lake Champlain.

1. Grenville, 2. Carillon, 3. St. Anne's, 4. Chambly, 5. St. Ours Canals.

Third.—Ottawa to Kingston and Perth.

1. Rideau Canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent Canal (not completed).

Fifth.—Ocean to the Bras d'Or Lakes.

1. St. Peter's Canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,200 statute miles. The distance to Duluth is 2,343 miles. The distance to Chicago 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the

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channel at low water was 10 feet 6 inches. By the year 1869 this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

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

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

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

The Dominion canals, constructed between Montreal and Lake Superior are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 73 miles ; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

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

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

LACHINE CANAL.

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

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

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

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

SOULANGES CANAL.

Length of canal.....	14 statute miles.
Number of locks	{ lift .....4
	{ guard .....1
Dimensions of locks	280 feet by 45 feet.
Total rise or lockage	84 feet
Depth of water on sills	15 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface.....	164 "
Number of arc lights	219 of 2,000 c. p. each

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascade Rapids, Cedar Rapids and Coteau Rapids.

From the head of the Lachine to the foot of the Soulanges the distance is sixteen miles.

CORNWALL CANAL.

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

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

From the head of the Soulanges to the foot of the Cornwall Canal there is a stretch through Lake St. Francis, of $32\frac{1}{2}$ miles, which is being made navigable for vessels drawing fourteen feet.

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

WILLIAMSBURG CANALS.

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

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FARRAN'S POINT CANAL.

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

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

RAPIDE PLAT CANAL.

Length of canal	3½ miles.
Number of locks	2
Dimensions of locks	270 feet by 45 feet.
Total rise or lockage	11½ "
Depth of water on sills	14 "
Breadth of canal at bottom.....	80 "
Breadth of canal at surface of water.....	152 "

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

From the head of Farran's Point Canal to the foot of Rapide Plat Canal, there is a navigable stretch of 10½ 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	7½ miles.
Number of locks	3
Dimensions of locks, { one of which is }	2-270 by 45.
" { a guard lock }	1-800 by 45.
Total rise or lockage.....	15½ feet.
Depth of water on sills	14 "
Breadth of canal at bottom.....	80 "
Breadth of canal at surface of water.....	144 "

From the head of Rapide Plat Canal to Iroquois, at the foot of the Galops Canal, the St. Lawrence is navigable 4½ miles. This canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

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MURRAY CANAL.

Length between eastern and western pier heads..5½ miles.
 Breadth at bottom.....80 feet.
 Breadth at water surface.....120 "
 Depth below lowest known lake level.....11 "
 No locks.

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

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old Line.	Enlarged or New Line.
Length of canal	27½ miles.	26¾ miles.
Pairs of guard-gates (formerly 3)		2
Number of locks { lift.....	26	25
{ guard.....	1	1
Dimensions	$\left\{ \begin{array}{l} 1 \text{ lock } 200 \times 45 \\ 1 \text{ " } 200 \times 45 \\ 1 \text{ (tidal) } 230 \times 45 \\ 24 \text{ locks } 150 \times 45 \end{array} \right\}$	270 feet x 45 feet.
Total rise or lockage.....	326¾ feet	326¾ feet
Depth of water on sills	10¼ "	14 "

WELLAND RIVER BRANCHES.

Length of canal—

Port Robinson Cut to River Welland.....2,622 feet.

From the canal at Welland to the river, via

lock at Aqueduct 300 "

Chippewa Cut to River Niagara1,020 "

Number of locks—one at Aqueduct and one at Port

Robinson.. 2

Dimensions of locks 150 by 26½ feet.

Total lockage from the canal at Welland down to

River Welland 10 feet.

Depth of water on sills 9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal

Number of locks

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 sills9 feet

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PORT MAITLAND BRANCH.

Length of canal	1 $\frac{3}{4}$ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet
Total rise or lockage.....	7 $\frac{1}{2}$ 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, 11 $\frac{3}{4}$ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

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

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

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

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

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine Canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245 $\frac{1}{2}$ miles.

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

Ottawa River Canals.

The Ste. Anne's Lock.	Grenville Canal.
Carillon Canal.	Rideau Canal.

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

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

Sections of Navigation.	Interme- diate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine Canal	8 $\frac{1}{2}$	
From Lachine to Ste. Anne's Lock.	15	23
Ste. Anne's Lock and piers	$\frac{1}{8}$	23
Ste. Anne's Lock to Carillon Canal	27	50
The Carillon Canal	$\frac{3}{4}$	51
From Carillon to Grenville Canal	6 $\frac{1}{4}$	57
The Grenville Canal.	$\frac{3}{4}$	63
From the Grenville Canal to entrance of Rideau navigation	56	119
Rideau navigation ending at Kingston	126 $\frac{1}{4}$	245

STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of canal	$\frac{1}{8}$ mile	$\frac{1}{8}$ mile
Number of locks	1	1
Dimensions of locks	190 x 45 feet.	200 x 45 feet.
Total rise or lockage	3 feet	3 feet
Depth of water on sills	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23 $\frac{1}{2}$ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal	$\frac{3}{4}$ mile
Number of locks	2
Dimensions of locks	200 x 45 feet
Total rise or lockage	16 feet
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon rapids.

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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	5 $\frac{3}{4}$ miles
Number of locks	5
Dimensions of locks	200 x 45 feet.
Total rise or lockage	43 $\frac{3}{4}$ feet
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet
Breadth of canal at surface of water.....	50 to 80 feet

This canal, by which the Long Sault Rapids are avoided, 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	126 $\frac{1}{4}$ miles
Number of locks going from Ottawa to Kingston.....	$\left\{ \begin{array}{l} 35 \text{ ascending} \\ 14 \text{ descending} \end{array} \right.$
Total, lockage.....	446 $\frac{1}{4}$ feet $\left\{ \begin{array}{l} 282\frac{1}{4} \text{ rise and} \\ 164 \text{ fall} \end{array} \right.$ at high water
Dimensions of locks	134 x 33 feet
Depth of water on sills	5 feet
Navigation depth through the several reaches....	4 $\frac{1}{2}$ feet
Breadth of canal reaches at bottom	$\left\{ \begin{array}{l} 60 \text{ feet in earth} \\ 54 \text{ feet in rock} \end{array} \right.$
Breadth of canal at surface of water.....	80 feet in earth

PERTH BRANCH.

Length of canal	6 miles
Number of locks	2
Dimensions of locks	134 feet x 32 feet
Total rise or lockage	26 "
Depth of water on sills	5 " 6 inches.
Length of dam	200 "
Breadth of canal at bottom	40 "
Breadth of canal at surface of water.....	$\left\{ \begin{array}{l} 40 \text{ feet in rock} \\ 60 \text{ " in clay} \end{array} \right.$

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

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

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

These may be divided into three systems, viz. :—

1. The summit level, supplied by the 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 Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin of Chambly ; thence, by the Chambly canal, to St. Johns, and down the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. 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.	Inter- mediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours Lock	14	14
St. Ours Lock to Chambly Canal	32	46
Chambly Canal	12	58
Chambly Canal to boundary line.	23	81
Boundary line to Champlain Canal	111	192
Champlain Canal to junction with Erie Canal.....	66	258
Erie Canal, from junction to Albany.....	7	265
Albany to New York.....	146	411

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ST. OURS LOCK AND DAM.

Length.. . . .	$\frac{1}{2}$ mile.
Number of locks.. . . .	1 "
Dimensions of lock.. . . .	200 feet by 45 feet.
Total rise or lockage.. . . .	5 "
Depth of water on sills.. . . .	7 feet at low water.
Length of dam in eastern channel.. . . .	300 "
Length of dam in western channel.. . . .	690 "

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

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

CHAMBLY CANAL.

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

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

TRENT CANAL.

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

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

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

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

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam,

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the summit water, about 165 miles from Trenton ; from Lake Balsam by a canal and the River Talbot to Lake Simcoe ; thence by the River Severn to Georgian bay, Lake Huron ; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

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

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté to Nine Mile rapids.	—	9
Nine Mile rapids to Percy landing....	19½	—
Percy landing to Heeley's Falls dam....	—	14½
Heeley's Falls dam to Peterborough....	51¾	—
Peterborough to Lakefield.....	—	9
Lakefield to a point across Balsam lake....	61	—
	<hr/> 132½	<hr/> 32½
Total distance, Bay of Quinté to a point across Balsam lake..		165
From Sturgeon Point on Sturgeon lake, 48¾ miles from Lake- field, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog....		<hr/> 27

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

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

At Young's Point, 5 miles from Lakefield, the dam between Lake Katchewanoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal. 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.

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At Buckhorn Rapids, 7 miles from Burleigh Rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon, $15\frac{3}{4}$ miles from Buckhorn Rapids, a dam, 553 feet long, controls the water level up to Fenelon Falls.

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

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

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

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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. Peters' 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.

BEAUHARNOIS CANAL.

Length of canal	12 statute miles.
Number of locks	9
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82½ "
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

As the new Soulanges canal is now opened for navigation, it is to be presumed that the Beauharnois canal will be abandoned for navigation purposes.

CHIEF ENGINEER'S REPORT

DEPARTMENT OF RAILWAYS AND CANALS,

OFFICE OF THE CHIEF ENGINEER,

OTTAWA, December 15, 1901.

SIR,—I have the honour to submit my annual report for the fiscal year ended June 30, 1901, covering, however, works of construction up to October 1, 1901. Accompanying it are the following :—

First.—The annual report of the General Manager of Government Railways, attached to which are the reports of the General Superintending Engineer of Maintenance, 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.—Report of Mr. J. S. O'Dwyer, one of the engineers on the exploratory surveys to ascertain the most practicable route for an all Canadian railway from some point on an existing railway into the Yukon district, also between the Stikine river and an ocean port in British Columbia. (Part I.)

Third.—The annual reports of the Superintending Engineers and Superintendents of the several canals. (Part I.)

Fourth.—Proceedings before the Railway Committee of the Privy Council. (Part I.)

Fifth.—Financial statements of the Accountant of the Department. (Part II.)

Sixth.—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.)

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

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

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

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

Eleventh.—The canal statistics for the season of navigation of 1900, compiled by Mr. Devlin. (Part V.)

Twelfth.—The Steam and Electric railway statistics for the year ended June 30, 1901, compiled by Mr. Ridout, from returns by the railway companies. (Part VI.)

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The following shows the length of the government railways in operation on June 30, 1901:—

INTERCOLONIAL RAILWAY.

MAIN LINE AND BRANCHES.

	Miles.
Montreal to Halifax, via Lévis	837
Moncton to St. John	89
Truro to Sydney	213
Oxford Junction to Pictou	69
St. Charles Junction to Chaudière Curve, via St. Henri.....	17
Dalhousie Junction to Dalhousie	7
Derby Junction to Indian town	14
Painsec Junction to Point du Chene	12
Pugwash Junction to Pugwash	5
Stellarton Junction to Brown's Point	12
North Sydney Junction to North Sydney	5
New Glasgow to Pictou Landing	8
Dartmouth Branch	13

1,301

FREIGHT BRANCHES.

	Miles.
Nicolet Branch..	14.76
Rivière du Loup Wharf Branch	4
Rimouski "	2
Newcastle "	2
Dorchester "	1
Courtney Bay "	1
Sackville "	50
Stewiacke "	1
Halifax Cotton Factory Branch	1
	<hr/> 27.26
Total..	1,328.26

WINDSOR BRANCH.

Windsor Junction to Windsor.. . . .	32
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PRINCE EDWARD ISLAND RAILWAY.

Souris to Tignish	168
Mount Stewart to Georgetown	24
Charlottetown to Royalty Junction	5
Emerald Junction to Cape Traverse	13
Alberton to Cascumpec Wharf	1
	<hr/> 211

Total length of government railways..... 1,571.26

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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.....	1,301	Working expenses.. 5,320,422 64		
		Earnings 4,972,235 87	Nil.	348,186 77
Windsor Branch.....	32	One-third earnings.. 47,261 89		
		Maintenance..... 16,862 66	30,399 23	
Prince Edward Island Division ..	211	Working expenses.. 261,766 24		
		Earnings 193,883 48	Nil.	67,882 76
Total miles	1,544		30,399 23	416,069 53
		Deduct profit from loss.....		30,399 23
		Net loss		385,670 30

The maintenance of the roads and rolling stock has received careful attention, and both roads continue to be in efficient condition, and the rolling stock is being brought up to the modern standard.

The working expenses of the Intercolonial Railway given above do not include the \$140,000 rental paid to the Grand Trunk Railway, as interest on capital has never been considered in making comparisons from year to year ; if the \$140,000 was added to the loss of \$348,186.77, it would make the loss on the Intercolonial Railway \$488,186.77, and on the whole of the government railways, \$525,670.30.

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

	1899-1900.	1900-1901.
Intercolonial Division	\$4,552,071 71	\$4,927,235 87
Windsor Branch	47,351 43	47,261 89
Prince Edward Island Division.....	174,738 73	193,883 48
	<u>\$4,774,161 87</u>	<u>\$5,213,381 24</u>

Showing an increase in the gross earnings of \$439,219.37.

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

	1899-1900.	1900-1901.
Intercolonial Division	\$4,431,404 69	\$5,460,422 64
Windsor Branch.....	12,891 56	16,862 66
Prince Edward Island Division	220,931 81	261,766 24
Total.....	<u>\$4,665,228 06</u>	<u>\$5,739,051 54</u>

Gross working expenses of government railways... \$5,739,051 54

Gross earnings of government railways 5,213,381 24

Excess of working expenses, including rental \$140,-

000), over earnings \$ 525,670 30

Showing an increase in working expenses for the year, compared with the previous year, of \$1,073,823.48, which is made up of the following :—

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	1899-1900.		1900-1901.		Difference.			
					Increase.		Decrease.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Locomotive power.....	1,457,956	08	2,044,801	60	586,845	52	Nil.	
Car expenses.....	1,049,809	96	1,177,127	98	127,318	02	Nil.	
Maintenance of way and works.....	1,041,071	06	1,264,339	56	223,268	50	Nil.	
Station expenses.....	569,634	29	664,154	41	94,520	12	Nil.	
General charges.....	321,038	95	384,760	57	63,721	62	Nil.	
Car mileage.....	61,023	25	63,867	42	2,844	17	Nil.	
Rental of leased lines.....	164,694	47	140,000	00	Nil.		24,694	47
	4,665,228	06	5,739,051	54	1,098,517	95		
Deduct decrease.....					24,694	47		
Net increase.....					1,073,823	48		

INTERCOLONIAL DIVISION.

The ocean passenger and freight traffic via the port of Halifax shows a considerable decrease for the winter season of 1900-01, 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 1899-1900 and 1900-1901.

Name of Steamer.	1899-1900.			Name of Steamer.	1900-1901.		
	No. of Passengers.				No. of Passengers.		
	1st Class.	2nd Class.	Total.		1st Class.	2nd Class.	Total.
Vancouver.....	78	392	470	Vancouver..	Nil.	1	1
Parisian.....	91	1,035	1,126	Parisian.....	5	9	14
Cambroman.....	56	531	587	Idaho.....	1	84	85
Lake Huron.....	12	328	340	Corinthian.....	2	39	41
Carthagénian.....	9	144	153	Carthagénian.....	Nil.	22	22
Monterey.....	3	19	22	Lake Champlain.....	26	155	181
Monteagle.....	3	Nil.	3	Degania.....	3	1	4
Siberian.....	5	120	125	Montford.....	Nil.	23	23
Californian.....	41	289	330	State of Nebraska.....	Nil.	6	6
Numidian.....	34	318	352	Numidian.....	2	11	13
Montrose.....	1	10	11	Wassan.....	Nil.	84	84
Lake Ontario.....	19	349	368	Lake Ontario.....	14	129	143
Dominion.....	113	500	613	Laurentian.....	2	46	48
Ashantee.....	3	Nil.	3	Sicilian.....	1	100	101
Arawa.....	3	46	49	Armenian.....	Nil.	1	1
Corean.....	11	68	79	Corean.....	Nil.	4	4
Assyrian.....	8	58	66	Assyrian.....	Nil.	1	1
Lake Superior.....	6	215	221	Lake Superior.....	7	39	46
Sardinian.....	1	46	47	Lake Megantic.....	4	159	163
Etolia.....	1	1	2	Lusitania.....	4	110	114
Lake Megantic.....	5	96	101	Tunisian.....	10	35	45
Norwegian.....	Nil.	54	54				
Yola.....	1	11	12				
Lusitania.....	4	173	177				
Tunisian.....	Nil.	446	446				
Arcadia.....	70	904	974				
Adria.....	Nil.	1,701	1,701				
Hispania.....	Nil.	389	389				
Total.....	577	8,243	8,820	Total.....	81	1,091	1,172

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Of ocean-borne passengers in 1899-1900, 7,537 travelled via St. John by the Canadian Pacific Railway, and 824 travelled via Chaudière, by the Grand Trunk Railway.

Of ocean-borne passengers in 1900-1901, 100 travelled by the Canadian Pacific Railway, 264 travelled by the Grand Trunk Railway and 808 travelled by the Inter-colonial Railway to Montreal.

COMPARATIVE STATEMENT of Ocean-borne Freight Traffic during the Winter Seasons of 1899-1900 and 1900-1901.

Name of Line of Steamers.	Winter of 1899-1900.			Name of Line of Steamers.	Winter of 1900-01.		
	Measurement tons.	Weight tons.	Total tons.		Measurement tons.	Weight tons.	Total tons.
Allan Line.....	2,615	2,756	5,371	Allan Line	5,660	4,202	9,862
Furness Line.....	1,831	5,165	6,996	Furness Line	6,656	5,406	12,062
Elder-Dempster....	233	213	446	Elder-Dempster....	467	312	779
Pickford and Black	Nil.	Nil.	Nil.	Pickford and Black	339	564	903
Total	4,679	8,134	12,813	Total.....	13,122	10,484	23,606

The above statement shows an increase of 10,793 tons of ocean-borne freight traffic for the winter season of 1900-1901, as compared with the winter season of 1899-1900.

The following is a statement of the quantity and classes of the rolling stock purchased on capital account up to June 30, 1901 :-

	Engines.	Dining cars.	Passenger car Stock.					Conductors' Van.	Box, cattle and Refrigerator cars.	Platform cars.	Coal cars of 3 several kinds.	Snow ploughs.	Wing ploughs.	Flangers.	Rotary snow ploughs.	Auxiliary cars.
			1st class sleeping and par-lour.	1st class.	2nd class sleepers.	2nd class.	Baggage and mail postal.									
									3,884		999					
	248	4	23	108	19	93	45	99	103	2521	152	49	10	22	2	9
			5				28		84		624					
Total	248	4	28	108	19	93	73	99	4,071	2521	1775	49	10	22	2	9

NOTE.—77 Gondola cars transferred to platform cars, 123 large coal cars transferred to platform cars.

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The following is a statement of the quantity and classes of rolling stocks which have been built during the year ended June 30, 1901, at the cost of revenue to maintain the work :—

	Engines.	Passenger Car Stock.					Conductor's Van.	Auxiliary Cars.	Box and Cattle Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Rtary Snow Ploughs.
		1st Class Sleeping and Parlour.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage and Mail.									
Total.....	6	.....	.....	.....	.....	.....	.....	1	1	15	206	1	.....	.....	.....

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

Year.	Average Miles in Operation.	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight carried.	No. of Passengers carried.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.		
1876-77.....	714	1,661,673 55	1,154,445 33	.....	507,228 22	421,327	613,420
1877-78.....	714	1,816,273 56	1,378,946 78	.....	432,326 78	522,710	618,957
1878-79.....	714	2,010,183 22	1,294,009 69	.....	716,083 53	510,861	640,101
1879-80.....	829	1,603,429 71	1,506,298 48	.....	97,131 23	561,924	581,483
1880-81.....	840	1,759,851 27	1,760,393 92	542 65	.....	725,777	631,245
1881-82.....	840	2,069,657 48	2,079,262 66	9,605 18	.....	838,956	779,994
1882-83.....	840	2,360,373 27	2,370,910 10	10,547 83	.....	970,961	878,600
1883-84.....	887	2,377,433 62	2,384,414 92	6,981 30	.....	1,009,237	944,636
1884-85.....	941	2,519,751 56	2,441,203 66	.....	78,547 90	989,936	957,228
1885-86.....	946	2,583,999 67	2,450,093 88	.....	133,905 79	1,023,788	932,880
1886-87.....	966	2,922,369 62	2,660,116 93	.....	262,252 69	1,143,020	942,784
1887-88.....	971	3,366,781 74	2,983,336 05	.....	383,445 69	1,288,823	1,040,163
1888-89.....	971	3,244,647 73	2,967,801 00	.....	276,846 73	1,218,877	1,136,272
1889-90.....	971	3,560,575 74	3,012,759 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	.....	1,388,980	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	1,352,637
1895-96.....	1,142	3,012,827 62	2,957,640 10	.....	55,187 52	1,379,618	1,471,866
1896-97.....	1,145	2,925,968 67	2,866,028 02	.....	59,940 65	1,296,028	1,501,690
1897-98.....	1,201	3,327,648 51	3,117,669 85	.....	209,978 66	1,434,576	1,523,444
*1898-99.....	1,301	3,675,646 21	3,738,331 44	62,645 43	.....	1,750,761	1,603,095
*1899-1900.....	1,301	4,431,404 69	4,552,071 71	120,667 02	.....	2,151,208	1,791,754
1900-01.....	1,361	5,460,422 64	4,972,235 87	488,186 77	2,111,310	2,025,295

* The working expenses include the rental paid for leased lines.

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The following table shows the number of tons of coal carried over the Intercolonial Railway from the Nova Scotia collieries to Ste. Rosalie, 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 Ste. Rosalie.	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	213,364	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		161,453	25,126	366,967	556,546
1890-91		113,996	39,213	344,829	498,038
1891-92		35,447	5,918	392,441	433,806
1892-93		136,868	3,775	402,653	543,296
1893-94		102,273	8,028	367,390	478,691
1894-95		67,082	7,865	310,253	385,200
1895-96		53,124	9,681	369,708	432,513
1896-97		38,395	12,305	331,469	382,172
1897-98		9,084	9,796	351,069	369,949
1898-99		4,644	5,399	484,163	494,206
1899-1900		3,495	Nil.	599,714	603,289
1900-01	136	Nil.	Nil.	506,454	506,590

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

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

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-77				1889-90	502,012		502,012
1877-78				1890-91	148,803	59,534	218,337
1878-79				1891-92	745,997	519,500	1,265,497
1879-80				1892-93	155,306	197,669	352,975
1880-81				1893-94	Nil.	8,026	8,026
1881-82				1894-95	Nil.	Nil.	Nil.
1882-83	31,011		31,011	1895-96	Nil.	Nil.	Nil.
1883-84	73,389		73,389	1896-97	Nil.	Nil.	Nil.
1884-85	300,901		300,901	1897-98	8,000	Nil.	8,000
1885-86	389,122		389,122	1898-99	30,000	Nil.	30,000
1886-87	575,880		575,880	1899-1900	13,239	Nil.	13,239
1887-88	69,021		69,021	1900-1901	147	Nil.	147
1888-89	129,725		129,725				

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

Year.	Barrels.	Year.	Barrels.
1876-77.....	254,710	1889-90.....	1,116,050
1877-78.....	657,778	1890-91.....	1,013,129
1878-79.....	630,329	1891-92.....	954,015
1879-80.....	533,248	1892-93.....	856,913
1880-81.....	672,310	1893-94.....	944,967
1881-82.....	692,095	1894-95.....	938,351
1882-83.....	983,916	1895-96.....	822,097
1883-84.....	817,134	1896-97.....	847,701
1884-85.....	935,977	1897-98.....	987,408
1885-86.....	761,127	1898-99.....	1,157,250
1886-87.....	763,894	1899-1900.....	1,234,076
1887-88.....	871,833	1900-1901.....	1,292,106
1888-89.....	948,514		

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	1889-90.....	2,610,202
1877-78.....	331,170	1890-91.....	2,890,921
1878-79.....	302,921	1891-92.....	3,776,677
1879-80.....	534,021	1892-93.....	1,514,619
1880-81.....	565,678	1893-94.....	1,304,684
1881-82.....	560,253	1894-95.....	1,036,384
1882-83.....	1,195,601	1895-96.....	1,064,385
1883-84.....	654,673	1896-97.....	1,093,499
1884-85.....	734,962	1897-98.....	1,551,372
1885-86.....	849,800	1898-99.....	2,595,353
1886-87.....	1,018,395	1899-1900.....	2,720,453
1887-88.....	1,219,035	1900-1901.....	3,535,364
1888-89.....	1,526,158		

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	1889-90.....	210,886,071
1877-78.....	56,626,547	1890-91.....	184,188,324
1878-79.....	55,626,696	1891-92.....	175,474,340
1879-80.....	55,462,654	1892-93.....	181,211,013
1880-81.....	72,841,388	1893-94.....	200,507,949
1881-82.....	78,356,418	1894-95.....	202,247,269
1882-83.....	104,633,417	1895-96.....	226,332,715
1883-84.....	131,120,948	1896-97.....	243,355,725
1884-85.....	138,493,675	1897-98.....	354,093,816
1885-86.....	117,186,512	1898-99.....	306,554,031
1886-87.....	161,801,763	1899-1900.....	379,350,074
1887-88.....	197,755,272	1900-1901.....	396,858,964
1888-89.....	199,507,777		

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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	1889-90.....	86,771
1877-78.....	46,498	1890-91.....	95,529
1878-79.....	47,584	1891-92.....	87,889
1879-80.....	70,990	1892-93.....	93,369
1880-81.....	61,574	1893-94.....	79,203
1881-82.....	73,479	1894-95.....	72,106
1882-83.....	68,338	1895-96.....	64,051
1883-84.....	60,090	1896-97.....	72,082
1884-85.....	70,785	1897-98.....	89,301
1885-86.....	74,498	1898-99.....	109,821
1886-87.....	82,896	1899-1900.....	92,813
1887-88.....	98,302	1900-01.....	95,923
1888-89.....	85,960		

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 Ste. Rosalie and from the West.	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.
1876-77.....					
1877-78.....		14,949		3,405	18,354
1878-79.....		21,628		2,643	24,271
1879-80.....		21,073		4,952	26,025
1880-81.....		15,454		3,334	18,788
1881-82.....		21,607		4,168	25,775
1882-83.....		24,875		7,911	32,786
1883-84.....		19,696		6,533	26,229
1884-85.....		22,787		8,405	31,192
1885-86.....		13,464		8,216	21,680
1886-87.....		16,923		9,811	26,734
1887-88.....		41,864		8,878	50,742
1888-89.....		17,340		11,481	28,821
1889-90.....		9,895		11,730	21,625
1890-91.....		9,923		10,764	20,687
1891-92.....		9,719	17	23,825	33,571
1892-93.....		7,295	100	12,319	19,714
1893-94.....		3,023	204	13,455	16,682
1894-95.....		6,749	213	10,399	17,361
1895-96.....		3,767	314	16,748	20,829
1896-97.....		2,654	263	17,239	20,156
1897-98.....		5,950	1,637	18,633	26,220
1898-99.....		2,465	243	31,555	34,263
1899-1900.....		2,379	307	37,108	39,794
1900-1901.....	322	6,860	1,142	155,514	163,838

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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 Ste. Rosalie for the West.	To Chaudière for the West.	To St. John for the West.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77..	340			340					
1877-78..	186			186					
1878-79..	1,041			1,041					
1879-80..	12,220			12,220					
1880-81..	13,872			13,872	4,022			2,902	6,924
1881-82..	14,256		1,290	15,546	7,146			3,607	10,753
1882-83..	9,465		508	9,973	11,126			5,497	16,623
1883-84..	13,778		3,068	16,846	14,543			7,265	21,808
1884-85..	10,381		3,661	14,042	18,024			8,445	26,469
1885-86..	4,394		3,998	8,392	7,660			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	1,670	8,215	17,973	10,130	468		5,996	16,594
1891-92..	7,142	3,960	10,535	21,637	12,633	7,674		12,414	32,721
1892-93..	Nil.	Nil.	10,137	10,137	8,327	6,456		7,840	22,623
1893-94..	Nil.	Nil.	6,775	6,775	17,729	6,967		8,885	33,581
1894-95..	Nil.	Nil.	10,342	10,342	13,351	15,819		4,695	33,865
1895-96..	Nil.	Nil.	9,824	9,824	15,138	13,734		11,309	40,181
1896-97..	Nil.	Nil.	4,925	4,925	5,694	8,069		6,957	20,720
1897-98..	Nil.	Nil.	Nil.	Nil.	6,624	8,821		10,989	26,534
1898-99..	Nil.	Nil.	Nil.	Nil.	8,138	2,193		15,833	26,164
1899-1900	96	Nil.	Nil.	96	9,795	257		19,655	29,907
1900-01..	489	Nil.	Nil.	489	403	14,791	12	10,615	25,821

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 Ste. Rosalie for the West.	To Chaudière for the West.	To St. John for the West.	To local Stations.	Total.	To Ste. Rosalie.	To Chaudière for the West.	To St. John for the West.	To local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77..		530	921	527	1,978		551	1,848	802	3,201
1877-78..		596	1,015	474	2,085		988	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..		888	1,682	412	2,982		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
1897-98..		3,575	3,703	1,052	8,330		1,729	1,066	2,210	5,005
1898-99..		1,210	2,070	3,305	6,583		1,651	1,198	3,625	5,474
1899-1900		2,547	2,706	3,686	8,939		2,421	1,563	2,659	6,643
1900-01..	37	2,009	3,207	4,125	9,393	360	3,419	1,346	4,643	9,768

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Forty-three miles of the 67 lb. and 123 miles of the 56 lb. steel rails have been lifted and replaced by 80 lb. steel rails, and 495,293 ties have been renewed.

CAPITAL ACCOUNT.

Total cost of road and equipment up to June 30, 1901 :—

Road, including \$1,459,000 paid on account purchas-	
ing Drummond County Railway.. . . .	\$52,865,651 78
Rolling stock	10,774,376 97
	<hr/>
Total	\$63,640,028 75
	<hr/>

The increased accommodation at the deep water terminus at Halifax has been further improved.

Additions have been made to the rolling stock, and both the road and rolling stock have been efficiently maintained during the year, and by the introduction of more powerful locomotives and cars of increased carrying capacity the efficiency of the rolling stock has been greatly improved.

WINDSOR BRANCH.

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

This road has been maintained in efficient condition.

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

Year.	Miles in operation.	One-third gross earnings.	Proportion of one-third gross earnings credited to line Windsor Junction to Halifax.	Proportion of one-third gross earnings credited to the Windsor Branch.	Maintenance expenses.	Profit.	Loss.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1880-81..	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	.....
1881-82..	32	28,461 07	7,407 88	21,053 19	13,099 55	7,953 64	.....
1882-83..	32	31,199 77	8,085 88	24,113 89	23,103 93	1,009 96	.....
1883-84..	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	.....
1884-85..	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	.....
1885-86..	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	.....
1886-87..	32	33,564 58	8,237 00	25,327 58	26,042 33	.....	714 75
1887-88..	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	.....
1888-89..	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	.....
1889-90..	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	.....
1890-91..	32	39,519 56	9,284 43	30,235 13	28,931 71	1,303 42	.....
1891-92..	32	42,891 23	9,382 38	33,508 85	19,514 37	13,994 48	.....
1892-93..	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	.....
1893-94..	32	41,834 70	8,859 23	32,975 47	17,645 09	15,330 38	.....
1894-95..	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	.....
1895-96..	32	47,456 74	10,894 91	36,561 83	16,476 46	20,085 37	.....
1896-97..	32	54,208 81	13,605 58	40,603 23	10,821 04	29,782 19	.....
1897-98..	32	48,892 21	11,665 57	37,226 64	18,181 63	19,045 01	.....
1898-99..	32	56,314 51	13,840 48	42,474 03	12,873 09	29,600 94	.....
1899-1900	32	62,266 61	14,915 18	47,351 43	12,891 56	34,459 87	.....
1900-01..	32	62,523 20	15,261 31	47,261 89	16,862 66	30,399 23	.....

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

Total cost of road and rolling stock up to June 30, 1901 :—

Road, &c.	\$3,643,598 21
Rolling stock.	480,229 00

Total \$4,123,827 21

The rolling stock provided on capital account consists of :—

Engines.	Passenger car Stock.			Official cars.	Box, cattle and Refrigerator cars.	Platform car and coal cars.	Conductors' Vans.	Pay car.	Snow plough.	Flangers.
	1st class cars.	2nd class cars.	Baggage, smoking and postal cars.							
23	19	12	9	1	203 17 1	147 18	3	1	8	7
					221	165				

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The capital expenditure during the year amounted to \$280,173.93, of which \$217,692.31 was expended on the construction of the Murray Harbour branch railway and the Hillsboro bridge, and \$54,000 for steel rails, 56 lbs. to the yard.

Statement of rolling stock rebuilt during the year :—4 coal and 4 platform cars.

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

Year.	Miles in operation.	Working expenses.	Gross earnings.	Loss.	Tons of freight carried.	No. of passengers carried.
		\$ cts.	\$ cts.	\$ cts.		
1875-76.....	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1876-77.....	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78.....	199	221,599 49	135,899 60	85,699 89	38,923	111,428
1878-79.....	199	223,313 12	125,855 99	97,457 21	38,668	105,046
1879-80.....	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81.....	199	203,122 88	131,131 43	71,991 45	45,336	102,937
1881-82.....	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1882-83.....	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1883-84.....	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1884-85.....	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1885-86.....	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1886-87.....	211	204,237 37	155,303 37	48,934 00	53,589	103,067
1887-88.....	211	229,639 95	158,363 62	71,276 33	59,603	131,246
1888-89.....	211	247,559 44	171,369 56	76,189 89	55,682	152,780
1889-90.....	211	266,485 85	160,971 78	105,514 07	51,604	133,099
1890-91.....	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1891-92.....	211	259,706 38	157,442 69	132,263 69	51,065	139,389
1892-93.....	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94.....	211	226,891 06	158,533 83	68,357 23	53,577	123,727
1894-95.....	211	232,905 19	149,654 71	83,250 41	48,325	125,089
1895-96.....	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97.....	211	240,489 90	153,443 13	87,046 77	52,151	121,498
1897-98.....	211	231,418 74	158,950 61	72,468 13	57,539	126,510
1898-99.....	211	218,053 01	165,012 03	53,040 98	57,968	129,667
1899-1900.....	211	220,931 81	174,738 73	46,193 08	62,227	147,471
1900-01.....	211	261,766 24	193,883 48	67,882 76	73,696	157,793

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

	Miles.
Steel rails (50 and 56 lbs. to yard).....	181½
Iron rails (40 lbs. to yard).....	30½

Total length of road 212

The road and rolling stock are in good running condition.

CROW'S NEST PASS RAILWAY.

The construction of this road being considered a necessity for the successful development of the mining interests of British Columbia, Parliament by 60-61 Victoria, chapter 5, 1897, granted a subsidy of \$11,000 per mile in aid of it. Under this Act the Canadian Pacific Railway Company undertook the work of construction, and entered into a contract, breaking ground on July 15, 1897.

The road was, for construction purposes, divided into two sections. Section 1 extended from Lethbridge to the crossing at the south end of Kootenay lake, a dis-

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tance of 288.75 miles. Section 2 commenced at the end of section 1, at the crossing of the south end of Kootenay lake to Nelson, a distance of 54 miles, making a total of 342.75 miles. Section 1 has been completed some time, with the exception of the building of a permanent straightened line around the point at Bullhead Prairie, for which a certain amount has been retained from the subsidy. Of section 2 no work has been done at the south end of Kootenay lake, but the 20 $\frac{3}{4}$ mile subsection between Proctor and Nelson is practically completed and ready for traffic; this subsection follows near the shores of the Kootenay lake; the grades are light, the alignment is good and the road is well and substantially built. The section between Lethbridge and the south end of Kootenay lake, 288.75 miles, has continued to be operated successfully during the year.

The amount of the subsidy paid up to October 1, 1901,	
remains the same as appeared in my last annual	
report, viz.	\$3,116,250
Balance of subsidy applicable to section 1 unpaid . . .	60,000
Subsidy for section 2 unpaid.	594,000
	<hr/>
Total subsidy applicable.	<u>\$3,770,250</u>

The work of driving the tunnel at Bullhead Prairie is in progress and is rapidly drawing towards completion.

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

Mr. J. S. O'Dwyer's report will be found attached hereto, as an appendix. He represents that a feasible line can be had between Edmonton and Teslin.

1st. *Prairie Section.*

	Miles.
Edmonton to mouth of D'Echafaud river, at the confluence of the D'Echafaud and Peace rivers.	415

2nd *Central Section.*

Mouth of D'Echafaud river to the mouth of Sestoot river, at its confluence with the Skeena river.	393
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3rd *Northern Section.*

Mouth of Sestoot river to Teslin, at the south end of Teslin lake.	432
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Total approximate distance—Edmonton to Teslin. . .	<u>1,240</u>
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ESTIMATED COST.

	Miles.	
1st.—Prairie section.	415	\$ 7,320,680
2nd.—Central section.	393	7,162,229
3rd.—Northern section	432	8,082,700
		<hr/>
Total of above.		\$ 22,565,609
Special buildings.		343,000
		<hr/>
Total estimated cost of construction, at eastern prices. .		\$ 22,908,609
Add 60 per cent for western prices.		13,745,165
		<hr/>
Total estimated cost of construction.		36,653,774
Rolling stock.		1,866,000
		<hr/>
Estimated cost of construction and equipment (average rate per mile \$31,064)—(1,240 miles).		<u><u>\$ 38,519,774</u></u>

BRANCH FROM TRUNK LINE TO SEA COAST.

Mr. O'Dwyer gives the length of this branch from the mouth of Sestoot river,—its junction with the trunk line,—to Port Simpson as 307 miles ; the cost of constructing and equipping he puts at :—

Estimated cost of construction (at eastern prices) . . .	\$ 9,170,900
Special buildings	127,500
<hr/>	
Total estimated cost of construction (at eastern prices)	\$ 9,298,400
Add 60 per cent for western prices	5,579,040
<hr/>	
Total estimated cost of construction (at western prices)	\$ 14,877,440
Rolling stock	438,100
<hr/>	
Total estimated cost of construction and equipment, at western prices (307 miles)	\$ 15,317,540

(Average rate per mile, \$49,894.)

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OCEAN PORT LINE.

(Port Simpson to Teslin.)

Treated independently of the trunk line.

Mr. O'Dwyer gives the length of the projected line from Port Simpson to the head of Lake Teslin as 739 miles ; the cost of constructing and equipping he puts at :

Estimated cost of construction (at eastern prices)....	\$ 17,253,600
Special buildings	278,000

Total estimated cost of construction (at eastern prices)	\$ 17,531,600
--	---------------

Add 60 per cent for western prices	\$ 10,518,960
--	---------------

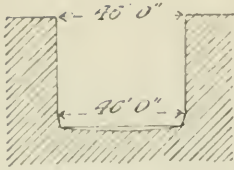
Total estimated cost of construction (at western prices)	\$ 28,050,560
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Rolling stock.....	\$ 1,060,100
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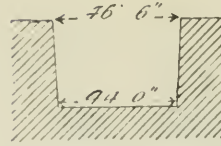
Total estimated cost of construction and equipment at western prices—(739 miles).....	\$ 29,110,660
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(Average rate per mile, \$39,392.)

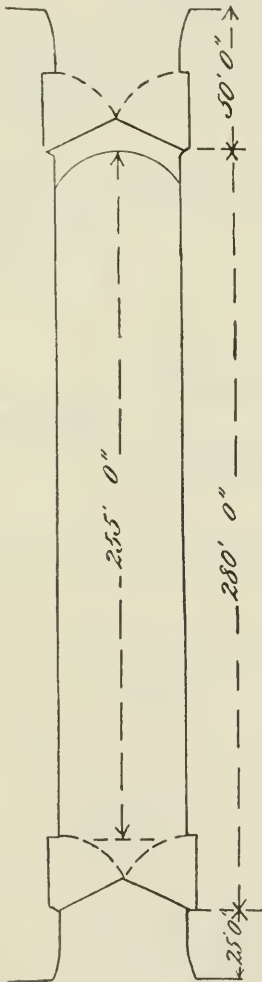
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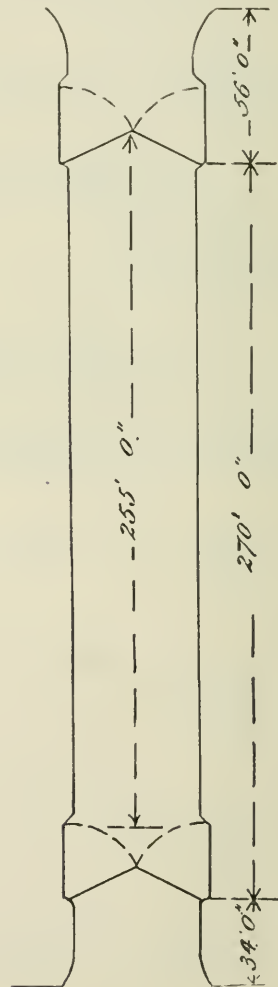
SECTION OF
SOULANGES CANAL LOCK.



SECTION OF
WELLAND CANAL LOCK



SOULANGES CANAL LOCK.



WELLAND CANAL LOCK

CANALS.

The two diagrams on the preceding page practically give the key to the whole navigation between Montreal and Lake Superior. There are no locks to be passed of less dimensions than the Welland canal lock shown.

CONSTRUCTION AND ENLARGEMENT.

Works of canal construction are confined to the Soulanges canal, the Sault Ste. Marie canal and the Trent canal.

Works of canal enlargement cover the Lachine canal, Cornwall canal, Farran's Point canal, Rapide Plat canal, Galops canal and Grenville canal.

CONSTRUCTION.

SOULANGES CANAL.

This canal is 14 miles in length, extending from Cascade Point to Coteau Landing. The work remaining to be done is the finishing of the highway on the north bank of the canal, some sodding of the slopes of the prism, all on sections 4, 5, 6 and 7—Andrew Onderdonk, contractor; the completion of the electrical instalment for the operation of the lock gates and valves, for which the Canadian Electric Company are the contractors; the completion of the berths for spare gates, &c., at Cascade Point, for which Messrs. Quinlan & Robertson are the contractors. It is confidently expected that these works will be fully completed before the opening of navigation in the spring of 1902. The staff of engineers are now engaged in completing the final estimates.

Total expenditure up to June 30, 1900	\$5,792,066 07
Expended during the year ended June 30, 1901	462,626 36

Total expenditure up to June 30, 1901	\$6,254,692 43
Expended from June 30, 1901, to October 1, 1901	71,517 67

Total expenditure up to October 1, 1901	<u>\$6,326,210 10</u>
---	-----------------------

SAULT STE. MARIE CANAL.

This canal is $1\frac{1}{2}$ miles in length. It is designed to pass vessels which will pass over a mitre sill of lock submerged in 20 feet 4 inches of water. The canal proper is completed, but the approaches both at the upper and lower entrances require to be deepened, there being only 18 feet of water in the upper entrance and 18 feet 6 inches in the lower entrance. Both entrances also require to be widened. The work of dredging the lower entrance to the required depth and width is under contract with Mr. A. F. Bowman, contractor, who has the work well advanced. In addition to the works aforementioned, the canal grounds require to be levelled off and laid out in neat form.

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Total expenditure up to June 30, 1900	\$3,769,671 67
Expended during year ended June 30, 1901	323,353 93
	<hr/>
Total expended up to June 30, 1901	\$4,093,025 60
Expended from June 30, 1901, to October 1, 1901	54,066 23
	<hr/>
Total expenditure up to October 1, 1901	<u>\$4,147,091 83</u>

TRENT CANAL.

This canal, when carried out in its entirety, will extend from Lake Ontario to the Georgian bay on Lake Huron at the mouth of the Severn river. The total distance will be about 192 miles. The proposed course is as follows :—Commencing at Trenton, on the Bay of Quinté, near Brighton, Trenton river, Rice lake, the Otonabec river, Clear lake, Lovesick lake, Buckhorn lake, Pigeon river, Sturgeon lake, Shallow lake, Rosedale river, Balsam lake, Lake Simcoe, Lake Couchiching and the River Severn at the Georgian bay, Lake Huron. The works on this canal completed are : Lock and dam at Chisholm's rapids, dam at Healy's Falls Point, lock and dam at Hastings, lock and dam at Peterborough, 2 locks and 2 dams at Young's Point, lock and dam at Burleigh Falls, lock and 2 dams at Lovesick, lock and dam at Buckhorn, lock and dams at Bobcaygeon, 2 locks and dam at Fenelon Falls, lock at Rosedale. (The lock at Young's Point and the lock at Rosedale, I should mention, are the property of the Ontario government.)

The works now under construction are the division of the canal between Peterborough and Lakefield, about 9 miles in length, and the division between Balsam lake and Lake Simcoe, a distance of 19 miles. The Peterborough-Lakefield division, for construction purposes, is divided into two sections. The section between Peterborough and Nassau is under contract with Messrs. Corry and Laverdure. The chief works of construction are the building of a hydraulic lift lock, an ordinary lift lock, a dam, waste weir, bridges, entrance piers, culverts, and the forming of the prism. This work, I may say, is practically completed with the exception of the lift lock, which is far advanced towards completion, and is progressing daily. The work so far is, I believe, of excellent quality. It is not thought that at the rate of speed at which the work is progressing it will be completed this season. The Dominion Bridge Company, of Lachine, have the contract for the steel superstructure of the lift lock and have had a large quantity of the structure in store, already manufactured and ready to put in place ; but owing to the substructure not being ready to receive it, nothing has yet been done towards its erection. It is hoped that the erection will be proceeded with next season.

The section between Nassau and Lakefield is under contract with Messrs. Brown, Love and Aylmer. The chief work is the construction of 5 locks, 5 dams, a bridge, the forming of the prism through the town of Lakefield, the deepening of the River Otonabee at several points, the building of entrance piers, and the diverting of the highway between Nassau and Lakefield. These contractors have completed their work, with the exception of the dredging of rock in the River Otonabee, near Lakefield,

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which rock has already been drilled and blasted. The structures are strong, neat and substantial.

The Simcoe Balsam Lake Division, for construction purposes, is divided into three sections.

Section 1. Balsam Lake to Kirkfield is under contract with Andrew Onderdonk. The works of chief importance on this section were : the building of entrance piers at Balsam Lake, the construction of bridges, a dam, guard gates, and the excavation of the prism through heavy rock cuts. The work is now all completed, and the final estimate is being prepared.

Section 2. Kirkfield northward for $7\frac{1}{2}$ miles is under contract with Messrs. Larkin & Sangster. The more important works of construction are : the building of a lift lock, several bridges and dams, and a moderate quantity of rock excavation in forming prism of canal. The work of forming the prism of the canal is being prosecuted with vigour, but the only structural work so far done is the building of concrete abutments of a highway bridge.

Section 3. From the end of Messrs. Larkin & Sangster's contract to Lake Simcoe. This work is under contract with Messrs. Brown & Aylmer. The chief features of the work are the construction of six locks, the extensive entrance piers on Lake Simcoe, a railway bridge, several highway bridges, a culvert, and forming the prism of the canal. The work so far done has been chiefly in clearing, excavating and fencing. A culvert has been built, and the contractors are now working at the railway bridge.

The following is a statement of the expenditure made on the construction of this canal from its commencement :

Expenditure prior to June 30, 1867	\$ 309,371 31
Expenditure prior to works now under contract, June 30, 1894	782,524 88
Expenditure from June 30, 1894, to June 30, 1900..	1,785,927 29
Total expenditure up to June 30, 1900.....	\$2,877,823 48
Expended during year ended June 30, 1901.....	284,503 89
Total expenditure up to June 30, 1901.....	\$3,162,327 37
Expended from June 30, 1901, to October 1, 1901....	77,695 69
Total expenditure up to October 1, 1901....	<u>\$3,240,023 06</u>

ENLARGEMENT.

LACHINE CANAL.

This canal is $8\frac{1}{2}$ miles in length, extending from Montreal to Lachine. The enlargement works for what is termed a 14-foot navigation are completed, with the exception of a few thousand cubic yards of stone lining of the slopes of the prism.

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However, some time ago it was determined to give a 20-foot navigation from the harbour of Montreal to several of the basins in the canal, and with this view the government dredge has been working between the lower entrance and the St. Gabriel Basin for the last few seasons. It is in contemplation to build a lock with 20 feet of water on the mitre sill, 600 feet long and 50 feet wide, the plans of which have been prepared and tenders received ; but some delay has occurred in consequence of a difference of opinion having arisen as to its exact location. Contracts have been let for an electrical instalment for lighting the canal and working the lock gates, bridges and valves by electrical power. The Canadian Electric Company have the contract for installing the electrical machinery. &c. Messrs. Ahearn & Soper, of Ottawa, are the contractors for the poles, wire cables, &c., and the erection of same. For the erection of the upper portion of the power house, Messrs. J. B. Gratton & Co. are the contractors, the foundation of the power house having been built by the government by day's labour.

The following contractors satisfactorily completed their contracts during the year :—

1. M. J. Hogan, contractor for regulating weir at Lachine.
2. Messrs. Brewder & McNaughton, contractors for deepening the St. Pierre River.
3. Messrs. Wm. Kennedy & Sons, contractors for hydraulic machinery for power house.
4. Messrs. Martineau & Sons, contractors for 303 feet of wooden flume to carry water from the upper reach to the turbines.

Total expenditure up to June 30, 1900.....	\$8,322,570 57
Expended during year ended June 30, 1901	97,305 52
<hr/>	
Total expenditure on enlargement up to June 30, 1901	\$8,419,876 09
Expended from June 30, 1901, to October 1, 1901....	6,105 12
<hr/>	
Total expenditure on enlargement up to Oct. 1, 1901.	<u>\$8,425,981 21</u>

CORNWALL CANAL.

This canal is 11 miles in length, extending from Cornwall to Dickenson's Landing. The works of enlargement on this canal are drawing to a close. The only work remaining to be done is : First, the completion of the work of improvement at the upper entrance opposite Dickenson's Landing, under contract with the Weddell Dredging Company, which work is composed of excavation in widening the approach to the canal on the land side. The work is about three-quarters done ; second, the strengthening of the north bank in front of the east end of the town of Cornwall, which has not yet been placed under contract ; third, the supplying electrical power to work the lock gates, valves and bridges, and to light the canal by electricity, which work is in progress under contract with Mr. M. P. Davis ; fourth, the enlarging of the regulating weir at lock No. 17, which has become necessary by reason of the additional water power leased to the paper mill at Cornwall. No steps have yet been taken to proceed with the work.

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Total expenditure up to June 30, 1900.....	\$4,787,272 78
Expended during the year ended June 30, 1901.....	62,032 47

Total expenditure on enlargement up to June 30, 1901.....	\$4,849,305 25
Expended from June 30, 1901 to October 1, 1901....	28,976 42

Total expenditure on enlargement up to October 1, 1901.....	<u>\$4,878,281 67</u>
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FARRAN'S POINT CANAL.

This canal is one mile in length, extending from Farran's Point for one mile westward. The work of enlargement of this canal is under contract with the Canadian Construction Company. The most important works covered by their contract were : Entrance piers, at both ends, a lock 800 feet long, 50 feet wide, with 14 feet of water on the mitre sill, the deepening, straightening and widening of the prism. These works are completed, with the exception of two or three thousand cubic yards of dredging which it is expected will be completed before winter sets in.

Total expenditure up to June 30, 1900.....	\$ 686,646 38
Expenditure during year ended June 30, 1901.....	111,158 39

Total expenditure on enlargement up to June 30, 1901.....	\$ 797,804 77
Expended from June 30, 1901 to October 1, 1901....	11,970 15

Total expenditure on enlargement up to October 1, 1901.....	<u>\$ 809,774 92</u>
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RAPIDE PLAT CANAL.

This canal is 3½ miles in length, extending from Morrisburg westward 3½ miles. The works of enlargement are completed, with the exception of the work of widening out the upper entrance on the land side and building a new entrance pier, which work is progressing very slowly under contract with Messrs. Gilbert Brothers. The Weddell Dredging Company completed the work of straightening at Mariatown Point during the year.

Total expenditure up to June 30, 1900.....	\$1,889,799 71
Expended during year ended June 30, 1901.....	76,501 57

Total expenditure on enlargement up to June 30, 1901.....	\$1,966,301 28
Expended from June 30, 1901 to October 1, 1901....	18,942 30

Total expenditure on enlargement up to October 1, 1901.....	<u>\$1,985,243 58</u>
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GALOPS CANAL.

This canal is $7\frac{1}{2}$ miles in length. It extends from Iroquois to Cardinal. The works of enlargement of this canal were of considerable magnitude, the most important works of which were : A lock 800 feet long, 50 feet wide, two locks 270 feet long, 45 feet wide, one of which is a guard lock, all with 14 feet of water on the mitre sills ; two weirs, two bridges, a new cut for over 4 miles, of which the cut at Cardinal is about one mile in length and 64 feet deep at the summit ; entrance piers at both ends, the building of retaining walls and constructing a new road. For construction purposes this canal was divided into four contracts, viz. :—

1. Iroquois to Presqu'île—Messrs. Larkin & Sangster, contractors.
2. Presqu'île to Gates' Point—Messrs. Wm. Davis & Sons, contractors.
3. Gates' Point to Upper Entrance—Messrs. Murray & Cleveland, contractors.
4. Outside Upper Entrance—William Allan, contractor.

Of these contracts, that of William Allan, is the only one completed.

Messrs. Larkin & Sangster have practically completed their work, there remaining to be done about 3,000 cubic yards of dredging, a few cubic yards of masonry and a small piece of ditching, all of which it is hoped will be finished before the season closes.

Messrs. Wm. Davis & Sons' work was very heavy, and is not so near completion. It will most certainly not be finished this season. There remains yet to be done considerable dredging, to complete the straightening and widening, and several thousand cubic yards of masonry lining to the slopes of the Cardinal cut, as well as some thousands of cubic yards of stone filling behind the masonry walls, also sodding and trimming of slopes, &c.

Messrs. Murray & Cleveland are bringing their work to a close, but will scarcely complete them this season ; the works remaining to be done are the completion of the straightening of the canal at McLaughlin's Point, and the construction of some cribs at the eastern end of their contract.

Total expenditure up to June 30, 1900.	\$4,138,636 65
Expended during year ended June 30, 1901.	390,112 78
<hr/>	
Total expenditure on enlargement up to June 30, 1901.	\$4,528,749 43
Expended from June 30, 1901 to October 1, 1901	125,359 04
<hr/>	
Total expenditure on enlargement to October 1, 1901.	<u><u>\$4,654,108 47</u></u>

WELLAND CANAL.

The trunk line of this canal is $26\frac{3}{4}$ miles in length, extending from Port Dalhousie on Lake Ontario to Port Colborne on Lake Erie. The works of enlargement were com-

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menced in August, 1873, and completed in 1887, since which the water in Lake Erie has fallen lower than the level previously recorded, so that it has become necessary to lower the mitre sill of the lock at Port Colborne (the upper entrance to the canal), and also to deepen the prism in the long reach, for both of which works parliament has provided an appropriation; these works will be carried out before the opening of navigation next spring. It is also in contemplation to remove the pivot piers of the bridges crossing the canal, and to build swing bridges, giving a clear span over the whole channel. At Port Colborne large works are in progress which, when completed, will enable vessels drawing 20 feet of water to enter the head of the canal and transfer their cargoes through elevators into vessels suitable for navigating the enlarged canals to Montreal, the head of ocean navigation. The Department of Railways and Canals, as their part of the work, are deepening the entrance sufficient to give a clear depth of 22 feet of water and building two piers on which to erect elevators, and are also otherwise improving the facilities at this point of shipping. The Department of Public Works, with a view of assisting in the encouragement of trade through the canals, are building a breakwater about a mile in length and dredging out the harbour within the line of the breakwater. When these works are fully completed, it is believed a very considerable increased trade will find its way to Montreal by way of our canal system. Considerable progress has been made with them, but there yet remains much to be done before they are available for service.

Total expenditure up to June 30, 1900. \$16,095,979 02

Expended during the year ended June 30, 1901 224,536 96

Total expenditure on enlargement up to

June 30, 1901. \$16,320,515 98

Expended from June 30, 1901, to October 1, 1901 78,117 34

Total expenditure on enlargement up to

October 1, 1901. \$16,398,633 32

In addition to the 26 $\frac{3}{4}$ miles of the trunk line of this canal, there are four branches available for small craft:—

	Mile.
1st. Port Robinson to Welland river.	$\frac{1}{2}$
2nd. Chippawa to Niagara river.	$\frac{1}{4}$
3rd. Grand river feeder	21
4th. Port Maitland branch.	1 $\frac{1}{2}$

GRENVILLE CANAL.

This canal is 5 $\frac{3}{4}$ miles in length, extending from the town of Grenville towards Carillon, 5 $\frac{3}{4}$ miles. It is not on the line of the 14-foot navigation, but is on the line of route between Montreal and Ottawa. The chief work comprised in Messrs. Piggott and Ingles' contract was the widening of the prism at certain points to 50 feet at the bottom. The work was completed, as stated, in the reports of last year, in May, 1900. The improvement is much appreciated by those who navigate these waters.

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The enlargement of this canal was commenced in 1870, and the enlarged canal was opened for navigation in 1884.

Total expenditure on enlargement up to June 30, 1900.	\$4,114,108 67
Expenditure during the year ended June 30, 1901 ..	4,930 65

Total expenditure on enlargement up to	
June 30, 1901..	\$4,119,039 32
Expended from June 30, 1901, to October 1, 1901..	Nil.

Total expenditure on enlargement up to	
October 1, 1901	<u>\$4,119,039 32</u>

ST. LAWRENCE RIVER AND LAKE IMPROVEMENT.

LAKE ST. LOUIS.

The work done in this lake was the cutting of a direct channel from the upper entrance of the Lachine canal westward for about 2 miles in length, 300 feet in width, giving a depth of 17 feet of water. Since the actual work was completed, the engineering staff have been engaged in making a chart of the channel and lake which, when completed, will be of great value.

Total expenditure up to June 30, 1900	\$261,832 18
Expended during the year ended June 30, 1901	12,918 31

Total expenditure up to June 30, 1901	\$274,750 49
Expended from June 30, 1901, to October 1, 1901.. . .	704 09

Total expenditure up to October 1, 1901.. . .	<u>\$275,454 58</u>
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LAKE ST. FRANCIS.

This work comprised the cutting of a direct channel 300 feet wide, with a depth of 17 feet of water through the Coteau shoal, the Horse Back shoal, the Highlander shoal, the Middle shoal, and the St. Regis shoal. The work is being carried through under contract with Messrs. Manning and McDonald, and it is expected that it will be completed by the end of the present season.

Total expenditure up to June 30, 1900..	\$41,961 46
Expended during year ended June 30, 1901..	15,000 00

Total expenditure up to June 30, 1901..	\$56,961 46
Expended from June 30, 1901, to October 1, 1901....	13,945 25

Total expenditure up to October 1, 1901....	<u>\$70,906 71</u>
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GALOPS RAPIDS.

This work, owing to the heavy rapid current, was a work both difficult and costly of execution. The work was composed entirely of submarine rock excavation in forming a channel 200 feet wide with a depth of 17 feet of water, through Upper Bar, North and Caledonia shoals, Island shoals and Lower Bar. Messrs. Gilbert Brothers are the contractors. Owing to the difficulties attending the execution of this work, the progress being made is necessarily slow, but the work is drawing towards completion.

Total expenditure up to June 30, 1900.....	\$763,192 03
Expended during the year ended June 30, 1901.....	91,211 97

Total expenditure up to June 30, 1901.....	\$854,404 00
Expended from June 30, 1901, to October 1, 1901.....

Total expenditure up to October 1, 1901.....	<u><u>\$854,404 00</u></u>
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NORTH CHANNEL.

This work is the cutting and forming of a channel about $2\frac{1}{2}$ miles long, 300 feet wide, with a depth of 16 feet of water, from a point about one mile west of the upper entrance to the Galops Canal, in a direct line to deep water off Chimney Point, and the building of a dam across the 'Gut' between Adams and Ogden's Islands. Mr. M. A. Cleveland is the contractor for this work. He has prosecuted it steadily and diligently from its commencement, and, with the exception of the dam, which is not yet commenced, owing to the sanction of the United States government for its construction not yet having been received, the work is fast drawing to a close, and it is hoped that it will be completed before June 30, 1902. I may here observe that if the dam is to be built, and in my opinion it certainly should be, in order to cut off a cross current, no unnecessary delay should occur in giving authority to proceed with the work.

Total expenditure up to June 30, 1900.....	\$ 858,316 15
Expended during the year ended June 30, 1901.....	184,790 34

Total expended up to June 30, 1901.....	\$1,043,106 49
Expended from June 30, 1901, to October 1, 1901....	25,947 57

Total expenditure up to October 1, 1901....	<u><u>\$1,069,054 06</u></u>
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ST. LAWRENCE RIVER AND CANALS.

The work under this heading is the supplying of gas and other buoys through the buoy tender *Scout*, the sweeping and surveying of the St. Lawrence River and canals throughout, from Coteau Landing to Prescott, &c.

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Total expenditure up to June 30, 1900.....	\$383,561 36
Expended during the year ended June 30, 1901.....	19,389 75

Total expenditure up to June 30, 1901.....	\$402,951 11
Expended from June 30, 1901, to Oct. 1, 1901.....	9,869 82

Total expenditure up to October 1, 1901.....	<u>\$412,820 93</u>
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To summarize, I may state the cost of construction and enlargement of the canals and improvements to the rivers and lakes up to June 30, 1901, to be as follows, viz.:—

ROUTE FROM MONTREAL TO PORT ARTHUR.

	Original construction of Canals.	Enlargement of Canals.	Improvements to St. Lawrence Rivers and Lakes.	Total Expenditure.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Lachine Canal	2,589,532 85	8,419,876 09		
Lake St. Louis.....			274,750 49	
Soulanges Canal.....	6,254,692 43			
Lake St. Francis.....			56,961 46	
Cornwall Canal	1,945,624 73	4,849,305 25		
Williamsburg Canals :—				
Farran's Point.....		797,804 77		
Rapide Plat.	1,320,655 54	1,966,301 28		
Galops.....		4,531,236 06		
Galops Rapids			854,404 00	
River Reaches			630,159 84	
North Channel.....			1,043,106 49	
Murray Canal.....	1,247,470 26			
Welland Canal.	7,693,824 03	16,320,515 98		
Sault Ste Marie	4,093,025 60			
Total.....	23,144,825 44	36,885,039 43	2,859,382 28	64,889,247 15

If to the above total there is added the cost, \$1,636,690.26, of the Beauharnois Canal, now not required for navigation, the total expenditure is \$66,525,937.41.

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ROUTE FROM LACHINE TO OTTAWA.

	Original Construction.	Enlargement.
	\$ cts.	\$ cts.
Ste. Anne's Lock.....	134,456 51	1,035,759 12
Carillon and Grenville Canals.....	63,053 64	4,119,039 32
Total.....	197,510 15	5,154,798 44

ROUTE FROM OTTAWA TO KINGSTON.

	Original Construction.	Enlargement.
	\$ cts.	\$ cts.
Rideau Canal.....	4,084,323 37	Nil.
Tay Canal.....	489,599 23	Nil.
Total.....	4,573,922 60	Nil.

ROUTE FROM ST. JOHNS, P.Q., TO SOREL.

	Original Construction.	Enlargement.
	\$ cts.	\$ cts.
Chambly Canal	637,056 76	Nil.
St. Ours Lock.....	121,537 65	Nil.
Total.....	758,594 41	Nil.

ROUTE FROM TRENTON TO GEORGIAN BAY.

	Original Construction.	Enlargement.
	\$ cts.	\$ cts.
Trent Canal.....	3,162,327 37	Nil.
Total.....	3,162,327 37	Nil.

ROUTE FROM ATLANTIC OCEAN TO BRAS D'OR LAKES.

	Original Construction.	Enlargement.
	\$ cts.	\$ cts.
St. Peters Canal—Cape Breton.....	248,762 84	399,784 30
Total.....	248,762 84	399,784 30

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The following canals are no longer required for navigation purposes : The Culbute, which has been abandoned for some years, and the Beauharnois Canal, which will, it is assumed, be closed to navigation next season. The cost of constructing these two canals was as follows, viz. :—

Culbute Canal.....	\$ 382,906 46
Beauharnois Canal	1,636,690 26
	<hr/>
	\$2,019,596 72
	<hr/>

MAINTENANCE AND OPERATION.

In treating of the maintenance and operation of the canals, I shall first take the canals in the order in which they are located on the trunk line of waterway between Montreal, the head of ocean navigation, and Port Arthur, at the upper end of Lake Superior, the head of lake navigation, commencing with the Lachine Canal at Montreal.

LACHINE CANAL.

Operation.

The traffic through this canal was only twice interrupted during the year, viz. :
1st. On October 10, 1900, the steamer *Alexandria* struck Brewster bridge, damaging it, on which occasion navigation was suspended for six hours, whilst the repairs were being made. 2nd. On November 21, 1900, the barge *Frontenac* damaged the St. Paul's bridge by running against it, navigation on this occasion was interrupted for nine hours whilst repairs were being made. With these two exceptions this canal was successfully operated during the year.

Maintenance.

The cost of repairs made during the year ended June 30, 1901, is as follows :—

Ordinary repairs under the head of staff and repairs ..	\$ 50,005 48
Special repairs under the head of income :	
Scow and fitting up with machinery.....	\$ 3,993 20
Steel rollers for Wellington bridge.....	1,954 24
To rebuild wall, basin No. 2.....	6,125 43
	<hr/>
	12,072 87
	<hr/>
Total.....	\$ 62,078 35
	<hr/>

SOULANGES CANAL.

Operation.

The electrical machinery for operating the lock gates, valves and bridges not having been fully completed and in working order, the gates, valves and bridges were worked by manual labour ; but it is expected that the electrical instalment will be in

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full working order before navigation opens next season, as a result the staff employed will be much smaller than it is now. The canal has been operated with only slight interruption to navigation whilst some changes were being made in the sluices. The grain traffic through during the season of 1900, was as follows, viz. :—

	Bushels.
Grain from the Canada Atlantic Railway.....	11,220,586
Grain from Kingston and River St. Lawrence	7,707,000
Grain-steamers through from Lake Erie	500,000
	<hr/>
Total bushels for the season of 1900.	19,427,586
	<hr/>

During the season of 1900, 2,976 vessels passed through the canal.

From the opening of navigation on May 1, 1901, to August 31, 1901 :

	Bushels.
Grain from the Canada Atlantic Railway.	7,211,526
Grain via St. Lawrence River.	4,311,614
	<hr/>
Total bushels up to August 31, 1901.	11,523,140
	<hr/>

The total volume of traffic which passed through the canal from May 1 to August 31, 1901, is :—

	Tons.
Grain.	327,674
Coal.	221,557
Oil.	9,675
Lumber.	9,948
Oil cake	393
Pork	1,908
Firewood	480
General merchandise.	17,417
	<hr/>
Total tons.	599,052
	<hr/>

The probabilities are, therefore, that the volume of traffic through the canal will, at the close of the season, show a great increase over that of the season of 1900.

Maintenance.

The cost of repairs made during the year ended June 30, 1901, is as follows :—

Ordinary repairs under the head of staff and repairs...	\$ 5,888 77
Special repairs under the head of income :	
M. Clement, injuries received and medicine and attend-	
ance.	115 00
	<hr/>
Total.	\$ 6,003 77
	<hr/>

1-2 EDWARD VII., A. 1902

CORNWALL CANAL.

Operation.

No accident occurred in connection with the operation of this canal, and navigation was maintained without interruption.

Maintenance.

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

Ordinary repairs under head of staff and repairs	\$ 13,166 89
Special repairs under the head of income . . . . .	.....
Total	<u>\$ 13,166 89</u>

WILLIAMSBURG CANALS.

Operation.

These canals compose the Farran's Point canal, the Rapide Plat canal and the Galops canal. Navigation on these canals was conducted without accident, and in a fairly satisfactory manner, considering the extensive works of enlargement in progress.

Maintenance.

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

Ordinary repairs under head of staff and repairs	\$ 11,755 09
Special repairs under head of income . . . . .	.....
Total	<u><u>\$ 11,755 09</u></u>

WELLAND CANAL.

Operation.

With the exception of two accidents, which caused delay to traffic, the canal has been operated with success during the year. 1st. The steamer *Waccamaw* bound down on October 10, 1900, struck the lower gates of lock 6, damaging them considerably and causing interruption to navigation for sixty hours whilst the repairs were being made. 2nd. On May 1, 1901, the steam barge *Van Allen* bound down struck the lower gates of lock 6, carrying them away ; the rush of water thereby also carried away the upper gates ; spare gates, being in stock, were at once brought on the ground and stepped. The execution of this work occupied forty-eight hours, during which time navigation was interrupted.

Maintenance.

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

Ordinary repairs under head of staff and repairs.. . . . \$72,055 89

Special repairs under head of income :—

Renewal of west pier at Port Dalhousie. . \$27,431.79

Renewal of docking below lock 1. 1,536.08

Renewal of masonry wall, lock 24 13,920.65

Renewal of pile fenders, three bridges.. 11,117.70

General repairs.. 30,000.00

Outlet drainage at Port Colborne 3,771.21

----- 87,777 43

Total.. \$159,833 32

SAULT STE. MARIE CANAL.

Operation.

In approaching this canal, several vessels have met with accidents by reason of getting out of the channel, but the canal has been operated without interruption. During the year 3,597 vessels passed through the canal, of an aggregate tonnage of 2,489,253 tons. Of this tonnage, 589,530 was in Canadian bottoms. The average time occupied for making a lockage was 15½ minutes.

Maintenance.

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

Ordinary repairs under head of staff and repairs . . . \$10,289 18

Special repairs under head of income—

Pair of lock gates.. 48 39

Total.. \$10,337 57

The Lachine canal is the first and the Sault Ste. Marie canal the last on the trunk line of navigation between Montreal and Port Arthur.

CHAMBLY CANAL.

Operation.

Navigation on this canal was uninterrupted during the year.

1-2 EDWARD VII., A. 1902

Maintenance.

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

Ordinary repairs under head of staff and repairs . . .	\$17,572 35
Special repairs under head of income—	
Rebuilding bridge on Iroquois river . . .	\$999 59
Surveying property and planting stones..	195 50
	<hr/> \$ 1,195 09
Total.. . . .	<hr/> <hr/> \$18,767 44

ST. OURS LOCK AND DAM.

Operation.

No interruption occurred to navigation during the year at this point.

Maintenance.

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

Ordinary repairs under head of staff and repairs	\$1,631 44
Special repairs under the head of income—	
Rebuilding dam and ice breaker	3,610 06
	<hr/>
Total.. . . .	<hr/> <hr/> \$5,291 50

STE. ANNE'S LOCK.

Operation.

Navigation through this lock was uninterrupted during the year.

Maintenance.

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

Ordinary repairs under head of staff and repairs . . .	\$3,999 02
Special repairs under head of income	Nil.
	<hr/>
Total.. . . .	<hr/> <hr/> \$3,999 02

CARILLON AND GRENVILLE CANALS.

Operation.

These canals were operated during the year without interruption to navigation.

Maintenance.

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

Ordinary repairs under head of staff and repairs.	\$13,416 00
Special repairs under head of income—	
Rebuilding wall below lock 6	\$1,697 14
Rebuilding guide piers	7,634 81
	<hr/>
	9,331 95
Total.	<hr/> <hr/> \$22,747 95

BEAUHARNOIS CANAL.

Operation.

Since the Soulanges Canal was opened the traffic through this canal has amounted to very little, a few market boats only using it. The day is, therefore, not far distant when it will be closed to navigation, and used only as a water power for manufacturing purposes. Even so, a small staff will have to be employed to regulate the water and keep the bridges, &c., in repair.

Maintenance.

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

Ordinary repairs under head of staff and repairs.	\$14,199 12
Special repairs under head of income : Surveying and	
defining land boundaries	483 40
	<hr/>
Total.	<hr/> <hr/> \$14,682 52

MURRAY CANAL.

Operation.

No accidents occurred on this canal during the year, and navigation was not interrupted. Eight hundred and twelve vessels passed through during the year.

Maintenance.

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

Ordinary repairs under head of staff and repairs.	\$1,138 15
Special repairs under head of income	
	<hr/>
Total.	<hr/> <hr/> \$1,138 15

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RIDEAU CANAL.

Operation.

This canal was operated during the year without interruption to navigation.

Maintenance.

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

Ordinary repairs under head of staff and repairs.....	\$33,791 17
Special repairs under head of income.....	.....
Total	<u>\$33,791 17</u>

TRENT CANAL.

Operation.

This canal had no interruption to navigation during the year. The number of lockages were 4,328.

Maintenance.

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

Ordinary repairs under the head of staff and repairs....	\$13,075 89
Special repairs under head of income—	
Five guard piers	\$1,796 51
Dredging channel below Buckhorn Lock	1,273 92
“ “ Hutchison's Lock.	2,124 37
Dredging shoals in Otonabee River	3,500 02
Salary of H. S. Greenwood, asst. engineer, whilst absent with 2nd contingent in South Africa—March 1, 1900, to Dec. 31, 1900.....	1,500 00
Gratuity to widow of late G. E. Robertson, asst. engineer.....	300 00
	<u>10,494 82</u>
Total.....	<u>\$23,570 71</u>

ST. PETER'S CANAL.

Operation.

This canal has been operated successfully and without interruption to navigation during the year, and 1,603 vessels passed through the canal.

Maintenance.

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

Ordinary repairs under head of staff and repairs.....	\$ 841 63
Special repairs under head of income : General repairs and improvements	2,311 26
Total	<u>\$3,152 89</u>

SUMMARY.

Cost of maintenance and operation of the canal system for the year ended June 30, 1901.. . . .	\$638,909 72
Net revenue of canals after deducting refunds.....	<u>315,425 69</u>
Excess of 'cost of maintenance and operation over revenue	<u>\$323,484 03</u>

PROPOSED OTTAWA AND GEORGIAN BAY CANAL.

OTTAWA RIVER SURVEYS.

An appropriation was made by Parliament of \$10,000 for surveys of the Ottawa river in connection with the proposed Ottawa and Georgian Bay canal. Mr. H. A. F. MacLeod, an engineer of long experience, and thoroughly reliable, was entrusted with the work of making the surveys. His report, which is very interesting, will be found as an appendix to this report. After giving much detail as to the work he has accomplished in making surveys and preparing plans and estimates of the cost of this proposed canal, from Montreal to Georgian Bay—a distance estimated at 430 miles—he estimates the cost for 14 feet navigation at \$23,898,000, and the cost for 20 foot navigation at \$72,627,000.

The above estimates are approximate only, and I am disposed to think that, in both cases, it would be prudent to add about 25 per cent to the figures given, as, judging from my observations in connection with carrying out such works to completion, the engineer's estimates are often far exceeded by unforeseen difficulties of construction.

The appropriation made by Parliament for a survey in view of improvements to navigation of the Ottawa river is :

For 1899-1900.. . . .	\$ 10,000
1900-1901.. . . .	10,000
Total amount of appropriation.. . . .	<u>\$ 20,000</u>

The total expenditure under these appropriations up to

June 30, 1900, is	\$ 9,994 90
Expended during the year ended June 30, 1901....	9,999 65
Total expenditure	<u>\$ 19,994 55</u>

1-2 EDWARD VII., A. 1902

RAILWAY SUBSIDIES.

Subsidies to railways continue to be voted in such a form that it is not possible to show the amount of cash subsidy granted, as the amount of subsidy will, in many cases, be based upon the cost of each road. For this reason, I am again, this year, unable to give the amount of each subsidy available, but I shall, as heretofore, show the actual amount paid; also the number of miles of railway for which subsidy granted, per mile, was available on July 1, 1900, and the number of miles of railway (built up to July 30, 1901), for which cash subsidy, per mile, was granted. There will also be found the amount of subsidy paid up to October 1, 1901, and a statement of cash subsidy, per annum, paid up to June 30, 1901, with the number of miles built. Also a statement showing the railways to which subsidies have been granted aid in land.

Amount of cash subsidy, per mile, paid up to June 30, 1901....	\$21,571,136 17
Number of miles of railway on which cash subsidy, per mile, was paid up to June 30, 1901..	3,954
Amount of cash subsidy, per mile, paid up to June 30, 1901....	\$22,255,766 17
Cash subsidy, per annum, paid up to June 30, 1901...	2,239,200 00
Number of miles built on cash subsidy, per annum, to June 30, 1901 ..	252
Number of miles of railway to which aid in land has been authorized ..	2,937
Number of acres of land, the grant of which in aid of railways, has been authorized..	21,518,144

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

These roads, as previously reported, received, in cash, as follows :—

Canadian Pacific Railway (mileage, 1,905) ..	\$ 25,000,000
Canada Central Railway (mileage, 120)...	1,525,250
Esquimalt and Nanaimo Railway (mileage, 71) ..	750,000
Total....	\$ 27,275,250

In land, as follows :—

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

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RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The report of the Secretary of the Railway Committee of the Privy Council enumerates the cases which have been before the committee during the twelve months from October 1, 1900, to October 1, 1901 ; within the period above named there were seven meetings of the Railway Committee, as follows :—

December 21, 1900.

June 3, 1901.

March 7, 1901.

September 5, 1901.

May 21, 1901.

September 10, 1901.

May 27, 1901.

The character of the business before them was :—

- 1st. For permission to make highway crossings over railways.
- 2nd. For permission for one railway to cross another.
- 3rd. For permission for one railway to form a junction with another.
- 4th. For permission for railways to cross and run along streets and highways.
- 5th. For approval of plan and proposed site of bridges over navigable waters.
- 6th. For permission to remove packing from frogs and wing rails.
- 7th. For permission to use crossings and junctions before installation of interlocking appliances.
- 8th. For permission to construct branch lines.
- 9th. For running powers by one railway over another railway.
- 10th. For protection at streets and highways crossed by railways.
- 11th. To compel railways to provide effective cattle guards at highway crossings.
- 12th. For permission to change location of sections of railways.
- 13th. For approval of rules and regulations of railways.
- 14th. For permission to close streets and highways and to divert them.

All evidence is taken down by a stenographer, and is placed on file in the department, as a record for future reference.

CANAL STATISTICS.

These statistics are for the season of 1900. They have been prepared by Mr. R. Devlin, the officer in charge of the Canal Statistic Office.

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TABLE showing the number of tons of freight passing through each canal, the tolls collected, and the number of trips of vessels passing through each canal, for the year ended December 31, 1900.

Name of Canal.		Tons of freight passing through.	Tolls Collected.	Number of trips of vessels pass- ing through.
			\$ cts.	
Lachine.	} St. Lawrence Canals	2,138,357	19,387 00	9,658
Beauharnois				
Cornwall				
Williamsburg				
Welland	} Ottawa River Canals	1,012,812	14,398 01	2,399
Chambly		300,755	3,128 63	2,839
Ste. Anne's		441,116	2,602 63	2,114
Carillon				
Grenville				
Rideau				
Murray		191,515	1,681 36	2,579
Trent Valley		213,179	263 34	745
St. Peters		100,972	565 12	2,212
* Sault Ste. Marie		115,783	2,317 52	1,628
		2,194,748	Free.	3,081

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

GENERAL REMARKS.

For details as regards the subjects treated in this report, I would refer you to the reports of the officers in charge of the Government Railways and Canals, which form appendices hereto.

SESSIONAL PAPER No. 20

The Summary of Tables of Steam Railways for the Years ended June 30, 1900, and June 30, 1901.

	Comparative Statement.	
	June 30, 1900. Including 13 Electric Railways.	June 30, 1901. Steam Rail- ways only.
	\$	\$
Miles of railway completed (track laid)	17,824	18,294
" siding	2,558	2,710
" iron rails in main line	130	110
" steel	17,694	18,184
" " (double track)	591	634
Capital paid (including the 4 following items)	998,268,404	1,042,785,539
Government (Dominion & Provincial) bonuses paid	169,706,725	177,640,765
" " loans paid	20,869,264	20,613,489
" " (Provincial only) subscriptions to shares paid	300,000	300,000
Municipal aid paid	15,884,542	16,310,253
Miles in operation	17,637	18,140
Gross earnings	70,740,270	72,898,749
Working expenses	47,699,798	50,368,726
Net earnings	23,040,472	22,530,023
Passengers carried	21,500,175	18,383,722
Freight carried (tons)	35,946,183	36,999,371
Train mileage	55,177,871	53,349,394
Passengers killed	7	16
Number of elevators	239	253
" guarded level crossings—public roads	169	193
" unguarded level	12,879	12,422
" overhead bridges	431	427
" of public roads under crossings		280
" level crossings of other railways	244	233
" junction with other railways	346	347
" " branch lines	251	230
" engines owned	2,179	2,516
" " hired	103	117
" sleepers and parlour cars owned	235	243
" " " hired	3	15
" first class cars owned	1,213	1,087
" " " hired	74	72
" second class and immigrant cars owned	640	636
" " " hired	1	13
" baggage, mail and express cars owned	632	729
" " " hired	30	86
" refrigerator cars owned	736	728
" " " hired	207	273
" cattle and box freight cars owned	39,112	42,166
" " " hired	3,426	3,738
" platform cars owned	14,947	15,773
" " " hired	679	575
" coal and dump cars owned	5,739	6,557
" " " hired	133	218
" conductors' vans owned	1,055	1,019
" " " hired	1	21
" tool cars owned	*872	948
" " " hired		7
" snow ploughs owned	300	301
" " " hired		3
" flangers owned	311	320
" " " hired		3
Number of cars with air-brakes—owned	48,072	
" " " hired	4,342	
Number of cars with automatic couplers—owned	56,423	
" " " hired	4,711	

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

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SUMMARY of Tables of Electric Railways for the year ended June 30, 1901.

Miles of railway completed (track laid)	675
“ sidings	14
“ iron rails in main line	5
“ steel rails in main line	670
“ steel rails (double track)	158

Capital paid, including Dominion bonuses, \$60,800 (of which \$38,400 was paid to the St. Catharines and Niagara Central Railway, afterwards changed to an electric road, under the name of the ‘Niagara, St. Catharines and Toronto Railway,’ and municipal aid, \$173,000 (of which \$100,000 was subscription to shares in and \$40,000 loan to the St. Catharines and Niagara Central Railway). \$39,076,019

Miles in operation	672
Gross earnings	\$ 5,768,283
Working expenses	\$ 3,435,163
Net earnings	\$ 2,333,120
Passengers carried	120,934,656
Freight carried (tons)	287,926
Car mileage	31,750,754
Passengers killed	3
Number of guarded level crossings, public roads	17
“ unguarded level crossings, public roads	247
“ overhead bridges	20
“ level crossings of other railways	74
“ junctions with other railways	24
“ junctions with branch lines	8
Power-houses (water-power)	11
“ (steam power)	30
Number of motor cars—owned	1,728
“ motor cars—hired	8
“ trailer cars—owned	291
“ trailer cars—hired	2
“ electric locomotives—owned	8
“ electric locomotives—hired	1
“ baggage, mail and express cars—owned	13
“ cattle and box freight cars—owned	7

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Number of platform cars—owned.	56
“ tool cars—owned.	7
“ snow ploughs—owned.	16
“ snow sweepers—owned.	62

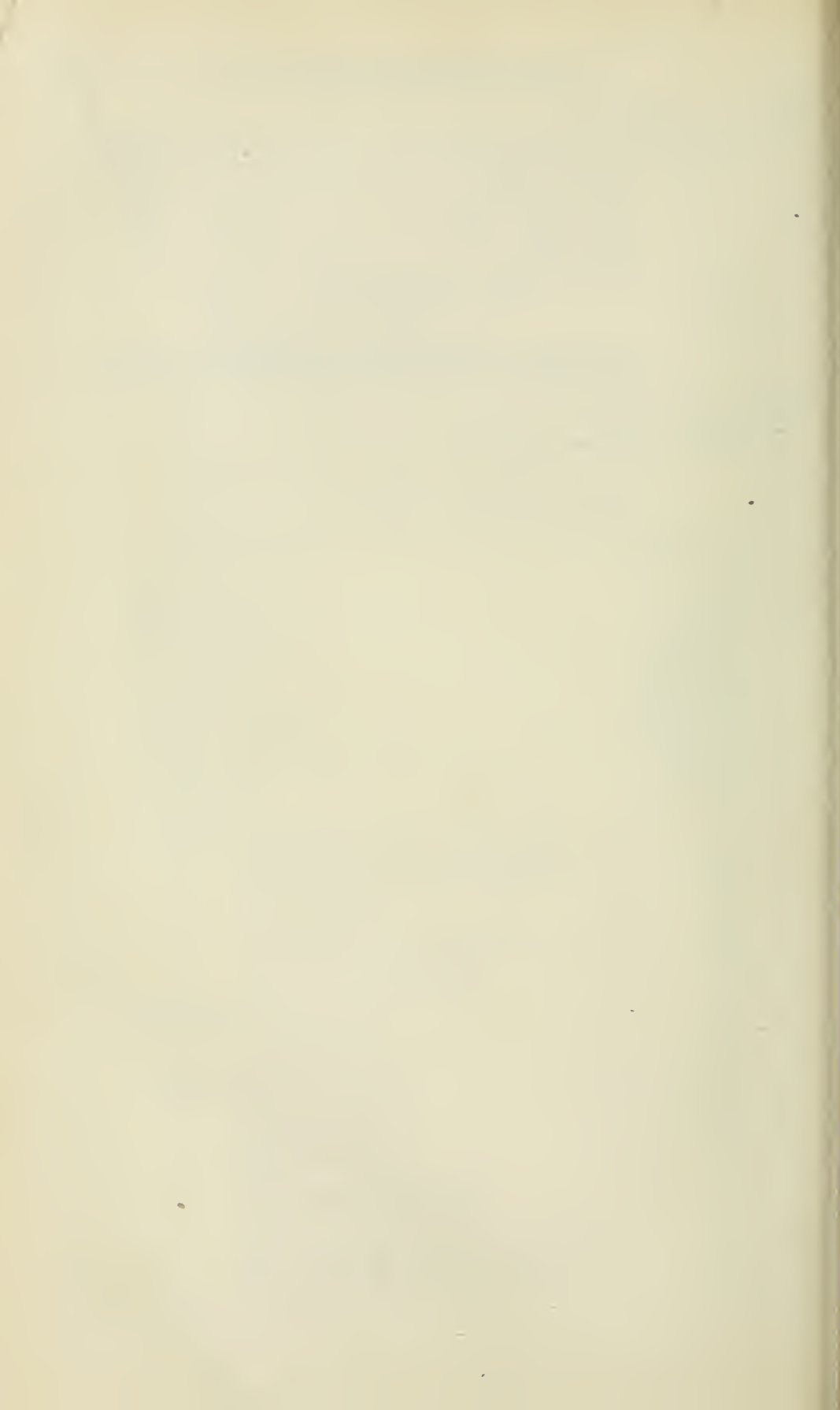
I have the honour to be, sir,
Your obedient servant,

COLLINGWOOD SCHREIBER,

Deputy Minister and Chief Engineer of Railways and Canals.

The Honourable A. G. BLAIR,

Minister of Railways and Canals.



No. 1

RAILWAYS.

INTERCOLONIAL RAILWAY OF CANADA,

OFFICE OF THE GENERAL MANAGER,

MONCTON, N.B., September 23, 1901.

SIR,—I have the honour to submit the following report on the working of the Intercolonial Railway during the fiscal year ended June 30, 1901:—

I inclose the report of the chief engineer on the works charged to capital account, the report of the general superintendent and of the engineer of maintenance on the repair and renewal of the permanent way, buildings and works, and the report of the mechanical superintendent on the rolling stock ; also, the following statements of the accounts 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. Special Votes.
9. General Stores.
10. General Balance.
11. Comparative Statement of Averages.

The length of railway in operation during the year was the same as last year, 1,314·67 miles.

CAPITAL ACCOUNT.

The total cost of road and equipment on June 30, 1900, was \$59,987,715.29.

The additions during the year were as follows:—

To increase accommodation at Halifax	\$ 16,151 06
Balance due on Halifax Cotton Factory Branch	5,801 97
To dredge and blast rock at Halifax	15,818 42
To extend Cotton Factory Branch at Halifax.....	734 75
Freight shed and to improve station at Rockingham..	368 44
Iron highway bridge, Rocky Lake	4,911 00
Building for baggage and express at Truro	2,045 33
To re-arrange, enlarge and extend station yard at Truro.	9,498 84
To extend coal trestle at Stellarton	3,502 20
Sidings at Stellarton near Albion Mines	2,364 75

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Improvements at Mulgrave	\$ 41,524 51
To improve ferry service at Strait of Canso	317,844 01
Improvements at Point Tupper	7,105 01
Towards building sea-wall in Cape Breton	8,000 00
To increase accommodation at Sydney	96,000 00
To raise Sydney and Louisburg Railway Bridge.	15 39
To increase station accommodation at Westville.	8,000 00
To extend Intercolonial Railway to Copper Crown Works, Pictou.	20,234 51
Land damages on Oxford and New Glasgow and Cape Breton Divisions	326 13
To increase accommodation at Amherst.	4,132 67
Towards constructing subway at Christie's Crossing.	6,252 42
To increase accommodation at St. John	203,000 00
Grain elevator at St. John	2,180 55
Additional conveyer on west side of wharf at St. John.	16,752 50
To increase accommodation at Lévis	90,090 23
To remove rock by widening Bennett's Cutting, &c., near Lévis.	5,058 61
New steel bridge at Etchemin	20,116 23
To strengthen bridges	142,678 00
Building new and enlarging old engine houses	132,422 61
Larger turntables	10,994 98
Improving telegraph service	5,190 00
Steel rails and fastenings.	402,549 71
Towards building rest houses at engine stations.	2,998 06
Improved accommodation and facilities along the line of railway.	146,486 27
To increase facilities along the line	92,099 53
Additional sidings along the line.	114,992 82
To purchase tools and machinery	18,116 63
Machinery at shops	4,170 56
Three travelling steam derricks	34,500 00
To change air brakes on passenger cars, &c.	13,074 10
To apply air brakes to freight cars	25,485 18
To change car couplers on passenger cars	2,212 00
To change draw-bars on freight cars	20,000 00
To equip passenger cars with vestibules	5,472 06
To equip passenger cars with Pintsch gas apparatus.	4,800 00
Additional rolling stock	1,563,705 77
Elevator at Halifax.	807 03
Original construction	1,723 62

Total. \$ 3,652,313 46

Making the total cost on June 30, 1901. 63,640,028 75

To purchase tools and machinery.

This is for additional and improved tools and machinery for the machine shop.

Three travelling steam derricks.

These are for lifting heavy weights at wrecks and on other occasions.

To change air brakes on passenger cars, &c.

This is to apply the latest improved quick action air brake.

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To apply air brakes to freight cars.

This is a continuation of work which has been going on for some years. The law in the United States requires that all freight cars shall be fitted with air brakes. These brakes were fitted on 1,307 cars during the year. There are now 3,978 of the freight cars so fitted.

To change car couplers on passenger cars.

This is a change made necessary by the action of all railways in North America adopting a particular kind of coupler called the master car builders' standard coupler. The Miller coupler, formerly in use, was removed from sixty cars during the year, and the M. C. B. coupler was applied in its place.

To change drawbars on freight cars.

This work has been going on for some time, as it is necessary in order to comply with the law in the United States, which requires all freight cars to be equipped with the M. C. B. coupler. Five hundred cars were fitted during the year.

To equip passenger cars with vestibules.

This is an improvement for through trains and adds to the comfort and safety of passengers.

To equip passenger cars with Pintsch gas apparatus.

This is the mode of lighting passenger cars which is in most general use, both in America and in Europe. It is found to be efficient, economical and safe.

Additional rolling stock.

A total of twenty locomotives were purchased, three of them being ten wheeled engines for passenger service, and seventeen being consolidation engines for freight service

Four first class sleeping cars, six first class passenger cars for day use, one thousand and forty-eight box freight cars, nineteen refrigerator freight cars were purchased.

Forty box freight cars and two platform cars were built in the railway workshop.

In regard to the other expenditures on capital account, the reports of the Chief Engineer, and of the Engineer of Maintenance, both of which are attached, give the particulars.

REVENUE ACCOUNT.

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

Working expenses.	\$5,320,422 64
Gross earnings.	4,972,235 87
	<hr/>
Deficiency.	\$ 348,186 77
	<hr/>

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

In 1900-1901.	\$4,972,235 87
In 1899-1900.	4,552,071 71
	<hr/>
Increase.	\$ 420,164 16
	<hr/>

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The earnings from passenger traffic compare as follows :—

In 1900-1901.. . . .	\$1,607,166 79
In 1899-1900.. . . .	1,404,469 87
Increase.. . . .	<u>\$ 202,696 92</u>

The earnings from freight traffic compare as follows :—

In 1900-1901.. . . .	\$3,121,006 15
In 1899-1900.. . . .	2,912,790 52
Increase.. . . .	<u>\$ 208,215 63</u>

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

In 1900-1901.. . . .	\$ 244,062 93
In 1899-1900.. . . .	234,811 32
Increase.. . . .	<u>\$ 9,251 61</u>

The earnings by mile of railway compare as follows :—

In 1900-1901.. . . .	\$ 3,782 11
In 1899-1900.. . . .	3,462 52
Increase.. . . .	<u>\$ 319 59</u>

The earnings by train mile compare as follows :—

	Cents.
In 1900-1901.. . . .	79·39
In 1899-1900.. . . .	<u>83·16</u>

The number of passengers carried compare as follows :—

In 1900-1901.. . . .	2,025,295
In 1899-1900.. . . .	1,791,754
Increase.. . . .	<u>233,541</u>

Of this increase 226,741 were local passengers and 6,800 were through passengers.

The weight of freight carried compares as follows :—

	Tons.
In 1899-1900.. . . .	2,151,208
In 1900-1901.. . . .	2,111,310
Decrease.. . . .	<u>39,898</u>

There was an increase in through freight of 40,359 tons and a decrease in local freight of 80,257 tons.

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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.	1899-1900.	1900-1901.	Increase.	Decrease.
Barrels of flour and meal.....	1,234,076	1,292,106	58,030	
Bushels of grain.....	2,720,453	3,535,364	814,911	
Lumber in superficial feet.....	379,350,074	396,858,964	17,508,890	
Head of live stock.....	92,813	95,923	3,110	
Coal in tons.....	603,209	506,590		96,619
Manufactured goods in tons.....	507,024	476,528		30,496
Cords of firewood.....	49,638	69,024	19,386	
All other articles in tons.....	296,341	289,519		6,822

There was an increase over last year in the quantity of the following articles carried :—Flour and meal, oats, wheat, corn, pease, beans, hay and straw, butter and cheese, horned cattle, pigs, sheep, lumber and timber, bricks, fish in barrels, dried fish, oysters, molasses, fresh pork, fresh and salted beef, hides and skins, and leather, and a decrease in the quantity of the following :—Barley, potatoes, carrots, beets and turnips, eggs, calves, horses, extract of hemlock bark, coal, ore, stone, lime and cement, sand, iron and other metals, fresh fish, canned fish, sugar, salted pork, drygoods, hardware, liquor, groceries.

WORKING EXPENSES.

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

In 1900-1901.....	\$5,320,422 64
1899-1900.....	4,266,710 22
Increase.....	<u>\$1,053,712 42</u>

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

Per mile run by engines—	Cents.
In 1900-1901.....	67'26
1899-1900.....	<u>62'49</u>
Per mile run by trains—	
In 1900-1901.....	84'95
1899-1900.....	<u>77'94</u>

Expenditure per mile of railway—

In 1900-1901.....	\$4,046 96
1899-1900.....	<u>3,245 46</u>

The rent paid to the Grand Trunk Railway Company is not included in the above, as it would disturb the comparison with previous years ; no corresponding charge relating to the cost of any portion of the railway having been included in the working expenses previous to March 1, 1898.

1-2 EDWARD VII., A. 1902

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

The work of relaying the track with heavier rails, commenced last year, was continued, and on $31\frac{1}{2}$ miles of track the rails, weighing 67 pounds to yard, were taken up, and new rails, weighing 80 pounds to the yard, were laid in their place.

The number of ties renewed was 495,243.

Portions of the track on various parts of the line were rebalasted, 109,863 cubic yards of gravel being distributed over a total distance of 144 miles.

The bridges, wharfs and buildings received necessary repairs.

The fences were repaired, and 161 miles of new fences were built.

The snow fences and snow sheds were repaired.

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

Six large ten-wheeled passenger locomotives were purchased to maintain the stock, replacing smaller ones taken out of service.

Two hundred platform cars were purchased, one box freight car, fifteen platform cars, six coal cars, and one auxiliary car were built in the railway shops, all to maintain the stock, a total of 223 cars.

These cars are of 60,000 pounds capacity, and replace cars of 30,000 pounds capacity.

STORES.

The value of stores purchased was	\$3,433,823 22
The value of stores used was	3,145,526 01
The value of material sold was	222,943 15

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

Miscellaneous.	\$ 295,202 57
Fuel.	543,382 00
Track materials	675,194 37
Iron and steel rails.	311,198 10
Total.	<u>\$1,824,977 04</u>

The large iron works of the Dominion Iron and Steel Company at Sydney, referred to in last year's report, have been rapidly constructed, and are approaching completion. The first blast furnace was started February 2, 1901, and the second one on May 13.

A number of fires occurred during the year by which railway property was destroyed. On October 5, 1900, the engine-house, turntable and thirty tons of coal were burned at Sussex.

On December 10, 1900, a coal shed at Point Tupper was burned.

On January 23, 1901, the office furniture, books and papers of the Assistant General Freight Agent were burned in the fire which destroyed the Board of Trade Building, Montreal, in which he had his office.

On February 5, 1901, all the railway buildings at Trois Pistoles were burned. They were a combined station-house, freight-house and residence, and a building formerly used as a dining-hall and residence. I regret to record that in this fire an aged lady, a relative of the station master, lost her life, and that in the endeavour to rescue her, the Station Master, Mr. Joseph Hudon, sustained injuries from which he died twelve days afterwards, on February 17.

SESSIONAL PAPER No. 20

On February 10, a building at Ste. Flavie, used for delivering coal to locomotives was burned.

On April 27, 1901, 650 lineal feet of snow shed, near Kempt station were burned, and on June 20, 1901, 525 lineal feet of snow shed, near St. Arsene, were burned.

On June 14, 1901, the freight-house at Chaudière Junction, and forty-six freight cars, some of them containing freight, were burned.

A heavy gale and high tide caused great damage to the Courtenay Bay branch and ballast wharf at St. John on November 10, 1900.

The cost of clearing snow and ice was greater than in any previous year, amounting to \$96,855.01.

Mr. E. Tiffin was appointed Traffic Manager, January 19, 1901, and he took charge of the Freight and Passenger Traffic Departments on January 21, 1901.

Mr. E. G. Russell was on February 23, 1901, appointed manager, having charge of the Mechanical Department, the station and train service and the maintenance of way and works, he did not, however, enter fully upon the discharge of his duties until June 1, 1901.

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

D. POTTINGER,
General Manager, Government Railways.

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

1-2 EDWARD VII., A. 1902

No. 1.—INTERCOLONIAL RAILWAY.

Dr.

CAPITAL ACCOUNT, Year ended June 30, 1901.

Cr.

1900.	1900.	cts.	cts.	cts.	cts.
June 30...	June 30...	By Dominion of Canada.....	59,987,715 29		
To Cost of Intercolonial Railway to date	60,006,192 18				
Less refunds on account previous years Expenditures	18,476 89				
Expenditure for current year :					
Increased account at Sydney.....	96,000 00				
" St. John	203,000 00				
Additional rolling stock	1,563,705 77				
Increased accommodation at Levis.....	90,090 23				
To strengthen iron bridges.....	142,678 00				
Additional houses for engines.....	132,422 61				
To complete subway at Christies' Brook at Amherst.....	6,252 42				
Larger turn tables.....	10,994 98				
To extend I.C.R. to Copper Crown Works, Pictou	20,234 51				
Improvements at Point Tupper	7,105 01				
Improved accommodation and facilities along the line.....	146,486 27				
To increase facilities along the line.....	92,099 53				
Machinery at shops	4,170 56				
Improvements at Mulgrave	41,594 51				
To change car couplers on Passenger cars	2,212 00				
" purchase tools and machinery	18,116 63				
Balance due on Halifax and Cotton Factory Branch.....	5,801 97				
To increase accommodation at Halifax.....	16,151 06				
" dredge and blast rock at Halifax.....	15,818 42				
Improving telegraph service	5,190 00				
Additional sidings along the line	114,992 82				
To improve ferry service, Strait of Canso.....	317,844 01				
Siding at Stellarton near Albion Mines.....	2,304 75				
To increase accommodation at Amherst.....	4,132 67				
" iron highway bridge at Rocky Lake	4,911 00				
Grain elevator, St. John	2,180 55				
Steel rails and fastenings	402,549 71				
Towards building sea wall in Cape Breton	8,000 00				
To increase station accommodation at Westville.....	8,000 00				
Land and Damages on O. & N. G. and C. B. Divisions.....	326 13				
To apply air brakes to freight cars	25,485 18				
" extend Cotton Factory Branch Halifax.....	734 75				
" re-arrange, enlarge and extend station yard, Truro	9,498 84				
Building for baggage and Express at Truro.....	2,045 33				
New steel bridge at Etchemin—Additional cost.....	20,116 23				
Original construction	1,728 62				
To extend coal trestle at Stellarton.....	3,502 20				

SESSIONAL PAPER No. 20

" raise Sydney and Louisburg railway bridge..... " change air brakes on passenger cars..... " change draw bars on freight cars..... Freight shed and to improve station at Rockingham..... To equip passenger cars with vestibules..... " equip passenger cars with Pintsch Gas..... " remove rock by widening Bennetts Cutting..... Towards purchasing 3 traveling cranes..... " building rest houses at 9 Eng. Stations..... Additional conveyor on west side of wharf at St. John..... Elevator at Halifax.....	15 39 13,074 10 20,000 00 20,368 44 5,472 06 4,800 00 5,058 61 34,500 00 2,998 06 16,752 50 807 03	1901. June 30...	By Dominion of Canada.....	3,652,313 46 63,640,028 75
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T. WILLIAMS,
Chief Accountant and Treasurer.

E. & O. E.
MONCTON, N.B., June 30, 1901.

1-2 EDWARD VII., A. 1902

No. 2.—INTERCOLONIAL RAILWAY.

Dr.

REVENUE ACCOUNT, year ended June 30, 1901.

Cr.

Previous Year.	Expenditure.	Year ended June 30, 1901.	Previous Year.	Earnings.	Year ended June 30, 1901.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
1,385,069 90	Locomotive power, Abst. No. 1.	1,970,987 70	1,404,469 87	Passenger traffic..	1,607,166 79
1,010,256 87	Car expenses " 2.	1,134,291 72	2,912,790 52	Freight traffic...	3,121,006 15
962,978 41	Maintenance way & works " 3.	1,151,263 65	234,811 32	Mails and sundries	244,062 93
537,548 85	Station expenses " 4.	627,872 94			
309,832 94	General charges " 5.	372,139 21			
61,023 25	Car mileage	63,867 42			
4,266,710 22		5,320,422 64			
164,694 47	Rental of leased lines " 6.	140,000 00			
4,431,404 69		5,460,422 64	4,552,071 71		4,972,235 87
120,667 02	By balance.....	.....	.....	To balance.....	488,186 77
4,552,071 71		5,460,422 64	4,552,071 71		5,460,422 64

E. and O. E.

MONOTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Acct. and Treasurer.

No. 3.—INTERCOLONIAL RAILWAY.

LOCOMOTIVE POWER, Abstract No. 1.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
16,755 60	Mech'l supt's salary, clerks, office and travelling expenses.....	18,273 60
359,996 15	Wages of drivers, firemen and cleaners.....	468,734 14
601,867 63	Fuel.....	973,268 83
24,891 77	Oil, tallow and waste and small stores....	27,023 07
316,999 78	Repairs to engines, tenders and engine tools.....	413,127 27
41,805 73	Water, including pump and tank repairs.....	38,755 52
22,753 24	Miscellaneous.....	31,805 27
1,385,069 90		1,970,987 70

E. and O. E.

MONOTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Acct. and Treasurer.

SESSIONAL PAPER No. 20

No. 4.—INTERCOLONIAL RAILWAY.

CAR EXPENSES, Abstract No. 2.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
106,608 01	Repairs to passenger cars.....	128,222 68
27,563 80	Repairs to postal, express and baggage cars.....	31,493 24
338,202 78	Repairs to freight cars and vans.....	326,075 62
5,851 81	Repairs to snow plows and flangers.....	6,635 12
360,585 01	Wages of conductors, train baggage masters and brakemen.....	452,385 55
5,473 20	Oil and waste for packing.....	7,498 40
115,180 27	Small stores and fuel.....	123,215 22
50,791 99	Miscellaneous.....	58,765 89
\$1,010,256 87		\$1,134,291 72

E. and O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Acct. and Treasurer.

No. 5.—INTERCOLONIAL RAILWAY.

MAINTENANCE OF WAY AND WORKS, Abstract No. 3.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
9,558 42	Engineer's salary, clerks, office and travelling expenses.....	10,242 75
505,534 75	Wages in repairing roadway, fences, semaphores including new sidings laid in.....	612,571 94
35,565 81	Rails and fastenings including new sidings laid in.....	78,659 37
69,298 95	Ties.....	123,997 89
134,953 57	Timber, lumber etc., for repairs to bridges, cattle guards snow-sheds; fences etc.....	97,973 42
8,544 96	Repairs to wharfs.....	5,627 71
86,546 97	Repairs to buildings and platforms, including extensions and additions to same.....	100,081 60
19,776 01	Repairs to tools.....	22,374 23
88,873 51	Clearing snow and ice.....	96,855 01
4,325 46	Miscellaneous.....	2,879 73
\$962,978 41		\$1,151,26 65

E. and O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Acct. and Treasurer.

1-2 EDWARD VII., A. 1902

No. 6.—INTERCOLONIAL RAILWAY.

STATION EXPENSES, Abstract No. 4.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
432,320 67	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage-masters, yard-masters, switchmen and labourers. . .	506,866 40
105,228 18	Fuel, oil and light, stationery, tickets and other incidental expenses.	121,006 54
537,548 85		627,872 94

E. and O. E.
MONCTON, N.B., June 30, 1901.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL CHARGES, Abstract No. 5.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
122,136 64	General manager, manager, traffic manager, district superintendents, train despatchers, general freight agent, general passenger agents salaries, clerks, office and travelling expenses.	151,589 76
36,508 71	Chief accountant and treasurer, traffic auditor, paymaster, cashier's salaries, clerks, office and travelling expenses.	42,051 12
16,770 31	Damages to men, animals and goods.	17,928 62
40,296 64	Ferry service.	60,526 78
6,434 45	Telegraph expenses, not including pay to operators.	4,107 84
35,609 35	Miscellaneous, printing, advertising, &c.	39,290 08
52,076 84	Agency expenses.	56,328 35
		371,822 55
.....	To pay J. J. Wallace and John M. Lyons.	316 66
309,832 94		372,139 21

E. and O. E.
MONCTON, N.B., June 30, 1901.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 8.—INTERCOLONIAL RAILWAY.

SPECIAL VOTES, Abstract No. 6.

Previous Year.		Year ended June 30, 1901.
\$ cts.		\$ cts.
140,000 00	Rent of Grand Trunk Railway—Chaudière Curve to Chaudière and Ste. Rosalie to Montreal, including the Victoria Bridge and terminals at Montreal.	140,000 00
24,694 47	Rent of Drummond County Railway—Chaudière to Ste. Rosalie and the Nicolet Branch.	
	Operated as part of the Intercolonial Railway.	
164,694 47		140,000 00

E. and O. E.
MONCTON, N.B., June 30, 1901.

T. WILLIAMS,
Chief Acct. and Treasurer.

No. 9.—INTERCOLONIAL RAILWAY.

GENERAL STORES ACCOUNT—Year ended June 30, 1901.

CR.

DR.

[illegible]

E. & O. F.

MONCTON, N. B., June 30, 1901.

T. WILLIAMS,
Chief Accountant and Treasurer.

Grand Trunk Railway—suspense.....	98 75
Central Vermont Railway.....	31 58
Wabash Railway.....	1 90
Drummond County Railway.....	7,259 87
Charlottetown Steam Navigation Company.....	87 91
Lotbinière and Megantic Railway.....	9 14
Newfoundland Railway.....	1,356 34
Salisbury and Harvey Railway.....	77 84
Michigan Central Railway.....	3 09
Phil. and Reading Railway.....	51
Pennsylvania Railway.....	62 77
York and Carleton Railway.....	15,788 84
Cin. H. and D. Railway.....	1 56
St. Martins and Uplam Railway.....	74 00
Delaware and Hudson Railway.....	1 91
Sherbrooke Tank Line.....	5 99
Rutland Railway.....	1 68
Maine Central Railway.....	5 50
Merchants Despatch Trans Co.....	29
Lake Shore and Michigan Southern Railway.....	9 76
Erte Railway.....	1 79
Boston and Albany Railway.....	2 69
Elgin and Havelock Railway.....	9 50
Canada Atlantic and Plant Line.....	1 43
National Car Co.....	9 92
Missouri K. and T. Railway.....	1 22
Chicago, Milwaukee and St. Paul Railway.....	20 40
Shore Line Railway.....	76
Great Northern Railway Line.....	2 00
Cincinnati Northern Railway.....	65
Louisville E. and St. S. Railway.....	1 20
Chicago, Burlington and Quincy Railway.....	93
Cleveland, Cincinnati, Chicago and St. Louis Railway.....	54
Lehigh Valley Railway.....	127 50
Midland Railway of Nova Scotia.....	78
New York, N. H. and Hartford Railway.....	360 70
Unclaimed freight.....	222,339 47
Capital Suspense.....	4,972 69
Rents.....	8 00
Pullman Palace Car Co.....	304 23
Fraserville Foundry.....	21 26
Acadia Coal Co.....	28 21
Canada Coal and Railway Co.....	35 51
Intercolonial Coal Co.....	207 19
Dominion Coal Co.....	1,591 81
SS. Admiral.....	50 78
SS. Verda.....	17 04
SS. Lake Ontario.....	10 04
SS. Assyria.....	49 59
St. Francis Bridges Co.....	

1-2 EDWARD VII., A. 1902

No. 10.—INTERCOLONIAL RAILWAY—Continued.

GENERAL BALANCE, Year ended June 30, 1901—Continued.

	\$	cts.
To Western Union Telegraph Co.	368	73
Dominion Iron and Steel Co.	8,066	81
Municipality of Kings, N. B.	60	00
Baldwin Locomotive Works.	181	10
Canada Locomotive and Engine Co.	4,972	04
Manchester Locomotive Works.	389	70
Richmond Locomotive Works.	113	19
Barney and Smith Car Co.	1,895	00
Standard Car Truck Co.	465	30
Portland R. Mills Co.	3,153	67
Nova Scotia Steel and Coal Co.	3,307	19
Can. Victoria.	37	50
Great North-western Telegraph Co.	124	32
Allan S.S. Line.	1,892	13
Union Bearing Co.	928	18
Eggin Branch Railway.	725	10
Folsom Iron Works.	273	25
Town of Dartmouth.	32,000	00
St. John Street Railway.	31	00
Ontario Car and Foundry Co.	1,275	00
Springhill and P. Railway.	3,161	99
Coldbrook Rolling Mills.	1,967	41
Halifax and C. E. Railway.	1,151	42
Schooner <i>Mary Jane</i>	71	30
Incident and failed bank notes.	77	20
Remittances destroyed.	788	81
Stations:—		
Trois Pistoles.	\$	97 37
Nauwigewank.		3 00
Glengarry.		5 00
Bloomfield.		25 21
Coal Branch.		65 84
Weldford.		55 00
Ste. Luce.		80 00
Bic.		22 00
St. Arsène.		107 12
Dalhousie.		19 69
Valley.		6 65
Iona.		72 71
Isle Verte.		25 00
Kent Junction.		28 38
Gloucester Junction.		78 87
Campbellton (freight).		25 00

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Derby Junction.....	231 04		
Ste. Louise.....	66		
Nicolet.....	3 00		
Rivière du Loup (freight).....	136 82		
St. Alexander.....	25 80		
Rivière du Loup (ticket).....	16 00		
New Castle.....	102 75		
Red Pine.....	20 00		
Nappan.....	40 00		
Meunamcook.....	7 54		
St. John (freight).....	3,006 46		
Amherst (freight).....	3 31		
Bosdale.....	7 80		
Sackville.....	10 17		
Wentworth.....	33 24		
Rockingham.....	27 47		
New Glasgow.....	633 90		
Halifax (freight).....	887 49		
Nash's Creek.....	5 00		
Shediac.....	34 70		
Pareka Mills.....	13 56		
Athol.....	4 44		
Individual accounts.....		6,058 09	
		12,608 48	
Total.....		2,471,601 60	2,471,601 60

E. & O. E.

Moncton, N.B., June 30, 1901.

T. WILLIAMS,

Chief Accountant and Treasurer.

1-2 EDWARD VII., A. 1902

INTERCOLONIAL RAILWAY.

Individual Accounts, year ended June 30, 1901.

DR.		\$	cts.
Sessenwein Bros.		1,507	84
Reid & Eastman		90	00
Gray & L. Bros Co.		6	75
F. E. Caine		2,760	70
M. J. O'Brien		419	21
H. A. McKeqwn		150	00
R. Colclough		12	85
W. K. Reynolds		31	19
W. A. Dube		81	99
Victor Pelletier		50	00
Geo. McDougall & Co		1,466	00
L. R. Harrison		1,343	41
Pickford & Black		134	22
I. N. Pouliot		352	20
R. A. & J. Stewart		41	39
J. Richards & Son		116	24
W. Ross		33	70
T. Cook & Son		19	80
P. E. Gallant		173	36
A. Forks		82	18
H. J. Cameron		1,679	07
J. J. McLeod		644	16
H. M. Hamilton		316	66
R. Hamilton		1,131	52
H. Atkinson		12	80
T. Atkinson		49	87
		12,707	11
CR.			
Dubs & Co		98	63
		12,608	48

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

Comparative Statement of Averages, year ended June 30, 1901.

	1900.	1901.
Mileage of railway.....	1,314·67	1,314·67
Engine mileage.....	6,828,005	7,909,297
Train mileage.....	5,473,710	6,262,674
Car mileage.....	63,810,012	70,117,194
Receipts per engine mile.....Cents.	66·67	62·86
Receipts per mile of railway.....Dollars.	3,462 52	3,782 11
Percentage of passenger earnings to gross earnings.....	30·85	32·32
" freight " ".....	63·99	62·77
" other " ".....	5·16	4·91
Expenses per engine mile :—		
Drivers, firemen and cleaners' wages.....Cents.	5·27	5·93
Fuel....."	8·81	12·31
Oil, tallow, waste and small stores....."	·37	·34
Repairs to engines....."	4·65	5·22
Water and tank repairs....."	·61	·49
Miscellaneous....."	·83	·40
Total.....	20·04	24·69
Mechanical superintendent's salary, office and travelling expenses.....	·25	·23
Total.....	20·29	24·92
Locomotive power per engine mile.....Cents.	20·29	24·92
Car expenses....."	14·80	14·34
Maintenance way and works per engine mile....."	14·10	14·55
Station expenses....."	7·87	7·94
General charges....."	4·53	4·70
Car mileage....."	·90	·81
Total....	62·49	67·26
Rental of leased lines.....	2·41	1·77
Total per engine mile.....	64·90	69 03
Locomotive power per train mile.....Cents.	25·30	31·47
Car expenses....."	18·46	18·11
Maintenance way and works per train mile....."	17·59	18·38
Station expenses....."	9·82	10·03
General charges....."	5·66	5·94
Car mileage....."	1·11	1·02
Total... ..	77·94	84·95
Rental of leased lines.....	3·01	2·24
Total per train mile.....	80·95	87·19
Working expenses per mile of railway :—		
Ordinary.....Dollars.	3,245 46	4,046 96
Rental of leased lines....."	125 27	106 49
	3,370 73	4,153 45

E. and O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Acct. and Treasurer.

1-2 EDWARD VII., A. 1902

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE GENERAL SUPERINTENDENT,
MONCTON, September 21, 1901.

SIR,—I have the honour to submit the annual report on the maintenance of way and works for the year ended June 30, 1901.

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

J. E. PRICE,
General Superintendent.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B., September 21, 1901.

SIR,—I have the honour to submit the report of the maintenance of way and works department, for the year ending June 30, 1901.

TRACK.

During the year 123·47 miles of track laid with old 56-lb. rails, and 42·59 miles of track laid with old 67-lb. rails, were taken up and replaced with new 5-inch steel weighing 80 lbs. to the yard. Nine miles of 4-inch, 4½-inch, 4¾-inch old steel rails were taken out of track and replaced with other 4-inch, 4½-inch and 4¾-inch.

Sixteen and three-quarter miles of 4-inch and 4½-inch rails which were worn at the ends were cut and relaid.

Track from main line to Portage ballast pit, which was taken up last year was relaid.

TIES.

During the year 495,243 ordinary ties, and 305 sets of switch ties, were renewed.

BALLASTING.

One hundred and nine thousand eight hundred and sixty-three cubic yards of ballast were distributed and put under track on various parts of the line throughout the year. Between St. Flavie and Rivière du Loup, a good deal of track was lifted with ballast that had been distributed in former years.

SEMAPHORES AND SWITCHES.

New distant semaphore signals were erected at the following stations :—St. John, Anagance (2), Moncton, Painsec, Amherst, Shubenacadie, Windsor Junction, Evans,

SESSIONAL PAPER No. 20

Salt Springs, Richmond (2), Halifax, McIntyre's Lake, West Bay, North Sydney Junction, Coal Branch (2), Harcourt, Sacré Cœur (2), Cacouna, Rivière du Loup (2), Montmagny, St. Michel (2), St. Pierre.

The number of new switches put up on the various divisions during the year was as follows :—

Between Halifax and Stellarton	31
“ Stellarton and Mulgrave	20
“ Pictou and Oxford Junction	5
“ Truro and Painsec Junction	27
“ Point du Chene and St. John	27
And renewed wooden frames on	87
“ Moncton and New Castle	3
“ New Castle and Campbellton	2
“ Campbellton and St. Flavie	10
“ St. Flavie and Rivière du Loup	31
“ Rivière du Loup and Lévis	22
“ Chaudière and Ste. Rosalie	36
“ Point Tupper and Sydney	42
Total switches renewed	<u>256</u>

New station telegraph signals were provided at the following stations :—Oxford Junction, Hopewell, Elmsdale, Scotch Hill, Malagash, Conn's Mills, McKinnon's Harbour, Shubenacadie, Pirate Harbour, Stellarton, Birch Ridge, Gallagher Ridge, Catamount, Adamsville, Acadiaville, Bartibogue, Beau Rivage, Sayabec, Kempt Station, Assametquaghan, Sacré Cœur, Trois Pistoles, St. Romuald.

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

SIDINGS.

During the year 22½ miles of additional siding accommodation has been provided at different points throughout the line.

FENCING.

During the year 161 miles of Woven wire, Anchor wire, Page and Strathy fence, were erected at different points throughout the line. Repairs were made where necessary to existing fences.

SNOW SHEDS AND SNOW FENCES.

There was built during the year :—

	Feet.
Stationary snow fence, 8 feet	3,536
“ 12 “	8,773
Portable snow fence	31,129

WHARFS AND TRESTLES.

At St. John, extensive repairs were made to ballast wharf, Courtenay Bay wharf. Built a new breakwater on Courtenay Bay wharf.

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At Point du Chene, built a small breakwater ; repairs were made to wharf.

At Halifax, repairs were made to wharfs ; 74 creosoted piles were driven at pier No. 4, repairs were made to piers No. 2, piers Nos. 8 and 9 were blocked up where they had settled, and planking was repaired ; repaired planking on piers Nos. 3, 4 and 5.

At Richmond, repairs were made to coal trestles.

At D. W. T., Halifax, repairs were made to coal trestle.

At Darmouth, 318 feet of cribwork was built.

At Motts, repaired trestle.

At Pietou Landing Wharf, necessary repairs were made.

At Pomquet, trestle was repaired.

At Maitland, repairs were made to crane and turntable, and renewed part of platform top.

At Mulgrave, necessary repairs made to wharf, and also to transfer ferry.

At Port Hastings, repairs were made to wharf.

At Kenedy's (east of), built new crib wharf.

At North Sydney, repairs were made to wharf.

At Beau Rivage (east of), a new crib wharf was built, and repairs made to crib wharf.

At Lévis, repairs were made to Princess pier, and repairs to crib work of wharf at Lévis yard.

At Rivière du Loup, repairs were made to coal trestle.

At Campbellton, repairs were made to coal trestle.

At St. Charles Junction, repairs were made to coal trestle.

BUILDINGS AND PLATFORMS.

At St. John, slight repairs were made to government houses, renewed foundation under head house with stone, iron needles and concrete. A new floor was laid in the C. P. R. freight house, and repairs made to carpenter shop ; also repairs made to wash-house.

At Challet, platform was extended 15 feet.

At Gondola Point, a new platform was built, 75 feet long by 8 feet wide.

At Hampton, a new platform was built around station.

At Penobscis, passenger platform extended 70 feet, and repairs made to Station Master's office.

At Model Farm, passenger platform was rebuilt, and a new station built.

At Nauwigewauk, repairs were made to station.

At Sussex a new shed for engines was built.

At Anagance, repairs were made to station master's office.

At Norton, repairs were made to station master's office.

At Petitediac, necessary repairs were made to roof of station.

At Salisbury, repaired freight house floor.

At Moncton, repairs were made to government cottages where needed, and four new wood houses built ; coal sheds repaired, a wooden sewer, 180 feet, was made from the old round-house ; paint shop was repaired, Barton's shop was repaired, new floors laid and sides of building clapboarded, and machine shop was partly reshingled. A new Sparham roof was put on general office building.

At Painsec, passenger platform was repaired.

At Calhouns, flag station was repaired.

At Springhill, repairs were made to coal shed and car repairer's office.

At Belmont, platform was rebuilt and general repairs made to station.

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At Debert, new sills put under the station, part of the roof reshingled, and general repairs made to building.

At Amherst, rebuilt a platform 450 feet by 9 feet ; freight house platform was also renewed.

At East Mines, passenger platform was repaired.

At Westchester, passenger platform was repaired.

At Greenville, passenger platform was repaired, a new cellar was built, and general repairs made to station building.

At Wentworth, repairs were made to platform, and also shingled one side of kitchen roof.

At Londonderry, roof of station was reshingled, and general repairs made to building.

At Thomson, general repairs were made to station.

At Fort Lawrence, loading platform repaired and a new platform built 100 feet by 12 feet.

At Athol Station, a new cellar was provided.

At Evans, general repairs were made to station.

At Memramcook, repairs were made to freight house.

At Sackville, slight repairs were made to station.

At Maccann, slight repairs were made to station.

At Springhill Junction, slight repairs were made to station and repairs made to coal shed.

At Shubenacadie, repaired freight shed ; new sills, floor and joists were put in, passenger and freight platforms were repaired. Also renewed box drain in yard.

At Truro, fitted up a box car for tool-house, repaired tannery building, which is now used as a storehouse, repaired round house walls and windows of the wooden addition ; also repaired floors, pit timbers, and roof, and put up a new smoke stack, made a new office for train despatcher, sheathed Superintendent's office and repaired floors, closets, &c. ; made a new oil room in freight house for traffic department, converted car body into tool-house for section men. Put up new shelves for traffic department in Truro freight house. Put new floor in baggage room, and repaired toilet closet. Built chimney in tool-house, repaired drop doors of coal shed. Supports were placed under floor of bonded-room in freight house ; made partition between bonded-room and freight room. Repaired passenger platform. Repaired gents' closet, ladies' waiting room, and ticket office. Repairs were also made to freight house.

At Wellington, renewed floor of station office.

At Elmsdale, sheathed walls of kitchen, and made repairs to station.

At Stewiacke, renewed and extended platform.

At Salmon River Bridge built shed over pump.

At Hopewell, repaired freight house doors, reshingled part of roof of bark shed and repaired doors and windows ; repairs were also made to station.

At Milford, extended passenger platform ; a car body was also fitted up for tool house.

At Murrays, renewed platform.

At Brookfield, built new top on loading platform, put a new roof on tool house, built a new chimney on tool house ; station roof was also repaired.

At Windsor Junction, roof of water tank was repaired, repaired roof of station with metallic shingles.

At Fall River, platform was extended.

At Lakeview, repairs were made to platform.

At Bedford, roof of water tank was repaired, repaired roof of station and dwelling house.

At Lorne, renewed top and joists of platform.

At Riversdale, converted an old car body into tool-house.

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At Shubenacadie, put new floor in tool house, and repaired scales.

At Halifax, necessary repairs were made to station, repairs were made to sheds on Piers Nos. 1, 2, 3 and 4, slight repairs were made to grain elevator building, and repairs made to cattle shed ; repairs were also made to dealers' platform.

Crossing platform and boat landing were removed and renewed, sills and part of floor under carpenter shop where renewed.

At Richmond, repairs were made to coal shed, and bulk head, built under trestle. Repairs were made to round-house, and an opening made in wall for engine pilot. Car shops were repaired. Machine shops were repaired. Metal fittings and sky lights of train shed were replaced. Necessary repairs were made to emigration building, and landing steps renewed, new lockers were built in sheds Nos. 2, 3, and 4. A new shanty for flagman was built at Young street crossing. Erected new automatic gates. Repairs were made to switchman's shanty. At D. A. R., freight shed adjoining walls were pointed. Floor was repaired and roof newly shingled where necessary. At Piers Nos. 1 and 2, repairs were made to platform and coal bins built, two chimneys were built and three stoves set up. Repairs were made to coal chute.

Pier No. 5, a car body was converted into an office for checkers.

Repairs were made to coal shed.

Repaired flooring of cattle shed.

Car body was fitted up for coal dealers.

North street station engine-room was repaired.

North street station platform was repaired.

Shed No. 3, D. W.T. supports were placed under floor beams.

Round-house, new pit, timbers were put in and floors repaired, also a new smoke-jack put up.

Roof of mechanical foreman's house was repaired.

Repairs were made to planking of pier No. 9, and piles driven.

At Pictou, station platform was repaired, freight shed doors and roof repaired.

Repairs made to engine-house, baggage-room repaired and new ash-pit built.

At Brown's Point, a new platform was built.

At Scotch Hill, repairs were made to station and a new platform built.

At Scotsburn, repairs were made to station.

At Meadowville, repairs were made to station.

At River John, repairs were made to station, and freight-shed platform was also repaired.

At Denmark, repairs were made to station and a new platform built.

At Tatamagouche, repairs were made to station and freight-shed, and a new platform built.

At Malagash, repairs were made to station.

At Wallace, spouting and conductors were put around house.

At Wallace bridge, storm doors were put on station.

At Pugwash Junction, repairs were made to station.

At Pugwash, repairs were made to station and freight-shed.

At New Glasgow, repairs were made to station platform, freight-shed, baggage-room and office.

At Conn's Mills, new passenger platform built, new loading platform built, and repairs made to station building.

At Oxford, repairs were made to station platform.

At Westville, new house built for watchman.

At Burnside, built new power shed and built an addition to freight platform.

At Avondale, birch floor built in station, rebuilt cattle pen.

At Antigonish, repairs were made to station, a small building was built for agent and repairs made to freight-shed.

At Monastery, repairs were made to station, and repairs made to platform.

At Murphy's, repairs were made to platform and shelter.

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- At Tracadie, repairs were made to toilet closets and cattle pen.
- At Stellarton, repairs were made to engine-house and freight shed.
- At Pirate Harbour, telegraph office was fitted up.
- Brierly's Brook, repairs were made to station.
- At Linwood, repairs were made to station.
- At Piedmont, repairs were made to station.
- At Harbour an Bouche, repairs made to toilet closet.
- At Mulgrave, freight shed and engine shed were repaired, fitted up an office for engineers, and repaired cattle pen.
- At Hawkesbury, hand-car shed built.
- At McIntyre's Lake, new foundation and floor under waiting-room.
- At Eden, built a new platform.
- At Alba, built a new platform.
- At Beaver Cove, built a new platform and shelter.
- At Boisdale, built hand-car shed, and repaired platform.
- At Shenacadie, repaired platform.
- At West Bay, repaired platform.
- At Orangedale, a tank was put under station.
- At Scotch Lake, built new platform.
- At Iona, built a new platform.
- At Ottawa Brook, built new platform and shelter.
- At North Sydney Junction, platform was extended.
- At Sydney, new floor in express office, and built hand-car house.
- At North Sydney Wharf, built a toilet closet and extended platform.
- At Acadiaville, coal shed and platform repaired.
- At Coal Branch, repairs made to platform.
- At Harcourt, repaired agent's house and station platform.
- At Catamount, repairs made to shelter and platform.
- At Canaan, repaired hand-car house and loading platform.
- At Trout Brook, repairs made to platform.
- At Rogersville, repairs made to freight house.
- At Kent Junction, repairs made to platform and station.
- At Barnaby River, repairs made to station and platform.
- At Gallagher Ridge, repairs made to shelter.
- At Derby Junction, repairs made to platform, and storm doors put on station.
- At Berry's Mills, repairs made to section foreman's house, and repairs made to platform.
- At Chatham Junction, built a platform and express baggage room.
- At Millerton, repairs made to station and platform.
- At Bryenton, repairs made to platform and cellar.
- At Newcastle, repairs made to roundhouse, repaired station building and platform, also repaired freight house platform.
- At Gloucester Junction, repaired coal shed, station and platform.
- At Petite Roche, repairs made to station.
- At Belledune, repairs made to station.
- At Bathurst, coal shed roof repaired.
- At Jaquet River, repaired roof of coal shed and repaired station.
- At Dalhousie Junction, repaired freight shed floor, general repairs made to station, foundation of tank house repaired, and renewed platform.
- At Ulticans Siding, built new platform.
- At Hodgins Siding, repaired passenger shelter and platform.
- At Laughlin's Siding, repairs made to platform.
- At Culligan's Siding, renewed platform.

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At Charlo, built new porch to dwelling, put new floor in one room, and repaired freight house doors.

At New Mills, repaired pantry in station.

At Campbellton, freight shed resingled, general repairs to freight shed platform, repaired roof of storehouse, and repaired coal boxes, fitted up old store room as a rest room for brakeman, repaired engine house and coal shed, and fitted up store room in engine house, and also put smoke jack on engine house.

At Moffatt's, made repairs to platform, moved old station and freight shed.

At Flat Lands, built new platform and freight shed, made old freight shed into a waiting room and agent's office, repaired toilet closet, and put water into station; also put double windows on agent's office.

At Metapedia, repairs were made to snow shed, repaired windows and doors, built new station platform, and built new platform to freight house.

At Millstream, built an addition to section foreman's house and rebuilt coal shed.

At Assametquaghan, rebuilt coal shed and put windows in foreman's house.

At Amqui, repairs made to platform.

At Cedar Hall, built pump house, repaired section foreman's house, and converted old freight shed into baggage room.

At Sayabec, general repairs made to station, removed old turntable and replaced it with one from Campbellton.

At St. Moise, repaired roof of station, built new kitchen for agent, converted old baggage room into dwelling rooms for agent, built new platform; also removed coal shed and toilet closet and rebuilt them.

At Kempt, repairs made to station, and built a new toilet closet.

At Causapséal, repairs made to foreman's house.

At Beau Rivage, repairs made to station, built new toilet closet.

At Sacré Cœur, repairs made to station.

At Rimouski, repairs made to station and baggage room.

At St. Flavie, repairs made to station and coal shed and station platform.

At Cacouna, repairs made to station platform.

At Rivière du Loup, repaired coal shed, round house mechanical shops, freight shed, ice house and baggage room; repairs were also made to platform.

At Trois Pistoles, repairs made to station and platform.

At St. Joseph, repairs made to station and toilet closet.

At Old Lake Road, built freight platform, repaired toilet closet, built new coal shed, put railing around platform.

At St. Helene, repaired station and put railing around platform.

At St. Phillip de Neri, moved old freight shed to rear of station, and converted it into a kitchen, built toilet closet and small coal shed, extended station platform.

At Ste. Anne, took down old wood shed, and repaired coal shed and cattle pen.

At St. Jean Port Joli, converted old station into freight shed, built toilet closet, repaired cattle pen, and extended station platform.

At St. Louise, laid kitchen floor.

At Rivière Ouelle, rebuilt cattle pen.

At St. Michel, built new tool house for section men, and put railing around platform.

At St. Valier, extended station platform, and made repairs to waiting room.

At St. François, repaired station and freight room.

At St. Pierre, repaired station and pump house.

At Montmagny, took down old loading platform, and repaired station platform.

At Harlake Junction, rebuilt station foundation and renewed platform.

At Hadlow, made repairs to despatcher's office and waiting room, tool house for section men was repaired, repaired switchman's shanty, and lengthened coal shed, and put in new coal chute, also repaired round house roof.

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At St. Romuald, moved section man's house and converted it into a freight shed. Moved old station to St. Jean Chrysostôme.

At St. Charles Junction, repairs made to coal trestle and coal shed, extended station platform, built new sectionman's tool house, and new sidewalk.

At Chaudière Curve, repairs made to government house and ice house.

At Chaudière Junction, built new freight shed platform.

At St. Jean Chrysostôme, rebuilt station platform, put floor in station, rebuilt chimney and built toilet closet.

At Lévis, extended station platform, made repairs to Superintendent's house, repaired sectionman's house and baggage-room.

At Point Lévis, repaired coal shed and station platform, built new wood shed on dwelling houses, and made necessary repairs to dwellings.

At St. Nicholas, sheathed two waiting-rooms and office.

At Laurier, sheathed two waiting-rooms and office.

At Kingsburg, built woodshed and toilet closet, and extended station platform.

At Forestdale, sheathed two waiting rooms and office, and two rooms in dwelling house.

At Aston Junction, extended platform, sheathed two walls and office.

At St. Leonard, sheathed one waiting room and office, and built toilet closet.

At Mitchell, sheathed one waiting room and office.

At Carmel, station clapboarded and reshingled.

At Nicolet, repairs made to engine house.

At St. Eugene, repairs made to freight shed and built platform, moved old station and toilet closet.

At Bagot, moved old station and repaired it, changed platform, and repaired freight shed.

At Drummondville, repaired baggage room, blacksmith shop and engine house.

At St. Germaine, new cattle yard made, built new station platform, and repaired freight shed.

At St. Cyrille, made new cattle yard.

PAINTING.

	Square yards
At Bloomfield station.....	1,744
Norton station.....	3,932
Grenville station.....	1,368
Londonderry station.....	2,536
Belmont station.....	1,854
Wentworth station.....	2,636
DeBert station.....	1,505
East Mines station.....	1,535
Pugwash Junction.....	2,203
Wallace Bridge station.....	1,256
Wallace station.....	3,281
Tatamagouche station.....	3,526
Malagash station.....	2,379
Scotsburn station.....	2,881
Scotch Hill station.....	1,787
Elmsdale station.....	1,021
Conn's Mills station.....	1,376
Oxford station.....	3,936
River John station.....	3,398
Meadowville station.....	1,014
Denmark station.....	2,347
Pictou station.....	244

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	Square yards.
Sylvester station.	1,113
Fall River station and watchman's shanty, Halifax . . .	297
Boisdale station, inside.	163
North Sydney engine-house.	936
Beaver Brook station.	1,851
Bathurst station	926
Gloucester Junction station	978
Gloucester station.	1,879
Belledune station.	885
Jacquet River station.	927
Campbellton freight-house.	900
Petite Roche station.	1,100
St. Jean Port Joli, freight-house.	450
Rimouski station.	1,358
Trois Pistoles station.	3,139
Isle Verte station.	679
River Sauvage station.	966
Millstream, sectionman's house.	265
Causapscal, sectionman's house.	265
Little Metis station.	1,667
Cedar Hall station.	1,740
Metapedia station.	194
St. Michel station.	1,269
St. Nicholas station.	1,868
Laurier station.	2,083
Nicolet station.	838
Drummondville station buildings.	3,893

BRIDGES AND CULVERTS.

Between St. John and Point du Chêne, repaired Jardine wooden bridge, built a small wooden bridge at Portage, ballast pit, repaired six arch culverts and four square culverts.

Put a new standard hard pine top on Moose Horn bridge, repaired Cook's Brook bridge, repaired small wooden bridge at Point du Chêne.

At Sackville, one new cattle guard was built and one repaired, also repaired abutments of bridge.

At Aulac, repaired a cattle guard.

At Onslow, built a cattle guard.

At Fort Lawrence, covered overhead bridge.

At Kiellor's Brook, covered bridge with hard pine ties.

At Gilbert's, built new wooden culvert.

At Salt Springs, repaired culvert.

At Athol, built a new wooden sluice.

At Debert, covered steel bridge with hard pine ties.

At Cameron Brook, an arch culvert was repaired.

Between Springhill Junction and Athol, two open culverts and one arch culvert, were repaired.

Between Wentworth and Folleigh, the masonry at Girder bridge and two culverts were repaired.

Between Wentworth and Greenville, three arch culverts were repaired, and one pipe culvert headed.

Between Calhoun's and Memramcook, lengthened two culverts, and put in four bridge-seats .

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At Painsec, repaired a cattle guard and lengthened an open culvert.

At Truro, renewed steps and covering of overhead bridge.

At Leper Brook, repaired tops and bridge seats.

At Mt. Thom Siding, built new bridge and renewed wooden culvert.

At Sandy Cove, excavated for masonry, put in 28 feet of 24-inch pipe, built 12 feet of masonry at upper end of culvert, and two retaining walls 8 feet long, 4 feet high.

At Elmsdale, built box culvert 40 feet long, 5 feet by 3 feet opening.

At Hilden ($\frac{1}{2}$ mile west of), put two new bridge seats in beam bridge.

At Lydia Brook, repaired wing walls.

At Stewiacke, rebuilt a 30-foot stone culvert.

At Stellarton, repaired beam culvert and built wing walls.

Near Graham's Siding, pointed masonry of culvert.

At West River Station ($2\frac{1}{2}$ miles east of), built walls at each end of culvert.

Near Valley Station, repaired pipe culvert and made repairs to wooden culvert.

At Windsor Junction (west of), made excavation and rebuilt 12 feet of masonry on east end of box culvert.

At Fall River Station, excavated and rebuilt 16 feet of masonry, on one end of culvert, and 10 feet on the other end.

At Richmond Cattle Shed, repaired culvert at sewer, extended wooden culvert, built new culvert at new siding, and repaired overhead bridge; also repaired cattle guards.

At Bedford Bridge, put new covering on top of ties over abutments.

At Halifax, renewed all woodwork of long culvert on upper level of North street yard, repaired culvert on lower level, excavated for and laid culvert over suction pipe, D. W. T.

At Pictou, all escapes on Harbour bridge were repaired, piles examined and new culvert put in at tank.

At Hamlin's Siding, a new beam culvert was built.

At Sylvester Station (east of), new culvert built and new hard pine deck put on; $1\frac{1}{2}$ miles east of Sylvester a new beam culvert was built.

Near Stellarton, new beam culvert built, one culvert repaired, and an extension built on another.

At Scotch Hill, hard pine stringers put in cattle guard, and beam culvert decked with hard pine.

At Scotsburn, hard pine stringers put in cattle guard, and beam culvert decked with hard pine.

At Meadowville, new hard pine stringers put in cattle guard, and beam culvert decked with hard pine.

At River John, new hard pine stringers put in cattle guard, and repairs made with flatted cedar.

At Denmark, repairs made to cattle guards and culverts.

At Tatamagouche, beam culvert repaired.

At Conn's Mills, cattle guards and culverts repaired.

At Westville, cattle guards and culverts repaired.

At Bear Brook, beam culvert repaired.

At Pomquet, new cedar culvert built.

At Stewart's Brook, repaired beam culvert

At Gillis Cove, built new culvert.

At Avondale, cattle guards repaired.

At Piedmont, repairs made to cattle guard and box culvert.

At Merigomish, cattle guards repaired.

At Mulgrave, cattle guards repaired.

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At Tracadie, cattle guards repaired.

At Pine Tree, repairs made to bridge.

At Woodburn, repairs made to cattle guard.

At New Glasgow, repairs made to cattle guard, masonry of abutments and pier of East River bridge were pointed, and also masonry of two iron spans in New Glasgow yard repaired. A new box culvert 51 feet long, was built east of New Glasgow.

At Afton, repairs made to cattle guard.

At Barney's River, repairs made to cattle guard.

At Marshy Hope, repairs made to cattle guard and bridge.

At Brierly's Brook, beam culvert repaired.

At James River, cattle guard repaired.

At Sutherland River, bridge masonry pointed.

At West Merigomish, walls of beam culvert pointed, and abutments of little bridge pointed.

At Afton River, masonry of abutments pointed.

At Dewar and Barney's River, masonry of bridge pointed.

At Cape Porcupine, new culvert built.

At Leitch's Creek (east of Stellarton), culvert built.

At Piper's Crossing, new top put on culvert.

At McKinnon's Harbour, new top put on culvert.

Between North Sydney Junction and Georges River, two cattle guards built and two culverts retopped.

Between Leitch's Creek and North Sydney Junction, three culverts retopped.

Between Sydney and North Sydney Junction, one culvert retopped and one cattle guard built.

At Orangedale ($\frac{1}{2}$ mile west of), one cedar culvert built.

At Orangedale, one cattle guard built, and two cedar culverts built.

At River Denys (one mile west of), one cedar culvert built.

At Ottawa Brook, one culvert built of cedar.

Between McKinnon's Harbour and Iona, six culverts built of cedar.

At Martin's Crossing, rebuilt culvert.

At Shenacadie, one culvert built.

At Boisdale (east of), one culvert built.

At McIntyre's Lake, two cattle guards built.

At Cleveland Crossing, two cattle guards built.

Between West Bay Road and River Denys, six cattle guards built.

Between Sydney and Leitch's Creek, two cattle guards built.

At Parker's, Indiantown Branch No. 1, culvert repaired, both ends of masonry taken down and rebuilt, one end of No. 2 culvert was repaired, a concrete bottom was put in No. 3 culvert; at Wilson's, No. 4 culvert, ends of masonry taken down and rebuilt.

At Vanderback's, No. 5 culvert was taken down and rebuilt, No. 6 culvert was taken down and rebuilt, No. 7 culvert was pointed with cement, No. 3 culvert was repaired with rough stone, Nos. 9 and 10 culverts were rebuilt, one end each of No. 10 and 12 culverts were pointed with cement, necessary repairs were made to all cattle guards.

At Acadiaville, culvert was repaired.

At Harcourt, repairs were made to culvert.

At Newcastle, 'Y' repairs were made to culvert.

At Rogersville, repairs were made to cattle guards.

At South-west Miramichi, repairs were made to bridge and masonry pointed above low water mark.

At North-west Miramichi, repairs were made to bridges and masonry, pointed with cement above low water mark.

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At Wilson's (Indiantown branch), repairs were made to bridge.

Between Jacquet river and Black Point, renewed three cattle guards, and repaired three cattle guards.

Between Dickie's siding and Black lands siding, renewed fourteen cattle guards.

Between Black lands siding and Charlo, renewed three cattle guards, and repaired three cattle guards.

Between Charlo and Dalhousie, renewed four cattle guards.

Between Dalhousie and Connors, repaired one cattle guard and one culvert.

Between Connors and Campbellton, necessary repairs made to three cattle guards, and one culvert repaired.

Between Millstream and Bourdeau, one culvert was retopped.

Between Dickie's siding and Black lands, repairs made to two culverts.

Dalhousie branch, four culverts were extended.

At Bathurst, necessary repairs made to overhead bridge.

At Charlo, built breakwater at bridge 80 feet long, and necessary repairs made to overhead bridge.

At Nepisiquit, necessary repairs were made to Black's overhead bridge.

At Eel river, rebuilt highway bridge at station, masonry on bridge was repointed, and two top stones reset.

At New Mills, Benjamin's, Dickie's and Morton's, race-way bridges were repointed, repointed masonry of two large arch culverts and ten small culverts.

Between Jacquet river and Black point, pointed masonry on Nashe's creek and Jacquet river, bridges, and also on five small culverts, and one arch culvert.

Between Gloucester and Beresford, pointed one arch culvert and seven small culverts.

Between Millstream and Bourdeau crossing, repointed masonry of inside of one end of each culvert, repointed masonry, Grant's bridge, and Millstream bridge, repointed masonry five beam culverts, and renewed seven.

Between Millstream and Middle river, repaired double box culvert and repointed both ends, made necessary repairs and repointed three box culverts, and also three double box culverts, also repointed one arch culvert and two box culverts.

At Kenny's overhead bridge made general repairs, built retaining walls between two piers, repointed four piers.

Between Red Pine and Bartibogue, repaired small box culvert, repointed two box culverts, and made necessary repairs to one culvert.

At Causapscah bridge, repointed masonry.

At Indian Brook bridge, repointed masonry.

At Amqui bridge, repointed masonry.

Between Fraser's and Kane's Brook, made necessary repairs to all culverts.

Between Kane's Brook and Millstream, made necessary repairs to all culverts.

Between Millstream and Assametquaghan, made necessary repairs to all culverts, and repaired Millstream bridge.

Between Assametquaghan and Beau Rivage, made necessary repairs to all culverts.

Between Beau Rivage and Metapedia river, made necessary repairs to all bridges and culverts, and put new top on Beau Rivage bridge.

Between Metapedia river and Causapscah, made necessary repairs to all culverts.

Between Salmon lake and Amqui, made necessary repairs to all bridges and culverts where necessary, general repairs made to Amqui bridge.

Between Amqui and McGregor's siding, made necessary repairs to all bridges and culverts.

Between McGregor's siding and Metapedia road, made necessary repairs to all bridges and culverts.

Between Metapedia road and Tortague river, made necessary repairs to all bridges and culverts.

Between Causapscah and Salmon lake, built two new cattle guards.

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Between Price's mill and Metapedia road, built two new cattle guards.
 At Adam's bridge, repaired wash-out.
 At Ste. Luce, repairs made to culvert.
 At Isle Verte, repairs made to culvert.
 At St. Simon, repaired two culverts.
 At Rimouski, repaired culverts and made necessary repairs to bridge.
 At Trois Pistoles, necessary repairs made to bridge and culvert.
 At Sacré Cœur, repairs made to culvert.
 At St. Eloi, repairs made to culvert.
 At St. Fabien, repairs made to culvert.
 At St. Anaclet, repairs made to culvert.
 At Breakey's brook, took down and rebuilt culvert.
 At Bennet's, repairs made to culvert.
 At Trois Saumons, necessary repairs made to bridge.
 At St. Valier, renewed one cedar box culvert.
 At L'Islet, took down one side of culvert, rebuilt and widened it.
 At St. Jean, Port Joli, renewed twenty-four bridge ties and two cattle guard stringers.
 At Ste. Louise, renewed four cattle guards, stringers and replaced twenty ties.
 At Ste. Anne, replaced twenty-eight bridge ties and renewed two stringers, and repaired cattle guard.
 At Rivere Ouelle, rebuilt one cedar beam culvert, and replaced two stringers on cattle guard at King's siding.
 At St. Philippe, repaired one beam culvert.
 At St. Paschal, put twenty-two ties on bridge.
 At Kamouraska, put twenty-two ties on bridge and repaired beam culvert.
 At Ste. Hélène, made one new cedar box culvert and one beam culvert.
 At Alexander, repairs made to culvert.
 At Rivière du Loup, two stone culverts repaired.
 At St. François, repaired three stone culverts.
 At St. Pierre, repaired two stone culverts.
 At Montmagny, repaired ice fenders.
 Drummond County division, fourteen culverts renewed and covered with cedar, eight open culverts renewed, with cedar, one open culvert built with cedar.
 At Lawlor's farm, ditch timbered up with cedar on both sides, 375 feet long and 3 feet deep.

Painting.

The following bridges were overhauled, scraped and painted :—

Seadouc river bridge	4 spans.
Hall's creek bridge	2 "
Mountain road bridge	3 "
Palmer pond bridge	1 "
" " (overhead) bridge	1 truss.
North West Miramichi bridge	span.
Salmon river bridge	2 spans.
Musquash bridge	1 "
Moose Horn bridge	1 "
Passakeag bridge	1 "
South West Miramichi bridge	6 "
Nappan bridge	1 "
Barnaby river bridge	1 "
North river bridge	2 "
Belmont bridge	2 "
Salmon river bridge	3 "

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Stewart's bridge	3	plate girder.
Mud creek bridge	2	"
Charlo river (south branch) bridge	3	spans.
" (north branch) bridge	2	"
Eel river bridge, lattice	3	"
Campbellton bridge, lattice	3	"
Belledune bridge, lattice	2	"
Nashe's creek bridge, lattice	1	"
Dickie's bridge	1	"
Benjamin river bridge (deck plate girder)	3	"
New Mills bridge	2	"
Elm Tree bridge	1	"
" (overhead public road) bridge (two approaches).	1	"
Truro Y (through town) bridge.		
Tatagouche bridge	5	"
Bartibogue (lattice deck truss bridge)	1	"
Grant's brook (lattice deck truss bridge)	1	"
Millstream (deck truss) bridge	1	"
Nigadoo (deck truss) bridge	1	"
West Ste. Hélène station bridge, 4 plate girder span.		
" Old Lake road bridge, 4 plate girder span.		
" St. Philippe de Neri bridge, 4 plate girder span.		
East Trois Saumon bridge, 4 plate girder span.		
Amqui (lattice truss) bridge.		
Metapedia bridge	5	spans.
West of Amqui bridge (through truss span).		
St. Charles river bridge	4	"
St. Lenard's bridge	15	"
St. Henri bridge (through truss)	1	span.
Rivière du Chêne bridge	1	"
Moose Park bridge	1	"
Isle Verte bridge	2	spans.
Trois Pistoles bridge	5	"
Scotsburn (No. 1 old rail) bridge.		
" (No. 2 old rail).		
East of Scotsburn (old rail) bridge.		
River John bridge	3	"
East of Malagash bridge	3	plate girder.
" bridge	1	"
Malagash bridge	1	"
Tatamagouche bridge	1	span.
Wallace draw bridge	6	spans.

GENERAL.

Considerable work was done on the road leading from public road to the station at Rothsay.

The roads leading to freight-house at Sussex, Norton and Apohaque were also repaired.

The road leading to Dorchester wharf was repaired.

The Etter Aboisdeau and sluice, at Aulac, were repaired.

New buffers were put up at different places on the line, and necessary repairs made to others.

At North street station, Halifax, an Ellis patent buffer was put up. Excavation was made, foundation laid and a new Gantry put up at Halifax, D.W.T.

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New sign boards were made and put up at different stations throughout the line where needed, old sign boards were repainted where necessary.

During the year a large number of farm crossing gates were renewed throughout the line and repairs made to others where necessary. Mail bag-catchers were put up at Cecile road and Sylvian Valley Mills.

The following works chargeable to capital account were carried out by the maintenance department.

At St. John, removed 288 cars of stone and clay to make foundation for new freight shed and siding, also extended loading platform 150 feet x 5 feet with top timbers, also supplied 110 cars of ballast, and built new freight shed 315 feet x 45 feet with 'L' 35 feet x 45 feet.

At Sussex, built loading platform 100 feet x 16 feet, covered with 4-inch deals.

At Norton, built a toilet closet.

At Penobscis, made an addition to station of 14 feet and extended loading platform 100 feet.

At Boundary creek, a loading platform was built 346 feet x 5 feet high, filled with stone.

At Truro, renewed and extended platform at No. 9 siding.

At Pugwash, a new platform was built.

At Westchester, built a new cattle pen.

At Richmond, built crib-work for turntable track, erected turntable and strengthened culvert.

At Mulgrave, built new boiler-house.

At Point Tupper, built new boiler-house.

At Adamsville, improvements were made to station and loading platform built.

At Derby Junction, an extension was built to station.

At New Castle, an extension was built to coal shed.

At Mines road, built a new kitchen.

At Taylor's road, a shelter was built.

At Dalhousie Junction, passenger platform was extended.

At Nigadoo, Beresford and Green Point, combined stations and freight sheds were built 40 feet x 20 feet.

At St. Alexis, excavated and prepared the foundation for station.

At Sayabec, removed old turntable, and placed the old turntable which was taken from Campbellton.

At Rivière du Loup, made improvements to despatcher's office.

At St. Apollinaire, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At Maddington Falls, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At St. Wenceslas, a station was built 17 feet x 34, with 'L' 17 feet x 27 feet.

At St. Eugène, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At St. Germain, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At Bagot, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At St. Cyrille, a station was built 26 feet x 40 feet, with 'L' 16 feet x 18 feet.

At River du Chêne, a station was built 17 feet x 34½ feet, with 'L' 17 feet x 27 feet.

At St. Nicholas, a dwelling was built 25 feet x 31 feet.

Copper Crown Co.'s road was repaired and extended.

SNOW FENCE BUILT.

	Feet.
Stationary, 8 feet	3,536
“ 12 feet	8,773
Portable	31,129

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SIDINGS.		New.	Extension.
		Feet.	Feet.
At St. John—			
Cross over from No. 2, to No. 3 long wharf....	108		
No. 5 ballast wharf....	762		
No. 5 “.....	850		
Cross over main line to creek.....	159		
Peters’s tannery.....	393		
Outside island.....	1,400		
Scot & Lawtons.....	.....		200
No 2, to No. 5 track.....	285		
Lawlor’s lake.....	271		
Moncton.....	362½		
Irishtown road .			
Calhouns.....	.....		1,000
Dorchester penitentiary.....	450		
Upper Dorchester.....	.....		1,000
Sackville.....	.....		1,000
Amherst.....	1,200		
Maccan.....	169		
Onslow.....	.....		150
Mulgrave.....	687		
Westchester.....	747		
Brown’s Point.....	950		
Cape Porcupine.....	788		
Pirate Harbour.....	2,958		
Mulgrave (2 miles west of).....	662		
Jefferson (5½ miles west of).....	1,200		
Orangedale.....	383		
River Denys (1 mile east of).....	250		
Estmere.....	616		
“.....	180		
Alba.			
George’s river.....	1,019		
East Mines.....	1,280		
“.....	.....		1,000
Boisdale.....	700		
Bear Brook.....	463		
Wellington.....	.....		756
Shubenacadie.....	500		
Chisholms.....	.....		204
Stellarton round house.....	332		
Dartmouth.....	1,902		
Newcastle ‘Y’.....	1,450		
Dalhousie Junction.....	1,267		
“ branch track.....	.....		2,825
“.....	234		
Campbellton.....		568
“.....		855
“.....		296
Ste. Flavie.....	2,118		
“.....		750
Thiberges.....		914
St. Moise spur.....		201
“.....	1,080		

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	New. Feet.	Extension. Feet.
Sacré Cœur	201
Ste. Luce ballast pit	293	
“ “	813	
St. Anaclet	362	
Cacouna	576	
“	1,300	
Rivière du Loup (east of bridge)	2,011	
“ (west of coal house)	2,324	
“ (round house)	284	
“ (west of machine shop)	230	
“ . . . . .	.....	235
“ (east of)	960	
St. Eloi	564	
St. Jean Port Joli	458	
Ste. Anne	404	
St. Philippe de Neri	550	
L'Islet	1,166	
Montmagny	240	
“	800	
St. Vallière	489	
St. Charles Junction	878	
Chaudière Junction	750	
Rivière du Chêne . . . . .	.....	1,107
Charlotte Crossing	345	
St. Romuald	350	
Hadlow	725	
St. Henri	900	
Aston Junction loading siding	3,688	
St. Apollinaire loading siding	350	
Aston loading siding	390	
Maddington Falls	3,850	
Kingsburg Junction	2,077	
St. Nicholas	750	
St. Wenceslas	750	
Laurière . . . . .	.....	2,108
Nicolet	782	
St. Cyrille . . . . .	.....	1,140
St. Germain	1,864	
Bagot round house	700	
St. Rosalie crossing . . . . .	.....	1,350
“ loading	1,078	

I have the honour to be, sir,

Your obedient servant,

T. C. BURPEE,

Engineer of Maintenance.

J. E. PRICE, Esq.,

General Superintendent, I.C.R.,
Moncton, N.B.

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OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., September 21, 1901.

SIR,—I have the honour to submit the following report on capital account expenditures for the fiscal year ending June 30, 1901.

To Increase Accommodation at Halifax.

A twenty-ton overhead transfer crane was purchased, and a concrete foundation prepared.

Grading for additional tracks was done, and additional siding accommodation provided. A large quantity of rails and fastenings, ties, &c., were provided.

To Extend Cotton Factory Branch at Halifax.

With the exception of a small extension to the cotton factory siding at Halifax, nothing was done on this account.

Balance due on Halifax Cotton Factory Branch.

The balance was paid on this account.

To Dredge and Blast Rock at Halifax.

A contract was let for submarine rock blasting, to provide twenty-eight feet of water at extreme low tide. It is still being proceeded with on the south side of pier No. 4.

Freight Shed and to Improve Station at Rockingham.

This was for a new station and alterations to be made to present building. The site was graded, plans and specifications prepared and tenders received. The contract has not yet been awarded.

Iron Highway Bridge at Rocky Lake.

The public highway was diverted and three dangerous crossings at rail level were eliminated.

A new steel overhead highway bridge, 40 feet clear span, 21 feet by 8 inches clear head room was erected on masonry abutments.

Contracts were awarded, the work on masonry abutments and road diversion was completed, and the work on the new steel bridge will be finished early next year.

Building for Baggage and Express at Truro.

Tenders were asked, a contract for a building, 30 feet by 65 feet, awarded, and the building completed.

To Rearrange, Enlarge and Extend Station Yard at Truro.

The Truro yard was rearranged and extensive additional siding accommodation provided. Thirty-five tons rails and 1,170 ties were also provided.

To Increase Accommodation at Sydney.

24.61 square acres of land were purchased to extend the station grounds at Sydney.

A contract was let for grading and tracklaying, and this work is still being proceeded with.

A sea-wall cribwork protection, about 1,400 feet long, was built in front of the marine hospital property.

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The pond on the Burchell property is being filled up with material from Barrack Point. Before placing the filling, a cedar culvert, 250 feet long, was built to drain the remainder of the land purchased.

A large quantity of filling is still needed on both sides of the main line between Barrack Point and York street for additional siding accommodation.

A stone retaining wall, 700 feet long, was built along the eastern side of Intercolonial street.

An extensive yard is projected and the laying of new sidings is being proceeded with. Two hundred and twenty-five tons rails and 6,670 ties were provided. An extension to the freight house of 205 feet by 25 feet was made. The platform was also extended, and the whole building painted. The office in freight house was enlarged and modern water closets put in.

A fifty-ton track scale, purchased last year, was put in position on concrete foundations.

To Raise Sydney and Louisbourg Railway Bridge.

With the exception of a survey being made, nothing was done on this vote.

Improvements at Point Tupper.

A small building and foundations for engine and boiler, purchased last year, for raising and lowering the present transfer bridges, were built; and engine and boiler erected.

In connection with the new ferry service, it was found necessary to remove part of the existing engine house. A contract was let for this work. Two stalls were removed from the south-west side; and an addition of five stalls made to the north-east side, two of which are 65½ feet long, and three 73 feet long inside of walls. The work is going on at present and is more than three-quarters done.

Improvements at Mulgrave.

The cribwork addition to the wharf, commenced last year, was completed.

The space between the new and old cribwork is being filled with earth taken from the cutting south of Mulgrave. By taking the earth from here, considerable additional siding room is provided.

A few sidings have already been laid, but neither the filling nor the new yard layout are yet completed.

Five and one-half acres of land were purchased, and a 'Y' built.

A small building with foundations for engine and boiler, purchased last year, for raising and lowering the present transfer bridges, was built and engine and boiler erected.

To Improve Ferry Service at Strait of Canso.

Surveys were made, extending from Mulgrave to Pirate Cove, and soundings and borings made at the latter place. Surveys and soundings were also made at Cash's Cove, and Mulgrave, Pirate Cove, Cash's Cove and Point Tupper were connected by survey. A contract was let for a train ferry steamer of 2,000 indicated horse-power, 282 feet long, and 48 feet wide, to carry 9 passenger cars, or 18 freight cars on three tracks; and the vessel is now nearly completed. A contract was let for two steel transfer lifting bridges, each 200 feet long (composed of three leaves, the inner 100 feet long, the intermediate and outer each fifty feet long), one at Mulgrave and one at Point Tupper. The work on these bridges is well advanced. Concrete and creosoted pile foundations for transfer lifting bridges were built.

A contract was let for two engines and boilers of 35 horse-power each, to operate the transfer bridges.

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Contracts were let for all wood, stone and iron required for new transfer docks at Mulgrave and Point Tupper, and the work of building is well advanced.

A contract was let for dredging to 17 feet at extreme low tide at Mulgrave and Point Tupper, and the work is about one-half completed. A building 16 feet x 50 feet was erected at Mulgrave for engineer's office, district superintendent's office and blacksmith shop, and a building 16 feet x 24 feet for a supply and store-room was erected at Point Tupper. At Mulgrave the freight house was moved out on the new wharf.

Towards Building Seawall in Cape Breton.

A contract was let and about 2,960 lineal feet were completed, about 530 lineal feet partly done, and part of last year's contract finished.

To Extend Coal Trestle at Stellarton.

The Acadia Coal Company's old coal delivery, trestle and bins were removed to make room for the new engine-house, and a new trestle built on the opposite side of the track. Part of this trestle was covered in and delivery bins provided. The work was done by the Railway Department.

To Increase Station Accommodation at Westville.

Contract was let for a new brick and stone building 27 feet x 77 feet, and the work is nearly completed. A covered platform at each end of the building was also provided for in the contract.

To Extend Intercolonial Railway to Copper Crown Works, Pictou.

The Intercolonial Railway to Copper Crown Works, at Pictou. This work was undertaken by the company last year, they provided money to buy the right of way, and do the necessary grading. The company was reimbursed this year for money expended by them. The trestle work was improved and strengthened, and the ballasting of track completed, and part of the extension fenced.

To Increase Accommodation at Amherst.

On this vote a new siding 1,200 feet long was provided. The passenger platform was extended 450 feet x 9 feet.

An extension to the baggage-room 12 feet x 25 feet was made.

An under drain 500 feet long was put in. A concrete foundation was made for a 15 tons capacity, pillar crane.

To Complete Subway at Christie's Brook, Amherst, and towards Constructing Subway at Christie's Crossing.

The masonry work commenced last year was carried to completion. The steel beams erected in place and new pitch pine floor put on.

The opening was increased to allow the sidewalk to pass under the track.

Land damages were paid to the proprietor on the east side of the approach where it was cut down below the original line of the street.

The depression caused by the subway was thoroughly drained.

To Increase Accommodation at St. John.

The new terminal wharf and warehouse have been completed. By dredging and submarine rock blasting, 28 feet of water at extreme low tide have been secured, and dockage accommodation for large ocean steamers provided.

Materials were also provided for a fire protection water supply in the terminal warehouse, and also to supply water to vessels in both docks.

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The tracks between the oil and the terminal wharf have been completed. 8,000 square feet of land have been acquired by expropriation, and a 40 foot through steel plate girder, with a siding 580 feet long were provided to reach the cold storage property.

An excavation in earth and rock was made north of the grain elevator to provide a foundation for a new wooden freight-house. This building is 315 feet x 35 feet ; it is covered with galvanized iron and has a Sparham roof. 1,425 feet of land were purchased and a barn removed to afford a better entrance to the new freight-house.

Two covered platforms, 152½ feet long each, were provided at the east end of the train-house.

38.74 square acres of land were purchased between Gilbert's Lane and the Marsh creek towards Colbrook station, for a new yard, engine-house, coal shed and other buildings. Track materials and ties for about 12 miles of new tracks were provided.

Grain Elevator, St. John.

The grain elevator was painted. The wainscoting, walls and floor of boiler-house were painted, and two Intercolonial Railway signs painted on the elevator.

The roof of elevator coal-house was covered with sparham.

Additional Conveyer on West Side of Wharf, St. John.

An additional grain conveyer, about 650 feet in total length, was erected along the west side of the new terminal wharf so that steamers can take grain in either dock.

Increased Accommodation at Lévis.

The crib retaining wall and filling on the east side of the yard tracks was completed, and additional sidings laid thereon. A crib-work quay wall 335 feet long was built along the water front between the railway wharf and Couture's wharf, affording a frontage of 435 feet for large vessels, and the filling of the space between the quay wall and the track bulkhead with earth and stone was partly completed. The open space between the railway wharf and the ferry wharf was also partly filled in with earth and stone.

Plans were prepared and tenders received for a new passenger station, 51 feet x 155½ feet.

Track materials including rails and fastenings, ties, frogs, switch gear, &c., were provided for a rearrangement and extension of the yard.

A wooden culvert 5 feet x 5 feet, 265 feet long was made to form part of a drainage system for the new station and yard, and an underground box constructed to carry pipes to the river for a water supply.

New Steel Bridge at Etchemin.

A new through riveted steel bridge, 165½ feet long over all, was erected over the Etchemin River, near Hadlow station. The old continuous iron tube was removed, and is now on hand. The stone masonry abutments were raised and widened with steel-built beams and concrete. A new hard pine floor was put on, and the metal work painted.

To Remove Rock by Widening Bennett's Cutting, &c., near Lévis

In this cutting the rock strata inclined towards the track, and several serious slides occurred, so that it became necessary to blast and remove a large volume of rock to secure safety. This work was done.

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Improving Telegraph Service.

A wire was furnished and provided between Quebec and Moncton, a distance of 489 miles. A wire between Lévis and Chaudière, a distance of nine miles, was provided; and an extension of the despatchers' wire from Chaudière Junction to Chaudière was made.

Additional Houses for Engines, and Building new and Enlarging old Engine Houses.

Sydney.—The engine house for Sydney will be similar to the one at Stellarton, excepting that the brick chimney is omitted, and a system of hot blast heating, with mechanical draft, installed.

The following materials were provided :—80 tons rails, 1,150 ties, 6 sets of switch gear, 6 sets of switch ties, 6 frogs, 6,000 pounds spikes.

Stellarton.—3'84 acres of land were purchased. A new 18-stall brick engine house, boiler house, chimney, concrete turntable wall, ash pit, &c., were tendered for and contract awarded. The work has been carried on during the year and is about three-quarters done.

The foundations of pits and walls are of concrete. The posts for supporting roof are cast-iron, girders are steel-eye beams, and the roof is covered with tar and gravel. The floor, turntable ring wall and centre are of concrete. The boiler house and chimney are built of brick, with concrete foundations. The height of chimney is 82 feet.

The following materials were provided :—80 tons rails, 1,150 ties, 6 sets switch gear, 6 sets switch ties, 6 frogs, 6,000 pounds spikes.

Campbellton.—The existing brick engine house was enlarged by building a new brick wall 17 feet outside of the old one, and extending the roof. Twelve engine stalls and pits were lengthened. A room for enginemen provided, and extensions made to blacksmith shop. A new steel plate girder, 4½ feet by 50 feet long, to support old roof trusses was erected. Room for mechanical foreman's office and stores department was provided. New concrete turntable ring and centre were put in and old ones removed. A new 65 foot turntable was erected, and a new top put on. A new drop pit was provided, and a new 15-inch clay pipe sewer, 300 feet long, put in to drain all the pits. The work was done by contract, with the exception of steel plate girder, which was built by the railway department.

Larger Turntables.

A new 65 foot steel deck turntable was purchased for Cahpbellton. At Moncton, the old turntable was taken out, foundation and ring wall removed. A new foundation and ring wall of concrete were put in. The 70 foot deck turntable purchased last year erected, and a new top put on. At Richmond, the old 55 foot table from Moncton was erected on a rock foundation, with a wood ring wall. A 65 foot deck table was erected in St. John on timber foundation, with a wood ring wall. At Sayabec, the old 52 foot table taken from Campbellton was placed on timber foundations, with wood ring wall. Two hundred and twenty hard pine ties were provided.

Drop Pits.

Nothing was done on this account.

Towards Building Rest Houses at Engine Stations.

In connection with this vote, a large quantity of materials were purchased, such as iron pipe and plumbers' fittings, also 60 iron beds, 50 barrels of cement, 252 cubic yards of stone, and 6,000 bricks were provided.

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To Strengthen Bridges and Towards Strengthening Iron Bridges.

The work of strengthening bridges has been continued. The 100 foot clear span new steel bridges—at Nappan 1 span, Debert 2 spans, Barnaby River 1 span, and Beau Rivage 3 spans—were completed and provided with new southern pitch pine floors. The girders for Sackville River at Bedford Station were erected in place, and two of the old spans doubled up. A new pitch pine floor was put on the whole bridge. The masonry piers were cut down and new stone tops put on.

The 70 foot span for Mulgrave Road, under crossing, was erected in place.

New steel plate girders, 56 feet long, were purchased for Sodom, Mud Creek, near Truro, and Boyer River, near St. Charles Junction. The span for Sodom River was erected in place and the old one taken out, and is on hand. A new floor was provided. The other two spans are on hand at present.

The old English lattice, 100 ft. spans, at Millstream 4 spans, Amqui 1 span, Causapsal 3 spans, and Jacquet River 3 spans, were all taken out and replaced with new thorough steel Warren truss spans, and new pitch pine floors were provided for all.

The old spans which are on hand are to be used in doubling up deck bridges at other places of the same length. River Philip bridge, 3 spans, 100 feet clear, was doubled up with two spans taken from Debert, and one from Nappan. A new floor was put on.

The new bridges put in Salmon river, Belmont, North river, Barnaby river and Nappan were painted. A Universal punch and two 25-ton jacks were purchased. A second-hand bridge 60 feet long was shipped to Prince Edward Island for Harper's pond, and also 8 old floor beams, and 10 beams were also shipped to Prince Edward Island for Murray Harbour branch. These were placed as a credit to this account.

Improved Accommodation and Facilities along the line of Railway.

The following work was done on this account :—

Sydney.—An electric semaphore was provided.

North Sydney.—Track scales on hand last year were put in.

North Sydney Junction.—A 'Y' was provided and about 6,400 feet of new sidings laid. The necessary land was purchased.

Grand Narrows.—A boat was purchased for the use of the bridge tender at the swing bridge.

Alba.—The station building walls were filled with sawdust.

Mines Road.—A new addition to station building for a kitchen for agent was built.

New Glasgow.—A siding was extended.

Stellarton.—An electric semaphore was provided.

Pictou. Track scales on hand last year were put in.

Brown's Point.—A new siding was provided here 950 feet long.

Meadowville.—The station was remodelled by providing a waiting room and enlarging office, and providing additional accommodation for agent. A new freight house, 20 x 40 feet, was also provided.

Tatamagouche.—A contract was let for about 500 feet cribwork protection sea wall, and this was nearly all completed.

Malagash.—The materials for a loading platform were purchased.

Pugwash Junction.—Track scales on hand last year were put in.

Pugwash.—A loading platform 229 x 30 feet was provided. Extra land, 0.13 of an acre, was purchased for approach to loading platform. The freight house was moved and a new siding provided. A new cattle pen was also built.

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Truro. The loading platform was extended.

East Mines.—A new freight house, 20 x 40 feet, was built, new waiting room and office with bay window made in station building. The siding was extended 1,000 feet.

Westchester.—The cutting east of the station was widened for the purpose of extending the side track. A cattle pen was built.

Salt Springs.—The semaphore was extended.

Spring Hill Junction.—A small amount of work was done to complete 'Y' here.

Nappan.—A new $1\frac{1}{2}$ story addition of $17\frac{1}{2}$ x 20 feet was made to station house for dwelling apartments.

Amherst.—A pillar crane 15 tons capacity was bought and erected.

Sackville.—Siding was extended 1,000 feet, and a new 7-ton crane purchased.

Dorchester.—A derrick was provided on the wharf here.

Upper Dorchester.—The siding was extended 1,000 feet.

College Bridge.—A new freight shed, 20 x 40 feet, was built. The station remodelled and a new waiting room and office with bay window provided

Calhouns.—The siding was extended 1,000 feet.

Moncton.—A platform for private cars was provided. The work on track scale commenced last year was completed.

Boundary Creek.—A loading platform was provided, 346 feet long.

Petitcodiac.—An extension of 25 feet by 35 feet was made to freight house.

Penobscuis.—An addition of 14 feet to the station was made and the platform extended 100 feet.

Sussex.—The loading platform was extended 100 feet.

Norton.—New dry closets were provided.

Jubilee.—The station ground was graded.

Quispamsis.—An addition of 14 x 20 feet was made to station.

Torryburn.—A new combined station, freight house and dwelling apartments, 17 x 24 feet, with L 16 x 32 feet, was provided.

Adamsville.—Small improvements were made to the station building, and an addition to loading platform, and also passenger platform made.

Barnaby River.—A new $1\frac{1}{2}$ -story station building, 24 x 40 feet, was built. The old station was moved and fitted up for a freight house.

Derby Junction.—An addition was built to the station building.

Newcastle 'Y'.—A 'Y' was provided.

Newcastle coal shed.—An extension was made to the coal shed.

Bartibogue.—A new $1\frac{1}{2}$ story station, 24 x 40 feet, was built. The old station was moved back a short distance and converted into a freight house.

Red Pine.—A new $1\frac{1}{2}$ story station building, 24 x 40 feet, was built. The old station was moved back a short distance and converted into a freight house.

Gloucester Junction.—An extension to the freight house 20 x 50 feet was made.

Bathurst.—A baggage room 16 x 27 feet was built.

Beresford, Nigadoo, Green Point.—A building 20 x 40 feet, with a freight room and waiting room, was provided at each of these places.

Nash's Creek.—The old station was remodelled and a waiting room and office made. A new freight house 20 x 40 feet was provided.

Dalhousie Junction.—The Dalhousie branch track was extended up to the station building a distance of 2,825 feet. The Dalhousie Junction tank house was moved back 20 feet to make room for track. The spur siding was lengthened 983 feet and made a through siding, and passenger platform extended.

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Dalhousie.—A baggage room 16 x 27 feet was built.

Campbellton.—An extension of 20 x 30 feet for an office was made to freight house.

Moffats.—A station building, with dwelling apartments 17 x 22 feet, was built. The old station and freight house was moved.

St. Alexis.—A station building 17 x 24 feet, with L 17 x 22 feet, with dwelling apartments and freight house 20 x 30 feet, were provided. The foundations were prepared by the Railway Department.

Millstream.—Platform was extended.

St. Octave.—A piece of land 4,060 square feet was purchased for enlarging station ground and plans prepared for a new station and extension of the freight-house.

St. Flavie.—An extension was made to the electric semaphore.

Rivière du Loup.—A baggage-room was fitted up.

Dessaint.—A combined station and freight-house with dwelling apartments, 17 feet x 34 feet, with 'L' 17 feet x 27 feet was provided.

St. Philip de Neri.—465 of an acre of land for extension of the station yard was purchased.

Gagnon.—A building for combined station, freight-house and dwelling apartments was provided 17 feet x 34 feet, with 'L' 17 feet x 27 feet.

St. Pierre.—A new freight-house 20 feet x 50 feet was provided. The station building was remodelled and modern water closets put in.

St. Valier.—Storm windows were provided.

Hadlow.—Water service was put in one of the tenement houses.

St. Romuald.—A new passenger station 24 feet x 40 feet was provided.

St. Nicholas.—A dwelling 1½ story for agent, 25 feet x 31 feet was provided.

St. Appollinaire.—A combined two story station and dwelling 26 feet x 40 feet, with 'L' 16 feet x 18 feet, one story was provided. Platform was extended 60 feet.

Rivière du Chêne.—A building for combined station, freight-room and dwelling apartments was provided, 17 feet x 34 feet, with 'L' 17 feet x 27 feet. 2,500 square feet of land was purchased. A new platform 300 feet long was provided.

Kingsburg Junction.—The platform was extended 100 feet.

Kingsbury, Aston, Laurier.—Some small additional work was done to the buildings erected last year. At Aston a platform 300 feet was built.

St. Monique.—Plans for remodelling of St. Monique station were made.

Maddington Falls.—A combined two story station and dwelling 26 feet x 40 feet, with an 'L' 16 feet x 18 feet; one story was provided. A new platform 444 feet was built.

Mitchell.—The station was sheated inside with tongued and grooved sheathing.

St. Cyrille.—A combined two story station and dwelling 26 feet x 40 feet with a one story 'L' 16 feet x 18 feet was provided. A platform 444 feet was built. Old station was fitted for freight shed. 46 of an arpent of land was purchased.

St. Germain.—A combined two story station and dwelling 26 feet x 40 feet, with a one story 'L' 16 feet x 18 feet was provided. A platform 444 feet long was built. Old station moved and fitted up for freight-house. 1.22 arpents of lands were purchased.

St. Eugène.—A combine two story station and dwelling 26 feet x 40 feet, with a one story 'L' 16 feet by 18 feet was provided. A platform 444 feet long was built. Old station moved and fitted up for freight-house. About ¼ acre of land was purchased. A well was sunk.

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Bagot.—A combined two story station and dwelling 26 feet x 40 feet, with a one story 'L' 16 feet x 18 feet was provided. A platform 444 feet long was built. Old station moved and fitted for freight-house. 0.39 of an arpent of land was purchased.

Ste. Rosalie.—.56 of an arpent of land was purchased for a loading ground.

Rivière du Loup, St. Fabien, St. Leonard, Drummondville.—Electric semaphores were erected at these places.

Snow fences were erected as follows :—

	Fencing 12 ft. high.	Fencing 8 ft. high.	Portable Fencing.
	Lin. ft.	Lin. ft.	Lin. ft.
St. John to Point du Chene Division		1,866	
Painsec to Truro Division		300	559
Halifax to Stellarton Division		1,370	165
Moncton to Newcastle	1,300		1,500
Newcastle to Campbellton Division	2,060		360
Campbellton to Rivière du Loup Division	1,288		28,545
Montreal Extension	4,125		
Totals	8,773	3,536	31,129

To Increase Facilities along the Line.

North Sydney.—A new siding 2,884 feet long was put in. An extension of 100 feet x 25 feet was made to the freight-house. A new baggage-room, 15 feet x 27 feet was built.

River Deny's.—The platform was extended. 1.40 acres of land for additional sidings were purchased.

Mulgrave.—An ice-house 18 feet x 33 feet was built.

Taylor's Road.—A shelter for passengers was erected.

Conn's Mills.—A loading platform 60 feet long was built.

Moncton.—Four main columns for supporting the roof of erecting shop were moved. Two new girders built. A new traverse table was made, and the pit was widened. New supporting rails with pedestal foundations were placed.

St. John.—The loading platform at Stanley street bridge was extended.

Moffatt's.—A platform was provided.

Rivière du Loup.—Some additional improvements were made to the station building which was remodelled last year.

St. François.—A new freight shed 20 feet x 40 feet was provided.

St. Jean Chrysostôme.—A flag station was provided.

Water supplies at various places.

Grand Narrows.—3,600 square feet of land was purchased on Campbell's brook for a gravity supply. A reservoir was built. $\frac{3}{4}$ of a mile of 4-inch and 6-inch cast-iron water pipe was laid. A 50,000 gallon tank was partly built.

River Deny's.— $\frac{3}{4}$ of a mile of 4-inch and 6-inch cast-iron water pipe was purchased for a gravitation water supply. .23 of an acre of land for reservoir was purchased.

Point Tupper.—Two miles of 6-inch cast-iron water pipes were purchased for a gravitation water supply.

Denmark.—A well was provided.

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River John, Truro, Harcourt.—Bore holes were sunk at each of these places.

Londonderry.—A survey was made for a gravitation water supply and 24,750 square feet of land purchased.

Painsee Junction.—1,800 feet of 2-inch water pipe was laid from a spring, and a gravitation water service placed in dwelling apartments and waiting-room of station.

Moncton.—A new brick and stone boiler house, 31 feet by 47 feet, was provided. The water supply system remodelled in part. Some new water pipes were laid and new hydrants were placed.

Flatlands.—A water supply was put into the station building.

St. Charles Junction.—Four arpents of land were purchased for a gravitation water supply. One mile of 4-inch and 6-inch cast-iron water pipe was laid and connected to tank.

Forestdale.—Material was supplied for a water tank at this place.

Carmel, St. Michael.—A well was provided at each of these places.

Additional Sidings along the Line.

In connection with this account, the following land was purchased :—

River Denys.—1.40 acres.

Newcastle.—‘Y’ land, two acres.

Maddington Falls.—0.86 arpents.

St. Wenceslas.—A building 17 feet x 34 feet, with ‘L’ 17 feet x 27 feet, for a combined station and freight house, with dwelling apartments, was provided. A new siding, 747 feet long, was made.

At the following places, the present sidings were extended, or new additional sidings made :—

Place.	New. Lin. feet.	Extended Lin. ft.
Division, Halifax to Stellarton—		
Richmond.....	4,059	
Dartmouth.....	1,902	
Wellington.....	756	
Truro.....	5,744	
Division, Stellarton to Oxford Junction—		
Bear Brook.....	463	
Division, Stellarton to Mulgrave—		
Cape Porcupine.....	788	
Pirate Harbour.....	2,958	
Division, Point Tupper to Sydney—		
Point Tupper.....	3,171	
River Denys.....	250	
Orangedale.....	383	
Jefferson.....	1,200	
Alba.....	1,019	
Boisdale.....	700	
George's River.....	1,280	
North Sydney Junction.....	15,722	
Estmere.....	796	
Division, Truro to Painsee Junction—		
Onslow.....		150
Maccan.....	169	
Dorchester Penitentiary.....	450	
Division, Point du Chêne to St. John—		
Irishtown Road.....	387	
Moncton.....	362	
Lawlor's Lake.....	271	
St. John.....	10,263	

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Place.	New. Lin. feet.	Extended Lin. ft.
Division Newcastle to Campbellton—		
Campbellton		117
Dalhousie	234	
Division, Campbellton to Ste. Flavie—		
Theberge's		914
St. Moise	1,281	
Ste. Flavie	2,118	
Division, Ste. Flavie to Rivière du Loup—		
St. Luce Ballast pit	1,106	
St. Anaclet	362	
Sacré Cœur		1,932
St. Eloi		560
Rivière du Loup east of bridge	2,011	
" "	960	235
Cacouna		1,876
Rivière du Loup	737	
Division, Rivière du Loup to Lévis—		
Rivière du Loup West end	230	
" " at Round House	284	
Rivière du Loup West Coal Shed	2,324	
St. Philip de Neri	550	
Ste. Anne	404	
St. Jean Port Joli	458	
L'Islet	1,166	
Montmagny	1,009	
St. Valer	489	
St. Charles Junction	878	
St. Henri	900	
Division, Lévis to Ste. Rosalie—		
Hadlow	725	
St. Romuald	350	
Chaudière Junction	750	
St. Nicholas		750
St. Apollinaire	350	
Laurier	2,168	
Rivière du Chêne	1,107	
Kingsbury Junction	2,077	
Maddington Falls	3,850	
Aston Junction	3,688	
Nicolet	782	
Aston Landing	390	
Carmel	350	
St. Cyrille		1,140
St. Germain	1,864	
Bagot	700	
Charlotte Crossing	345	
St. Rosalie	2,428	

NOTE.—Certain of the above works were done by the maintenance department, for which see report of the engineer of maintenance, Mr. T. C. Burpee.

From above, the totals are for extension of sidings, 1.75 miles. For new sidings 17.64 miles.

Steel Rails and Fastenings.

Division, Sydney to Point Tupper.—Eighty-two miles of 56-lb. 4-inch rails and fastenings were taken up and relaid with 80-lb. 5-inch rails and fastenings.

Division, Tiuro to Moncton.—Twenty-nine and three-quarter miles of 67-lb. 4½-inch rails and fastenings were taken up and relaid with 80-lb. 5-inch rails and fastenings.

Division, Campbellton to Ste. Flavie.—12.84 miles of 67-lb. 4½-inch rails and fastenings were taken up and relaid with 80-lb. 5-inch rails and fastenings.

And the following materials were supplied :—7,314 twisted rail braces, 143,798 intermediate tie plates, 9,762 joint tie plates, 1,100 slide tie plates.

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Original Construction.

On this account, an inquiry into the St. Charles Branch expenditures was made. Amounts were paid for legal and engineering expenses in connection with old construction claims.

Land Damages on Oxford, New Glasgow and Cape Breton Divisions.

On this account, two claims for stream diversions and two claims for land damages, together with legal services connected therewith, were paid.

NOTE.—Certain of the above works were done by the maintenance department, for which see report of the engineer of maintenance, Mr. T. C. Burpee.

PRINCE EDWARD ISLAND RAILWAY.

Murray Harbour Branch, Including Hillsborough Bridge.

The grading of section No. 2, 11½ miles from Mutch's Point to Village Green, is practically completed, and almost ready for ballasting and track laying. Most of the right of way has been secured and paid for.

During the winter, the remaining portion of the line, 31½ miles to Murray River, was located on the ground; and the alignment and profiles of grades submitted and approved. The piers and abutments of the Hillsborough bridge were laid off upon the ice; and an extensive triangulation made to permanent stations on the shores, from which the positions of the piers and abutments will be determined during construction. A contract was let for the substructure and approaches of the bridge on October 8, 1900. Sub-contracts for materials were let during the winter; and on the opening of navigation, a large amount of plant, timber, iron, cement, stone, sand, &c., was brought to the site; and work on the pneumatic caissons and machinery is now being prosecuted with vigour. A series of percussion drill borings were made through the ice on the site of the abutments in February and March, 1901.

To Shorten Main Line by Removal of Curves.

The improvement of the alignment near Colville was completed, the curvature being reduced and the line shortened.

I have the honour to be, sir,

Your obedient servant,

W. B. MACKENZIE,

Chief Engineer.

D. POTTINGER, Esq.,

General Manager, Government Railways,
Moncton, N.B.

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INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL SUPERINTENDENT,

MONCTON, N.B., September 23, 1901.

SIR,—I beg to submit for your information the following statements prepared by the Mechanical Accountant :—

Statement showing the number of locomotives and of the various classes of cars.

Locomotive and car mileage.

Abstract of locomotive returns.

Locomotive power for each month.

General statement of expenses of mechanical department.

Also, a summary of the principal work done in drawing office, Moncton locomotive and car shops, shops at Rivière du Loup and Richmond.

Complete statement of renewals and repairs to the water service on the whole system, for the year ending June 30, 1901.

Yours truly,

JOHN SUTTON,

for Mechanical Superintendent.

D. POTTINGER, Esq.,
General Manager,
Moncton, N.B.

DRAWING OFFICE.

Work done in drawing office for the year ending June 30, 1901 :—

408 new drawings have been supplied. 133 of these were finished tracings sent from the Baldwin Locomotive Works for new consolidation engines Nos. 211 to Nos. 227, Cleveland engine 228 and consolidation engines 229 and 230. 60 new tracings were made from blue prints, supplied from the Canadian Locomotive and Engine Works for ten-wheeled passenger engines, 72, 93, 116, 119 and 166. 11 new drawings were made for engines of the same class, which are being built in Moncton shops to order, 334.

The following list includes the principal drawings made for the year :—

Wheel test, 12 feet drop, 140 lbs. weight.

Cast iron wheel for 100,000 pound freight cars.

Bolster springs for 100,000 pounds freight cars.

Eccentric for Cleveland engine No. 228.

Eccentric strap for Cleveland engine No. 228.

Link for Cleveland engine No. 228.

Rock shaft for Cleveland engine No. 228.

Malleable iron spring pocket for passenger cars (automatic couplers).

Snow plow for stub pilot.

Ventilation for paint shop.

Additional jacks for drop table, erecting shop.

Extended wagon top boiler for four new passenger engines, to be built in Moncton shops.

Standard axle for 100,000 lbs. car, M.C.B.

Proposed plan of working coach.

Plan of brick (car) shop.

Uncoupling gear for 60 feet postal and baggage cars.

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Details for 5-inch x 5-inch engine for turntable.
Details of side door castings for postal and baggage cars.
Side and end doors for 60 feet postal and baggage cars.
Partition for general freight agent's office.
Stay-bolt tester.
Machine for fixing couplers on train hose.
Addition to ends of existing traveller, Moncton shop.
Conductor's van.
Swing-truck for conductor's van.
Iron details for truck, conductor's van.
Cut gears for transfer table.
Interior fittings for conductor's vans.
Foundation plate for engine on transfer table.
Wrought iron details for conductors' vans.
Alteration to spring gear, class A1 (119).
Air brake application for conductors' vans.
General plan of building for water service.
Automatic dies of building and cutting gibs on standard Gould drawbar strap.
Details of brake gear for conductor's van.
Draw-gear for conductors' van.
Wrought iron details for conductors' vans.
Travelling crane for erecting shop.
Smoke-stack for machine shop, Richmond.
Wrought iron stack for pump-house, water service.
Valve setting machine for Moncton shop.
Wrought iron details for 50 tons wrecking crane.
There were 1,250 blue prints sent out of office during the year.
New specifications for modern box and platform cars were made.

MONCTON LOCOMOTIVE SHOPS.

The following locomotives were ordered and received during the year and charged to capital account :—

Eight simple passenger engines from the Manchester Locomotive Works.

Five simple freight engines and five compound freight engines from the Richmond Locomotive Works.

Six simple consolidation freight locomotives from the Canadian locomotive works.

One passenger locomotive, fitted with Cleveland cylinders, and two freight locomotives fitted with Cleveland cylinders were received from the Dickson Locomotive Works, Scranton, Pa.

One hundred and eleven locomotives received heavy repairs, 26 received medium repairs and 55 specific repairs.

The following new parts being supplied :—Four new half side sheets, 374 new tubes, 25 new driving wheel centres, 1 new boiler, 79 new driving wheel tires, 49 new driving wheel axles, 15 new truck wheel axles, 19 crank pins, 10 cylinders, 10 half saddle cylinders, 37 W. A. B., 9½-inch pumps, 9 new cabs, 56 new pilots, 4 new tender frames, 3 new tender trucks, 422 new tender and truck tires. One hundred and thirty-eight boilers were tested. Fifty-six fire boxes were patched, 11,417 tubes were pieced.

Two hundred and eighty-seven pairs of truck tires were turned and 255 pairs driving wheel tires were turned.

One hundred and eleven engines and tenders were repainted and varnished.

Four new tenders, complete, were constructed.

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Special work was done as follows :—

Ten new steel snow-plows were made.
 Four new air hoists were made.
 Two boilers for water service were constructed.
 Twelve cylinders for drop-pits were made.
 The traversing table in erecting shop was greatly improved.

A large number of new machines were purchased and charged to capital account. These necessitated a large amount of work in putting up in shop, building foundations, &c.

In addition to above work the following material was turned out :—321,778 bolts were forged, 1,270,032 pounds other forgings, 13,261 studs screwed, 143,285 pounds nuts tapped.

MONCTON BRASS FOUNDRY.

Output.—139,987 pounds brass castings, 149,363 brass bearings.

MONCTON CAR SHOPS.

The following new cars were received during the year and charged to capital account :—

Six new first-class day coaches, 3 new dining cars from the Barney and Smith Company, Dayton, Ohio.

Five hundred and two box cars and 17 refrigerator cars, from Rhodes, Curry & Co., Amherst, N.S.

One hundred and fifty box cars and 150 platform cars from the Crossen Car Company, Cobourg Ont.

Fifty box cars from the Rathbun Company, Deseronto, Ont.

The following cars were built at Moncton shops :—

Thirty box cars built on order.

The following cars were converted :—

One platform car, two box cars.

The following cars received heavy repairs :—

Four official cars, 13 sleeping cars, 5 dining cars, 4 parlour cars, 57 first-class cars, 34 second-class cars, 20 second-class sleeping cars, 14 postal cars, 29 baggage cars, 24 freight vans, 4 snow ploughs, 3 wing ploughs and 419 freight cars.

The following cars received light repairs :—

Ten official cars, 10 sleeping cars, 6 dining cars, 25 first-class cars, 41 second-class cars, 7 second-class sleeping cars, 4 postal cars, 12 baggage cars, 42 freight vans, 4 snow ploughs, 1 flanger and 3,824 freight cars.

The following cars were scraped, filled stained and varnished :—

Three sleeping cars, 4 baggage cars, 4 first-class cars, 3 second-class cars.

The following cars were renovated and varnished :—

One official car, four sleeping cars, six dining cars, two parlour cars, twenty-five first-class cars, nine second-class cars, eight second-class sleeping cars, eleven postal cars, thirteen baggage cars, one freight van, one snow plough and one wing plough. Also, one official car renovated only.

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The following cars were repainted :—

Twenty-nine vans, 203 box cars, 183 flat cars, thirty-nine hopper cars, forty-seven gondola cars, ten refrigerator cars, six flangers, four wing ploughs and nine snow ploughs.

The following cars were rebuilt :—

Fourteen platform cars, five gondola cars, one hopper car, one box car and one snow plough.

Special work was done as follows :—

Ninety-nine new wooden trucks were built and 114 Sterlingworth steel trucks were received from the Record Foundry Co., Moncton, N.B., and put under freight cars.

3,378 new wheels were pressed on axles and 1,097 second-hand wheels were pressed on axles.

388 new axles were turned, 1,771 old axles were trued up, 1,166 steel tired wheels turned, 3,454 wheels pressed off axles.

Forty-two freight cars were equipped with Westinghouse air brakes.

The following cars were fitted with M. C. B. couplers :—

One official car, seven sleeping cars, three parlour cars, thirty-three first-class cars, nineteen second-class cars, three second-class sleepers, ten postal cars, seventeen baggage cars, and 368 freight cars.

Eight second-class sleepers were fitted with new dining tables, eight to each car.

In addition to the lumber prepared for the above repairs, 460,000 feet was milled to store orders, also a large amount of work was done to freight and baggage car trucks, chairs, footboards, ticket cases and station furniture on account of store No. 1.

RICHMOND SHOPS.

Heavy repairs, engines.	10
Specific repairs, engines.	106
Fire boxes patched.	2
Tires turned, pairs.	162
Boilers tested	32
New driving wheel tires.	18
Driving tires, turned pairs.	33
New cabs.	1
New pilots.	7
New tender frames.	1
Bolts forged.	29,200
Bolts screwed.	37,200
Studs screwed.	925
Engines and tenders painted.	10

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RIVIÈRE DU LOUP SHOPS.

Heavy repairs, engines	22
Specific repairs	44
New tube sheets supplied	2
New side sheets supplied	4
New half side sheets supplied	6
New tubes supplied	1,637
Fire boxes patched	6
Tubes pieced	182
Tires turned, pairs	128
Boilers tested	63
New driving wheel tires supplied	9
Driving wheel tires turned, pairs	77
New driving axles supplied	2
New main rods supplied	1
New crank pins supplied	1
New cabs supplied	1
New pilots supplied	26
New tender frames supplied	2
Engines and tenders painted	24
Bolts forged	4,200
Bolts screwed	15,400
Studs screwed	34,200
Pounds brass castings	10,317
Pounds brass bearings	24,695

Special Work.—Nineteen new locomotives were coupled up.

WATER SERVICE FROM JULY 1, 1900, TO JUNE 30, 1901.

AMHERST.

February, 1901. Repaired crane pipe.

ANTIGONISH.

November, 1900. Smoke pipe for top of tank.

January, 1901. Repaired tank pipe.

May, 1901. Repaired two tank pipes.

ARMOUR'S ROAD.

July, 1900. Repaired trestle under the tank.

August, 1901. New tank pipe.

November, 1900. Four joints 6-inch stove pipe. One No. 14 Globe stove.

BAYFIELD ROAD.

August, 1900. New tank pipe.

November, 1900. Smoke pipe for top of tank.

January, 1901. Repaired tank pipe. Four joints 7-inch galvanized stove pipe.

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BAGOT.

November, 1900. Smoke pipe for top of tank.
December, 1900. Repaired smoke pipe on top of tank and inspirator.
March, 1901. Washed out the boiler.
April, 1901. Repaired steam pump.

BATHURST.

October, 1900. Smoke pipe for top of tank. New trestle under tank. Cut the hoops and re-riveted them. Painted tank.
December, 1900. Three tank pipes repaired.
January, 1901. Smoke pipe for top of tank.
March, 1901. Disconnected the water from Leger's Hotel and repaired tank valve.

BEAVER BROOK.

November, 1900. Ten joints 7-inch pipe.

BOISDALE.

September, 1900. Repaired tank pipe.
October, 1900. Repaired tank pipe.
November, 1900. Repaired tank pipe. One new copper strainer.
December, 1900. Fifteen feet 7-inch iron pipe. One elbow, 4-inch.
June, 1901. Repaired tank pipe.

CALHOUNS.

December, 1900. One No. 16 grate bar for stove. One joint 7-inch stovepipe.
One box wrench.
January, 1901. One tank pipe.

CAUSAPSCAL.

September, 1900. Cleaned out the reservoir.
March, 1901. Repaired two tank pipes.

CAMPBELLTON.

July, 1900. Cleaned out reservoir, and repaired covering on reservoir.
October, 1900. Smoke pipe for top of tank.
November, 1900. New leather on tank valve. Four joints 7-inch stovepipe.
Repaired tank pipe.
January, 1901. Repaired tank pipe.

CEDAR HALL.

November, 1900. One No. 16 Globe stove. Seven lengths 7-inch stovepipe.
New leather on tank valve. Repaired reservoir and new covering. Repaired tank pipe.

SESSICNAL PAFER No. 20

December, 1900. New tank pipe.

February, 1900. Connected boiler and steam pump at Brook, east of the station, to supply engines with water. (Temporary.)

April, 1900. Repaired tank pipe. New leather on tank valve, and repaired pipe chains.

CHARLO.

July, 1900. New smoke pipe for boiler.

January, 1901. Repaired tank pipe.

March, 1901. Repaired tank pipe.

CHAUDIÈRE.

July, 1900. Repaired pump in station.

November, 1900. Repaired tank pipe.

CANAAN.

July, 1900. Built new reservoir. Finished new 50,000 gallon tank. Galvanized smoke pipe for top of tank. New tank pipe. Fenced new reservoir.

December, 1900. One No. 16 Globe stove. Four joints 7-inch stove pipe.

February, 1901. Repaired three tank pipes.

January, 1901. Repaired tank pipe.

DRUMMONDVILLE.

July, 1900. Repaired tank pipe.

February, 1901. Repaired tank pipe and tank valve.

DALHOUSIE.

August, 1900. New crane pipe.

November, 1900. Cleaned out reservoir and put on new covering. Repaired crane.

December, 1900. Copper strainer. Repaired reservoir and new cover. Repaired crane and 6-inch water gate.

DALHOUSIE JUNCTION.

November, 1900. One No. 16 Globe stove. Eight joints 7-inch pipe. Two elbows, 7-inch.

December, 1900. One piece of 7-inch stovepipe, galvanized. Repaired tank pipe.

FOLLEIGH.

September, 1900. Repaired tank pipe.

November, 1900. Smoke pipe for top of tank.

January, 1901. Repaired tank pipe.

FORESTDALE.

September, 1900. Repaired tank and steam pump.

October, 1900. Repaired tank valve.

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1-2 EDWARD VII., A. 1902

GRAND NARROWS.

January, 1901. Laid 3,400 feet of pipe, cast iron, and foundation of tank.

HARCOURT.

October, 1900. Smoke pipe for top of tank.

December, 1900. Repaired tank valve.

February, 1901. Repaired tank valve. Put down 6-inch bore hole 251 from bottom of well. Moved steam pump out of tank, and placed in the well 12 feet from surface, and built house over the well.

HADLOW.

September, 1900. Repaired steam pump.

HAMPTON.

February, 1901. Repaired tank pipe.

ISLE VERTE.

August, 1900. Repaired leaks in tanks.

JACQUET RIVER.

July, 1900. Repaired tank pipe.

November, 1900. Twelve joints 7-inch stove pipe.

February, 1901. Repaired tank pipe.

April, 1901. Repaired two tank pipes.

May, 1901. Repaired tank pipe.

LONDONDERRY.

September, 1900. Repaired tank pipe.

December, 1900. One nipple, 2 inches. One nipple, 1½ inches.

LITTLE METIS.

September, 1900. Repaired tank pipe.

January, 1901. Repaired tank pipe.

L'ISLET.

September, 1900. Cleaned out the tank.

LÉVIS.

July, 1900. Repaired water pipes in electric light station.

August, 1900. Repaired heater pipes in station and changed steam pumps.

December, 1900. Repaired steam pump. New discharge pipe for injector. New injector.

MONCTON.

June, 1901. New trestle under tank. Cut and riveted the hoops and painted it. Put in two repaired 8-inch water gates in the crane. Laid 1,500 feet cast-iron pipe.

SESSIONAL PAPER No. 20

Put in four fire hydrants outside and put eight $2\frac{1}{2}$ connections inside of paint and freight car shops.

METAPEDIA.

February, 1901. Nine joints, 7-inch galvanized stovepipe.

MILLSTREAM.

November, 1900. Repaired trestle and tank. Cleaned out the reservoir.

January, 1901. Repaired tank pipe.

February, 1901. Four joints, 7-inch stovepipe, galvanized.

May, 1901. Repaired tank pipe.

MULGRAVE.

September, 1900. New tank pipe.

November, 1900. Smoke pipe for top of tank. Cleaned our reservoir.

January, 1901. Repaired three tank pipes.

MCKINNON'S HARBOUR.

August, 1900. Repaired tank pipe.

December, 1900. Repaired tank pipe and repaired wind-mill.

January, 1901. Repaired tank pipe.

February, 1901. Repaired tank pipe.

June, 1901. Repaired tank pipe.

NEW GLASGOW.

July, 1900. Repaired crane pipe.

August, 1900. New crane pipe.

December, 1900. Repaired crane pipe.

January, 1901. Repaired crane pipe.

NORTH SYDNEY.

August, 1900. Repaired tank pipe.

September, 1900. Repaired trestle and raised tank up to standard height. Cut the hoops and riveted them, and repaired the tank.

February, 1901. Repaired tank pipe.

NICOLET.

January, 1901. Repaired crane.

NEWPORT.

October, 1900. Smoke pipe for top of tank. New leather on tank valve.

OXFORD JUNCTION.

November, 1900. Smoke pipe for top of tank.

1-2 EDWARD VII., A. 1902

POINTE DU CHÊNE.

January, 1901. Repaired tank pipe.

PETITCODIAC.

January, 1901. Four joints, 7-inch, galvanized stovepipe.

PIEDMONT.

July, 1900. New copper strainer and cleaned the tank reservoir.

October, 1900. New tank pipe.

February, 1901. Repaired tank pipe.

PICTOU.

July, 1900. Repaired tank pipe and ball cock.

February, 1901. Repaired tank pipe.

May, 1901. Repaired tank pipe.

PUGWASH JUNCTION.

July, 1900. New tank pipe.

August, 1900. Repaired tank pipe.

November, 1900. Three sheets tinned iron. 1-elbow, 7-inch (stovepipe).

RIVER JOHN.

December, 1900. Put down 6-inch bore hole 477 feet.

May, 1901. One new tank pipe. Repaired tank valve.

RED PINE.

October, 1900. Smoke pipe for top of tank.

November, 1900. One No. 16 Globe stove. Four joints 7-inch pipe.
New leather on tank valve.

ROGERSVILLE.

September, 1900. Repaired tank pipe.

November, 1900. Smoke pipe for top of tank.

February, 1901. Repaired tank pipe.

April, 1901. Put in a new No. 6 Knowles steam pump and shipped old pump to Moncton for repairs.

RIVIÈRE DU LOUP.

July, 1900. Repaired water pipes and station closets.

August, 1900. Repaired steam pump.

April, 1901. Put in water pipe to wash coal cars.

RIVERSIDE.

November, 1900. Twenty joints, 7-inch galvanized pipe. Two elbows. One outside joint with cap.

December, 1900. One stove pipe ventilator.

SESSIONAL PAPER No. 20

RIVIÈRE DU CHÊNE.

July, 1900. Repaired tank valve.

December, 1900. Repaired tank valve.

March, 1901. Repaired steam pump, washed out the boiler and put in new grate.

April, 1901. Repaired tank valve.

May, 1901. Repaired tank valve.

June, 1901. Repaired steam pump, cleaned out well at the river.

RIMOUSKI.

November, 1900. Smoke pipe for top of tank.

January, 1901. Repaired tank pipe.

SYDNEY.

October, 1900. Repaired tank pipe.

November, 1901. One piece 4-inch pipe, 12 feet long, 2 elbows, 4 inches. Repaired and raised tank up to standard height, cut hoops and riveted them and painted the tank.

December, 1900. Repaired tank pipe.

February, 1901. Repaired tank pipe.

SPRINGHILL JUNCTION.

November, 1900. One piece 2½-inch galvanized iron pipe, 1 peet valve 2½ inches.

January, 1901. Repaired tank pipe.

April, 1901. Repaired tank pipe and steam pipe. Cleaned out reservoir and repaired two leaks in bottom of tank.

SACRE CŒUR.

September, 1900. Repaired crane. Cleaned the reservoir.

November, 1900. Repaired crane.

SUSSEX.

November, 1900. Smoke pipe for top of tank. Took up three drive well points and put down five drive well points, and connected them to steam pump. Repaired tank pipe.

STELLARTON.

July, 1900. Repaired tank and laid water pipe to ash pit.

November, 1900. Repaired tank pipe.

May, 1901. Two new tank pipes and one repaired.

1-2 EDWARD VII., A. 1902

ST. PIERRE.

July, 1900. Repaired suction pipe, foot valve and steam pipe.

August, 1900. Cleaned out the well and unloaded car lumber for tank repairs.

Repaired steam pump.

April, 1901. Washed out boilers. Repaired tank pipe.

May, 1901. Repaired steam pump. Repaired tank pipe.

ST. FABIEN.

December, 1900. Repaired steam pump.

April, 1901. Washed out boiler and repaired steam pump.

June, 1901. Repaired lubricator.

ST. LEONARD JUNCTION.

August, 1900. Smoke pipe for top of tank.

October, 1900. New tank pipe. Finished new 50,000 gallon tank.

November, 1900. Repaired tank pipe.

ST. VALIER.

April, 1901. Washed out boiler.

June, 1901. Put in steam pump.

STE. FLAVIE.

July, 1900. Tested stationary boiler.

August, 1900. Put in No. 6 Blake steam pump, and shipped the other to Moncton for repairs.

ST. PASCHAL.

August, 1900. Repaired water pipe and crane.

STE. ANNE.

July, 1900. Repaired water pipes in building.

ST. APOLLINAIRE.

December, 1900. Repaired tank pipe and inspirator.

February, 1901. Repaired tank foundation, tank valve and inspirator.

March, 1901. Changed steam pump. Put in No. 36 Knowles, and shipped other pump for repairs.

May, 1901. Put in repaired steam pump and new discharge pipe ; 2½-inch galvanized 40 feet repaired tank pipe.

SESSIONAL PAPER No. 20

ST. HELÈNE.

December, 1900. Repaired ball cock.

April, 1901. Repaired tank pipe and tank pipe chains.

STE. MOÏSE.

August, 1900. New copper strainer.

February, 1901. Galvanized smoke pipe for top of boiler.

April, 1901. Repaired tank pipe.

June, 1901. Repaired tank pipe.

ST. CHARLES.

August, 1900. Smoke pipe for top of tank.

January, 1901. Finished new 50,000 gallon tank, and connected boiler and steam pump.

April, 1901. Washed out and repaired tank pipe.

June, 1901. Laid 5,400 feet cast-iron pipe to lake and made connections to tank. Changed pump and pipes.

ST. CHARLES JUNCTION.

October, 1900. New tank pipe. Washed out boiler.

November, 1900. One piece 4-inch pipe 11 feet long, one piece of 4-inch pipe three feet long, one elbow 4-inch. One No. 16 Globe stove. Five joints of 7-inch stove pipe.

December, 1900. Twenty-eight feet 4-inch iron pipe. One elbow, 4-inch.

TRURO.

October, 1900. Laid 2,800 feet of pipe, different sizes, 5 inches to 3 inches on top of the ground. Put up a small building and connected boiler and pump.

December, 1900. Smoke pipe for top of boiler. Five hundred and seventy-five feet 3-inch galvanized iron pipe, three elbows, galvanized, two nipples, galvanized. One No. 16 Knowles steam pump. One tank boiler No. 17. One copper strainer.

January, 1901. Repaired tank pipe. One strainer. Put down bore 6 inches, 198 feet. Put off an old box car body in east end of yard and put in boiler and No. 16 steam pump for temporary use.

February, 1901. Repaired tank pipe, and put down 6-inch bore-hole 219 feet.

June, 1901. Connected the bore-holes, made well at the brook 12 feet deep, and 200 feet 4-inch galvanized pipe. Put in a No. A Knowles steam pump.

TATAMAGOUCHE.

July, 1901. New copper strainer. Cleaned out the reservoir and repaired fence.

February, 1901. One new tank pipe. Two repaired.

THOMPSON.

December, 1900. New tank pipe.

January, 1901. New tank pipe.

1-2 EDWARD VII., A. 1902

WEST RIVER.

August, 1900. Repaired tank pipe.
November, 1900. Repaired tank pipe.
January, 1901. Repaired tank pipe.
February, 1901. Repaired tank pipe.

WEST BAY ROAD.

December, 1900. Repaired tank pipe. Put in a new steam pump, and shipped the other pumps to Moncton for repairs.
January, 1901. Repaired two tank pipes.
February, 1901. Repaired two tank pipes.
March, 1901. Repaired two tank pipes.
April, 1901. Repaired tank pipe and cylinder cocks.
May, 1901. Repaired three tank pipes.

WEST COCK.

November, 1900. Smoke pipe for top of tank.

SESSICAL PAPER No. 20

A.—INTERCOLONIAL RAILWAY,

STATEMENT showing the Number of Locomotives and of the Various classes of Cars on July 1, 1900, and on June 30, 1901.

THE VARIOUS CLASSES OF CARS.																								
Locomotives.	First Class Sleepers.	Second Class Sleepers.	Parlour.	Dining Cars.	First Class Passengers.	Second Class Passengers.	Postal and Smoking.	Express and Baggage.	Box.	Refrigerator.	Platform, 10, 15, 20 and 30 tons.	Hoppers, 6 tons.	Gondolas, 20 tons.	Coal Cars, 20 tons.	Stock Cars.	Auxiliary and Tool Cars.	Vans.	Total.	Snow Ploughs.	Wing Ploughs.	Flangers.	Steam Ploughs.	Total.	
On hand serviceable July, 1900.....	226	23	19	5	4	102	93	28	43	2,768	59	2,315	937	72	580	88	998	7,243	49	1022	49	1022	2	83
Condemned July, 1900.....	2								2	28	6	4	62	157	167	15	1	442						
Total.....	228	23	19	5	4	102	93	28	45	2,796	65	2,319	999	229	747	103	999	7,685	49	1022	49	1022	2	83
Received on capital account.....	20	4				6			1,088	19	2	77	77											
Transferred from gondolas to platform.....																								
Transferred from large coal to platform.....																								
Total.....	248	27	19	5	4	108	93	28	45	3,884	84	2,521	999	152	624	103	999	8,804	49	1022	49	1022	2	83
Condemned July 1, 1900.....	2								2	28	6	4	62	157	167	15		1	442					
" during the year.....	4					1			46	1	49	24	9	9	2	1	3	145	1					
Less rebuilt.....	6					1			2	74	7	53	86	166	176	17	1	5	587	1				
To be rebuilt.....	6									1		15		77	129		1		223	1				
Add serviceable and repairing.....	248	27	19	5	4	107	93	28	43	3,811	77	2,483	913	63	577	86	995	8,440	49	1022	49	1022	2	83
Total.....	248	27	19	5	4	108	93	28	45	3,884	84	2,521	999	152	624	103	999	8,804	49	1022	49	1022	2	83

MONTGOMERY, June 30, 1901.

JOHN SUTTON,

Mechanical Accountant.

1-2 EDWARD VII., A. 1902

B. INTERCOLONIAL RAILWAY.

STATEMENT of Locomotive and Car Mileage, Year ended June 30, 1901.

Months.	LOCOMOTIVE MILEAGE.		CAR MILEAGE.				Snow Ploughs.	Average Passenger.	Average Freight.
	Passenger.	Freight.	Passenger.	Express Postal and Baggage.	Freight.	Total.			
1900—July.....	189,270	323,632	813,231	379,865	4,256,878	5,449,974	.....	6.62	13.18
August.....	186,061	316,109	878,368	380,239	4,382,418	5,641,055	.....	6.76	13.87
September.....	176,310	309,636	851,898	355,562	4,418,224	5,625,684	.....	6.85	11.27
October.....	172,617	367,690	780,234	368,852	5,063,912	6,152,998	560	6.66	13.61
November.....	162,101	348,612	719,521	349,061	4,676,900	5,745,482	1,690	6.59	13.41
December.....	156,637	393,731	670,375	338,633	5,208,476	6,217,704	5,275	6.45	13.23
1901—January.....	166,201	358,493	673,601	332,234	4,407,794	5,413,539	18,557	6.65	12.29
February.....	142,743	329,439	564,592	294,228	4,052,770	4,911,590	42,346	6.02	12.28
March.....	146,134	411,880	639,918	309,786	5,124,590	6,074,294	25,315	6.50	12.44
April.....	146,849	402,336	648,915	308,950	5,549,969	6,507,774	800	6.52	13.79
May.....	146,353	393,717	679,968	321,355	5,394,848	6,396,171	.....	6.84	13.70
June.....	172,213	353,067	763,594	356,002	4,861,333	5,980,929	.....	6.49	13.77
Total.....	1,954,489	4,308,185	8,684,415	4,094,787	57,337,962	70,117,194	94,483	6.54	13.31

JOHN SUTTON,
Mechanical Accountant.

MONROE, June 30, 1901.

SESSIONAL PAPER No. 20

C. INTERCOLONIAL RAILWAY.

ABSTRACT of Locomotive Return for Year ended June 30, 1901.

Months.	Hours in Steam.	Locomotive Mileage.	CONSUMPTION.					AVERAGE CONSUMPTION PER 100 MILES.				
			Tons of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.	Miles run to 1 hour in Steam.	Pounds of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.	
1900—July.....	60,169	624,859	18,694	24,485	11,194	13,463	10.38	67.01	3.92	1.79	2.15	
August.....	59,489	619,506	19,083	22,931	11,406	13,010	10.41	69.00	3.70	1.84	2.10	
September...	59,553	606,692	19,394	22,423	10,817	12,269	10.18	71.61	3.69	1.78	2.02	
October.....	68,624	681,128	22,417	22,979	11,891	12,479	9.92	73.72	3.38	1.75	1.83	
November....	68,418	656,033	22,901	22,760	11,469	12,142	9.59	78.19	3.47	1.75	1.85	
December.....	76,776	714,466	27,438	26,101	13,192	13,357	9.30	86.02	3.65	1.85	1.87	
1901—January..	69,768	668,636	25,423	26,150	11,770	13,498	9.58	85.17	3.91	1.76	2.02	
February.....	66,251	614,360	22,751	24,136	11,183	11,131	9.27	82.95	3.93	1.82	1.81	
March.....	74,996	709,917	26,065	28,943	13,399	13,062	9.46	82.21	4.07	1.89	1.84	
April.....	70,027	685,480	23,888	26,960	12,173	12,517	9.79	78.07	3.93	1.78	1.82	
May.....	65,799	671,840	21,194	25,370	11,246	10,516	10.21	73.06	3.78	1.67	1.56	
June.....	64,791	656,380	21,210	24,266	11,960	10,344	10.13	72.38	3.69	1.82	1.58	
	894,661	7,909,297	271,178	297,504	141,700	147,788	9.83	76.80	3.76	1.79	1.87	

JOHN SUTTON,
Mechanical Accountant.

Moncton, June 30, 1901.

1-2 EDWARD VII., A. 1902

D.—INTERCOLONIAL RAILWAY.

STATEMENT of Locomotive Power for each month from July 1, 1900, to June 30, 1901.

Months.	Miles run by Locomo- tives.	Mechanical Super- intendent's Salary, Clerks and Office Expenses.	Engine- men's Wages.					Fuel.	Oil and Waste.	Repairs to Tenders, and Tools.	Water.	Engine Houses and Turn- tables.	Total.	AVERAGE PER 100 MILES.						Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			\$	cts.	\$	cts.	\$							cts.	\$	cts.	\$	cts.	Mech'l Supt.		Wages.	Fuel.	Oil and Waste.	Repairs.	Water.	Engine Ho- z.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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JOHN SUTTON,
Mechanical Accountant.

MONROE, June 30, 1901.

SESSIONAL PAPER No. 20

E.—INTERCOLONIAL RAILWAY.

GENERAL STATEMENT of the Expenses of the Mechanical Department Year ended
June 30th 1901.

The miles run by trains	6,262,674
" engines	7,909,297
" cars	70,117,194
" snow ploughs	94,483
	<hr/>
	\$ cts.
Cost of locomotive power	1,970,987 70
Cost of repairs to passenger cars	128,222 68
" postal express baggage	31,493 24
" freight cars and vans	326,075 62
" snow ploughs and flanges	6,635 12
" oil and waste for packing	7,498 40
	<hr/>
	499,925 06
The cost of locomotive power per 100 miles run by trains	31 47
" " " engines	24 91
" " " cars and ploughs	2 80
	<hr/>
The cost of repairs to cars and ploughs per 100 miles run by trains	7 86
" " " engines	6 23
" " " cars and ploughs	70
	<hr/>
The cost of oil and waste for packing per 100 miles run by trains	12
" " " engines	09
" " " cars and ploughs	01
	<hr/>
The cost of repairs to cars per 100 miles run by passenger	1 47
" " " postal express baggage	76
" " " freight cars and vans	56
" " " ploughs and flanges	7 02

JOHN SUTTON,
Mechanical Accountant.

Moncton, N. B.
June 30, 1901.

1-2 EDWARD VII., A. 1902

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.
1900.						
July 5..	13·30	.....	Shunting .....	.....	G. Hudson	123
" 10.	21·35	.....	Special.	J. Langille	A. Purdy.....	44
" 13..	14·10	.....	" .....	W. J. Ellis	W. Hanaway.....	183
" 14..	22·10	.....	" .....	L. Bélanger.....	A. Matthews..	224
" 16..	19·30	65	Accommodation.....	J. McDonald.....	A. Sproule.....	141
" 17..	25·35	16	Freight.	J. Hughes.....	J. J. Smith	177
" 17..	21·30	.....	Shunting.....	.....	C. Skinner.....	122
" 18..	17·25	33	Express	G. Johnston	J. Houston.....	125
" 21..	17·12	142	Accommodation.	A. Calder.....	J. Sproule.....	141
" 23..	.....	.....	Working.	A. A. McNeil.....	F. Satchell	178
" 24..	4·30	.....	Shunting .....	.....	F. W. Welling.....	118
" 28..	11·15	148	Accommodation.....	L. E. Proulx.....	G. Bégin	196
Aug. 3..	21·30	45	"	M. Andet	E. B. Price.....	135
" 7..	7·30	.....	.....	.....	.....	.....
" 10..	9·45	.....	Shunting.	A. Arcand.....	H. Atkinson.....	96
" 19..	1·30	.....	.....	.....	.....	.....
" 25..	15·00	33	Express	W. A. Mitchell	R. Mitchell	173
" 29..	11·32	85	Accommodation	B. McLellan.	W. Wall.	157
Sept. 2..	14·50	.....	Special.	B. Walker.	L. Boulet.....	163
" 4..	9·00	.....	Shunting	H. McDonnan.....	A. R. Sutherland ..	49
" 11..	12·20	.....	Special	H. B. Haines	J. McCallum	180
" 12..	15·00	.....	" .....	A. J. Shanahan.....	W. Meach	165
" 13..	17·00	.....	Working	W. F. Ferguson.....	D. Cool.....	34
" 14..	7·00	.....	Special.	J. S. Nickerson	A. Fryers	213
" 17 .	10·15	.....	Shunting.....	J. J. Daley... ..	J. Sterkall	25
" 17..	21·00	.....	Special	E. O'Grady.....	J. Walsh.	209
" 21..	19·35	.....	" .....	R. J. McNeil	J. Satchell.....	178
" 22..	5·00	.....	" .....	G. A. McLeod.....	W. G. McDonald ..	182
" 22..	19·20	.....	" .....	R. J. McNeil	J. Satchell.....	178
" 24..	10·02	.....	" .....	G. M. Armstrong	J. Donald	52
" 26..	15·30	.....	" .....	J. L. Barnhill	A. M. Stevens... ..	86
" 26..	23·15	.....	" .....	R. Hunter.....	W. C. Hunter	221
Oct. 2..	9·30	126	Accommodation.....	J. J. Daley.....	J. Stockall.....	25
" 3..	7·00	.....	.....	.....	.....	.....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the Year ended June 30, 1901.

Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Sydney	J. W. Shaw	Neither	Struck by locomotive while walking on track.	Forehead badly cut.	Accidental.
1½ miles east of Truro	N. Paul	"	Struck by train	Fatal	
Truro	A. A. Fisher	Employee	While uncoupling engine . .	Hand slightly injured.	Accidental.
Sayabec	L. Bélanger	"	While shunting	Fingers jammed.	
Lourdes	D. McNeil	Neither	Struck by train while walking on track.	Fatal	Accidental.
2 miles east of Springhill.	J. J. Smith	Employee	Train collided with light engine No 128.	Considerably injured. . . .	
Halifax	P. Houlihan	"	While coupling cars	"	Accidental.
2 miles west St. Cyrille.	Eloi Cote	Neither	Struck by train	Fatal	
Westville, Main Street.	Mr. Connor and wife.	"	Crossing track with team struck by engine.	Slightly injured.	Accidental.
River Denys	H. A. McDonald . .	Employee	While coupling cars	Two fingers crushed.	
Moncton Yard . . .	H. W. Briggs	"	While shunting	Fatal	Accidental.
St. Perpetue	F. Cyr	"	While unloading freight . .	Three fingers crushed.	
Near Millstream	Thos. Tait (tramp).	Neither	Stealing ride, foot caught between drawbar.	Foot badly crushed.	Accidental.
Between Bic and Sacré Cœur.	Jos. Dupère	"	Found on track, supposed to have been struck by train.	Fatal	
Point Lévis	J. T. Carrier	Employee	While shunting	Shoulder broken and chest hurt.	Accidental.
Sydney	John Tobin	Neither	Found on track, supposed to have been struck by train.	Fatal	
Chaudière Jct. . . .	Wm. Lee	Passenger	Jumped from moving train.	Leg cut off. Since died.	Accidental.
Richmond	E. Coy	Employee	" " " " " "	Slightly injured.	
2½ miles east of Ste. Flavie.	J. B. Bernier	Neither	Walking on track, struck by train.	" " " "	Accidental.
Pugwash	W. Landry	Employee	Fell from car while shunting	Foot crushed . . .	
Stewiacke	H. Biswanger	"	While signalling struck hand on a car on siding.	Hand injured . . .	Accidental.
North Sydney Wharf.	Jos. Bailey	Neither	Trying to board moving box car.	Arm injured . . .	
Gloucester Jct. . . .	A. Carrier	Employee	Fell from car	Considerably injured.	Accidental.
Evans	J. S. Nickerson . . .	"	Stuck knee on step of van while boarding train.	Knee dislocated.	
Near Mt. Hope Asylum.	J. Rayffe	Neither	Walking on track struck by train.	Slightly injured.	Accidental.
Deep Water Terminal, Halifax	F. Racif	"	Stealing ride on brake beam.	Hands and face bruised.	
Grand Narrows . . .	J. S. Campbell	Employee	While coupling	Arm broken	Accidental.
¼ mile west of Bayfield.	H. Fraser	"	Engine collided with box car.	Seriously injured died.	
McKinnon's Harbour.	W. Philpot	"	Fell from engine in motion.	Head cut. . . .	Accidental.
Fort Lawrence . . .	Geo. Lutz	"	Fell between van and car of moving train.	Fatal	
Valley	G. Dickie	"	While getting on train in motion.	Foot jammed. . .	Accidental.
Painsec Jct.	C. J. McInnis	"	While coupling cars	Hand jammed . . .	
Dartmouth	J. O'Donnell	Neither	Got between cars which were being shunted.	Foot jammed . . .	No inquest.
West Bay Road . . .	D. McDonald	"	Found lying near track. Supposed to have fallen while intoxicated, his head striking on rail.	Head badly cut. Since died . . .	

1-2 EDWARD VII., A. 1902

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Train.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1899.						
Oct. 4.	P. M.	2	Express	W. Gunn	R. McDonald	62
" 11.	14.35	152	"	C. Rioux	T. Levesque	198
" 11.	23.40	85	Accommodation.	J. Craigie	J. Collison	128
" 12.	7.15		"		W. E. Turner	39
" 14.	8.00		"			
" 17.	10.30					
" 17.	15.15	104	Freight.	J. J. McNeil	J. McRury	133
" 18.	9.35		Working	D. Marquis	C. Mercier	38
" 18.	9.35		"	J. W. Coles	F. Whitney	38
" 22.	6.15	7	Express	J. J. Côté	S. Ferguson	55
" 27.	24.05		Special.	H. McDormand	A. Sutherland	28
" 29.	9.20	487	Accommodation.			49
" 31.		38	Freight.	M. Cummings	D. McQuarrie	138
Nov. 1.	17.00		Special.	W. A. Munn	D. Matheson	3
" 5.	2.00		"	A. Philips	W. R. Wheaton	176
" 7.	2.30		"	H. A. Baker	"	209
" 9.			Working	N. Ouellet	I. Bérubé	126
" 10.	4.20		Special.	F. Côté	J. Dussault	37
" 10.	6.25	147	Accommodation.	A. Legacé	J. Deboo	7
" 10.	20.00		Special.	H. B. Hanes	R. Simpson	82
" 12.	5.30				J. Donald	52
" 13.	8.30		Shunter	R. Cummings	J. McEachern	161
" 14.	1.10		Special.	P. Tardif	W. Kelly	5
" 15.	10.25				W. J. Hunter	94
" 19.	9.00	19	Express	W. H. Donkin	H. McAulay	82
" 19.	16.45			A. Arcand	F. Cloutier	96
" 19.	22.35	66	Express	J. McDonald	T. Scott	185
" 20.	12.00			R. Cummings	D. Yould	95
" 21.	15.30		Working	D. Hanes	C. Cool	84
" 22.	11.10		Special.	E. Perron	J. Dion	170
" 24.	18.30		"	R. J. McNeil	John Gayley	178
" 27.	3.30	143	Accommodation.	F. Dumond	O. Jolivet	198
" 27.	5.40		Working	A. Arcand	H. Atkinson	103
" 27.	14.00		Special.	J. Roger	A. Cornell	217
" 27.	21.00	57	Freight.	J. B. Pollard	B. Peterson	27

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the Year ended June 30, 1901—*Continued.*

Place of Accident.	Name of Persons injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Between Springhill Jct. and Salt Springs.	J. Eagles.....	Neither....	Struck by train while walking on track.	Slightly injured.	
2 miles East of Montmagny.	J. Cote.....	"	Crossing track with team. Struck by train.	Leg sprained...	
McIntyre's Lake	J. Collison	Employee..	Train run off track at switch.	Face and arm cut.	
Vinet Street Montreal.	G. Carrigan....	Neither....	Struck by engine.....	Fatal... ..	Accidental.
2½ miles west Windsor Jct.	P. Redmond ...	"	Found on track supposed to have been struck by train.	Seriously injured	
Pictou yard....	W. McMaster ..	Temp. empl.	Fell from top of refrigerator car while loading ice.	Leg broken, ankle and wrist hurt.	
McIntyres Lake.	D. McNeil.....	Employee..	Fell from pilot of moving engine.	Leg broken and cut.	
Old Tartagne....	J. Michaud....	"	Train collided with handcar of rails throwing van over the bank.	Head hurt, rib broken and side arm and leg burnt.	
"	D. Sabry.....	"	"	Slightly injured.	
Sussex	W. C. Price	"	While coupling	Finger injured.	
Moose Park....	F. Fergnes	"	"	Finger cut off.	
Pugwash	J. Hay	"	Slipped from pilot of engine while shunting	Fatal.....	Accidental.
Charlo.....	L. Vye.....	"	While shunting.....	Hand injured.	
Shenacadie	S. McPherson...	"	Fell from car while shunting	Head cut, body bruised.	
New Glasgow...	D. R. Ross....	"	While helping to coal engine	Ankle injured.	
Stellarton.	A. Thorpe....	"	While coupling	Hand crushed and broken.	
River du Loup.	E. Pouze.....	"	"	Hand jammed.	
Ceston Junction.	F. Côté.....	"	Special train ran into rear of train.	Shoulder and leg slightly hurt.	
St. Lambert....	— Trudeau.	Neither....	Struck by train while walking on track	Slightly injured.	
Stellarton.....	C. Davis.....	Employee..	While coupling	Thumb taken off.	
Moncton yard...	J. McAuley	"	Fell from moving engine...	Arm broken.	
Truro	I. Glenfield....	"	While coupling	Finger jammed.	
Drummondville.	W. Atkinson ...	"	Fell in tender of engine...	Considerably injured.	
St. John.....	Geo. McBraid ..	"	Fell under car wheels while shunting	Fatal.....	Accidental.
Near West River	John C. Fraser ..	"	Trying to board train in motion	"	"
Near Lévis	Montininy (boy).	Neither....	Walking on track struck by engine.	Considerably injured.	
Near Pictou	E. Munn..	"	Struck by moving train...	Fatal	Accidental.
Truro	W. D. Nelson....	"	Crossing between cars, foot caught between drawbars	Foot injured.	
Nigadoo.	C. W. Aubie....	Employee..	A man with tie on his shoulder fell the tie hitting Aubie on nose	Nose injured.	
Ste. Anne	O. Langlois....	"	Fell between engine and tender.....	Slightly injured.	
Shenacadie	L. A. Merrison ..	"	Fell into cattle guards....	Nose broken.	
Cap St. Ignace..	L. Vaillancourt.	"	Train collided with special backing out of siding.	Legs slightly injured.	
Pt. Lévis.....	A. Laliberté....	"	While coupling cars	Fingers jammed.	
Millstream.....	J. Martin.....	"	Struck his head against door facing	Forehead cut.	
Truro	H. Kent..	Neither....	Crossing between cars, foot caught between drawbars	Foot injured.	

1-2 EDWARD VII., A. 1902

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the line

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1900.						
Nov. 28..	5:20		Special.....	E. Perron.....	G. Lamothe.....	194
" 28..	15:30		Working.....	D. Hanes.....	C. Cool.....	84
" 29..	11:30	56	Freight.....	B. McLennan.....	J. Wall.....	27
" 30..	7:30		Special.....	G. A. McKay.....	J. Gunning.....	60
" 30..	7:30	143	Accommodation....	E. Camire.....	A. Jolivet.....	81
Dec. 4..	4:50	56	Freight.....	J. Holmes.....	A. Grant.....	26
" 7..	8:40		Special.....	D. McKenzie.....	A. Purdy.....	11
" 8..	16:10	1	Express.....	W. Kelly.....	C. McCarthy.....	184
" 8..	21:45		Special.....	J. Wilson.....	{ St. Amand..... G. Côté.....	77 200
" 13..	1:30		Shunting.....		B. Johnson.....	44
" 13..	13:45		Special.....	H. A. Baker.....	P. O'Toole.....	209
" 14..	13:20	152	Express.....	M. Marchessault	G. Findlay.....	61
" 17..	15:45		Special.....	H. A. Baker.....	E. Kennedy.....	145
" 18..	2:00		".....	W. J. Ellis.....	J. Hayward.....	177
" 18..	8:00		".....	J. W. Coles.....	W. Smallwood.....	179
" 18..	17:00		".....			
" 22..	23:31		".....	A. A. McNeil.....	B. Titus.....	178
" 24..	15:45	26	Express.....	D. McQuarrie.....	H. Tait.....	164
" 25..	14:40	129	Accommodation....	A. H. Hayman.....	J. Stockall.....	60
" 28..	7:30		Shunting.....		J. Ferguson.....	67
" 31..	9:00		".....		J. McDowell.....	20
1901.						
Jan. 3..	24:00		Special.....	J. Beaulieu.....	A. Connell.....	215
" 7..	15:15		".....	J. T. McDonald.....	J. Joncas.....	208
" 7..	16:30		Shunting.....		Jas. Coles.....	118
" 10..	11:35		Special.....	J. J. Côté.....	J. Bruce.....	195
" 12..	7:55	148	Accommodation....	L. E. Proulx.....	J. O. LeBel.....	195
" 12..	13:20		Special.....	J. T. McDonald.....	W. Atkinson.....	208
" 12..	16:30		".....	W. A. Munn.....	H. Scothorn.....	130
" 14..	14:10		".....	A. Bonneau.....	J. DeBoo.....	193
" 15..	9:10		".....	J. T. McDonald.....	J. Joncas.....	210
" 15..	17:30		".....	J. Tardiff.....	J. Collet.....	115
" 17..	11:15		".....	I. L. Barnhill.....	A. M. Stevens.....	209
" 17..	11:30	42	Freight.....	V. Carmel.....	E. B. Price.....	17
" 19..	11:30		Shunting.....		H. Thompson.....	124
" 24..	2:30		Special.....	J. Langille.....	A. Stevens.....	209
" 24..			".....	J. Mahoney.....	W. R. Wheaton.....	91
" 24..			".....	".....	".....	91
" 25..	21:45		".....	".....	W. G. McDonald.....	123

SESSIONAL PAPER No. 20

RAILWAY.

of the Intercolonial Railway during the Year ended June 30, 1901—*Continued.*

Place of Accident.	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accidents.	Extent of Injury.	Verdict of Coroner's Jury.
St. Fabien ... 2 miles west of Eel river.	J. Lebel..... C. Bulley.....	Employee... "	While coupling While unloading rails.....	Fingers jammed. Hand hurt.	
New Glasgow... Near James Riv.	C. Conrod A. M. Fraser....	" .. "	Slipped while coupling Fell from moving train....	Sprained ankle. Head cut, foot crushed.	
Lévis. Mulgrave.....	J. B. L'Heuvreau A. F. O'Neil....	" .. "	While coupling cars. Found on track, supposed to have been struck by No. 56 train.	Wrist hurt. Head badly cut. Since died.	
Healturton Salisbury.	A. McDonald... Mrs. Duff	" .. Neither....	While coupling Struck by train while crossing track.	Jaw broken. Leg broken otherwise injured. Since died....	No inquest.
½ mile west of Cap St. Ignace	N. Belanger...	Passenger..	Train left track.....	Leg and face injured.	
Truro.....	J. Hill.....	Employee ..	While coupling.....	Finger broken..	
Oxford Junction	W. Marr.....	" ..	"	Hand jammed..	
1 mile west of Hadlow.	Marie Anne Dus-sault.	Neither....	Struck by train.....	Fatal.....	Accidental.
Thomson.....	H. Gould.....	Employee ..	While coupling	Hand jammed..	
Belmont.....	C. Lardigan....	" ..	While shunting.....	Leg injured. . .	
Sussex.....	J. W. Horseman	" ..	"	Finger jammed..	
Moncton.....	S. Duff.....	" ..	While unloading rails....	Leg broken.	
Point Tupper ..	N. McDonald...	" ..	Fell while entering van....	Ribs broken....	
2 miles west of Penobscuis.	R. Whitenect...	Neither....	Struck by train while walking on track.	Fatal.....	Accidental.
Dartmouth....	C. F. Brunt....	Employee ..	While shunting.....	Hand hurt, amputation necessary.	
Pictou Yard....	S. Landry....	" ..	Foot caught while shunting	Fatal.....	Accidental.
Truro.....	F. Conley....	" ..	While coupling	Two ribs fractured.	
2 miles west of Metapedia.	J. Gagnon	" ..	Train broke in three pieces.	Slightly injured.	
North Sydney Junction.	J. Benoit.....	" ..	While coupling.....	Finger and part of thumb cut off.	
Moncton.....	A. Bishop.....	" ..	"	Fingers jammed.	
St. Romuald Bridge.	J. J. Côté	" ..	Jumped from train near bridge.	Seriously hurt, since died.	Accidental.
St. Rosalie.....	J. A. Boisvert..	" ..	Fell from moving train....	Arm and leg hurt	
Near McKinnon's Harbour.	M. McKinnon..	" ..	Hand car struck by train..	Slightly injured.	
½ mile west of Iona.	Mary McNeil...	Neither....	Struck by train while walking on track.	Fatal.....	Accidental.
St. Leonard Junction.	J. DeBoo.....	Employee ..	Gauge glass breaking.....	Hand cut.	
North Sydney.	J. J. Ryan.....	" ..	While shunting.....	Head jammed..	
St. Rosalie Jct.	F. Carran	" ..	"	Two fingers cut off.	
Oxford Junction	B. Pickrem....	" ..	"	Finger injured..	
Ste. Flavie.....	P. Desrosier....	" ..	While coupling	Hand jammed..	
Mulgrave.....	L. McEachern..	" ..	While shunting.....	Hand jammed, finger cut off.	
Albion.....	C. Landigan....	" ..	While coupling.	Finger smashed.	
¼ mile west of W. Merigomish.	W. R. Wheaton.	" ..	Train ran in washout.....	Fatal.....	Accidental.
" " "	Jas. Blackwood.	" ..	"	"	
Lorway's Siding, Sydney.	P. Keys.....	" ..	Standing on top of car, struck by overhead bridge.	Forehead, eye and lip cut.	

1-2 EDWARD VII., A. 1902

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.
1601.						
Jan. 25..	21:50	151	Express	A. Bouchard.....	W. Turner.....	61
" 29..	16:45		Special	R. W. Orchard.	E. Thomas.....	215
" 31..	12:00		"	J. Langille.....	T. McCallum.....	177
" 31..	19:50		"		Geo. Spear.....	127
Feb. 1..	16:00				J. Ferguson.....	48
" 4..	21:50				J. McLellan.....	57
" 5..	9:50	1	Express	W. Gunn	J. Hunter.....	63
" 11..	9:25	45	Accommodation.	J. Guay.....	E. Parsons.....	116
" 12..	13:55	128	"	J. J. Daley.....	J. Stockall.....	43
" 13..						
" 14..	13:05	31	Express	J. McFadyen.....	J. H. Moore.....	57
" 14..	16:00				T. O'Brien.....	16
" 14..	9:30				W. Meach.....	165
" 14..					A. McGrath.....	2
" 19..	15:00					
" 20..	21:00				C. McHugh.....	118
" 22..	19:30		Special	G. A. McKay.....	J. Sproull.....	85
" 23..	16:00				J. McDermott.....	18
" 23..	18:00				J. Labonté.....	117
" 24..	21:30			J. Michaud	{ A. McConnell..... A. J. McDonald.....	17 209
" 25..	15:00			A. Dumas.....	C. J. Levesque	205
" 25..	23:00				M. F. O'Brien	127
Mch. 4..	17:00		Special.....	J. W. Coles	W. E. Hunter	177
" 4..	15:30				G. Spear.....	68
" 4..					F. Cloutier.....	97
" 5..	2:10			A. J. Shanahan.....	W. Atkinson.....	180
" 5..	3:40				N. Purris.....	27
" 7..	15:00			G. N. Armstrong.....	{ T. Hennessy..... B. Johnson.....	36 131
" 8..	19:35			W. A. Warman.....	H. Cameron	46
" 9..		42	Freight.....	M. Audet	E. B. Price	135
" 11..	8:30	148	Accommodation.....	L. E. Proulx	S. Ferguson.....	89
" 11..	15:30				O. Veilleux.....	116
" 11..	15:38	97	Express.....	W. Clark.....	A. Palmeter	8

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the Year ended June 30, 1901.—*Continued.*

Place of Accident	Name of Person injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
St. Hyacinthe Bridge.	A. Sicard.	Passenger..	Fell off train into river...	Fatal.....	Accidental.
Campbellton....	J. DeGrace....	Employee..	Slipped on ice and fell on rail.	Knee cut.. ..	
Springhill	I. B. Archibald.	" ..	While shunting.....	Foot jammed....	
Moncton.	H. Langhly....	" ..	While coupling.....	Finger jammed..	
Pictou.....	W. Heighton....	" ..	" ..	Hand injured...	
Richmond.....	F. Druhan.....	" ..	Fell from box car while shunting.	Arm broken, otherwise hurt.	
Truro.	D. Bartlett....	" ..	Struck by train backing to platform.	Hand bruised...	
St. André... ..	Miss Levesque..	Passenger..	Jumped from moving train.	Knees hurt.....	
Windsor Junct..	C. E. Conrod. ..	Employee..	While coupling.....	Hand crushed...	
Lorway's Cross- ing, Sydney.	McLeod (Deaf Mute).	Neither....	Supposed to have been struck by train.	Seriously injured, since died.	No inquest.
Dorchester Road	Squaw.....	" ..	On track intoxicated, struck by train.	Head cut... ..	
Richmond.....	C. Wagstaff ...	Employee..	While coupling.....	Finger jammed..	
North Sydney..	F. O. Moffatt...	" ..	Fell while getting off moving engine.	Leg and arm hurt	
Richmond.....	J. Heffler.	Employee..	Struck by engine, while trying to get on it.	Slightly injured.	
" ..	J. W. Burton...	" ..	Struck by lever while working at semaphore.	" " ..	
Moncton Yard..	S. C. Tuttle ...	" ..	While coupling.....	Hand jammed..	
New Glasgow...	H. D. Hatty ...	" ..	" " ..	Body " ..	
Moncton.....	C. Grass.....	" ..	Trying to get car on track..	Finger taken off.	
Rivière du Loup.	J. Roussel ..	" ..	While coupling.....	Fingers crushed.	
Ste. Flavie.....	J. Martin.....	" ..	" " ..	Finger " ..	
	J. Raymond ..	" ..	Scraper fell from top of tender and struck him.	Head hurt.	
Near Ste. Flavie.	M. Beaulieu ...	Neither....	Crossing track with team, struck by train.	Slightly injured.	
Moncton Yard..	H. W. Laughey.	Employee..	Load of fence material shifted; catching hand between load and brake wheel.	Hand jammed..	
Memramcook. .	E. McRelvie ...	Neither....	Jumped from moving van and fell under.	Fatal	Accidental.
Moncton Yard..	T. M. Le Blanc..	Employee..	While working under car shunter struck same.	Neck cut, ribs broken and chest injured.	
Lévis Yard.	J. B. L'Heureux	" ..	Coupling cars.....	Hand slightly injured.	
Orangedale.....	D. F. McRinnon	" ..	While shunting.....	Hand smashed..	
Truro.....	P. Leonard.....	" ..	" coupling.....	Hand jammed...	
Onslow Grade..	J. Frizzle.....	" ..	Struck by piece of deal falling from car.	Slightly injured.	
New Castle.....	Geo. Chiveriton.	" ..	While shunting.....	Finger slightly hurt.	
Near Cedar Hall	W. B. McGovern	" ..	Slipped off engine and under cars.	Foot injured. Amputation necessary.	
St. Hyacinthe ..	L. Begin.....	" ..	While shunting.....	Two fingers crushed.	
Hadlow	W. Dubois.....	" ..	Engine backing in shop struck him.	Foot injured. Amputation necessary.	
Windsor Jct....	J. Johnson.	" ..	Fell while jumping from moving train.	Head injured....	

1-2 EDWARD VII., A. 1902

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the line

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1901.						
Mch. 11.	22 50		Special	W. V. Bovard	J. Stockford	218
" 12.	7 20			G. A. McKay	S. Black	178
" 12.	10 00	34	Express	E. McKenna	J. Cameron	167
" 15.	20 40		Special	J. B. Sirois	G. Côté	183
" 19.	9 00				D. Boucher	126
" 19.	15 40				H. Cameron	69
" 19.	24 45			G. Lamkin	P. McKenna	140
" 24.	18 45			S. M. Armstrong	F. Welling	86
" 25.	16 50			J. F. Kelly	J. H. Shaw	10
" 30.		33	Express	D. R. Hunter	W. Gross	149
Apl. 1.	16 00				J. W. Coles	35
" 2.	9 40		Special	W. F. Ferguson	C. Freeze	223
" 3.	21 30					
" 3.	19 15				G. Roberge	126
" 3.	16 30			L. S. Poulet	F. Cloutier	31
" 8.	2 15		Shunter	D. Laplante	C. Mercier	215
" 13.	8 30				J. McDowell	23
" 13.	19 00				J. Walsh	89
" 20.	21 45				W. J. Hunter	189
" 22.	20 30		Working	A. Arcand	E. Huot	14
" 23.	9 30		Special	J. McDonald	A. Fogo	206
" 23.	22 28	33	Express	A. McLellan	E. S. White	70
" 26.	16 50				H. Scothorn	122
" 28.	2 50	76	Freight	N. Letarte	J. Callet	195
" 29.	6 50	2	Express	W. Kelly	T. W. Prince	150
" 30.	9 50	20	"	W. H. Donkin	H. McAuley	159
May 1.	21 00		Special	G. Lamkin	A. Wood	228
" 8.	7 30	148	Accommodation	F. Côté	T. Dussault	1
" 9.	1 45	52	"	E. L. Watts	J. Oakley	17
" 10.	10 00					
" 11.	4 30				E. Price	41
" 16.	21 55		Special	A. Cameron	D. Matheson	8
" 18.	4 30	75	Freight	S. Bernier	A. Connell	218
" 20.	13 40	147	Accommodation	C. Couchy	W. Turner	171
" 23.	9 00				H. Coms	A
" 24.	13 30		Special	J. W. Coles	J. Moody	217

SESSIONAL PAPER No. 20

RAILWAY.

of the Intercolonial Railway during the Year ended June 30, 1901—*Continued.*

Place of Accident.	Name of Person Injured	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Newcastle.....	G. E. Powers. . .	Employee..	Struck by passing special while shunting.	Foot injured....	
Glengarry	D. W. Chisholm. "	" ..	Coupling engines to cars...	Fatal	Accidental.
Near Metapedia. F. Loy.....	Neither....		Walking on track struck by train.	Elbow slightly injured.	
Chaudière Jct. . .	G. Coté.....	Employee..	While making fire in his engine.	Face and hands burned.	
" " " " " "	A. Demers.....	" ..	While shunting.	Foot sprained...	
NewCastle coal shed.	H. Cameron ..	" ..	Fell through trestle.....	Head injured....	
Coal Branch....	H. Hachey....	" ..	Fell from top of car. . .	Slightly injured.	
Springhill	F. L. Fillmore..	" ..	While shunting.....	Foot jammed....	
1 mile west Har. E. Fougère.....	Neither....		Walking on track struck by train.	Fatal.....	Accidental.
au Bouche.					
Near Berry's Mills.	Corporal McCulloch.	Passenger ..	Fell from moving train....	Seriously injured	
Moncton Yard..	H. Purrington..	Employee..	While coupling.....	Finger jammed..	
New Mills.....	J. Cumming's...	" ..	Head struck by telegraph signal while looking out of window.	Head injured....	
Moncton.....	H. Weatherbee.	Neither....	Found lying on track. Supposed to have been struck by train.	Fatal	Accidental.
Chaudière Jct. . .	O. Cantin.	Employee..	While shunting.....	Finger jammed..	
Chaudière curve.	B. Therrien. . .	" ..	" "	Two fingers crushed.	
Rivière du Loup.	J. Levesque	" ..	Fell from, top of car while shunting.	Head hurt.....	
Truro Yard.....	O. McLaughlin..	" ..	While coupling.....	Shoulder and breast hurt.	
Truro	S. Musgrove	" ..	While changing draw bar in cars.	Seriously hurt. Since died.	No. Inquest.
St. John.....	J. L. Conlon....	Employee ..	While shunting.....	Hand smashed..	
Hadlow	O. Langlais.....	" ..	" coupling.....	Finger smashed.	
Shenacadie.....	A. McDonald....	" ..	" shunting.....	Finger taken off.	
2 miles East Kent Junction.	J. B. Cameron..	" ..	Fell from moving train....	Not seriously injured.	
Point Tupper... N. McLean.....	" ..		While coupling cars. . .	Body jammed...	
Between Aston Jct. and St. Leonard Jct.	J. Dean.....	" ..	Gauge glass breaking.	Hand slightly cut	
St. John.....	J. Petrie.	" ..	While coupling cars.	Collar bone broken and side injured.	
Mulgrave.....	J. Jewells.....	" ..	" " " " " " " " " "	2 fingers taken off	
Hamilton Siding	H. J. Culligan..	" ..	Stepped on nail.....	Foot injured....	
Riv. du Chene..	L. Baron.	Passenger..	Jumped from moving train	Leg broken.....	
Dalhousie Jct. .	E. L. Watts....	Employee ..	Stepped on stone while shunting.	Ankle sprained..	
Dickie's Mills Siding.	S. Totton.....	Neither....	Jammed between cars at Wood Chute.	Fatal.....	Accidental.
Ste. Flavie.....	A. Fournier... .	Employee ..	While trying to get on engine.	Foot jammed. . .	
Scotch Lake....	P. Hogan	" ..	Struck by chute while placing cars under same.	Fatal.....	Accidental.
Near Metapedia.	R. McBeath....	" ..	Run over by train while lying on track.	"	
St. Leonard Bridge.	R. Champagne..	Neither. . .	Struck by train while walking on track.	Leg and head slightly hurt.	
St. John Yard..	W. Needham....	Employee ..	While coupling cars. . . .	Hand crushed...	
Near Painsec Jct	F. W. Perkins ..	" ..	Fell while walking over train.	Knee injured...	

1-2 EDWARD VII., A. 1902

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the line

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1901.						
May 25..	15:45				A. McLeod.....	175
" 25..	20:40	66	Express	J. McDonald.....	A. Sproull.....	49
" 29..	13:13	35	"	W. McClafferty....	C. Atkinson.....	232
June 2..	2:10		Special.....	H. A. Baker	J. Kennedy.....	60
" 10..	9:00		"	A. McNeil.....	A. Foggo.....	8
" 12..	9:15				R. J. Jefferson..	92
" 15..	15:00				S. Martin.....	122
" 16..	2:30				C. Skinner.....	191
" 22..	14:00				D. Matheson	75
" 23..	23:15			A. Gamache....	W. Savidant..	229
" 24..	7:30			H. G. Thompson.....	W. J. Coffey.	225

GENERAL MANAGER'S OFFICE,
 MONCTON, N.B., October 3, 1901.

SESSIONAL PAPER No. 20

RAILWAY.

of the Intercolonial Railway during the Year ended June 30, 1901—*Concluded.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Sydney.. ..	T. B. Spencer...	Employee..	While coupling cars....	Hand crushed...	
New Glasgow...	H. McGregor...	Neither...	Struck by train at crossing.	Fatal.....	Accidental.
Near Humphe- ry's.	I. Dupont.....	"	Struck by train while walk- ing on track.	"	"
Windsor Jct....	P. Houlihan	Employee ..	Struck by engine.....	Head hurt.....	
North Sy d n e y	R. A. McDonald	" ..	Jumped off engine.....	Back injured....	
Junction.					
Stellarton ...	H. Murray.....	" ..	Run over while working under car.	Fatal.....	Accidental.
Point Tupper...	F. McPherson..	" ..	While shunting.	Ankle sprained .	
Richmond	C. Steele.....	" ..	Fell while stepping from one car to another.	Arm injured....	
Sydney.....	G. Downing....	" ..	While shunting.	Thumb crushed.	
Little Metis....	A. Gallant.	" ..	Struck by side rod of engine while sanding rail.	Head slightly cut	
Amherst.....	F. H. Griffiths..	" ..	Fell between cars while shunting.	Leg crushed am- putation neces- sary. .	

1-2 EDWARD VII., A. 1902

WINDSOR BRANCH RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,
 MONCTON, N.B., September 21, 1901.

SIR,—I have the honour to submit the following statement showing the results of the working of the Windsor Branch Railway for the year ended June 30, 1901.

No. 1. Revenue account.

No. 2. Maintenance of way and works.

No. 3. General balance.

No. 4. Statement of earnings.

I also send you the report of the Engineer of Maintenance on the condition of the permanent way and works.

This line, 32 miles in length, was operated during the year by the Dominion Atlantic Railway Company on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the government, the latter maintaining the line.

The gross earnings were about the same as last year, as follows :—

Earnings 1899-1900	\$47,351 43
Earnings 1900-01	47,261 89
	<hr/>
Difference	89 54

The earnings from passenger traffic increased \$830.69, and the earnings from freight traffic decreased \$916.55.

The permanent way and works have been well maintained, and 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.

SESSIONAL PAPER No. 20

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B.

SIR,—I have the honour to submit herewith the report of the Maintenance of the Windsor Branch for the year ending June 30, 1901.

TRACK.

During the past year 563 feet of 4½-inch rails, which had the ends worn, have been taken up out of the main line, cut, and relaid.

TIES.

8,471 ordinary ties, and 5 sets of switch ties, have been renewed during the year.

BALLASTING.

There was not any ballasting done during the past year.

SEMAPHORES AND SWITCHES.

Switches were renewed at the following stations, and sidings : Mount Uniacke, Panhook, and Chappelle. Repairs were made to all other switches and signals, where found necessary. A new station telegraph signal was put up at Newport.

SIDINGS.

During the year additional siding accommodation to the extent of 560 feet was provided.

FENCING.

1,188 rods of woven wire was erected on the branch during the year, and existing fences overhauled and repaired.

AT BEAVER BANK.

A new pitch and gravel roof was put on freight house.

AT ELLERSHOUSE.

Repaired cattle pen, and passenger platform, also shingled roof of station.

AT MOUNT UNIACKE.

The freight house was repaired, passenger platform was repaired, and new sills were put under the station.

AT NEWPORT.

Built a new cattle pen, also rebuilt freight house platform, 40 feet by 12 feet.

1-2 EDWARD VII., A. 1902

AT HARTVILLE.

Built a shelter over passenger platform, repaired reservoir at Newport tank.

BRIDGES AND CULVERTS.

At Wilkins and Cow bridges near Windsor, drove 20 piles, and made necessary repairs.

GENERAL.

Put hard pine stringers under track scale at Windsor, new plank top, and built new masonry piers.

Put up 15 new farm gates, and made repairs to others where necessary.

Six new sign boards were put up on stations between Windsor and Windsor Junction.

I have the honour to be, sir,

Your obedient servant,

T. C. BURPEE,

Engineer of Maintenance.

J. E. PRICE, Esq.,

General Superintendent,

Moncton, N.B.

SESSIONAL PAPER No. 20

DR. No. 1.—WINDSOR BRANCH RAILWAY.

CR.

REVENUE ACCOUNT, Year ended June 30, 1901.

Previous Year.	Expenditure.	Year ended June 30, 1901.	Previous Year.	Earnings.	Year ended June 30, 1901.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
12,891 56	Maintenance way and works...	16,862 66	16,003 91	Passenger traffic..	16,834 60
34,459 87	Balance.....	30,399 23	30,195 68	Freight traffic....	29,279 13
			1,151 84	Mails.	1,148 16
47,351 43		47,261 89	47,351 43		47,261 89

E. & O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE OF WAY AND WORKS, Year ended June 30, 1901.

Previous Year.		
\$ cts.		\$ cts.
9,551 69	Repairs to track.....	9,328 30
1,058 27	Rails and fastenings	1,306 78
714 06	Ties.....	2,173 59
7 60	Bridges.....	651 00
14 58	Signals.....	49 81
183 82	Culverts, cattle guards, &c.....	169 14
28 40	Wharf at Windsor.....	34 15
322 40	Buildings and platforms.....	1,342 42
	Hand cars and trollies.....	74 00
187 14	Removing snow and ice.....	354 11
156 67	Tools and repairs of same.....	205 05
200 74	Fencing.....	639 61
445 49	Accountant's office and expenses	488 52
21 70	Miscellaneous.....	46 18
12,891 56		16,862 66

E. & O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Accountant and Treasurer.

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No. 3.—WINDSOR BRANCH RAILWAY.

GENERAL BALANCE, Year ended June 30, 1901.

Dr.

Cr.

		\$ cts.			\$ cts.
1901.			1901.		
June 30.	To Stores.....	2,054 54	June 30.	By Dominion Accounts.....	2,195 58
	Old Rails.....	141 04			
		2,195 58			2,195 58

E. & O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Accountant and Treasurer.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY STATEMENT OF RECEIPTS, ONE-THIRD EARNINGS.

Month.	Passenger Traffic.	Freight Traffic.	Mails.	Totals.
1900—July.....	1,792 99	2,300 18	95 68	4,188 85
August.....	2,457 67	1,697 73	95 68	4,251 08
September.....	2,772 67	2,986 04	95 68	5,854 39
October.....	1,636 73	3,741 65	96 91	5,475 29
November.....	1,120 31	3,359 98	96 90	4,577 19
December.....	1,098 95	2,624 73	96 91	3,811 59
1901—January.....	985 46	2,207 45	94 45	3,287 36
February.....	677 88	1,754 83	94 45	2,527 16
March.....	913 26	2,355 05	94 46	3,362 77
April.....	996 54	2,152 74	95 68	3,244 96
May.....	1,066 78	2,054 77	95 68	3,217 23
June.....	1,324 36	2,043 98	95 68	3,464 02
	16,834 60	29,279 13	1,148 16	47,261 89

E. & O. E.

MONCTON, N.B., June 30, 1901.

T. WILLIAMS,

Chief Accountant and Treasurer.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS,

MONCTON, N.B., September 20, 1901.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island railway, for the fiscal year ended June 30, 1901.

I inclose the report of the superintendent, including statements of the various accounts.

The mileage of railway in operation was 209 miles, one mile less than last year, this is due to the reducing of curves between Loyalist and Colville stations.

The expenditure on capital account during the year was \$280,173.93. This was chiefly for the construction of the Murray Harbour branch and of the Hillsborough bridge.

There is also included in it, a considerable amount for relaying the track with steel rails and for rolling stock.

The total cost of the railway on June 30, 1901 was \$4,123,827.21.

The working expenses for the year were. \$261,766 24

The gross earnings were. 193,883 48

Deficiency. \$ 67,882 76

The business done by the railway was good, and the earnings increased \$19,144.75 over the previous year.

The increase of earnings was in both freight and passenger traffic.

There was an increase of working expenses of \$40,834.43, due to the increased price of fuel and other stores, to increase of wages, and to the great cost of clearing the track of snow and ice last winter.

A large amount of work was done in the maintenance and repair of the track, buildings, bridges, fences and wharfs, and these are in good order.

The rolling stock received necessary repairs, and is in a state of efficiency.

Last winter was stormy, and considerable difficulty was experienced in keeping the track clear of snow and ice, and the expense of this was much more than usual.

Mr. E. Tiffin was appointed Traffic Manager, January 19, 1901, and he took charge of the Freight and Passenger Traffic Departments on January 21, 1901.

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

D. POTTINGER,
General Manager, Government Railways.

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

1-2 EDWARD VII., A. 1902

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, P.E.I., August 26, 1901.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway for the fiscal year ended June 30, 1901 :—

I also inclose the following statements prepared by the accountant and auditor and the mechanical accountant and storekeeper :—

- No. 1. Capital account.
2. Revenue account.
3. Locomotive power (abstract No. 1).
4. Car expenses (abstract No. 2).
5. Maintenance of ways and works (abstract No. 3).
6. Station expenses (abstract No. 4).
7. General charges (abstract No. 5).
8. General store 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 the railway in operation is 209 miles, one mile short of last year, on account of the removal of several curves.

CAPITAL ACCOUNT.

The total expenditure to June 30, 1900, was. \$3,843,653 28

The additions during the year were as follows :—

Hillsborough bridge.	92,028 43
Murray Harbour branch.	115,663 88
Steel rails.	54,000 00
Rolling stock.	10,000 00
Reducing curves.	2,989 10
To provide new machinery.	3,493 01
Increased accommodation at Cardigan.	1,999 51

Making the total cost on June 30, 1901. \$4,123,827 21

Hillsborough Bridge.—Mr. M. J. Haney has the contract for the piers and approaches of this, and the work is progressing.

Murray Harbour Branch.—Mr. Willard Kitchen has the contract for this work, about twelve miles of which are nearly all graded, and the balance under construction. Twenty platform cars and twenty box cars were built and charged to this branch. Two locomotives were purchased from the Kingston Locomotive Works, and included in this account.

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Steel rails.—2,587 tons of steel rails were purchased from the Intercolonial Railway. (Further particulars are given under the head of 'Track'.)

Rolling Stock.—Two passenger coaches and one second-class car were built at the works at Charlottetown.

Reducing curves.—Particulars are given under the head of 'Track.'

New Machinery.—One double surface wood planer, one mortiser and boring machine, one buzz planer, one iron working lathe, one steam hoisting engine, and eight jack screws were added to the works at Charlottetown.

Increased accommodation at Cardigan.—The freight shed at Cardigan was extended thirty feet, and a dwelling was furnished the station master.

REVENUE ACCOUNT.

The earnings from passengers and freight show a very substantial increase as compared with previous years. The crops were good, and the cheese factories and creameries appear to have increased their output. The live stock business is showing signs of improvement and promises well for the future. Trade in general has been good throughout the whole province.

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

Gross earnings.....	\$193,883 48
Working expenses.....	261,766 24
Deficit.....	<u>\$ 67,882 76</u>

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

In 1900-1901.....	\$193,883 48
1899-1900.....	174,738 73
Increase.....	<u>\$ 19,144 75</u>

The earnings from passenger traffic compare as follows :—

In 1900-1901.....	\$ 78,689 73
1899-1900.....	72,998 42
Increase.....	<u>\$ 5,691 31</u>

The earnings for freight traffic compare as follows :—

In 1900-1901.....	\$ 97,425 85
1899-1900.....	83,627 41
Increase.....	<u>\$ 13,798 44</u>

The earnings from mails and sundries compare as follows :—

In 1900-1901.....	\$ 17,767 90
1899-1900.....	18,112 90
Decrease.....	<u>\$ 345 00</u>

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The number of passengers carried compare as follows :—

In 1900-1901..	157,793
1899-1900..	147,471
	<hr/>
Increase..	10,322
	<hr/>

The weight of freight carried compares as follows :—

In 1900-1901..	73,696
1899-1900..	62,227
	<hr/>
Increase..	11,469
	<hr/>

WORKING EXPENSES.

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

In 1900-1901..	261,766 24
1899-1900..	220,931 81
	<hr/>
Increase..	\$ 40,834 43
	<hr/>

This increase is wholly due to the increased price paid for fuel, the increase in salaries and wages, the cost of relaying rails, and the large expenditure incurred in clearing snow and ice.

The averages compare with the previous year, as follows :—

Per mile run by
engine.

In 1900-1901..	\$ 76 06
1899-1900..	65 08
	<hr/>

Per mile run by
trains.

In 1900-1901..	\$ 96 88
1899-1900..	83 40
	<hr/>

Per mile of by
railway.

In 1900-1901..	\$1,246 50
1899-1900..	1,052 05
	<hr/>

TRACK.

At Colville 1,500 feet of new track were graded and finished, making a saving of 150 feet in distance and greatly improving the alignment. There were 2,800 cubic yards of earthwork, one cedar box culvert put in, and 1,500 feet of fence erected.

During the year 1,300 old iron rails were taken up and replaced with a better class of old rails, some of which were improved by cutting the worn ends off.

Steel rails, 56 lbs. to the yard, were laid between Tignish and Alberton (12 miles), and between 48th Road and Cardigan (6 miles), and between Mount Stewart and Souris (12 miles).

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SIDINGS.

At Duvar, a siding of 204 feet was built.

O'Leary, a siding was lengthened 170 feet.

Summerside, a through siding of 750 feet, and a spur 113 feet were built.

TIES.

There were renewed during the year 45,000 ordinary ties, 21 sets switch ties, 10 head-blocks and frames, and 932 culled ties were used in yards and sidings.

BALLASTING.

During the year 13,091 cubic yards of ballast were distributed where most needed, and 1,770 cubic yards of earth were removed from cuttings and ditches and used for widening embankments.

FENCING.

Two and three-quarter miles of old fence were replaced by Page wire and posts, one and a half miles were replaced by woven wire with posts and battens, and about two miles with barbed wire ; 9,445 feet of snow fence were rebuilt, and general repairs made on both snow and ordinary fences where required.

BUILDING, PLATFORMS, ETC.

At Tignish the cellar of the agent's dwelling was repaired.

At St. Louis a new station 20 x 40 was built.

At Conway a new flag station was built.

At Port Hill a new kitchen was built and painted inside.

At Richmond a new station platform was built.

At Wellington the waiting-room and office were painted.

At St. Nicholas a new flag station was built and the platform renewed.

At Summerside a new gravel roof was put on the station freight office, the office of the freight shed on the wharf was rebuilt, and the freight shed was raised and put on a new foundation.

The new office on wharf was painted, and the station freight office was painted inside and out.

At New Annan station the platform was rebuilt.

At Kingston a new door was supplied the freight house, and the agent's kitchen was painted inside and out.

At Blueshank the station was painted.

At Cape Traverse the station platform and engine house were rebuilt.

At Hunter river, a new door was put on the waiting-room, and 120 feet of breast-work built and used as a loading platform.

At Charlottetown, new sills were placed under part of the station and freight house, a new office was built for the engineers, and roof of baggage-room was repaired.

At Bedford the waiting-room and office were painted.

At Scotchfort station the platform was rebuilt.

At Mount Stewart the engine house was repaired, and the roof of station shingled.

At St. Peter's the roof of station was shingled, and also half of the roof of dwelling.

At Bear river, sills were put under the station.

At Souris the engine house was rebuilt, and freight house on wharf received a new felt roof, and had one side shingled.

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At Peake's the waiting-room and office were repaired.

At Cardigan a dwelling was provided the agent, a new door was put on waiting-room, and 30 feet were added to the freight shed.

At Georgetown the engine house was shingled and repaired.

WHARFS AND BREASTWORKS.

At Alberton, in repairing the wharf, 38 tons of timber, 56 piles, 60 cross-ties, 385 drift bolts, 8 cars of slabs, 5 cars of hard stone, 4 cars of earth, and 12 screw bolts were used.

At Summerside, 63 tons of timber, 15 creosoted piles, 20 screw bolts, 10 clamp plates, 5 cars of poles, 15 cars hard stone, 700 drift bolts, 9,000 feet of deal, and 3 mooring posts were used in repairing the wharf.

At Georgetown, 20 tons of timber, 60 piles, 60 cars of earth, 27 cars of ballast, 24 cars and 211 cart loads of brush, 22 cars and 84 cart loads of hand stone were used in repairing the wharf.

At Souris in repairing the wharf, 30 tons of timber, 39 cars of brush, 88 cars of clay, 80 tons of hard stone, 4 creosoted piles, 26 fenders, and 585 drift bolts were used.

BRIDGES AND CULVERTS.

At Harpers a new iron bridge was put in, using 18 piles, 85 cubic feet of timber, 85 barrels of cement, 170 barrels of sand, 50 tons of broken stone, and 2 tons of old iron rails.

At Morell, a new steel through deck bridge was erected in place of an old Howe truss wooden bridge, condemned.

During the year there were 24 wooden culverts rebuilt, and 9 cast iron pipe culverts put in. Thirty-two cattle guards were also rebuilt.

The bridges at Tignish, Harpers, Trout Brook, Carroll's Pawes, Pawes' West, Ellerslie, Blueshank, Freetown, Emerald, Bradalbane, Elliott's, Moore's, Milton Creek, Curtis Creek, Marie, Midgell, St. Peters, Five Houses, and Selkirk were painted and received necessary repairs.

ROLLING STOCK.

The following is a summary of the principal work done in the shops of the mechanical department :—

LOCOMOTIVES.

Two new locomotives were purchased from the Canadian Locomotive Works, of Kingston, Ont., (Nos. 22 and 23), and charged to capital.

Eight engines received specific repairs, and 4 heavy repairs. The following work was performed and new parts supplied:—Four engines had their cylinder bored out and five boxes patched, and were given new pistons, cross-heads, slides, motions, driving and truck boxes, cab mountings, balance valves, crank pins, and all new brasses in wearing parts. Four tenders were largely rebuilt. Eight locomotive smoke stacks were built. 2,000 tubes were renewed in locomotive boilers. One air reservoir, 6 pop valves, 4 whistles, 50 sets of steam packing, and 20 new driving springs were made. Twelve injectors were largely rebuilt. Twelve sets of driving wheels, and 4 sets of engine truck wheels were turned; 594 wheels were pressed on axles, and 200 new axles were turned; 400 oil boxes were made, with spring covers; 5,467 lbs. of nuts were tapped; 11,000 bolts were forged and threaded; 115,130 lbs. of iron were forged; 120 driving and engine truck springs were repaired; and 993 lbs. of steel were forged; besides ordinary running repairs.

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For the road department, 20 frogs, 10 sets of switch gear, one set of track scales, 6 sets of small scales, and 6 track ratchets were repaired ; 24 new frogs, 16 sets of switch gear, and 8 smoke stacks for engine sheds were made ; 576 lbs. of steel, and 19,025 lbs. of iron were forged ; 1,200 old tubes were slotted and pointed for fencing.

BRASS FOUNDRY.

Output :—12,434 lbs. of brass castings, and 114 battery zincs.

CAR SHOP.

Two first-class cars, 1 second-class car, 20 platform cars, and 20 box cars were built and charged to capital.

Four first-class cars, 2 postal cars, 4 second-class cars, 40 box cars, 25 platform cars, 2 snow ploughs, and 2 flanger cars received heavy repairs.

Three first-class cars, 2 second-class cars, 25 box cars, 20 platform cars, and 2 flanger cars received light repairs.

Rebuilt 1 platform car, and 4 fifteen-ton coal cars to replace the same number of ten-ton cars condemned.

One new cab was built, and 8 cabs were repaired (4 with new running boards, buffer beams, boxes, and seats). Six new tender trucks, 6 pilots, and 3 tender houses were made.

For the traffic and road departments there were 34 loading platforms, 14 switch frames, 6 freight trucks, and 3 baggage trucks made ; and 3 baggage trucks, 6 freight trucks repaired ; one derrick, and one hand-car rebuilt ; and 60 bags of plugs cut.

PAINT SHOP.

Seven first-class cars, 3 second-class cars, 1 postal and smoking car, and 6 locomotives were painted and varnished.

Forty-two box cars, and 26 platform cars were painted.

Six first-class cars, 5 second-class cars, 4 postal and baggage cars combined, and 3 baggage cars were cleaned and varnished.

200 panes of glass were put in buildings.

STORES.

The value of stores purchased was	\$168,529 70
The value of stores used was	167,957 64
The value of old material sold was	3,485 77

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

Ordinary stores	\$ 55,337 16
Fuel	7,326 54
Iron and steel rails and fastenings	4,459 22
Old material for sale	6,801 33
	<hr/>
	\$73,924 24

1-2 EDWARD VII., A. 1902

GENERAL.

The rolling stock, road bed, and buildings have been maintained in a state of efficiency.

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.

SESSIONAL PAPER No. 20

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

Dt.

CAPITAL ACCOUNT.

Cr.

		\$	cts.			\$	cts.
1900.				1900.			
June 30.	To cost of road and equipment			June 30.	By Dominion of Canada.....	3,843,653	28
1901.	to date.	3,843,653	28	1901.			
June 30.	To expenditure year ended			June 30.	" "	280,173	93
	June 30 as follows:						
	Hillsborough						
	Bridge	\$92,028	43				
	Murray Harbour						
	Branch.....	115,663	88				
	Steel Rails.....	54,000	00				
	Rolling Stock...	10,000	00				
	Reducing Curves.	2,989	10				
	New Machinery.	3,493	01				
	Increased accom-						
	modation at						
	Cardigan	1,999	51				
		280,173	93				
		4,123,827	21			4,123,827	21

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

Dr.

REVENUE ACCOUNT for Year ended June 30, 1901.

Cr.

Previous Year.	Expenditure.	Year ended June 30, 1901.	Previous Year.	Receipts.	Year ended June 30, 1901.
\$	cts.	\$	cts.	\$	cts.
72,886 18	Locomotive power.....	73,813 90	72,998 42	Passenger traffic.....	78,689 73
39,553 09	Car expenses.	42,836 26	83,627 41	Freight traffic	97,425 85
65,201 09	Maintenance of way and		18,112 90	Mails and Sundries.....	17,767 90
	works.....	96,213 25			
32,085 44	Station expenses.....	36,281 47	174,738 73	.... Total receipts.....	193,883 48
11,206 01	General charges.....	12,621 36	46,193 08	.... Balance	67,882 76
220,931 81	.... Totals.....	261,766 24	220,931 81	.... Totals.....	261,766 24

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

1-2 EDWARD VII., A. 1902

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

Dr.

LOCOMOTIVE POWER.—(Abstract No. 1.)

Cr.

Previous Year.	Details.	Year ended June 30, 1901.
\$ cts.		\$ cts.
792 34	Mechanical Superintendent's Salary, clerks, office and travelling expenses..	1,075 29
18,410 18	Wages of drivers, firemen and cleaners.....	21,100 38
14,614 19	Fuel.....	27,913 56
2,080 77	Oil, tallow, waste and small stores....	2,398 83
34,843 29	Repairs to engines, tenders, and engine tools.....	18,992 09
395 46	Water including pump and tank repairs....	468 95
1,749 95	Miscellaneous	1,864 80
72,886 18	Totals.....	73,813 90

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 20, 1901.

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

CAR EXPENSES.—(Abstract No. 2.)

Previous Years	Details.	Year ended June 30, 1901.
\$ cts.		\$ cts.
11,038 89	Repairs to Passenger Cars.....	7,782 14
2,431 37	" Postal, express, and baggage cars	3,336 27
3,806 29	" Freight cars and vans.....	5,270 46
650 25	" Snow ploughs and flangers	455 97
16,997 48	Wages of conductors, train baggage masters and brakeman.....	21,250 49
740 93	Oil and waste for packing.....	688 09
2,933 79	Small stores and fuel.....	2,799 71
954 09	Miscellaneous	1,253 13
39,553 09	Totals.....	42,536 26

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I. June 30, 1901.

SESSIONAL PAPER No. 20

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND WORKS (Abstract No. 3).

Previous Year.	Details.	Year ended June 30, 1901.
§ cts		§ cts.
294 01	Engineer's salary, clerks, office and travelling expenses.....	360 40
45,560 60	Wages in repairing roadway, fences and semaphores.....	48,626 05
17,255 13	Rails, chairs and spikes.....	9,937 26
13,755 64	Ties.....	13,666 46
11,234 78	Timber and lumber for repairs to bridges, cattle guards, &c.	2,706 98
4,959 64	Repairs to wharves.....	7,354 74
4,464 27	" buildings and platforms.....	5,454 66
1,188 40	" tools	1,490 83
998 88	" ice and snow.....	6,615 87
65,201 09		96,213 25

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

No. 6 —PRINCE EDWARD ISLAND RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Previous Year.	Details.	Year ended June 30, 1901.
§ cts.		§ cts.
25,801 27	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage masters, yardmasters, switchmen and labourers.	28,261 62
6,284 17	Fuel, oil, light, stationery, and other incidental expenses..	8,019 85
32,085 44		36,281 47

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

1-2 EDWARD VII., A. 1902

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL CHARGES.—(Abstract No. 5.)

Previous Year.	Details.	Year ended June 30, 1901.
\$ cts.		\$ cts.
4,705 94	Superintendents and train despatchers salaries, clerks, office and travelling expenses	5,898 22
5,049 52	Accountant and Auditor, paymasters and cashiers salaries, clerks, office and travelling expenses	4,788 01
237 34	Advertising	651 01
720 50	Damages to men, animals and goods	578 05
151 07	Telegraph expenses, (not including pay to operators).....	446 95
341 64	Miscellaneous	259 12
11,206 01	Totals.....	12,621 36

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF GENERAL STORES ACCOUNT, Year ended June 30, 1901.

1900.	Dr.	\$ cts.	\$ cts.
June 30...	To balance brought forward.....		63,505 31
1901.			
June 30...	Purchases during year including rails	168,529 70	
	Charges from other departments....	12,272 74	
	Pay rolls.....	1,059 90	
			181,862 34
	Cr.		245,367 65
June 30...	By issues during the year.....		171,443 41
	Balance { Ordinary stores..... \$56,408 51 }		
	{ Fuel..... 7,326 54 }		
	{ Rails and fastenings on hand..... 9,736 69 }		
	{ Old material serviceable..... 452 50 }		
			73,924 24

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

SESSICNAL PAPER No. 20

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

Dr.

GENERAL BALANCE.

Cr.

	\$	cts.		\$	cts.
General stores.....	73,924	24	Dominion Account.....	92,284	23
Cash.....	11,645	73	Through Ticket Ledger.....	783	11
Stations.....	1,552	51	John McDougall & Co.....	648	75
Post Office Department.....	2,582	50	Rhodes, Curry & Co.....	54	76
Militia Department.....	245	88			
Anglo American Telegraph Co.....	46	43			
Judge Weatherbee.....	30	00			
Sidney Grey.....	30	00			
Railway extension, Charlottetown.....	812	83			
B. & M. Rattenbury.....	76	20			
Intercolonial Railway.....	1,521	89			
Accident Insurance.....	1,302	64			
	93,770	85		93,770	85

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

1-2 EDWARD VII., A. 1902

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of Averages for Years ended June 30, 1900 and 1901.

Details.	1901.	1900.
Mileage of railway open	210	210
Engine mileage	344,144	339,458
Train mileage	270,255	264,895
Car mileage	1,645,521	1,538,038
Receipts, per engine mile Cents.	56·34	51·47
" mile of railway Dollars.	923·25	832·09
Percentage of passenger earnings to gross receipts	40·59	41·77
" freight " "	50·25	47·86
" other " "	9·16	10·37
Expenses per engine mile :—		
Drivers, firemen and cleaners wages	6·13	5·43
Fuel	8·11	4·31
Oil, tallow, waste and small stores	·70	·61
Repairs to engines	5·52	10·26
Water and tank repairs	·13	·12
Miscellaneous	·54	·52
	21·13	21·25
Mechanical superintendents salary, office and travelling expenses	·31	·23
Total Cents.	21·44	21·48
Locomotive power, per engine mile	21·44	21·48
Car expenses " "	12·45	11·65
Maintenance of way and works, per engine mile	27·96	19·20
Station expenses	10·54	9·45
General charges	3·67	3·30
Total per engine mile Cents.	76·06	65·08
Locomotive power, per train mile	27·32	27·51
Car expenses	15·85	14·93
Maintenance of way and works	35·60	24·61
Station expenses	13·43	12·12
General charges	4·68	4·23
Total per train mile Cents.	96·88	83·40
Working expenses per train mile of railway Dollars.	1,246·50	1,052·05

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., June 30, 1901.

SESSIONAL PAPER No. 20

A.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

STATEMENT of Cost of Locomotive Power for the Year ended June 30, 1901.

Months.	Miles run by Engines less Ballasting.	COST OF						AVERAGE PER MILE RUN.							
		Enginemen's Wages.	Fuel.	Oil, Waste, &c.	Repairs.	Water, including Tank and Pump Repairs.	Miscellaneous, including Office and Engine House.	Total.	Enginemen.	Fuel.	Oil, Waste, &c.	Repairs.	Water.	Miscellaneous.	Total.
1900—July.....	33,047	cts. \$ 1,683 26	cts. \$ 2,214 54	cts. \$ 214 17	cts. \$ 1,402 38	cts. \$ 41 58	cts. \$ 209 10	cts. \$ 5,765 03	cts. 5 09	cts. 6 70	cts. 0 64	cts. 4 25	cts. 0 13	cts. 0 63	cts. 17 44
August.....	33,120	1,871 16	2,331 00	254 68	1,227 99	2 66	231 16	5,918 65	5 65	7 04	0 76	3 71	0 01	0 70	17 87
September.....	31,086	1,711 09	2,550 24	211 82	1,297 46	24 86	231 12	6,026 59	5 50	8 21	0 68	4 17	0 08	0 74	19 38
October.....	31,117	1,764 90	2,500 83	254 74	1,899 64	3 20	235 74	6,659 05	5 67	8 04	0 82	6 11	0 01	0 75	21 40
November.....	31,837	1,817 88	2,624 59	269 12	2,141 82	48 65	309 91	7,211 97	5 71	8 24	0 85	6 73	0 11	0 97	22 65
December.....	30,256	1,630 16	2,402 76	226 21	2,032 04	155 44	264 93	6,711 54	5 39	7 94	0 75	6 72	0 51	0 87	22 18
1901—January.....	23,537	1,946 21	2,321 92	203 09	1,956 03	7 00	329 34	6,763 59	8 27	9 86	0 86	8 30	0 03	1 39	28 71
February.....	24,010	1,704 08	2,568 29	226 92	1,349 06	4 00	207 34	6,059 69	7 10	10 69	0 94	5 62	0 02	0 86	25 23
March.....	25,773	2,214 11	2,916 71	230 12	1,989 82	3 40	278 72	7,632 88	8 59	11 32	0 89	7 72	0 01	1 08	29 61
April.....	21,854	1,549 73	1,927 72	146 04	1,716 74	26 36	227 86	5,594 45	7 09	8 82	0 67	7 86	0 12	1 04	25 60
May.....	29,064	1,757 70	1,356 18	126 91	1,230 11	1 80	203 49	4,676 19	6 04	4 66	0 43	4 25	0 01	0 70	16 09
June.....	29,423	1,450 10	2,198 78	35 01	749 00	150 00	211 38	4,794 27	4 93	7 47	0 12	2 54	0 51	0 72	16 29
Totals.....	344,144	21,100 38	27,913 56	2,398 83	18,992 09	468 95	2,940 09	73,813 90	6 13	8 11	0 69	5 52	0 14	0 86	21 45

S. F. HODGSON,
Mechanical Accountant.

1-2 EDWARD VII., A. 1902

PRINCE EDWARD

MECHANICAL

STATEMENT of the Performance and Consumption

Months.	Hours in steam.	Train Mileage.				Mileage by Engines.			
		Passenger.	Freight and Mixed.	Ballasting.	Piloting.	With Train.	Light.	Shunting.	Total.
1900—July.....	4,111	11,664	14,551	1,563	84	27,862	227	7,096	35,185
August.....	4,341	12,109	14,355	5,744	218	32,426	24	6,962	39,412
September.....	3,955	11,025	14,241	4,886	.....	30,152	5	6,197	36,354
October.....	4,233	8,884	15,920	5,710	.....	30,514	158	6,720	37,392
November ..	4,135	10,261	15,240	3,491	22	29,014	123	6,662	35,799
December.....	3,532	8,882	14,825	8	44	23,759	49	6,456	30,264
1901—January.....	3,286	3,897	13,877	.....	22	17,796	100	5,661	23,557
February.....	3,478	3,730	12,164	.....	3,118	19,012	114	4,884	24,010
March.....	4,227	4,515	12,469	.....	2,004	18,988	150	6,635	25,773
April.....	3,033	1,931	14,251	40	44	16,266	108	5,520	21,894
May... ..	3,599	6,488	15,882	308	.....	22,678	..	6,749	29,427
June.....	3,624	9,555	13,983	3,156	.....	26,694	92	6,273	33,059
Totals.....	45,554	92,941	171,758	24,906	5,556	295,161	1,150	75,815	372,126

SESSIONAL PAPER No. 20

ISLAND RAILWAY.

DEPARTMENT.

of Locomotives for the Year ended June 30, 1900.

Total Mileage.		Average of Cars per Mile run with Train.	Average Mileage.		Consumption				Consumption per 100 miles run by Engines.			
Cars.	Snow Ploughs.		Miles to one hour in steam	Of Cars to one of engines.	Bushels of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.	Bushels of Coal.	Pints of Oil.	Pints of Valve Oil.	Pounds of Waste.
165,768	.....	5·97	8·56	4·71	18,248	2,080	968	701	51·96	5·91	2·75	1·99
193,694	.....	6·01	9·01	4·91	19,200	2,615	1,112	682	48·72	6·63	2·82	1·73
196,678	.....	6·52	9·19	5·41	21,048	2,258	988	670	57·89	6·21	2·71	1·84
188,716	.....	6·18	8·83	6·82	20,935	2,803	1,180	771	55·98	7·49	3·15	2·06
177,991	.....	6·14	8·66	4·97	19,896	2,613	1,088	655	55·57	7·30	3·04	1·83
153,077	1,191	6·45	8·57	5·05	19,024	2,428	856	586	62·19	8·02	2·82	1·93
119,979	1,568	6·75	7·17	5·09	16,708	1,962	688	483	70·92	8·32	2·92	2·05
87,891	5,461	5·53	6·90	3·66	16,836	2,405	952	529	70·12	10·01	3·96	2·20
118,222	4,355	6·96	6·09	4·59	17,694	2,239	832	525	68·65	8·69	3·22	2·07
108,063	.....	6·66	7·22	4·93	12,121	1,402	424	436	55·36	6·40	1·94	1·99
155,287	.....	6·84	8·18	5·27	16,353	1,096	332	533	55·57	3·72	1·12	1·81
175,102	.....	6·56	9·12	7·59	16,955	1,218	340	477	51·28	3·68	1·03	1·44
1,840,468	12,575	6·35	8·17	4·95	215,018	25,119	9,760	7,048	57·78	6·75	2·62	1·89

S. F. HODGSON

Mechanical Accountant.

1-2 EDWARD VII., A. 1902

C.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

MONTHLY STATEMENT of Car Mileage for Year ended June 30, 1901.

Months.	First Class.	Second Class & Baggage.	Postal and smoking	Box and Stock.	Platform.	Total.
1900—July.....	37,516	21,866	31,521	54,661	20,204	165,768
August.....	35,361	27,078	31,094	48,090	52,071	193,694
September.....	37,845	26,078	29,964	47,437	55,354	196,678
October.....	26,275	25,041	29,245	53,760	54,395	188,716
November.....	26,996	24,742	29,668	63,926	32,659	177,991
December.....	24,568	21,104	26,126	62,799	18,480	153,077
1901—January.....	17,487	15,701	17,301	57,121	12,369	119,979
February.....	15,281	11,891	14,887	32,254	13,578	87,891
March.....	16,663	15,087	15,907	49,387	21,178	118,222
April.....	19,411	16,146	16,517	43,358	12,631	108,063
May.....	22,950	20,848	27,316	71,774	12,399	155,287
June.....	26,080	23,258	29,452	58,176	38,136	175,102
Totals.....	306,433	248,840	298,998	642,743	343,454	1,840,468
Less ballasting..	.....	12,963	13,573	.....	168,411	194,947
Balance.....	306,433	235,877	285,425	642,743	175,043	1,645,521

S. F. HODGSON,

Mechanical Accountant.

SESSIONAL PAPER No. 20

D.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

STATEMENT showing the number of Locomotives and of the various classes of Cars and other Rolling Stock on June 30 1901.

	CLASSIFICATION OF CARS.																Totals.	
	Locomotives.	1st Class.	2nd Class.	Combined 2nd and Baggage.	Postal and Smoking.	Combined Postal and Baggage.	Pay Car.	Vans.	Box Freight.	Refrigerator Car.	Stock.	Coal.	Platform.	Total.	Snow Ploughs.	Flangers.		
On hand, serviceable, June 30, 1900..	21	17	7	4	2	3	4	1	3	183	1	17	18	125	385	8	7	15
Condemned, July 1, 1901.....														2	2			
Total.....	21	17	7	4	2	3	4	1	3	183	1	17	18	127	387	8	7	15
Purchased during the year on capital account.....	2																	
Built during year on capital account..		2	1						20				20	43				
Total.....	23	19	8	4	2	3	4	1	3	203	1	17	18	147	430	8	7	15
Condemned, July 1, 1900.....														2	2			
" during the year.....												4	2	6				
Total condemned.....												4	4	8				
Less rebuilt.....												4	1	5				
To be rebuilt.....														3	3			
Add serviceable and repairing..	23	19	8	4	2	3	4	1	3	203	1	17	18	144	427	8	7	15
Total.....	23	19	8	4	2	3	4	1	3	203	1	17	18	147	430	8	7	15

1-2 EDWARD VII., A. 1902

E.—PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

COMPARATIVE STATEMENT of the Expenses of the Mechanical Department for the Years ended June 30, 1900 and 1901.

	1900.	1901.
The miles run by trains were	264,895	270,255
" engines were	339,458	344,144
" cars were	1,538,038	1,645,521
" snow ploughs were	1,499	12,575
	\$ cts.	\$ cts.
The cost of locomotive power was	72,886 18	73,813 90
" repairs to cars were	17,276 55	16,388 87
" " passenger cars was	11,038 89	7,782 14
" " postal and smoking cars was	2,431 37	3,336 27
" " freight cars and vans was	3,806 29	5,270 46
" labour, oils, and waste for cars was	740 93	688 09
" repairs to snow ploughs and flangers was	650 25	455 97
The cost of locomotive power per 100 miles run by trains was	27 51	27 31
" " " engines was	21 47	21 45
" " " cars was	4 73	4 45
The cost of repairs to cars per 100 miles run by trains was	6 52	6 06
" " " engines was	5 09	4 76
" " " cars was	1 12	0 99
The cost of labour, oil and waste for packing per 100 miles run by trains was ..	0 28	0 25
" " " engines was	0 21	0 19
" " " cars was	0 04	0 04
The repairs to passenger cars per 100 miles run by trains were	4 16	2 88
" postal and smoking cars were	0 91	1 23
" freight cars and vans	1 43	1 95

S. F. HODGSON,
Mechanical Accountant.

F.—PRINCE EDWARD ISLAND RAILWAY.

SESSIONAL PAPER No. 20

RETURN of Accidents and Casualties which have occurred on the line of the Prince Edward Island Railway during the Year ended June 30, 1901.

Date.	Time of Day or Night.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Persons Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1900.												
July 22.	.....	.....	.....	.....	.....	.....	Souris Yard ..	A. McEwen ..	Employee.	Hand caught while coupling cars.	Hand crushed.	
Aug. 25.	5.40 p.m.	5	Mixed	F. Kelley	D. Pound	6	Blue Shank	D Pound	"	Severe bodily injury by engine being derailed.	Fatally injured.	
Sept. 24.	.....	.....	.....	.....	.....	.....	St. Louis	F. Bernard	"	Leg fractured by falling rail.	Leg fracture..	
Oct. 4.	.....	.....	.....	.....	.....	.....	Bear River	A. McIsaac ..	"	Shoulder dislocated by fall.	Shoulder dislocated.	
" 29.	.....	.....	.....	.....	.....	.....	Ch. Town Yard ..	Jas. Stewart ..	"	Hand crushed while coupling.	Hand crushed.	
Nov. 16.	5 20 p.m.	21	Mixed	G. Tanton	J. Millman	6	Royalty Junction ..	F. A. McDonald ..	"	Hand crushed while coupling cars.	"	
Dec. 1.	.....	.....	.....	.....	.....	.....	Summerside Wharf	Neil McKenzie ..	"	Hand crushed while driving piles.	"	
1901.												
Feb. 13.	6.30 a.m.	8	Mixed	G. W. Hibbett ..	R. Dongan	22	George town Yard ..	D. Gunn	"	Fingers crushed while coupling.	Fingers crushed.	
" 14.	8.40 a.m.	8	"	G. W. Hibbett ..	C. McElman	3	Mount Stewart ..	C. Clarke	"	Hand crushed while coupling cars.	Hand crushed.	
Apl. 28.	.....	.....	.....	.....	.....	.....	York	R. Webster	"	Leg injured by handle of hand car.	Leg fractured.	
May 2.	10.00 a.m.	10	Mixed	T. Stanley	H. Sutherland ..	4	Mount Stewart ..	T. Stanley	"	Body injured while coupling cars.	Body injured.	
June 4.	.....	.....	.....	.....	.....	.....	Charlottetown ..	John Good	"	Fingers cut off while operating planer.	Fingers cut off	

No. 2

MEMO. OF DOCUMENTS AND PLANS FOR THE CHIEF ENGINEER
OF RAILWAYS AND CANALS.

(FILED BY J. S. O'DWYER.)

JUNE 13, 1901.

Report.—Port Simpson to Teslin railway.

“ Edmonton to Teslin railway.

Map showing explorations of 1900.

Profile of explorations of 1900.

Sketch map of the north-western portion of British Columbia.

Map of the north-western portion of Canada (to illustrate report on the Edmonton
to Teslin railway).

Profile of the Edmonton to Teslin railway.

Admiralty charts (3)—

- (1.) Port Simpson Harbour.
- (2.) Kitimat Arm and vicinity.
- (3.) Portland canal, Alice Arm and mouth of Nass river.

(Album of photographs.)

SESSIONAL PAPER No. 20

PROPOSED RAILWAY FROM PORT SIMPSON TO LAKE TESLIN,
BRITISH COLUMBIA.

*Report on Explorations made during the Season of 1900, by J. S. O'Dwyer, C.E.,
Engineer in Charge.*

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, CANADA, June 8, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Chief Engineer,

Department of Railways and Canals.

SIR,—I have the honour to transmit you herewith my report on the explorations performed under my charge during the season of 1901, in connection with the proposed railway from Port Simpson to Teslin lake.

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

JOHN S. O'DWYER,

Engineer in Charge.

Memo.

Accompanying this report are the following :—

- (1.) Map of explorations and projected location (scale of 2 miles to the inch).
- (2.) Sketch map of the north-western portion of British Columbia (scale of 20 miles to the inch).
- (3.) Profile of projected location.
- (4.) Album of photographs.

The instructions received from the Chief Engineer outlined the following work in the field :—

(1.) Exploration of the main Clappan River Valley, from its head to the junction of the Clappan and Stikine rivers.

(2.) Exploration of the Stikine River Valley, from the mouth of the Clappan to the mouth of the Tahltan river.

(3.) Exploration of the country between the latter point and Teslin lake via the Tahltan River Valley and the most feasible route thence northward.

ITINERARY OF TRIP.

I left Ottawa for Vancouver, accompanied by my assistant and one man, on the 16th of May, having received my final instructions from the Chief Engineer the previous day.

Kamloops was reached on the 21st. Here I was detained until the 2nd of June, purchasing horses for my pack-train, getting pack saddled and rigging made, and hiring the necessary men to complete the party.

Owing to an accident to the Candian Pacific Railway Navigation Company's steamer *Danube*, we did not sail from Vancouver until the 8th of June, arriving at Wrangel, Alaska, on the 11th.

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Here another delay occurred, due to the Hudson's Bay Company's steamer not carrying out instructions from the Victoria office, to await my arrival—on or about the 11th—before leaving for Telegraph creek. As a result, we were obliged to wait this steamer's return and only got away from Wrangel on the 19th.

The trip up the Stikine river was very slow and tedious, owing to high water. Telegraph creek was not reached until the evening of the 25th of June.

The tract of country under consideration for this year's explorations extends from the Clappan pass, at the head of Clappan river, to the south end of Teslin lake, and is accessible by steamer only at Glenora and Telegraph creek, on the Stikine River.

In order to expedite the survey, I had decided to proceed to Telegraph creek—as a fairly central point—make the explorations thence to Teslin lake first, then returning to Telegraph creek and refitting with supplies continue the survey to the head of the Clappan, and connect at the Clappan pass with my surveys of the previous year (made to this latter point from Hazelton on the Skeena river). By this disposition of the work in hand, I would reach the larger rivers (Tanzilla, Stikine and Clappan) at the localities where I anticipated crossing them, after the period of high water.

Following out this programme, I left Telegraph creek, for Teslin lake on the 28th of June, and reached the now defunct village of Teslin, at the south end of the lake, on the 8th of July. The route followed was by the government pack trail to the mouth of the Tahltan river, and thence to Teslin by the old pack trail. Side explorations, away from the main trail, were made from time to time at such points as seemed to demand extra examination.

At Teslin a day was spent in examining the shores of the lake for some miles below it head, and on the 10th we started on the return trip to Telegraph creek, arriving there on the 22nd.

Here I dispensed with the services of five of my men—for good and sufficient reasons—and hired Indians to replace them, thereby securing men who were more or less familiar with that portion of the country to be examined—lying between the mouth of the Clappan river and its head—and men, too, that could be discharged as soon as my actual surveys and explorations were completed, that is, when I should arrive at the Clappan pass.

From this point, I contemplated reaching the sea-coast via Hazelton on the Skeena—some 230 miles distant—and during this latter part of the trip there would be no need of more than sufficient men to handle the horses and outfit.

I left Telegraph creek with the newly organized party on the 29th of July, and following the right or north bank of the Stikine river to the mouth of the Clappan, a distance of 77 miles, crossed the Tahltan river at the twelfth mile, the Tuya river near the eighteenth, and the Tanzilla river, with the transverse survey, about 30½ miles from Telegraph creek.

At a point some 16 miles from Telegraph creek, the government pack trail leaves the vicinity of Stikine river on account of the numerous canyons in the river valley, and ascends on to the elevated rolling plateau following the north rim of the valley—nine miles further, or at the twenty-fifth mile (Portage camp)—we left the government trail leading to Dease lake, and thence to the Clappan river, some 60 miles by our trail, we were forced to cut a pack trail through rough timbered country, across numerous creeks in deep canyon-like ravines, over long stretches of muskeg, through tracts covered by densely fallen timber and over many other obstacles.

This pack trail lies from three to five miles distant from the Stikine river, as it was quite impracticable, across this stretch of country, to place it near the river or in the river valley itself, owing to the mighty canyon of the river proper and the many lateral ones, carrying tributary creeks to the river. The traverse survey, however, was carried along the river, on the tops of the main canyons and across the lateral ones, as men could travel on foot where it was impossible to take horses.

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The pack trail again reached the banks of the Stikine at the sixtieth mile of the traverse survey, virtually the head of the 'Great Canyon of the Stikine,' extending to this distance from Telegraph creek, which is situated just at its lower end, thence to the mouth of the Clappan river, at the seventy-seventh mile, the pack trail was placed fairly close to the river.

On the 26th of August we camped on the north bank of the Stikine, opposite the mouth of the Clappan river, having been 29 days making the distance of 77 miles from Telegraph creek. During this time work was carried on every day but three (of which two were lost on account of rain), thus an idea can be formed of the obstacles to transportation by pack-trains that were encountered.

On the 28th of August the pack-train and outfit were crossed to the south bank of the Stikine—a half-mile above the Clappan—and here the horses enjoyed a week's rest in the midst of abundant feed, of which they were sorely in need, as feed had been scarce at numerous points on our trail.

This interval—from the 29th of August to the 5th of September—was employed in continuing the traverse survey up the Stikine river $16\frac{1}{2}$ miles to Jones' creek, and also some 10 miles up the valley of Ptarmigan creek, which empties into the Stikine a mile and a half above the Clappan. At these two points connections were made with my explorations of 1898 from Dease lake south-eastward to the main Stikine valley. These short exploratory trips filled up the gap in the complete traverse of the Stikine river from Telegraph creek to its head at the Skeena-Stikine summit—a few miles east of the Clappan pass—and furthermore, completed the examination of the entire length of Ptarmigan creek. This creek seems to offer so far the only practicable route for an exit northward from the Clappan valley, although later on I will suggest another route which appears worthy of examination at a future time should the Clappan route be adopted. During this detention at the Clappan mouth the men not utilized on the side exploration trips, were employed cutting out our trail ahead, up the Clappan valley some 13 miles, to the point where the main Hazelton trail crosses the river, and thence from the crossing strikes westerly across country to Telegraph creek. This main trail I expected to utilize to the Clappan pass, and having no further use for some of the axemen, I discharged four of my Indians here, anticipating that I would not require these men on the main trail, as it had recently been traversed by a large pack-train employed by the telegraph construction party of the Department of Public Works, and consequently doubtless made passable. On the 5th of September the party left the mouth of the Clappan river, bound southward for its head waters.

The traverse survey was carried along the right on east bank of the river, where the trail had previously been cut out.

About 13 miles from the mouth is the crossing of the main trail between Hazelton and Telegraph creek—an easy fording place at low water, but decidedly difficult and rather dangerous at high water. Here we struck into this main pack-trail, and used it for the pack-train from this point to the Clappan pass, and thence on to Hazelton. Our rate of daily progress was now materially increased, and averaged 10 miles per day, for each day of travelling to the Clappan pass.

At 30 miles north of the mouth of Clappan we reached the main forks of the river—one branch tending to the south-west and the other to the south-east. This latter leads to the Clappan pass, and is the one along which the explorations were carried.

At the 112th mile the pack-trail leaves the main stream, and, striking easterly, follows the narrow grassy valley of tributary stream for some 12 miles, then crosses an intermediate summit at an elevation of 5,230 feet above the sea, and again reaches the valley of the main stream at 22 miles from where we left it—or the 134th mile of the trail. The traverse survey was subsequently carried along the main valley and showed the distance by this latter route to be about 2 miles shorter.

Before crossing the intermediate summit explorations were made 15 miles easterly to the head of the creek, by which we had travelled from the main Clappan, to ascer-

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tain if a pass could be obtained from its head into the valley of the main Stikine river. This creek was found to head in a cul-de-sac among snow banks and glaciers.

Having resumed our course along the main Clappan river, the traverse survey was continued in this valley to the Clappan pass, and thence over this summit, which was crossed on the 14th, through eighteen inches of snow. On the following day the survey was connected with that of last season, at Upper forks of main Stikine river, a point ascertained by last year's traverse to be 226 miles from Hazelton, via the projected location and 10 miles north-west of the Skeena-Stikine summit.

In my report of the explorations of last season (p. 164, part 1, Report Railways and Canals for 1899-1900), I outlined a feasible connection from Skeena-Stikine summit (at the 216th mile from Hazelton) to the Clappan valley by way of the Clappan pass. The summit of this pass being some 10 miles west of the above watershed, and 1,076 feet higher, this connection would demand a considerable amount of heavy rock work and rather severe grades in places.

Having ascertained from one of my Indians that another pass through these mountains lay some miles north, and was used by them in crossing from the Clappan to the Stikine valleys. I devoted a couple of days to the examination of this northern pass, and was gratified to find it gave a summit some 800 feet lower than the Clappan pass, and afforded a connection to the Clappan valley from the Skeena-Stikine watershed of practically no greater length. Its summit is but 255 feet higher than this watershed, but the railway location would have to descend from the watershed into the valley of a small tributary to the Stikine, and then ascend by another stream to the summit of the pass.

This pass opens out easterly towards the shack where, in August of 1899, the remains of a white man were found by my party, and has been consequently called 'Dead Man's Pass.'

It lies about fourteen miles north-west of the Skeena Stikine Summit, and can be approached on both sides by grades of 75 to 100 feet per mile, with light work; by using heavier work these grades could be reduced to between 50 and 75 feet per mile.

Before leaving this vicinity explorations were made from the Forks to the head of the east branch of the Stikine, about 17 miles, with the intention of connecting them later on with the traverse of 1899, by ascending the north fork of the Stikine from the 190th mile of the projected location of that year—which latter point we would pass on our outward trip to Hazelton.

When we ultimately reached this 190th mile I spent two days in exploring the aforesaid north fork of the Skeena. This stream and the east fork of the Stikine (noted above), lie in the easterly of the two parallel valleys referred to in the report of the Chief Engineer of railways and canals for 1898-1899 (part 1, p. 33).

The examination of this valley, made during the present season, shows that while the summit is 115 feet lower than that of the westerly valley, in which latter lies the watershed—termed by me the Skeena—Stikine Summit, this easterly valley is not by any means as suitable for railway construction as the westerly one. It is very narrow, rocky and of a canyon nature on its more southern portion near the Skeena river, while its north-western part—although an open and easy valley—does not offer as feasible a connection with Dead Man's Pass as that given by the westerly valley, moreover the distance is not lessened. Were the railway line to be carried down the upper Stikine river, rather than via the Clappan, this easterly valley would then be worthy of consideration, but as the line via the Clappan valley, being much more direct, is without doubt the better route, and as access to this Clappan valley is preferably made by way of Dead Man's Pass, there can now be no question that the projected line from Hazelton should reach the watershed between the Skeena and Stikine rivers by the westerly of these two valleys, that is by the main upper Skeena valley—which is from 1 to 2 miles wide, and demands but a limited amount of heavy work, with an average grade of 54 feet per mile.

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With these last explorations—which were completed on September 24—the field survey work for this season terminated. The next day we again resumed the trail for Hazelton and reached there on October 10.

At the Indian village of Kispyox and at Hazelton I disposed of those of my horses that had survived the trip; some of them towards the latter part of the trip had become too weak to travel from lack of feed and had to be shot.

From Hazelton we travelled to Port Essington—on the sea coast—by canoe, and from there to Vancouver by steamer, arriving on October 25. Here the remaining men were paid off, and leaving Vancouver on the 27th I reached Ottawa on November 1.

The explorations of this season covered some 470 miles of actual survey and reconnaissance, extending from the Skeena-Stikine summit, 216 miles from Hazelton, to the south end of Teslin lake, at the 558th mile from Hazelton, via the projected location.

A track survey was carried on through the entire work and barometer readings taken frequently each day for ascertaining relative elevations above the sea. Latitude observations with a large sextant and mercurial horizon were obtained as often as practicable, as a check on the traverse survey. The variation of the magnetic needle was accurately determined by stellar observations taken with a transit at Telegraph creek.

DETAILED DESCRIPTION of the projected location from the Skeena Stikine Summit to Teslin Lake viz.: From the 216th to the 558th mile (mileage reckoned from Hazelton) with an Approximate Estimate of the cost of Construction.

This section forms the northern portion of the proposed railway from Port Simpson to Teslin ocean port line.)

The explorations of 1899, under my charge, extended from Hazelton to a point on the Upper Stikine, 230 miles distant by the projected location, and are fully described in my report thereon (*vide* Report of the Department of Railways and Canals for 1899-1900, page 158, *et seq.*).

This season's explorations embrace the country comprised in the extension of the work of 1899, from the Skeena-Stikine summit, at the 216th mile (from Hazelton) to the south end of Teslin lake, a further distance of 342 miles, by the projected location, or a total distance of 558 miles from Hazelton.

For descriptive purposes, that portion of the projected location covered by this season's explorations, and extending from the 216th to the 558th mile from Hazelton, as above noted, is divided into the following eight sections:—

	Miles.
1. Summit Section—	
216th to 230th mile.	14
2. Clappan River Section—	
230th to 298th mile.	68
3. Ptarmigan Creek and Gnat Creek Section—	
298th to 340th mile.	42
4. Tanzilla River Section—	
340th to 390th mile.	50
5. Stikine River Section—	
390th to 406th mile.	16
6. Tahltan River Section—	
406th to 434th mile.	28
7. Hacket River and Egnell's Creek Section—	
434th to 455th mile.	21
8. Grand Valley Section—	
455th to 558th mile.	103

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Before proceeding with the detailed description of these sections, I will give here a memorandum of the data used in estimating the approximate cost of construction per mile.

MEMORANDUM REGARDING THE APPROXIMATE ESTIMATE OF COST OF CONSTRUCTION.

This estimate provides for the railway line complete, with usual station buildings, sidings, telegraph line, water supply, &c.

(It is based on the cost of similar work in eastern Canada, to which must, therefore, be added the cost of transport of labourers, plant and material, also whatever difference there may be in wages.)

To arrive at this estimate the following data are used :—

1. Cost of one mile of permanent way, in position on formation, including ballasting.
2. Cost of constructing one mile of roadbed, under three grades : (a) light work ; (b) medium work ; (c) heavy work.

The details of these data are as follows :—

COST OF 1 MILE OF PERMANENT WAY.

(IN POSITION ON FORMATION, INCLUDING BALLASTING.)

Items.	Rates.	Amounts.
	\$ cts.	\$ cts.
Steel rails (56 lbs. per lin. yd.) 88 tons	\$32.60 per ton.	2,868 80
Angle plates (24-in.) (allowing 360 joints per mile) 360 pairs at 36 lbs. per pair, 12,960 lbs.	2c. per lb.	259 20
Bolts and nuts ($\frac{3}{4}$ -in.) 4 bolts per joint, 1,440 bolts and nuts, (weight 1 lb.) 1,440 lbs.	3c. "	43 20
Track spikes ($5\frac{1}{2}$ -in. x $\frac{5}{16}$) 4 per tie, 6,000 lbs.	2c. "	120 00
Valcantite washers		25 00
Ties (spaced 2 feet centres) 2,640.	25c.	660 00
Track-laying per mile		250 00
Ballasting, 2,200 cubic yds. per mile.	40c.	880 00
Total.		5,106 20

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COST OF CONSTRUCTING 1 MILE OF ROAD BED.

GRADE (a) LIGHT WORK.

Items.	Rates.		Amounts.	
	\$	cts.	\$	cts.
Clearing, 12 acres.....	25	00	300	00
Close cutting, 2 acres.....	35	00	70	00
Grubbing, 2 acres.....	50	00	100	00
Earthwork, 15,000 cubic yds.....	0	25	3,750	00
Rock work, 1,000 ".....	1	00	1,000	00
Minor structures.....			1,000	00
Engineering, \$600, stations, \$150, telegraph line, \$125, water supply, \$150, sidings, \$350.....			1,375	00
Contingencies, 10 per cent.....			7,595	00
			759	50
Cost to formation.....			8,354	50
Permanent way.....			5,106	20
Total.....			13,460	70

(Approximately, \$13,500 per mile.)

COST OF CONSTRUCTING 1 MILE OF ROAD BED.

GRADE (b) MEDIUM WORK.

Items.	Rates.		Amounts.	
	\$	cts.	\$	cts.
Clearing, 12 acres.....	25	00	300	00
Close cutting, 2 acres.....	35	00	70	00
Grubbing, 2 acres.....	50	00	100	00
Earthwork, 15,000 cubic yds.....	0	25	3,750	00
Rock work, 10,000 ".....	1	00	10,000	00
Minor structures.....			1,250	00
Engineering, \$700, stations, \$150, telegraph line, \$125, water supply, \$150, sidings, \$400.....			1,525	00
Contingencies, 10 per cent.....			16,995	00
			1,699	50
Cost to formation.....			18,694	50
Permanent way.....			5,106	20
Total.....			23,800	70

COST OF CONSTRUCTING 1 MILE OF ROAD BED.

GRADE (c) HEAVY WORK.

Items.	Rates.	Amounts.
	\$ cts.	\$ cts.
Clearing 12 acres.....	25 00	300 00
Close cutting 2 acres	35 00	70 00
Grubbing 1 acre.....	50 00	50 00
Earth work, 20,000 cubic yards.	0 25	5,000 00
Rock work, 20,000 cubic yards.....	1 00	20,000 00
Minor structures.....		1,500 00
Engineering, \$700. Stations, \$150. Telegraph Line, \$125. Water Supply, \$150. Sidings, \$400.....		1,525 00
		28,445 00
Contingencies, 10 per cent		2,844 50
Cost to formation.....		31,289 50
Permanent way		5,106 20
Total		36,395 70

(Approximately, \$36,400 per mile.)

SUMMARIZING the preceding detailed estimates, the cost per section of the 343 miles is as follows :--

Section 1.—Summit Section.

216th to 230th mile, 14 miles.

This section comprises the 14 miles between the Skeena-Stikine summit and the summit of Dead Man's pass. It is chiefly an open grassy valley with a light growth of timber on the hill sides. On leaving the 216th mile, the projected location is placed in the right bank of a small stream tributary to the Stikine, which it follows to the 219th mile, and there crosses to the left bank by a structure 100 feet in length spanning a short canyon.

The line thence follows the west side of the valley, and is continued along its foot-hills to the 224th mile, when it begins the ascent to the pass, on the side hills of the valley of a small stream flowing to the Stikine from the pass. The grade rising to the summit is at 73 feet per mile for 6 miles, with light work. As previously noted—in the general description of Dead Man's pass—this grade can be reduced, by commencing the ascent further back, but this would considerably increase the work of construction.

APPROXIMATE COST.

14 miles light work at \$13,500	\$139,000 00
1-100 feet steel bridge on masonry	10,000 00
Amount	\$199,000 00
Average per mile, \$13,857.14.	

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Section 2.—Clappan River Section.

230th to 298th mile, 68 miles.

This section extends from the summit of Dead Man's pass—where a tributary stream to the Clappan river heads—to the junction of the Clappan and Stikine rivers.

Leaving the summit of the pass at the 230th mile, the line continues in the flat open country of the pass for a mile, then descends to the main branch of the Clappan river, on a grade of 100 feet to the mile to the 235th mile; thence it is placed for the remaining distance on the right bank of the stream, with grades varying from 14 to 64 feet per mile.

At the 298th mile the line crosses the Stikine river, which here passes through a short narrow canyon, about one and a half miles above the mouth of the Clappan river, requiring a single span of 200 feet to clear the opening.

The Clappan river valley is timbered throughout, lightly on its upper portion, but quite heavily through the lower 40 miles; and contains an ample supply for ties, temporary structures, buildings, &c.

The work may be classed as 60 miles of light work and 8 miles of medium. Four steel bridges will be required—1 of 50, 2 of 75, and 1 of 200 feet span—the latter over the Stikine river, all on masonry abutments. Also about 400 lineal feet of timber trestling, and 1,250 feet of crib-work protection at the foot of cut banks near the river.

APPROXIMATE COST.

60 miles light work at.....	\$ 13,500	\$ 810,000
8 miles medium work at.....	23,800	190,400
Steel bridges on masonry.....		45,000
Total.....		<u>\$ 1,045,000</u>

Average per mile, \$15,373.53.

Before proceeding I will here explain why the projected location is carried north from the Stikine river crossing, at the 298th mile, to the valley of the Tanzilla river, thence along that valley, in a west and south-westerly course, to the confluence of the Tanzilla and Stikine rivers, at the 390th mile, a distance of 92 miles, while the distance between these points (298th and 390th miles) by following the valley of the Stikine is but 49 miles, or practically one-half the length of the route followed by the projected line.

The 'Great Canyon of the Stikine' has its lower end at Telegraph creek village, and thence extends up the river a distance of 60 miles, or to within 17 miles of the mouth of the Clappan. The Tahltan, Tuya and Tanzilla rivers enter this canyon from the north at respectively 12, 18 and 30 miles from Telegraph creek, while the second south fork enters it from the south at 21 miles from Telegraph creek. Thus there are four tributary rivers entering this canyon in the lower 30 miles, while the upper 30 miles receives only small streams. This lower portion of the canyon occupies the bottom of a wide valley, the result of the denuding action of vast quantities of water and ice in past ages. The upper portion does not seem to have been subject to the same eroding process. In places this canyon is but an immense fissure having almost vertical walls, from 300 to 800 feet high, with the space between their bases entirely occupied by the rushing and boiling waters of the river.

Occasionally the walls of this canyon are broken into by lateral canyons that reach back for miles and marked by the same high cliff-like walls. While it is practicable, although demanding expensive work, to build a line of railway along the lower portion of this canyon, as followed by the line I have projected, from near the mouth

of the Tahltan to that of the Tanzilla, some 16 miles, it is quite impracticable to construct a line within limits of reasonable expenditure over the upper 30 miles.

For this reason the location has been projected on the longer route involving an increase in the mileage from 49 miles by the Stikine valley, to 92 by the necessary detour via Ptarmigan creek, Gnat creek and the Tanzilla river.

Section 3.—Ptarmigan Creek and Gnat Creek Section.

298th to 340 mile, 42 miles.

After crossing the Stikine river at the 298th mile, the projected location enters the valley of Ptarmigan creek and follows it to its summit at the 320th mile, attaining there the maximum altitude throughout the entire line, viz., 5,300 feet above the sea.

From this summit the location follows the valley of Gnat creek to the 340th mile, where it enters the Tanzilla river valley.

At the 308th mile the projected location joins the line explored by me in 1898, from Dease lake to the Stikine river. From this point of junction, which is 47 miles south-east of Dease lake, the projected location of this year follows that of 1898 to within 4 miles of Dease lake.

On leaving the Stikine river at the 298th mile, the projected location ascends Ptarmigan creek, on a grade of 126 feet per mile for $3\frac{1}{2}$ miles, generally with light work except at a small canyon, one and a half miles from the Stikine. Here a tunnel of 400 feet in length is necessary, through a narrow ridge of rock crossing the valley of the creek and causing this canyon.

From the 301 $\frac{1}{2}$ mile a grade of 24 feet per mile for two and a half miles takes this line to the forks of Ptarmigan creek, thence 4 miles of 110 feet per mile to the 308th mile, where the line, as previously noted, joins that of 1898.

From here to the summit, at the 322nd mile, there are 8 miles of 158, and 6 of 50 feet per mile ascending grades. The work on this portion is chiefly light, the line being generally on benches, but occasionally masses of rock debris will be encountered. From the summit, descending to the 340th mile, the grades vary from 34 to 160 feet per mile. Of this latter there are but $2\frac{1}{2}$ miles. The work varies from light to medium, and is described in detail in my report on the explorations of 1898. (Vide pages 139 and 140 Report Railways and Canals for 1898-99.)

I would note here that a route between the 298th and 340th miles, other than via Ptarmigan and Gnat creeks, could probably be obtained by descending the Stikine river on the north bank (after crossing at the 298th mile) some 10 miles to a creek, that appears to come through a notch in the mountains to the north, dividing the Stikine and Tanzilla valleys, thence following this creek to its head, where the Indians report a pass exists leading towards the lower part of Gnat creek. This route is used by the Indians in winter travelling between Dease lake and the mouth of the Clappan river, and they report it as an easy trail. It would apparently shorten the distance some 6 or 8 miles, also possibly reduce the summit elevation and eliminate a portion of the severe grades in the approaches to Ptarmigan summit. In any case this route is well worthy of examination in securing the most feasible exit northward from the Clappan valley.

Over this section of 42 miles, the work may be classed as 29 miles of light, 11 miles of medium and 2 miles of heavy work.

Two steel bridges of 50 feet span each on masonry abutments at the 308th and 338th miles, are required, also a tunnel of 400 feet, as previously noted, at the 299 $\frac{1}{2}$ mile.

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APPROXIMATE COST.

29 miles light work at \$13,500	\$391,500 00
11 miles medium work at \$23,800	261,800 00
2 miles heavy work at \$36,400	72,800 00
Tunnelling, 400 lineal feet at \$50	20,000 00
Steel bridges on masonry	13,000 00

Total \$759,100 00

An average of \$18,073.81 per mile.

Section 4.—Tanzilla River Section.

340th to 390th miles, 50 miles.

The projected location enters the valley of Tanzilla river at the 340th mile, on the west or left bank of the river, and descends a rocky side hill on a grade of 126 feet per mile to the 343rd mile, where it crosses the river by a steel structure consisting of two spans of 100 feet each on masonry abutments and a central pier. The line is continued throughout the remainder of this section on the right bank and reaches the mouth of the river at the 390th mile.

From the river crossing to the 351st mile, where the projected location leaves the line laid down in 1893, at a point 4 miles south of Dease lake, the grade is 58 feet per mile, thence to the mouth of the river, the grades vary from 31 to 47 feet per mile.

From the 343rd to the 388th mile, the line is generally on benches, and, apart from the crossings of tributary streams, the work is light to medium. From the 388th to the 390th mile, the river runs through a canyon with sloping walls of gravel and rock, along which the work will be heavy, and furthermore, to make a feasible connection into the valley of the Stikine, a tunnel of 1,000 feet in length is necessary through the rock walls of the canyon at the immediate mouth of the Tanzilla.

The work over this section may be classed as 32 miles light, 13 miles medium and 5 miles heavy work, also 1,000 feet of tunnelling and 4 steel bridges, 1 of 200 feet, and 3 of 50 feet over all.

APPROXIMATE COST.

32 miles light work at \$13,500	\$432,000 00
13 miles medium work at \$23,800	309,400 00
5 miles heavy work at \$36,400	182,000 00
1,000 feet tunnel at \$50	50,000 00
Steel bridges on masonry	34,000 00

Total \$1,007,400 00

An average of \$20,148 per mile.

Section 5.—Stikine River Section.

390th to 406th miles, 16 miles.

The projected location has again reached the Stikine river valley (which is simply touched in crossing the Stikine at the 298th mile), and is placed on the right or north bank of the river, with an average grade of 47 feet per mile to the 403rd mile, and thence three miles of level on the lava beds to the 406th mile. This section will demand a large proportion of heavy cutting through rocky spurs that extend to the water's edge from the north rim of the valley.

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At one and one-half miles below the Tanzilla a high narrow spur of rock, reaching across the valley to the river, and there forming a deep narrow canyon, will need to be cut through by a tunnel of about 500 feet in length; at the 401st mile another spur is encountered, which will also require 500 feet of tunnelling.

At the 402nd mile, the Tuya River is crossed near its mouth; this crossing necessitates a high structure of about 600 feet in length, as the Tuya enters the Stikine through a canyon-like gorge. The central span would be approximately 100 feet above the water, with a clear opening of 175 feet, and supported on tower bents at either end. The approaches to the central span would be composed of tower bents, with intermediate spans.

A mile or so below the Tuya crossing, the line reaches the upper outcrop of the flat lava beds that are a distinctive feature of this portion of the Stikine Valley.

At the 405th mile there will be a fairly heavy rock cut 1,000 feet in length, along the face of a cliff that forms the river end of a high ridge crossing the valley.

This section of 16 miles has but two miles of light work, the remainder being from medium to heavy. There are two tunnels, aggregating 1,000 feet in length, and one steel structure, over the Tuya, as previously noted.

APPROXIMATE COST.

Two miles light work at \$13,500.. . . .	\$ 27,000
Six miles medium work at \$23,800.. . . .	142,800
Eight miles heavy work at \$36,400.. . . .	291,200
1,000 feet tunnelling at \$50.. . . .	50,000
Tuya Bridge, steel and masonry structure.. . . .	60,000
Total.. . . .	<u>\$571,000</u>

An average of \$35,687.50 per mile.

Section 6.—Tahltan River Section.

406th to 434th miles, 28 miles.

The projected location leaves the Stikine at the 406th mile and enters the Tahltan river valley, which it follows, on the left, or north, bank of the river, up to the forks of the north and south branches, at the 426th mile. The north branch is then followed, also on its left bank, to the 433rd mile. At this point the north branch, swinging abruptly to the north, leaves the main valley, and trending towards the high plateau called Level mountain, there splits into a number of small creeks. Crossing this north branch at the 433rd mile, the line reaches the end of this section at the 434th mile.

The Tahltan valley and the Valley of Hacket river—a tributary of the Sheslay, flowing west, from one continuous valley, a mile or more in average width, in which the divide between the water flowing east and those flowing west, is but a low almost imperceptible summit.

The projected line on leaving the 406th mile, requires a tunnel of 1,000 feet in length through a high ridge extending across the valley to the river, and there breaking off with almost vertical walls. Thence to the crossing of Hartz creek, at the 412th mile, the work is heavy, including a long stretch of cut clay banks; the next two miles are medium work, and the remaining distance to the summit at the 434th mile, fairly light work on benches adjacent to the river. About 500 feet of tunnelling will be necessary through a rocky bluff at the Tahltan forks. Four steel bridges, of 50 feet span, will be required over streams.

The average grade of this section is 45 feet per mile.

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APPROXIMATE COST.

20 miles light work at.	\$ 13,500	\$ 270,000
2 miles medium work at.	23,800	47,600
6 miles heavy work at.	36,400	218,400
1,500 feet tunnelling at.	50	75,000
Steel bridges on masonry.		22,000
Total.		<u>\$ 633,000</u>

An average of \$22,607.14 per mile.

Section 7.—Hacket River and Egnell's Creek Section.

(434th to 455th mile—21 miles.)

The projected line starting from the 434th mile, the Tahltan valley summit, at an elevation of 2,260 feet above the sea, keeps this elevation for a distance of 2 miles, to the east end of Kennicott lake.

From here the summit of Egnell's creek is distant 19 miles, and has an altitude of 4,100 feet above the sea, or a further rise of 1,840 feet. A continuously rising grade, with an average of 97 feet per mile throughout these 19 miles, can be had to Egnell's summit, but as Hacket river falls westerly and this grade rises westerly, the projected line must leave the valley and make its way entirely on the side hills that form the north boundary of the valley. This side hill work will entail a large proportion of rock, which will be especially heavy towards the head of Egnell's creek. This high side hill grade will require elevated structures over streams and lateral valleys.

On this section there will be 2 miles of light work, 14 of medium, and 5 of heavy ; steel bridges will be required across 3 streams.

APPROXIMATE COST.

2 miles light work at.	\$ 13,500	\$ 27,000
14 miles medium work at.	23,800	333,200
5 miles heavy work at	36,400	182,000
		<u>\$ 542,200</u>
Steel bridges on masonry		63,000
Total.		<u>\$ 605,200</u>

An average of \$28,819 per mile.

Before finally adopting the present projected location, it is essential that further explorations should be made, looking to the possibility of eliminating the severe grade of 19 miles between the 436th mile and the summit of Egnell's creek, 455th mile.

A route should be examined by following up the north branch of the Tahltan river to the head of its west fork, and thence over to the Grand valley, possibly by the head of Cache creek ; this line would entail a summit probably as high as Egnell's, but by reason of greater distance the grades should be easier and the work lighter.

Another route is by the natural water courses, and while it would lengthen the line some 20 miles, would entirely do away with the Egnell summit grade and heavy work in the approaches from the east. This route is by following down Hacket river to its confluence with the Sheslay river (near the 450th mile), thence by this latter river to its junction with Nahlin, and finally ascending the main Nahlin river, and its north

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fork to the vicinity of the 510th mile of the projected location. The intermediate distance of 60 miles would probably be increased by one-third, but the average grades would be those of the rivers and therefore presumably fairly easy. This route is mentioned only as a final resort to obviate the severe Egnell grade, should the suggested one following up the north fork of the Tahltan not show a marked improvement on the present line via Egnell's summit.

Section 8.—Grand Valley Section.

455th to 558th mile, 103 miles.

On leaving Egnell's summit the projected line descends slightly, then rises to the summit of Cache creek, at approximately the same altitude as Egnell's. Thence, following the course of Cache creek, it descends to the main valley on a generally north course to the 480th mile, then it swings to the north-east in order to secure a crossing of the Nahlin river above the main forks and towards its head waters.

At the 506th mile, the line crosses the south branch of the Nahlin, a couple of miles above the forks, and at 5 miles further reaches the head of the north fork and the divide between the Nahlin waters, following west to the Pacific ocean by Taku river, and the Teslin waters that reach the Northern Pacific by way of the Yukon river.

From this summit the line passes through a wide valley interspersed with numerous lakes, and finally, crossing White Swan river at the 556th mile, reaches Teslin post, at the head or south end of Teslin lake, the northern terminus of the line as now projected, at a distance of 558 miles from Hazelton.

The work on this section of 103 miles is chiefly light, excepting 11 miles of medium and 2 miles of heavy. The grades vary from level, of which there is a good proportion, to 57 feet per mile; with 5 miles at 70 feet per mile ascending north from the Nahlin river crossing to the Nahlin summit.

There are 5 steel bridges necessary—3 of 50 feet span, 1 at the lower crossing of White Swan river of 150 feet, and 1 high structure of 400 feet over all, at the crossing of the south fork of the Nahlin river.

This latter bridge would preferably be an arrangement of braced tower bents connecting intervening spans, of which the central span would be about 125 feet above the bottom of the deep ravine that carries this stream.

APPROXIMATE COST.

90 miles of light work at \$13,500	\$1,215,000 00
11 miles of medium work at \$23,800	261,800 00
2 miles of heavy work at \$36,400	72,800 00
	<hr/>
	\$1,549,600 00
Steel bridges on masonry	75,000 00
	<hr/>
Total	<u><u>\$1,624,600 00</u></u>

An average of \$15,772.81 per mile.

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Summarizing the preceding detailed estimates the cost per section of these 342 miles is as follows :—

Section.	Mileage.*		No. miles.	Mean rate per mile.	Amount.
	From	To			
				\$ cts.	\$ cts.
I.....	216	230	14	13,857 00	199,000 00
II.....	230	298	68	15,374 00	1,045,400 00
III.....	298	340	42	18,074 00	759,100 00
IV.....	340	390	50	20,148 00	1,007,400 00
V.....	390	406	16	33,688 00	571,000 00
VI.....	406	434	28	22,607 00	633,000 00
VII.....	434	455	21	28,819 00	605,200 00
VIII.....	455	558	103	15,773 00	1,624,600 00
Grand total for 342 miles.....					6,444,700 00

* Reckoned from Hazelton.

This estimate covers the projected location from the Skeena-Stikine summit to Teslin lake, 342 miles and gives an average rate of \$18,844 per mile.

It also completes the detailed description of the projected location on the lines explored during the season of 1900.

Description and estimates covering the remaining portions of the proposed railway from Port Simpson to Teslin (Ocean-Port Line).

These portions are the two following :—

(I.) From Hazelton to Skeena-Stikine summit, 216 miles.

(II.) From Port Simpson to Hazelton, 181 miles.

(I.) From Hazelton to the Skeena-Stikine summit, 216 miles.

The route from Hazelton, northward to the Skeena-Stikine summit was explored by me, as previously noted, in the season of 1899, and an estimate of the approximate cost of construction given in my report thereon. (Vide Report Railways and Canals for 1899-1900, page 158 et seq.)

In this report (p. 167) is given a total estimate for the 230 miles explored, viz., to a point 14 miles beyond the Skeena-Stikine summit ; deducting the amount allowed for these 14 miles (at \$15,350 per mile) from this total, the cost of the 216 miles from Hazelton to the Skeena-Stikine summit is \$4,356,600.

An average of \$20,169 per mile.

(II.) From Port Simpson to Hazelton, 181 miles.

There yet remains the link from Port Simpson to Hazelton, 181 miles, to be estimated.

In 1879 Mr. H. A. F. MacLeod, C.E., examined and reported on Port Simpson harbour and that part of the Skeena river extending from its mouth at Port Essington to Hazelton (Vide Report Canadian Pacific Railway for 1880, page 57 et seq.) In the same season Mr. G. A. Keefer, C.E., made a trial location survey from the head of Work inlet, 32 miles from Port Simpson, to a point on the Skeena river 60 miles distant from the initial point of his survey. He also made an examination for some 20 miles farther up the river (vide Report Canadian Pacific Railway for 1880, page 71 et seq.) Mr. Keefer's plans and profiles of this survey are on file in this department, but his estimate of cost, I have not been able to trace. However, from the profiles I have worked out the detail estimates of the 60 miles surveyed, and from the reports of these two engineers and my own observations of the country along the banks of the Skeena river (necessarily limited as they were made during a canoe trip from Hazel-

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ton to Essington on my return last October) I have estimated the approximate cost of construction from Port Simpson to Hazelton, as follows :—

Port Simpson to head of Work inlet, 32 miles (described by Mr. Keefer as 'very heavy work, and some 6 miles excessively so)	\$1,500,000 00
Head of Work inlet to Keefer's 80th mile, 112 miles from Port Simpson, (an average for 112 miles of \$43,323 per mile)	3,352,300 00
Remaining 69 miles to Hazelton (an average of \$23,190 per mile)	1,600,000 00
	<u>\$6,452,300 00</u>

An average per mile of \$35,648.

This high average rate per mile is due to the very large percentage of heavy rock cuts on the lower 90 miles, but it could be very materially reduced by employing sharp-curvature and a more undulating grade line in many places.

From the preceding different estimates the whole line from Port Simpson to Teslin may be summed up as follows :—

Approximate estimate, Port Simpson to Teslin lake, 739 miles.

Section.	No. miles.	Total Mileage from Port Simpson.	Mean rate per mile.	Amounts.
			\$ cts.	\$ cts.
Port Simpson to Hazelton.	181	181	35,648 00	6,452,300 00
Hazelton to Skeena-Stikine Summit.	216	397	20,169 00	4,356,600 00
Skeena-Stikine Summit to Teslin Lake.	342	739	18,844 00	6,444,700 00
Total for 739 miles.				17,253,600 00

An average rate per mile of \$23,347.

As noted in the memorandum regarding the date used in compiling the estimate of approximate cost of construction per mile, for the different grades of work, the estimate thus obtained provides only for the ordinary buildings on a railway line and does not include such special buildings as are required at terminal and divisional points, neither does it provide for rolling stock.

To the previous total therefore must be added, as per memorandum below :

For special buildings and their equipment.	\$ 278,000
For rolling stock.	1,060,100
Amount.	<u>\$ 1,338,100</u>
Previous total.	17,253,600
Grant total.	<u>\$ 18,591,700</u>

This completes the estimate for the Port Simpson to Teslin line (Ocean-Port Line), and makes the average estimated cost, including rolling stock, \$25,158 per mile.

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OCEAN-PORT LINE.

PORT SIMPSON TO TESLIN, 739 MILES.

MEMORANDUM of Terminal and Divisional Points, with their respective Mileage from Port Simpson, the Ocean Terminus.

	Mileage.
Port Simpson, ocean terminus . . . . .	...
Hazleton, inter. dist., 181 miles	181
Sestoot Junction, inter. dist., 126 miles	307
Clappan, inter. dist., 154 miles	461
Tahltan, inter. dist., 126 miles	587
Teslin, inland terminus (inter. dist.) 152 miles	739

MEMORANDUM of Approximate cost of Special Buildings.

An approximate estimate of the cost of docks and warehouses at the terminals, and also of engine houses, repair shops, coal bunkers, offices, &c., at terminal and divisional points, may be made as follows, keeping in view the amount of traffic for the first few years of operation. (This estimate, as the previous ones, is based on prices for similar works in eastern Canada.)

DOCKS AND WAREHOUSES.

Port Simpson, ocean terminus	\$60,000 00
Teslin, head of river navigation	30,000 00
Amount	<u>\$90,000 00</u>

ENGINE HOUSES.

2 of 6 stalls each at \$9,000	\$18,000 00
4 of 4 stalls each at \$6,000	24,000 00
6 turntables at \$2,000	12,000 00
	<u>\$ 54,000 00</u>

REPAIR SHOPS.

2 (at terminals) at \$20,000	\$40,000 00
4 (at divisional points) at \$15,000	60,000 00
	<u>100,000 00</u>

COAL BUNKERS.

At terminal and divisional points, 6 at \$3,500 each	21,000 00
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GENERAL OFFICES.

At terminal points, 2 at \$6,500 each	13,000 00
For special buildings, total	<u><u>\$278,000 00</u></u>

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Memorandum of approximate cost of rolling stock for the ocean-port line—739 miles—in 5 divisions, of an average length of 148 miles.

ROLLING STOCK FOR ONE DIVISION.

4 engines at \$15,000	\$ 60,000
2 first-class passenger coaches at \$12,000	24,000
2 second-class passenger coaches at \$7,500	15,000
2 baggage and mail coaches at \$5,750	11,500
40 box cars at \$810	32,400
60 platform cars at \$650	33,600
2 conductors vans at \$1,200	2,400
2 snow ploughs and flangers at \$2,500	5,000

Ordinary rolling stock for one division	\$ 183,900
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Ordinary rolling stock for five divisions, at above rate . .	\$ 919,500
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Extra equipment—

4 first-class sleeping cars at \$19,250	\$77,000
4 second-class sleeping cars at \$8,000	32,000
2 first-class dining cars at \$15,800	31,600
	<hr/>
	\$ 140,600

Total	<hr/> <hr/> \$1,060,100
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NOTE.—The amount of rolling stock necessary depends on the traffic that may be developed, and this latter is quite conjectural.

REVIEW OF THE PROJECTED LOCATION FROM PORT SIMPSON TO TESLIN.

(OCEAN-PORT LINE.)

With Port Simpson as the ocean terminus of the proposed ocean-port line to Teslin, the projected route is via the Skeena river, Dead Man's pass, the Clappan river to the crossing of the Stikine river, thence northward through the mountains by Ptarmigan pass to Gnat creek valley, the upper Tanzilla river, and the vicinity of the south end of Dease lake. (The possibility of obtaining another and probably preferable route through the mountains than that by way of Ptarmigan pass has been previously noted.)

From this latter point, near the south end of Dease lake, 351 miles from Hazelton and 532 from Port Simpson, the route, as projected, is by the valleys of the Tanzilla, Stikine (for a short distance only), and Tahltan rivers, and over into the Grand valley by Egnell's summit; finally by this latter valley to Teslin, a further distance of 207 miles; making a total of 558 miles from Hazelton, and 739 from Port Simpson.

On the 'sketch map of the north-western portion of British Columbia' accompanying this report, I have indicated the projected location, and have also shown by a broken line the general course of a possible alternative route from the south end of Dease lake to Teslin. The latter has been represented to me, by reliable white men conversant with that country, as offering a feasible route for a railway line.

By this alternative route the line would follow down the west shore of Dease lake to the mouth of Thibert's creek, ascend by this creek to the divide between the Dease and Tuya waters, thence by the Tuya river valley to the foot of Tuya lake and the head waters of Fifteen Mile river, and finally by this river to Teslin lake.

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This route, if practicable, would reduce the distance between Teslin lake and the 351st mile—(4 mile south of Dease lake)—from 207 miles by the present line, to about 149, effecting a saving of 58 miles. Apart from this reduction in distance the suggested route would eliminate the heavy work of the present route at the following points: in the canyon of the lower Tanzilla; and the 16 miles along the Stikine, including the Tuya River bridge, an unavoidably expensive structure; on the lower Tahltan, and in the approaches to Egnell's summit.

A feasible route that would eliminate only the heavy work at the points just mentioned, even if it did not reduce the mileage at all, would be well worthy of careful consideration.

At the present time it is quite premature to venture any hazard as to the probable nature of the work of construction on this suggested route; but if Port Simpson is finally accepted as the ocean terminus for the proposed railway to Teslin, this route, which shortens the intermediate distance between Dease lake and Teslin lake by fully 25 per cent, should be carefully explored before a final location is adopted beyond Dease lake.

Another point in favour of this unexplored route is that it reaches Teslin lake some 12 miles farther north than Teslin village—the terminus of the present projected location—so that, in the event of the proposed railway being extended northward, there is a still further saving in distance.

Should the suggested route present serious difficulties in passing from the north end of Dease lake to the Tuya valley by way of Thibert creek, it is quite possible a line could be had by striking northward from Riley's, a point on the Tanzilla river, some 23 miles south-west of Dease Lake Junction, and thence following the Tuya valley to the vicinity of Tuya lake. This is also shown on the map above-mentioned. Indians at Tahltan village informed me that they have a trail from the Upper Tuya valley across the head waters of White Swan river (emptying into Teslin lake) through a pass in the mountains. This line would strike the projected location probably near the 520th mile, and would then follow it to Teslin.

Regarding Fifteen-Mile river, Mr. A. St. Cyr, D.L.S., reports: 'The valley of Fifteen-Mile river is easily traced inland (viz., from Teslin lake) by the high cut banks along the eastern shore. The valley appears to be thickly timbered, especially near the vicinity of the river. It is reported by the Indians to be a continuation of the Tuya valley. Both streams, they state, rise in a chain of lakes situated on the height of land, and of which Tuya lake is the largest. This valley is used by the Indians as a winter route from Telegraph creek or Dease lake to Teslin lake.'—(*Vide* Report, Department of Interior for 1897, p. 119.)

Memorandum of approximate distances from Dease Lake junction to the mouth of Fifteen Mile river, on Teslin lake, 12 miles north of Teslin village.

(1. VIA THE WEST SHORE OF DEASE LAKE.)

Localities.	Intervening Distance.	Mileage from Hazelton.
	Miles.	
Dease Lake Junction		351
" House	4	355
Foot of Dease Lake	25	380
3 Little Lakes	30	410
Head of 15 Mile River	30	440
Mouth of "	60	500
Intervening distance	149	

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(2.) VIA RILEY'S—23 MILES SOUTH-WEST OF DEASE LAKE JUNCTION.

Localities.	Intervening Distance.	Mileage from Hazelton.
	Miles.	
Dease Lake Junction.....		351
Riley's.....	23	374
3 Little Lakes.....	50	424
Mouth of 15 Mile River.....	90	514
Intervening distance.....	163	

NOTE.—By the projected route, the distance from Dease Lake Junction to Teslin Village, as previously noted, is 207 miles.

Owing to the narrows near the head of Teslin lake, it probably will be found advisable to extend the railway some ten miles beyond Teslin, thus placing the terminus below the constricted portions of the lake.

But the difficulties to navigation of the Hootalinqua or Teslin river during the periods of low water, and other considerations, will doubtless make it expedient to extend the proposed railway northward to a connection with the White Pass and Yukon Railway, which is now in operation from Skagway, at the head of Lynn canal, to White Horse in the Yukon territory.

From the reports in the Department of the Interior, it appears quite practicable to continue the proposed railway northward along the shores of Teslin lake and the Hootalinqua river to McClintock's portage, a distance of 100 miles, thence westerly over a low divide (600 feet above the Hootalinqua and 900 above Marsh lake) to McClintock's river, and by this river, Marsh lake, and the upper Lewes river to White Horse, a further distance of 50 miles, or a total of 150 miles from Teslin village.

While I have no authentic data other than the above reports, I think it is quite probable that this section of 150 miles could be built at an average of \$20,000 per mile (eastern rates).

White Horse is approximately 450 miles from Dawson, and of this intervening distance the existing railway is already projected to Fort Selkirk, some 260 miles.

I would here draw attention to the fact that Teslin village, at the south end of Teslin lake—the present suggested northern terminus of both the Edmonton-Yukon and the Ocean Port lines—is situated at the head of a system of lake and river navigation reaching to Dawson City.

The distance to Dawson from Teslin village is about 625 miles by this water route. It was utilized to a considerable extent during the season of 1898 by medium-sized stern-wheel steamers. While some difficulty was reported to have been experienced at the latter part of the season, owing to low water on the bars of Teslin river, it is probable that this objection could be removed by dredging, and satisfactory water ensured for ordinary medium-sized river boats, during the entire season of navigation. The abandonment of the Teslin lake and river route the following year was probably due to the opening of the route from Skagway north over the White pass to Lake Bennett, as much as to the difficulties experienced in the navigation of the Teslin river.

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POSSIBLE DIRECT ROUTE FROM THE SEA COAST TO GLENORA AND TESLIN LAKE.

Before closing my report on the projected location from Port Simpson to Teslin, (ocean-port line), I wish to draw attention to a possible direct route from the sea to Glenora and Teslin, which, if proved on examination to be feasible, would reduce the distance from an ocean-port to Teslin by such a very great percentage that it seems worthy of careful consideration.

This suggested route is shown on the 'Sketch map of the north-western portion of British Columbia, accompanying my report.

The proposed line would leave the sea coast either at :—

- (1.) Mouth of Naas river (some 50 miles north-east of Port Simpson).
- (2.) Head of Portland canal (which extends inland from the general coast line in a northerly direction about 90 miles).
- (3.) Port Simpson or
- (4.) Head of Alice Arm.

After leaving their respective points of departure at the sea coast, these routes all merge into a common one that follows the Valley of Naas river.

Portland inlet, some 25 miles from its mouth, divides into three branches. The eastern one forms the mouth of Naas river ; the middle one, called Observatory inlet, extends north-eastward about 25 miles where it forks, its east fork forming Alice arm, extends a further distance inland of 12 miles ; the west branch of Portland inlet reaches directly north about 65 miles from the head of the inlet, or approximately 90 miles from the coast line.

Of the heads of Alice arm and Portland canal, little seems to be generally known, apart from what information is given on the Admiralty charts. The chart of this portion of the Pacific coast shows these arms of the sea as having a width of a mile or more, with ample depth of water to their heads. Of the difficulties to steam navigation in these inland reaches of the sea, if any, I have not been able to secure information, but it is probable that strong currents of wind would obtain, possibly tidal currents as well, and also floating ice during the winter months. Satisfactory information on the above question regarding these waters could best be determined by observations on the spot, or by interviewing steamboat men who have navigated them.

HARBOURS AT THE MOUTH OF NASS RIVER AND HEAD OF PORTLAND CANAL.

In the 'Report of Progress on the Explorations and Surveys of the Canadian Pacific Railway up to January, 1874,' pp. 53 and 54, are the following remarks by C. Horetzky, C.E., regarding the harbour (Salmon Cove) at the mouth of the Naas river :

'The Salmon cove is three miles long by one mile wide, and is sheltered from seaward. It has very fair anchorage, but vessels lying there would be exposed to the terrific north-easters which blow right down the Naas river.

'Captain Lewis, a gentleman of great experience upon the coast, pronounces the Nass harbour to be unsafe on that account. With the exception of this drawback, and the fact of there being but one little piece of level land (situated on the west side of the defile I have just mentioned) available, this harbour may be considered good. It can be approached from seaward by steamers at any time, but sailing vessels would experience great difficulty getting in during the prevalence of north-easterly gales, and there is no anchorage outside, the water being very deep.

'Upon the whole, the Naas river would be a very undesirable terminus for a trunk line, but, in the event of the Peace river mines turning out well, a wagon road may eventually pass that way.'

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Notwithstanding Mr. Horeszky's final condemnatory remarks on this harbour, it may be worthy of future consideration and more detailed investigation.

I learned from Mr. Cunningham, a trader at Port Essington, who spent some years on the Nass river, that the head of Alice Arm offers a good site for a town, with an easy route easterly to the valley of the Naas.

Regarding the head of Portland canal I can give no information, further than such brief mention as is contained in the 'summary report of the Geological Survey Department for 1893' (pp. 11 and 12), where it is noted 'The chief characteristics of this inlet are the general uniformity of its width and the straightness of its shores, which are flanked by uniformly steep mountains.'

I.—Route Northward from the Mouth of Nass River.

This route would follow the Naas river, about 200 miles to the summit between it and the Nin-gun-saw, a tributary of the Iskoot, where an altitude of 2,800 feet above the sea is attained. Thence, by this latter stream and the north branch of the Iskoot river, some 74 miles further to the divide between the Iskoot and the First South Fork of the Stikine, at an elevation of 4,900 feet above the sea. From this point the main valley of the Stikine is reached by the first south fork, and thence followed on the south side of the river to a point a mile or more below Glenora village, where the line would cross the river to the north bank, on which the village is situated, reaching Glenora at a distance of approximately 320 miles from the coast. From the Iskoot summit there is apparently a very rapid descent northward for some 8 or 10 miles to the main stream of the First South Fork; but if a practicable grade can be secured here, the remainder of this route seems feasible. The elevation of Glenora being 440 feet above the sea, there would be an average descending grade of 63 feet per mile from a point 10 miles north of the summit of the Iskoot and First South Fork to Glenora, some 36 miles.

At Glenora the line turns easterly towards Telegraph Creek pass and reaches this summit in a distance of 15 miles, there attaining an elevation above the sea of 3,658 feet, which calls for an average grade of 214 feet per mile throughout these 15 miles. This is a long stretch of severe grade, but from personal inspection of the country in question, I am forced to conclude that it is unavoidable. Additional motive power will need to be provided on this grade in each direction.

From Telegraph creek summit the line descends by way of Arthur creek, and the south or main branch of the Tahltan river, 10 miles to the Tahltan forks, or junction of the main and little Tahltan rivers. Over these 10 miles the grades will be of 132 and 220 feet per mile, equally distributed.

At the Tahltan Forks—with a total distance of about 345 miles from the mouth of Naas river—the line would intersect the present projected location at the 607th mile from Port Simpson. This direct route therefore shows a saving in distance of 262 miles.

It is possible that from the summit of Telegraph creek pass the line, instead of being carried north-easterly to the Tahltan Forks, could turn to the west and reach the projected location about 9 miles west of the Tahltan Forks; if so, probably the grades would be easier than those noted in descending from the summit to the Forks.

The crossing of the Stikine river is suggested near Glenora as it would be impossible to cross at Telegraph creek village, and from there to reach the summit of the pass, a rise of 3,100 feet, with a practicable grade, the intervening distance being but 9 miles.

Possibly there may be an opportunity to cross from the head of the Iskoot to the head of the Second South Fork of the Stikine (as shown on the sketch map), thence by this stream to the Stikine valley, and following the south bank of the river to a point some 3 miles above the mouth of the Tahltan, cross the Stikine there, and in-

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tersect the present projected line near the 584th mile from Port Simpson, at an approximate distance of 310 miles from the coast by this suggested route, thereby effecting a saving in distance of 274 miles.

This latter deviation at the north end of the suggested direct route would, however, necessitate a very expensive crossing of the Stikine river at the point of junction just noted.

II.—A Route Northward from the Head of Portland Canal.

At a point some 110 miles above the mouth of Naas river a branch enters this river from the west, carrying to it the waters of Tam-a-tsi-a-ten lake. Of this lake, Mr. McEvoy, of the Geological Survey, writes: 'Tam-a-tsi-a-ten is a beautiful lake, eleven miles long, lying within the eastern mountains of the coast range. From the head or western end of the lake a low pass runs westward to Bear river, which flows into the head of Portland canal.'—(Geological Survey Report, 1893.)

From the head of Portland canal to the 110th mile, noted above, is approximately 45 miles, by way of Bear river, the low pass noted above, Lake Tam-a-tsi-a-ten, and its outlet to the Naas.

A line from the head of Portland canal, reaching the valley of Naas river, as here noted, would thence follow the previously described route to Glenora and the Tahltan forks, and with this further reduction of 65 miles, would make the entire distance from the sea coast to Tahltan forks approximately 280 miles, as against 607 from Port Simpson via the projected location, a difference of 327 miles.

III.—Direct Route with Port Simpson as the Ocean Terminus.

In the memorandum regarding the head of Kitimat Arm as a possible ocean terminus for the ocean port line (which forms a subsequent portion of this report), I have noted that a railway line can be carried from the valley of the Skeena river northward to the Naas river by way of the Kit-sum-galum river valley.

The mouth of this latter river is at 111 miles from Port Simpson, on the line of Mr. Keefer's trial location (at his 79th mile), and the distance across to the Naas about 55 miles to the point where this line would intersect the suggested route to Glenora and Teslin via the Naas river. This point of intersection would be some 280 miles south of Glenora and 437 from Teslin, making the distance from Port Simpson to Teslin, via this route, 603 miles, as against 739 by the projected line, a saving of 136 miles.

IV.—Route from the Head of Alice Arm.

About 50 miles above the mouth of the Naas river a number of small streams enter the Naas from the west; by some one of these a line may possibly be found to the head of Alice Arm from the Naas river valley, and so determine whether an outlet could be had northward from this arm, should it be considered in the future as a possible ocean terminus for the suggested direct route from the sea to Teslin. From the head of this arm the distance to Teslin would be some 35 miles shorter than that from the mouth of Naas river, or approximately 442 miles.

The following table shows the distance from each of these four points on the sea coast to Teslin by this direct route.

	Miles.
1. From mouth of Naas river.	477
2. From head of Portland canal.	412
3. From Port Simpson.	603
4. From head of Alice arm.	442

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For comparison it must be noted that the distance from the sea coast to Teslin by the present projected line (having Port Simpson as its ocean terminus) is 739 miles.

MEMORANDUM Regarding an Ocean Terminus at the Head of Kitimat Arm.

Kitimat arm forms the northern extension of Douglas channel, by which access is had to Kitimat directly from Grenville channel, Fraser reach and Graham reach; these three latter forming the connection between Chatham sound, opposite the mouth of the Skeena river, and Milbank sound, south of Princess Royal island, by way of the 'Inside Passage,' which is the one usually taken by coasting steamers on this northern route.

Douglas channel and Kitimat Arm have not been thoroughly surveyed, judging from the published charts, but the existing chart of this section shows ample water and denotes anchorage near the head of the Arm. Some two or three years ago the government steamer *Quadra* took the then chief engineer of the Department of Public Works, Mr. Louis Coste, to the head of Kitimat Arm, and experienced no difficulty in the navigation of this channel and arm. Mr. Coste informed me subsequently that the head of this arm affords a good harbour, with an ample extent of suitable ground adjacent for wharfs, terminals, &c.

It is probably safe, to assume that as far as ordinary navigation is concerned, Kitimat Arm will afford a fairly suitable ocean terminus.

The next question is whether a railway line can be built from this point northward to the Skeena river.

Regarding this point Mr. G. A. Keefer, C.E., in his report on the location made by him in 1879 on the lower Skeena river (Report, Canadian Pacific Railway for 1880, page 74), says: 'This state of affairs' (viz., closing of the season of canoe navigation on the Skeena by reason of ice jam), 'entirely prevented the possibility of an examination of the valley of the Lakelse to the head of Kitimat. But from all information I could gather from the Indians, and from my own observation, I infer there is no difficulty, should it ever be desirable, of carrying a line through this valley to the head of Gardner Inlet.' Gardner Inlet may be termed an arm of Douglas channel extending eastward from a point some 25 miles south of Kitimat.

As my report does not deal with an extension of the proposed railway south of the head of Kitimat Arm, Mr. Keefer's remarks cover the ground in question.

Further, in regard to a railway line northward from the head of Kitimat Arm, in the 'Report, Canadian Pacific Railway for 1877,' p. 111, Mr. Marcus Smith, C.E., states, 'The Kitimat valley, at the head of the channel, appears to be three to four miles wide and very low; it stretches away to the north affording an easy route to the Skeena river.' In the same report, p. 138, Mr. C. Horetzky, remarks, 'Kitimat Inlet, a continuation of Douglas channel, terminates in about latitude 54 degrees, and here a large stream of the same name enters it. In the immediate neighbourhood the ground is low, especially on the north side, where the wide level valley of the river begins. This valley is about four miles wide, and extends for a very long distance northward. From an elevated position I had a very fine view of it, and I am tolerably certain that easy ground intervenes between the head of this inlet and the Skeena river.'

From the preceding it appears quite practicable to reach the Skeena river from Kitimat Arm with a railway line by way of the valleys of the Kitimat and Lakelse rivers. This railway line would reach the Skeena at a distance of about 40 miles from the head of Kitimat Arm, and would then be at a point distant 111 miles from Port Simpson. Thereby affecting a saving in distance of 71 miles, and also cutting off entirely that portion of the Skeena river where the heaviest work in construction is to be met with.

Mr. T. Richardson, who examined the Kitimat Arm in 1874, in connection with the work of the geological survey, reports that it is capable of being made a fair harbour (*Vide* Report of Geological Survey for 1879-80).

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Should the head of Kitimat Arm be made the ocean terminus of the proposed 'railway from an ocean-port in British Columbia to Teslin lake' it would, by its geographical position, as previously noted, make the distance some 71 miles shorter than that by the present projected line from Port Simpson.

A comparison of the relative distances to Teslin lake from these two ocean-ports, is as follows :—

I.—Port Simpson to Teslin Lake.

	Miles.
(a) Via the projected location.	739
(b) Via the projected location to Dease lake, and thence to Teslin by the suggested route to the mouth of Fifteen Mile river.	681
(58) miles less than I (a).	

II.—Head of Kitimat Arm to Teslin Lake.

(a) Northward to the Skeena river and thence via present projected location.	668
(71 miles shorter than 1 'a' above).	
(b) Northward to the Skeena river and thence via the route 1 'b' above.	610
(And 58 miles shorter than 11 'a'.)	

Assuming that the suggested cut off from Dease lake to Teslin lake, by which some 58 miles in distance would be saved, is practicable (a question that can only be definitely settled by further explorations), the minimum distance to Teslin lake from these suggested ocean termini is :—

	Miles.
From Port Simpson	681
Kitimat Arm.	610

In conjunction with the preceding remarks, in regard to Kitimat arm as the ocean terminus of the proposed railway to Teslin, it should be noted that a railway line from Kitimat to Teslin could probably be carried over a more direct route, from the point where it first strikes the Skeena river, than by the projected one following the Skeena, Dead Man's pass, Clappan river, &c.

From the point where the line from Kitimat would first touch the Skeena river, a wide, well defined valley extends in a north-west direction, through the intervening mountains to the valley of Naas river. In it lie Kit-sum-gallum river, flowing south-easterly to the Skeena, and Tseax river, flowing north-westerly to the Naas.

Mr. G. A. Keefer, C.E., in his report on the trial location survey made by him on the lower Skeena river (*Vide* Report Canadian Pacific Railway, 1880, p. 74), after stating that the valley of Lakelse and Kitimat rivers, extending southward from the Skeena to Kitimat arm, are quite feasible for the construction of a railway line, adds : 'A corresponding valley to the north of the Skeena, or rather a continuation of the same valley northward, would seem to offer equal facilities for egress to the Nass river, should such a route in the future ever come under consideration,' and later he also remarks : 'The Naas river can be reached through the valley of the Kit-sum-gallum river, to the north, and through which there is a trail to that point in present use.'

In a preceding part of my report, I have outlined what appears, from the information at present available, a feasible, and if so, a very direct route from the mouth of Naas river to Glenora and Teslin, by way of the Naas, head waters of the Iskoot, and the first south fork of the Stikine to Glenora, and thence to Teslin by routes already explored by myself.

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Combining this latter and the route to the Nass river from Kitimat arm, as described in the above extracts from Mr. Keefer's report, there is then apparently a very direct route from Kitimat arm to Glenora and Teslin lake.

From Kitimat arm to the Skeena is approximately 40 miles, from the Skeena river to the Naas, by the valley of Kit-suin-gallum and Tseax rivers, is about 55 miles, or a distance of 95 miles from Kitimat arm to the Naas river.

At this point, the confluence of the Tseax and Naas rivers, the line from Kitimat would intercept the suggested 'direct route' from Naas harbour to Glenora, about 40 miles north of the mouth of Naas river, or 280 miles south of Glenora. From Glenora to Teslin is 157 miles, therefore 532 miles is the approximate distance from Kitimat arm to Teslin lake via the suggested 'direct route.'

The distance to Teslin from Kitimat arm, by the projected location is 668 miles, and by the Dease lake cut off 610 miles, therefore, the 'direct route' would effect a saving in distance of at least 78 miles, if not considerably more.

ICE IN KITIMAT ARM.

The only information bearing on this question that I have been able to obtain is from the report of Mr. C. H. Gambsy, C.E., regarding ice at the head of Gardner's inlet (*Vide* Report Canadian Pacific Railway, 1877, p. 180). Kitimat arm forms the northern extremity of Douglas channel, its head being some 50 miles from the mouth of the channel at Wright sound. From Wright sound, Gardner's inlet extends northerly, then easterly about 70 miles inland.

Mr. Gambsy reports ice from eight to eighteen inches thick at the head of Gardner's inlet for 25 miles in February, and seventeen in April of 1876. He infers that the upper 10 or 15 miles are frozen over every winter.

It is a matter of conjecture whether similar conditions obtain at the head of Kitimat arm. Possibly there the conditions favouring open water may be better, owing to its being at less distance from the general sea coast line, and having also a wider and more direct outlet by Douglas channel to the ocean.

COMPARATIVE ADVANTAGES OF KITIMAT ARM AND PORT SIMPSON FOR AN OCEAN TERMINUS.

The chief and apparently sole advantage that the head of Kitimat arm possesses over Port Simpson as an ocean terminus for the proposed railway line to Teslin is the shortening of this line by some 71 miles, and the eliminating of the heavy rock work that would be entailed in the construction of a railway along the lower Skeena river and the shores of Work inlet.

The saving in distance must be conceded to Kitimat arm, but, in my opinion, the quantities in rock excavation demanded by the profiles of the trial location on the lower Skeena could be very materially reduced by introducing sharper curvatures and steeper grades, and still keep these two essential features of the line within the limits of good modern practice for a standard gauge railway.

The head of Kitimat Arm is some 45 to 50 miles north of the route of coasting steamers, called the 'Inside Passage.' It is also accessible from the main ocean (Hecate strait) by way of Otter passage, Otter channel and Cridge pass. An inspection of the chart of this portion of the British Columbia coast (fyled herewith) will show clearly the position of the head of Kitimat Arm, relatively to the main lines of steamer travel.

Port Simpson, also shown on this chart, is situated on Chatham Sound at the eastern end of Dixon's entrance, and is easily approached from the open sea by the largest steamers; its harbour is extensive, free from ice, and fairly well landlocked. Commander Pender describes Port Simpson as the 'finest harbour north of Beaver Harbour in Vancouver island.' (*Vide* report Canadian Pacific Railway for 1877, p. 295.)

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Regarding the advantages possessed by Port Simpson as an ocean terminus, I would quote from the 'Report Canadian Pacific Railway for 1880' the following extracts :—

REPORT OF MR. H. J. GAMBLE, C.E.

(p. 38.)

'By inspecting the chart it will be seen, that within the southern part of the harbour, protected by this reef from the ocean swell, is an area of about one-half mile by two. In the northern part there is a well-sheltered bay inside Birnie island, about three-quarters of a mile square. These, with the land-locked bay east of Finlayson's island, afford about five miles of water frontage on the mainland, besides a large extent on the surrounding islands.

The islands and reefs which inclose the harbour being low, vessels would not be protected from wind should it blow a gale from the west. This, in the case of small sloops, such as those which now trade along the coast, might cause inconvenience, but large vessels may be considered safe when in calm water, and westerly winds are not the prevailing ones in the winter when gales most frequently occur.

The shores of Port Simpson rise gently from the water's edge and are well adapted for the site of a city.

There is much rain in summer and frequent snow storms occur in winter, but the snow seldom lies on the ground for more than a few days.'

REPORT OF MR. H. A. F. MACLEOD, C.E.

(p. 57.)

'The steamer, drawing 10 feet, entered the harbour of Port Simpson at low tide by the southern entrance; after waiting for an hour she passed out by the northern entrance. The main entrance is from the west between Birnie island and extensive reefs lying to the south about a mile distant; many of these reefs are uncovered at low tide and form a good breakwater to the western sea.

The harbour is good, and is sheltered from the S.W. round by south to the N.W. westerly winds would sweep with considerable force across the harbour, but would not be accompanied by much sea. Captain Lewis, of the Hudson Bay Co., who lived there for some time, and has had long experience on the coast, considers it a very fine harbour; he says the most prevalent gales are from the S.E. in summer, and from the N.E. in winter. The ground is not high around the shores and is sufficiently even for the site of a large town.

The approach from the ocean is good, the rocks known as the Pointers are rather to the south of the track taken by vessels from the ocean, and can be utilized as sites for lighthouses, no soundings being obtained except within a short distance of the entrance to the harbour.'

REPORT OF MR. G. A. KEEFER, C.E.

(p. 71.)

'The area of the harbour is sufficient for the purpose, possessing an anchorage of over four square miles. It is sheltered to the north and west by the shores and outlying islands but is exposed in part to the S.W. winds; the sea, however, is broken by a reef or kelp bed forming a natural breakwater, but which does not prevent the full force of the wind being felt from that direction, and would possibly prove awkward for vessels exposed to its full force, but there is still a comparatively large area of sheltered anchorage left.

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The shores are low, sloping back gradually, easy of approach and suitable for extensive wharfage, and possessing a building area of sufficient extent to meet any requirements of the future.'

The late Dr. Dawson, in the report of the Geological Survey for 1879-80 (p. 4. B.), describes Port Simpson harbour and gives an equally favourable opinion of it, as that expressed by the above engineers.

In my preliminary report on the explorations of 1899, it is noted that I visited Port Simpson on my return trip from the interior. My impressions of its harbour are fully in accord with the opinions I have just quoted. Kitimat Arm would need to possess advantages other than at present known, to enable it to be favourably considered, in comparison with Port Simpson, as an ocean terminus for the proposed railway line from the sea coast to Teslin.

A good view of Port Simpson harbour is shown on page 66 of the Album of Photographs of 1899.

In order to elucidate more clearly the preceding remarks regarding the suggested direct route from the sea coast to Teslin, the following table of comparative distances is appended :—

TABLE OF COMPARATIVE DISTANCES FROM THE SEACOAST TO TESLIN.

Routes.	App oximate Mileage.	Reduction in Mileage from Projected Lo- cation.
(A) PORT SIMPSON TO TESLIN—		
(a) Via projected location.....	739	.....
(b) Via cut off from Dease Lake.....	681	58
(c) Via direct route.....	693	136
(B) KITIMAT ARM TO TESLIN—		
(a) Via projected location.....	668	71
(b) Via cut off from Dease Lake.....	610	129
(c) Via direct route.....	532	207
(C) MOUTH NASS RIVER TO TESLIN—		
Via direct route.....	477	262
(D) HEAD OF ALICE ARM TO TESLIN—		
Via direct route.....	442	297
(E) HEAD OF PORTLAND CANAL TO TESLIN—		
Via direct route.....	412	327

This table of comparative distances shows that the suggested direct route is entitled to serious consideration by virtue of the evidently great reduction in mileage which it would give, as compared to the present projected route.

It provides without exception the shortest line to Glenora and Teslin from any one of the possible ocean termini ; furthermore, as will be shown later, it is capable of being incorporated with the proposed line from Edmonton to the Yukon. It possesses, in addition, the advantage of striking the Stikine river at Glenora, some miles below the head of steamboat navigation, and thus would admit of the work of construction being carried on in three different directions at the same time, viz., from the sea coast northward and from Glenora both north and southward.

From what information I have been able to secure, it does not appear that very difficult country is likely to be met with, between the sea coast and the head waters of the Iskoot river.

Of the country lying to the north of these waters, between them and the main Stikine river, no detailed knowledge is available ; but from the explorations of the Western Union Telegraph Company—made over this section in 1867—it seems quite

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evident that severe grades will be demanded in the approaches to the divide between the Iskoot and Stikine waters, and possibly very heavy works in construction. Still, it must be remembered that the 136 miles of least distance saved by this route represents, in construction alone, at least three millions of dollars, without taking into account the amount saved in maintenance and operation; therefore, a very large outlay could be justifiably spent in the approaches to this summit, in order to bring the grades within a practicable working limit.

A careful consideration of all the points involved, impels me to look upon this direct route as the one, which a railway line from the northern British Columbia sea coast to the Yukon territory must follow, unless the topographical features of the Iskoot summit are very much more severe, from an engineering point of view, than what the limited information at hand would lead one to expect.

UTILIZING THE SUGGESTED DIRECT ROUTE IN CONNECTION WITH THE EDMONTON TO TESLIN LINE.

I wish to note here that the original scheme of utilizing a portion of the ocean-to-Teslin route, as part of the Edmonton-to-Teslin one, is also feasible, in connection with this direct route.

By the present projected location, the Edmonton-to-Teslin line joins the ocean line at the mouth of Sestoot river, a distance of 808 miles from Edmonton, and 307 from Port Simpson, and thence proceeds to Teslin, 432 miles further, by a route common to both lines.

In order to connect this Edmonton-to-Teslin route with the direct route, the former could be continued from the mouth of Sestoot river, 22 miles down the Skeena, to the mouth of the Alawkish (called 'Ka-Lan-Kees river' on my map of 1900), and thence by this river to the divide between the Skeena and Naas waters. This is a low summit of 2,900 feet elevation, with easy approaches through a wide grassy valley in either direction. From this summit the line would follow the Tum-To-Ax river to the Che-weax, and this last river to the main Naas river (a distance about 100 miles from the mouth of the Sestoot), and there join the direct route at a point about 125 miles north of the mouth of Naas river. This point of junction would be some 60 miles distant from the head of Portland canal, via the route from the canal northward as outlined. Thus, the distance from Edmonton to Teslin, via the direct route would be 1,260 miles, and from Edmonton to the sea coast at Portland canal 968.

In my explorations of 1899, I descended the Tum-To-Ax river to a point ten miles from its head (the Skeena-Naas summit), and also examined the Alawkish valley. As far as these explorations went, no obstacles were found that would interfere with the extension of the Edmonton-to-Teslin line west towards the valley of Naas river, as now suggested.

On pages 47 and 48 of the Album of Photographs of 1900 are views taken on the Alawkish and Tum-to-Ax rivers, and also on the Skeena-Naas summit that divides these waters.

This concludes my 'Report on the Explorations of the Season of 1900,' and the 'Review of the Projected Location from Port Simpson to Teslin,' as brought out by the explorations to date.

The whole respectfully submitted,

JOHN S. O'DWYER, M. Can. Soc. C.E.,
Engineer in Charge.

Ottawa, June 8, 1901.

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

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MEMORANDUM regarding the Album of Photographs accompanying Report on Explorations of 1900.

These views having necessarily been taken as the survey progressed, are shown in the album in the same sequence.

They may be briefly indexed, as follows :—

Glenora to the mouth of the Tahltan river (on the Stikine river), pages 4 to 8.

Mouth of the Tahltan river to Teslin lake, pages 10 to 16.

Mouth of the Tahltan river to the mouth of the Tanzilla river (on the Stikine river), pages 17 to 20.

Mouth of the Tanzilla river to Dease lake, Gnat creek and the head of Ptarmigan creek, pages 20 to 24.

(These last views were taken in 1898 but are shown here, as they illustrate that part of the survey of 1898, which is referred to in my report of this year.)

The trail, crossing of the Tanzilla river, some $3\frac{1}{2}$ miles above its mouth, thence along the Stikine river to the mouth of Clappan river, pages 25 to 32.

These views show the most formidable parts of the 'Great Canyon of the Stikine.'

The Stikine river, from the mouth of the Clappan river to the mouth of Ptarmigan creek, thence up this creek to that point where connection was made on it with the survey of 1898, pages 33 to 35.

The Stikine river, from the mouth of Ptarmigan creek to the mouth of Jones creek, where connection was made with the survey of 1898 on the Stikine river, pages 36 to 37.

The Clappan river, from its mouth along its main branch to Dead Man's pass and the Skeena-Stikine summit, pages 38 to 46.

On pages 47 and 48 are views, taken in 1899, of the Alawkish and Tum-to-Ax river valleys and their intervening divide, the Skeena-Naas summit.

On page 54 is a view of Mount Ko-Ket-Sa, and the country in the immediate vicinity of the junction of the Sheslay and Hacket rivers and Egnell's creek.

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REPORT ON THE EXPLORATIONS TO DATE IN CONNECTION WITH THE
PROPOSED RAILWAY FROM EDMONTON TO TESLIN.

(EDMONTON-YUKON LINE.)

With an Approximate Estimate of the cost of Construction by J. S. O'Dwyer, C.E.

Compiled from reports of—

Dr. G. M. Dawson, F.G.S.	1879
H. J. Cambie, C.E.	1879
H. A. F. Macleod, C.E.	1879
C. Horetzky, C.E.	1879
V. H. Dupont, C.E.	1898
C. F. K. Dibblee, C.E.	1898-99
J. S. O'Dwyer, C.E.	1898-99 & 1900

Ottawa, June, 1901.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, CANADA, June 8, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer,

Department of Railways and Canals,

Ottawa.

SIR,—I have the honour to transmit you herewith a report on the explorations to date in connection with the proposed railway from Edmonton to Teslin (Edmonton-Yukon line), with an estimate of the approximate cost of construction.

The authorities used in the compilation of this report are noted in each instance.

I have the honour to be, sir,

Your obedient servant,

JOHN S. O'DWYER,

Engineer in Charge.

The proposed railway from Edmonton to Teslin, is projected to pierce the Rocky Mountain via the Peace river pass, which carries the Peace river through this range by a canyon of some 20 miles in length.

The entire distance may be said to have been practically covered by the explorations conducted, and reported on by the authorities quoted above.

The routes followed in these explorations, in so far as they appertain to the proposed railway, are herein briefly described, and an approximate estimate given of the probable cost of building and equipping a modern railway line of standard gauge through the country in question. The information given in the reports previously noted, being used for that purpose.

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The estimated cost of construction, it must be noted, is for similar works in Eastern Canada ; therefore, to it should be added to cost of transport of labourers, plant and material, as well as whatever differences there may be in relative wages.

Accompanying this report are submitted the following :—

I.—Map of the North-western Part of Canada.

On this map are indicated : the route of the proposed railway from Edmonton to Teslin ; the location of the White Pass and Yukon railway, now operating from Skagway to White Horse ; the projection of this latter railway north towards Dawson ; and also a route by which connection could be made between these two railways, viz., from Teslin to White Horse.

II.—Profile of the Proposed Railway from Edmonton to Teslin, showing the approximate elevations above sea level over this route.

For descriptive purposes the route of this proposed railway may be divided into the following sections, viz. :—

I.—Prairie Section, 415 Miles.

Extending from Edmonton to the mouth of D'Echafaud river, at the confluence of the D'Echafaud and Peace rivers (from the initial point to the 415th mile).

II.—Central Section, 393 Miles.

Extending from the mouth of D'Echafaud river to the mouth of Sestoot river, at its confluence with the Skeena river, and comprising the valleys of the Peace, Omenica, Driftwood, Bear, and Sestoot rivers (from the 415th to the 808th mile).

III.—Northern Section, 432 Miles.

Extending from the mouth of Sestoot river to Teslin, at the south end of Teslin lake, and comprising that portion of the proposed railway from Port Simpson to Teslin (ocean-port line), by which both lines reach Teslin from their junction near the mouth of Sestoot river (from the 808th to the 1240th mile).

The approximate distance from Edmonton to Teslin viâ the projected line over these routes is 1,240 miles.

A brief description of these main sections is as follows :—

I.—Prairie Section.

Extending from Edmonton to the mouth of D'Echafaud river, a distance of approximately 415 miles.

In the early explorations for the Canadian Pacific Railway, the country embraced in this section was examined and reported on by Mr. H. A. F. Macleod, C.E., from a point on the D'Echafaud river, some 28 miles above its mouth, to the vicinity of Dirt lake, 75 miles west of Edmonton, where his exploratory line joined the location surveys from Fort Saskatchewan towards Yellow Head pass. In the 'Report, Canadian Pacific Railway, 1880,' page 65, *et seq.*, under the heading 'Pine river towards Dirt lake,' will be found a detailed description of these explorations.

Accompanying the 'Report of Progress, Geological Survey of Canada for 1879-80,' is a 'map of part of British Columbia and the North-west Territory,' illustrating an included report by Dr. G. M. Dawson on explorations made by him in conjunction with Messrs. Cambie and Macleod during the season of 1879. On this map are shown the main topographical features of the country embraced, and the elevations above sea level of river crossings, watersheds, &c.

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From this map and Mr. Macleod's report I have compiled the profile of the prairie section.

This route may be outlined briefly, as follows :—

It strikes west from Edmonton via Lake Ste. Anne and Isle lake to the Pembina river crossing, at the junction of the Pembina and its western tributary the Lobstick ; it then ascends to the head of the northwest branch of the Lobstick, and passes over to a branch of McLeod's river, which it descends, and crosses McLeod's river near the 110th mile. The line then follows the valley of McLeod's river to the junction of this river with the Arthabasca, and thence up the valley of the Arthabasca to the 175th mile, where it crosses the river and strikes north-westerly over the intervening divide to the valley of Smoky river. The valley of Smoky river is followed to the 235th mile, where it is left, as the river here turns away to the north-east, and the line ascends to Sturgeon lake summit, thence descending to the valley of big Smoky river, it crosses this river at the 305th mile, just below the junction with Elk river. The line ascends Elk river some 10 miles, then turning north reaches the summit of Beaver Lodge river, by way of Bear river and Bear lake and the upper portion of Beaver Lodge river. On crossing this summit, at the 365th mile, it ascends to Swan lake, and here strikes the head waters of D'Echafaud river, thence it follows the valley of D'Echafaud river to the confluence of this river and the Peace, at the 415 mile.

From Mr. Macleod's report I have estimated, that about three-fourths of the work of construction will be light, the remainder medium, with a few miles of heavy work. Seven rivers will require bridges from 100 to 600 feet over all, while there will be a number of smaller streams demanding 30 to 50 feet spans.

APPROXIMATE COST.

292 miles light work at \$13,500 per mile	\$ 3,942,000
107 miles medium work at \$23,800 per mile	2,546,600
16 miles heavy work at \$36,400 per mile	582,400
Steel bridges on masonry	249,680

Total for the prairie section (415 miles)	<u>\$ 7,320,680</u>
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Average of \$17,640 per mile.

ALTERNATIVE ROUTE FROM EDMONTON TO THE PEACE RIVER.

In connection with this prairie section, I wish to point out that an alternative route can probably be obtained from Edmonton to the junction of D'Echafaud and Peace rivers.

This route, which is shown by a broken line on the accompanying map, is as follows :—

From Edmonton a north-west course is taken to old Fort Assiniboine, on the Athabasca river, about 80 miles from Edmonton, passing over the watershed between the Saskatchewan and Athabasca rivers, and crossing the Pembina river, which flows easterly to the Athabasca.

Leaving Fort Assiniboine this route deflects westerly, keeping south of the range of high hills that extend northward to Lesser Slave lake, of which no doubt the south-west extension, reaching towards the Athabasca, would have to be crossed before arriving at the valley of Little Smoky river.

From a point about 200 miles distant from Edmonton, Little Smoky river would be followed, still on a north-west course, some 45 miles to its junction with the main Smoky river.

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Here the line, turning west, would ascend the main Smoky river, 25 miles to the mouth of Wicked river, then, leaving Smoky river and resuming its general north-west direction, ascend the plateau towards the head waters of Rivière du Brûlé, Ghost river and Rat river, all flowing north to the Peace. Near the crossing of Ghost river this line would be some ten miles south of Dunvegan, a Hudson's Bay Company's post on the Peace river, and about 310 miles distant from Edmonton. At Rat river crossing the line would turn to the west and reach the projected location in the valley of D'Echafaud river, some 28 or 30 miles above its mouth.

By this route a saving in distance of probably 40 miles in comparison with the projected line would be effected. However, parts only of this alternative route have been explored and mapped, a large portion extending from Fort Assiniboin to the Little Smoky river, and thence to the forks of the main Smoky river, in all some 170 miles or more, is comparatively unknown.

Hence, it is hardly safe to assume that this alternative route is feasible for a railway line over its entire extent, until further explorations are made.

In the 'Report of Progress, Canadian Pacific Railway Explorations and Surveys up to January, 1874,' some information is given regarding that portion of this alternative line from Edmonton to Fort Assiniboin by Mr. C. Horetzky, C.E. (page 46), and Prof. Macoun (pages 68 and 69).

That part of this suggested alternative route extending from the main Smoky river to the point where it joins the present projected line—some 75 miles—was examined by Mr. H. A. F. Macleod, C.E., in 1879. His report, under the head 'Pine River towards Slave Lake,' is given in 'Report, Canadian Pacific Railway, 1880,' page 63.

In this same report for 1880 (page 45, *et seq.*), Mr. H. F. Cambie describes the country from Dunvegan to Smoky river, and thence to Lesser Slave lake by way of Sturgeon lake.

The above reports, with that of Dr. G. M. Dawson and his map, previously noted, constitute the information I have been able to obtain touching on the route of this suggested alternative line.

II.—Central Section.

This section extends from the mouth of D'Echafaud river to the mouth of Sestoot river, a distance of 393 miles, viz., from the 415th to the 808th mile, and can be best described under the following three subsections :—

(a.) Peace River Subsection:

415th to 598th mile, 183 miles.

(b.) Omenica River Subsection:

598th to 726th mile, 128 miles.

(c.) Driftwood, Bear and Sestoot Rivers Subsection:

726th to 808th mile, 82 miles.

(a) Peace River Subsection :—

This subsection comprises 183 miles along the Peace river, from the 415th mile at the mouth of D'Echafaud river to the 598 mile at the crossing of Parsnip river.

The latter crossing is made about two miles above the confluence of the Finlay and Parsnip rivers, whose combined waters are thence known as the Peace river.

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This portion of the Peace river was examined and reported on by Mr. V. H. Dupont, C. E., in the season of 1898 (*Vide* Report Department of Railways and Canals for 1898-99, page 148 *et seq.*).

From Mr. Dupont's report a detailed description of the route followed by him can be had. I will quote a few extracts only. 'From the junction of the Finlay and Parsnip rivers to the boundary line on the Peace (*viz.*, that between British Columbia and the North-west Territories), as far as facility and economy of construction is concerned, there exists no material difference between the north and south shores of the Peace river.'

'I am of opinion, however, that the south shore is preferable, except at the canyon, where a decided advantage would be in favour of the north shore, if it was not for the two crossings of the river, and the three per cent grades as spoken of previously.'

These crossings of the Peace river, Mr. Dupont states, 'would necessitate the erection of two single span bridges, 600 feet long, and the grade, although very light for the greater part, would be about three per cent for a distance of three miles from the second bridge.'

Regarding the canyon, he says: 'Peace river canyon, for 10 miles in length, is a serious obstacle to the construction of a railroad, owing to numerous creeks cutting their way deeply through the mountains, whose base is friable rock.'

Of these creeks, he mentions three in particular, requiring single spans of 300, 350 and 400 feet, at heights respectively of 200, 100 and 300 feet—rather formidable structures.

In spite of these obstacles, Peace river pass seems to be the only available one for a direct route. Pine river pass, which lies to the south some 50 miles, is fairly accessible from either direction, but it is 850 feet higher than the Peace river pass, and would entail a rather serious diversion of the route to the south-west, crossing the Parsnip river about 70 miles south of the present projected line. From this upper crossing, necessitated by the use of Pine river pass, the line would either have to descend the Parsnip river these 70 miles to join the projected line westward, or an entirely new route would require to be followed from the upper crossing westerly, reaching the Skeena by a circuitous line involving a great increase in mileage.

Therefore, it would seem that to obtain the most direct route for the line in question, the Peace river pass must be used, notwithstanding the obstacles presented by the canyon portion.

From Mr. Dupont's estimate I have computed the approximate cost of the 183 miles under consideration at \$3,735,729.

An average of \$20,414 per mile.

(b) *Omenica River Subsection.*

This subsection comprises 128 miles, extending from the crossing of Parsnip river, at the 598th mile, to Hogem pass, which forms the head of the Omenica valley, at the 726th mile.

The eastern or lower 45 miles of this subsection, *viz.*, from the Parsnip river to the confluence of the Omenica and Osilica rivers, are included in the explorations made by Mr. C. F. K. Dibblee, C.E., in the winter of 1898-99; when an attempt was made to obtain a feasible route from the lower Omenica river to the head of Sestoot river, by way of the Osilica river. (*Vide* Report Department of Railways and Canals for 1898-99, page 163 *et seq.*)

At a point 23 miles west of the Parsnip river crossing is the 'Black Canyon' of Butler's 'Wild North Lands'; it apparently offers no serious obstacle to the construction of a railway line.

Taking Mr. Dibblee's classification and his rates for the different grades of work, I have estimated these 45 miles as follows:—

APPROXIMATE COST.

30 miles light work at \$12,000 per mile.	\$360,000
12½ miles medium work at \$15,000 per mile	187,500
2½ miles heavy work at \$20,000 per mile	50,000
Steel bridges on masonry.	9,500
Amount	<u>\$607,000</u>

The remaining 83 miles of this subsection are in the valley of the main Omenica river and its head waters, and carry the line to the summit of Hogem pass. This pass has an altitude of 3,438 feet above the sea, and forms the demarcation in this locality of the Pacific-Arctic watershed.

In the early explorations for the Canadian Pacific Railway, that part of the Omenica valley extending from the mouth of the Osilinic river to Germansen Landing, about 25 miles, was reported on by Mr. C. Horetzky, C.E., from information obtained at Germansen Landing, while the remaining portion reaching to Hogem pass, was reported on from his personal examination. (*Vide Report Canadian Pacific Railway for 1880, p. 82 et seq.*)

Mr. Horetzky states ‘from the Hogem summit the descent through the valley of Fall river to the Omenica is comparatively easy, the gradients being in general moderate. In one or two places, however, short stiff grades of 2 per 100 may be found unavoidable. In all other respects the Fall river valley is exceedingly favourable.’

‘From Fall river to Germansen creek, the valley of the Omenica is favourable for railway construction. The valley is wide, probably averaging a mile, and the descent so gentle as not in all probability to exceed 5 or 6 feet per mile. Below Germansen creek the Omenica preserves a nearly placid course through a wide valley for 15 or 20 miles, after which it becomes rapid, and a canyon, formidable enough in high water, but passable for the frailest canoe at a low stage, intervenes. This is the ‘formidable’ black canyon of Butler’s ‘Wild North Land.’

The grades shown on Mr. Dibblee’s profile from the crossing of the Parsnip to the junction of the Osilinic and Omenica rivers, a distance of 45 miles, vary from 3 to 14 feet per mile ; and, from the elevation of Germansen Landing, as given by Mr. Horetzky (2,457 feet above the sea), it is probable that the grades over the intervening distance, from Mr. Dibblee’s 45th mile to Germansen Landing will not exceed those on the lower part of the river.

As the Black Canyon, referred to above, is included in the lower 45 miles, already described, it appears that the remaining upper portion of the Omenica valley may be classed as entirely light work. Steel structures will need to be provided for the crossings of six streams, for which 50 feet spans will probably suffice.

From the above I have computed, as follows, the approximate cost :—

83 miles light work at \$13,500 per mile.	\$ 1,120,500
Steel bridges on masonry.	50,000
Amount.	<u>\$ 1,170,500</u>

Summing the two preceding amounts we have, for the total approximate cost, of the Omenica river subsection—

Approximate cost of first 45 miles.	\$ 607,000
“ remaining 83 miles	1,170,500
Total for 128 miles.	<u>\$ 1,777,500</u>

An average of \$13,730 per mile.

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(c.) *Driftwood, Bear River and Sestoot Rivers subsection.*

This subsection embraces that portion of the railway route comprised between the summit of Hogem pass, at the 726th mile, and the confluence of the Sestoot and Skeena rivers, at the 808th mile, a distance of 82 miles.

From the summit of Hogem pass the line descends in a northerly direction along the west face of the mountains that form the east boundary of the valley of Tacla lake and Driftwood river, for some 16 miles to Buckley House at the head of Tacla lake. Thence it ascends the valley of Driftwood river to its head, a further distance of 28 miles.

At the head of the Driftwood is a low divide between the Driftwood waters, flowing to the Fraser river and Bear lake, discharging through Bear river to the Sestoot and thence into the main Skeena river.

From this divide the line follows the west shore of Bear lake to its mouth, and thence the valleys of the Bear and Sestoot rivers north and westerly to the Skeena river, a distance of 38 miles, crossing the latter to its west bank at the 808th mile, 82 miles from the summit of Hogan pass.

The 44 miles from Hogem pass to the head of the Driftwood river, were examined and reported on by Mr. Horetzky in connection with his explorations previously referred to. He states 'The Driftwood, although at a low stage, was yet very swift, the average fall in the upper portion being at least 12 feet per mile. The distance from Bear lake to Tacla, by following the sinuosities of the stream, is about 35 miles, and the difference in level between the lakes is 333 feet. The valley of the Driftwood is low, wide and of a generally easy character.' He further remarks 'It is hoped that by crossing the Driftwood river at a high level, say 75 feet above that of Lake Tacla, and keeping well up the slopes to the east of Buckley House, the Hogem pass may be reached with gradients not exceeding 1.5 per 100. In all the distance from Buckley House to the summit the mountain slopes are quite gentle and covered with forest, one or two streams running through lateral ravines alone presenting obstacles of any magnitude; it is also probable that in order to keep down the grades, a large amount of earth excavation through the summit swamp will be necessary.'

The 38 miles from the head of Bear lake to the mouth of Sestoot river (its junction with the Skeena) were explored by me in 1899, and described in my report on the surveys of that season. (*Vide* Report, Department of Railways and Canals for 1899-1900, pp. 165 and 166.)

My explorations above noted terminated on the Driftwood river a mile south of the divide, and therefore the distance from the mouth of the Sestoot river to the end of these explorations is there given as 39 miles.

As noted in the above report a good line was obtained over these 38 miles, with fairly easy grades, and but little heavy or mediumly heavy work.

From Mr. Horetzky's report I have estimated the approximate cost of the first 44 miles of this subsection, as follows:—

Hogem Pass to Buckley House:

16 miles side hill work at \$23,800 per mile.	\$ 380,800
Steel bridges on masonry.	20,000
Amount.	\$ 400,800

Buckley House to Head of Driftwood river, 28 miles:

Twenty-four miles light work at \$13,500 per mile.	\$324,000
Four miles medium work at \$23, 800 per mile	95,200
Steel bridges on masonry	16,000
Amount.	\$435,200

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From the head of Driftwood river to the crossing of the Skeena river (mouth of the Sestoot), 38 miles (explored by me in 1899):

Fifteen miles light work at \$14,000 per mile.....	\$210,000
Twenty-one miles medium work at \$23,000 per mile.....	483,000
Two miles heavy work at \$35,000 per mile.....	70,000
Steel bridges on masonry	70,000
Amount.....	<u>\$833,000</u>

By summing these three amounts the approximate cost of this subsection of 82 miles is therefore \$1,669,000.

An average cost of \$20,334 per mile.

The total approximate cost of the central section is, then, as follows :—

(a) Peace river subsection, 183 miles	\$3,735,729
(b) Omenica river subsection, 128 miles	1,757,500
(c) Driftwood, Bear and Sestoot rivers subsection, 82 miles.....	<u>1,669,000</u>

Total for the central section, 393 miles..... \$7,162,229

An average of \$18,225 per mile.

III.—Northern Section.

This section extends from the crossing of the Skeena, at the confluence of the Sestoot and Skeena rivers, to Teslin village, at the south end of Teslin lake, a distance of 432 miles, being from the 808th to the 1,240th mile.

It is common to both the Edmonton-to-Teslin and the Port Simpson-to-Teslin lines, with the point of junction at the beginning of the section, distant 808 miles from Edmonton, or 307 from Port Simpson.

In that part of my report which treats of the Port Simpson-to-Teslin line (ocean-port line), a full detailed description, with approximate cost of construction and equipment, is given for this section of 432 miles.

It is sufficient here to note that the approximate cost of this northern section may be summarized as follows :—

(a.) Sestoot Junction to Skeena-Stikine Summit, 90 miles:

(Vide Report Railways and Canals for 1899-1900, p. 163.)

Sixty-four miles on the main Skeena river, at \$18,500 per mile, including bridges	\$1,184,000
Twenty miles on the Upper Skeena—	
At \$14,000 per mile	\$280,000
Six miles on the Upper Skeena—	
At \$23,000 per mile	138,000
Bridges on these 26 miles	36,000
	<u>454,000</u>
Amount.....	<u>\$1,638,000</u>

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(b.) Skeena-Stikine Summit to Teslin, 342 miles:

As per estimate previously given for ocean-port line in
report on the explorations of 1900..... \$6,444,700

Total for the northern section, 432 miles..... \$8,082,700

An average of \$18,710 per mile.

Treating the Edmonton-to-Teslin line independently of the fact that its northern section is also a part of the ocean-port line, a summary of the approximate cost of the entire line, per sections, is as follows :—

1. Prairie section (415 miles)	\$7,320,680
2. Central section (393 miles)	7,162,229
3. Northern section (432 miles)	8,082,700

A grand total for 1,240 miles of..... \$22,565,609

An average for the entire distance of \$18,198 per mile.

But, as the construction of the Edmonton-to-Teslin line would no doubt be subsequent to that of the one from Port Simpson to Teslin, it is evidently fairer to consider the Edmonton line proper as terminating at Sestoot junction, distant 808 miles from Edmonton, where connection would be made with the Port Simpson-to-Teslin line.

Considered in this light, the Edmonton line would only comprise sections 1 and 11, and the approximate cost would be :

1. Prairie section (415 miles)	\$ 7,320,680
2. Central section (393 miles)	7,162,229

A grand total for 808 miles of \$14,482,909

An average of approximately \$18,000 per mile.

This estimate of cost provides only for the usual buildings on a railway line ; it is necessary, therefore, to provide for certain special ones required at terminal and divisional points, and also for a sufficient supply of rolling stock.

FOR PURPOSES OF ESTIMATING THE REQUIREMENTS FOR SPECIAL
BUILDING AND ROLLING STOCK, THE EDMONTON-TO-SESTOOT
JUNCTION LINE MAY BE DIVIDED INTO THE FOLLOWING
SIX DIVISIONS.

	Inter. Distance.	Whole Mileage.
Edmonton (terminal)	0	0
Athabasca (25 miles east of crossing) .. .	150	150
Smoky river crossing.	155	305
Moberly river crossing	147	452
Parsnip river crossing.	146	598
Old Hogen.	104	702
Sestoot junction.	106	808

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APPROXIMATE COST OF SPECIAL BUILDINGS AT TERMINAL AND DIVISIONAL POINTS.

Edmonton (Terminal)—

Warehouses.	\$ 6,000
Engine house and turntable.	11,000
Repair shops and coal bunkers.	23,500
General offices	6,500
Sundries.	3,000
	<hr/> \$ 50,000

Divisional Points—

Engine house and turntable.	\$ 8,000
Repair shops, coal bunkers, &c.	18,500
	<hr/>
Amount for one divisional point	\$26,500
Amount for five divisional points at above rate.	132,500

Sestoot Junction—

Extra facilities (not provided for in previous estimate) due to Edmonton line.	10,000
	<hr/>
Amount for special buildings.	\$192,500
	<hr/>

APPROXIMATE COST OF ROLLING STOCK FOR THE EDMONTON-TO-SESTOOT JUNCTION LINE, 803 MILES—6 DIVISIONS OF AN AVERAGE LENGTH OF 135 MILES.

In the estimate for the Ocean-Port line, a detail is given of the ordinary rolling stock required for one division, and the approximate cost thereof given as \$183,900.

Ordinary rolling stock for 6 divisions at above rate.	\$1,103,400
Extra equipment at the same rate as previously noted for the Ocean-Port line	140,600
	<hr/>
Amount for rolling stock.	\$1,244,000
	<hr/>

The above estimate provides rolling stock sufficient to operate this line under an ordinary traffic over the entire mileage, therefore it would probably be in excess of the earlier requirements of the line.

COMPLETE ESTIMATE FOR THE PROPOSED RAILWAY FROM EDMONTON TO SESTOOT JUNCTION.

(808 miles.)

The total cost of construction and equipment of this line—808 miles in length—may be summarized as follows :—

Cost of construction (as previously estimated).	\$ 14,482,909
Terminal and divisional special buildings.	192,500
Rolling stock.	1,244,000
	<hr/>
Grand total for 808 miles	\$ 15,919,409
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This gives an average rate of approximately \$19,700 per mile, for the line complete in all details and provided with sufficient rolling stock for operation under ordinary traffic conditions.

The whole respectfully submitted.

JOHN S. O'DWYER,

M. Can. Soc. C.E., Engineer in charge.

Ottawa, June 8, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer,

Department of Railways and Canals.

APPENDIX.

It may be desirable to treat the Edmonton-to-Teslin line as the main line, and that portion of the Port Simpson-to-Teslin line which extends from Port Simpson to Sestoot junction, as an ocean branch off the main line.

For this purpose I have here appended the following summarized estimates giving estimated total cost for—

(1.) The Edmonton to Teslin line (Edmonton-Yukon Railway).

(2.) The Port Simpson to Sestoot Junction line (Ocean branch off the Edmonton-Yukon Railway).

(3.) The Port Simpson to Teslin line (Ocean-Port Railway).

SUMMARISED ESTIMATES.

(1) *Edmonton to Teslin, 1,240 miles. (Edmonton-Yukon Line)—*

Road bed complete with ordinary buildings.. . . .	\$ 22,565,609
Special buildings.. . . .	343,000
Rolling stock.. . . .	1,866,000
Total.. . . .	<u>\$ 24,774,609</u>

(2) *Port Simpson to Sestoot Junction, 307 miles. (Ocean Port Branch from Edmonton-Yukon Line)—*

Road bed complete with ordinary buildings.. . . .	\$ 9,170,900
Special buildings.. . . .	127,500
Rolling stock.. . . .	433,100
Total.. . . .	<u>\$ 9,736,500</u>

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(3) *Port Simpson to Teslin, 739 miles. (Ocean-Port Line)—*

Road bed complete with ordinary buildings.	\$ 17,253,600
Special buildings.	278,000
Rolling stock.	1,060,100
Total.	<u>\$ 18,591,700</u>

As previously mentioned in this report, the data used in compiling all estimates as based upon the cost of similar works in eastern Canada, to which must, therefore, be added the cost of transport of labourers, plant and material, also whatever difference there may be in relative wages.

JOHN S. O'DWYER,
Engineer in Charge.

No. 3

CANALS

SAULT STE. MARIE CANAL.

SUPERINTENDENT'S OFFICE, July 6, 1901.

SIR,—I beg to submit the sixth annual report upon the operation of this canal for the fiscal year ending June 30 last.

The canal was closed for traffic on December 16, having been in continuous operation for 237 days, and was reopened for traffic on April 20.

During the fiscal year there has been made some 2,406 lockages, passing through 3,273 registered craft and 324 unregistered craft, with a combined tonnage of 2,489,258 tons, with an average time of 15'224 minutes to each lockage. Of this tonnage, 589,530 was of Canadian bottoms, being an increase of some 15,071 tons over last year's tonnage for this class. In the total tonnage there was a falling off of some 358,296 tons as compared with last year. This can no doubt be assigned to the fact of the dredges being at work in the lower channel, thus blocking up, or nearly so, the whole of the channel, and as the channel at its best is very narrow when compared with that of the American canal, vessel captains do not use this canal when the other canal channel is not blocked.

This dredging in the lower entrance channel is necessary to make it down to a depth of 21 feet 6 inches, and when finally completed will give us a full depth of water the same as on the American side. When this dredging is done, an extension of at least 700 feet should be made to the south pier at the lower end, so as to give us more room for vessels to lie at after locking down at night and waiting for daylight to go on down the river.

The machinery is all in good working order and there has been no breakages during the year. All the buildings have been painted and kept in good repair.

Very little damage has been done to the walls and piers by vessels using the canal.

Last season was a record-breaker as regards the Lake Superior traffic, and as in former years I send a report showing the traffic to and from the upper lakes since the opening of the first canal at this point in 1855, on the American side; in 1895, the Canadian canal was opened and since that time the traffic passing through this canal is included in the report. This is obtainable by the daily exchange of vessel reports made with the American canal officials.

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STATISTICS

OF THE LAKE SUPERIOR TRAFFIC PASSING THROUGH THE CANALS AT SAULT STE. MARIE,
MICHIGAN AND ONTARIO.

Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total freight Tonnage.	Cost of Carrying per Mile.	Estimated Value of freight Carried.	Percentage of fr ight carri d in Canadian Canals.	Number of Passengers.
				Tons.			
1855.....	No. record.	106,296	No record	Mills.	No record		4,270
1860.....	"	403,657	until 1881.		kept until		No record.
1865.....	997	409,962	"		1887.		19,720
1870.....	1,828	690,826	"		"		17,153
1875.....	2,023	1,259,534	"		"		19,685
1880.....	3,503	1,734,890	"		"		25,766
1885.....	5,380	3,035,987	3,256,628				36,147
1890.....	10,557	8,454,435	9,041,213	1 ³ / ₁₀₀	102,214,948	3 ¹ / ₄	24,856
1894.....	14,491	13,110,366	13,195,860	1 ⁹ / ₁₀₀	143,114,502	3 ¹ / ₄	27,236
1895.....	17,956	16,806,781	15,062,580	1 ¹¹ / ₁₀₀	159,575,129	3 ³ / ₄	31,656
1896.....	18,615	17,249,418	16,239,061	1 ¹⁰ / ₁₀₀	195,146,842	4	37,066
1897.....	17,171	17,619,933	18,982,755	1 ⁸ / ₁₀₀	218,235,927	3	40,213
1898.....	17,761	18,622,754	21,234,664	1 ⁹ / ₁₀₀	233,069,739	2 ² / ₁₀	43,426
1899.....	20,255	21,958,347	25,255,810	1 ⁶ / ₁₀₀	281,364,750	3 ¹ / ₁₀	49,082
1900.....	19,452	22,315,834	25,643,073	1 ¹⁸ / ₁₀₀	267,041,959	3	58,555

The south pier on the upper entrance should be extended out about 1,000 feet to do away with the strong current setting across the channel at that point. A short time ago this was brought forcibly to our notice by several vessels drifting down on to the bank at that point, some of them doing damages to themselves. This occurred whilst the American lock was closed down owing to an accident to the gates being run into by a vessel and all the deep draught ones had to come down this way. This work should be the next undertaken, when any improvement is to be made to the approaches, and the upper channel, where it crosses the Vidal shoal should be both deepened and widened to a width of at least five hundred feet. A levelling up of the grounds should be made around the office and it would add greatly to the appearance of things in general.

A frame building for the use of the men should be built near the power house, as the small room now occupied by them in the power house is too small for their use. The staff has been efficient, and this spring there were some changes made on account of resignations of some of the men.

During the winter Mr. Fripp, the engineer in charge of the improvement works on the canal, has taken some soundings along the channels so as to make out a large plan of the two approaches showing the depth of water in and around the channels. This was something that was badly needed so that changes could be suggested in regard to the dredging and widening of the channels.

The swing dam was operated, or rather a part of the wickets were let down and the men instructed in its operation. It will be necessary to repaint it next season.

All the old wooden platforms and ladders down in the well have been taken out and new ones of iron put in their place.

The time for the completion of the pair of solid gates made with Messrs. J. & R. Miller has been extended and the gates are nearly completed. They are solid ones and made from British Columbia fir.

The floor of the lock and all the machinery under water was in good order when we pumped out the lock last fall.

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Last fall we discovered that the breast wall was lifting, so this spring we put in a large number of bolts, drilling down into the solid rock for them and then filling in with cement, and we hope that this will have the desired effect and hold it down, otherwise it will be necessary to put in a wall of concrete in front of the present breast wall ; of this we will not be certain of until we are pumped out this coming fall.

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

J. C. BOYD,
Superintendent.

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SOULANGES CANAL.

COTEAU LANDING, August 1, 1901.

SIR.—Since my last annual report, dated September 12, 1900, work of construction on the various sections of this canal, then unfinished, has been completed, with the exception of Andrew Onderdonk's contract, where the stone road on the north bank is yet in progress, and a good deal of trimming, sodding, &c., remains to be done. The whole will, however, be completed this fall.

At the upper entrance some 3,342 lineal feet of strong iron railing has been constructed with gates, turnstiles, &c., to inclose part of the canal property. An office has also been built for the use of the collector of tolls. This is placed in a convenient position for vessel men, especially at night and is generally recognized as a much needed improvement. The grounds have been levelled off and a large number of trees planted, so that the western end now presents a fairly neat and trim appearance, without necessitating any extra outlay for maintenance; as no gravel walks or roads have been constructed for ornamental purposes. This work of finishing will be continued on other parts of the line between Coteau Landing and Cascades Point.

It is gratifying to be able to state that there has been no recurrence whatever of the formidable earth slides on sections 8 and 9, which added so much to the estimated cost of the canal. I may also say that the protection lining has stood the wash of passing steamers fairly well, although this is of the cheapest description, consisting chiefly of rough stone and quarry waste thrown into a notch made in the face of the banks, the centre of which is about mean level of water in Lake St. Francis (155). The stone cost on an average less than \$1.50 per cubic yard in place, or about \$10,000 per mile for one side. A good masonry wall built to serve a similar purpose would cost at least four times as much.

Fair speed can be safely made through this canal, not because of fast working locks, but because the summit reach is $10\frac{1}{2}$ miles long, or 75 per cent of the whole length of the line, and at ordinary level of the lake (155) it has a water section of about 2,500 square feet. If the mid-ships section of a vessel of full canal size is taken at, say 42 feet x 14 feet = 588, the proportion is, say 4 to 1, and this permits of high speed without risk of damage to the banks. As a matter of fact there has been, however, only one vessel (the steamer *Arabian*) drawing 14 feet passed through the canal to date, while most of the antiquated craft now using it are of much lighter draught, so that a speed of 7 miles an hour between the guard lock and No. 4 is quite permissible. On the reach between (4 and 3, $2\frac{1}{2}$ miles) the banks have been somewhat damaged by steamers and tugs running (when unobserved) at over ten miles per hour. The time of passing between these locks (3 and 4) has recently been fixed at thirty minutes or at the rate of about five miles per hour.

Ten years ago, when this canal was designed, it was considered a somewhat hazardous experiment to make use of concrete to the extent contemplated in its construction, especially on a line of navigation like the St. Lawrence, and in such a climate as that of Canada. The result has, however, proved very clearly that hydraulic structures of all kinds can be safely built of this material. It is probable that in the near future leading lines of water communication will have locks, weirs, dams, &c., made entirely of concrete which is in my opinion better suited for the purpose than ordinary stone. If the cement and aggregate are good and clean, the concrete properly mixed, placed and rammed, the resultant monolithic mass will fully answer all the purposes of masonry as usually specified for lock and weir work.

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A clear proof of its excellence as a building material was afforded during the great slide which took place at the St. Emmanuel road on October 25, 1897, when the north abutment of the bridge, containing about 1,000 cubic yards of concrete and weighing at least 2,000 tons, was swept bodily into the centre of the canal, a distance of 50 feet, without the least crack or opening being developed in the mass, which sank down in an inclined position, about 19 feet into the soft greasy blue clay forming the bottom of the canal at this place. That part of the structure showing above this plane (136) had to be removed by drilling and blasting at considerable cost. The copings and steps of this abutment were of finely cut stone and did not part from the body of the concrete nor show a single open joint on examination after the accident. It is safe to say that no ordinary masonry structure would have shown similar strength. At this place concrete cost about \$5 per cubic yard, including cement, and the cut stone copings \$20.

The cost of concrete will be still further reduced when the manufacture of Portland cement, only now being fairly introduced here shall have attained proper proportions. The price paid for this article on the canal is greater to-day than it was several years ago. There does not seem to be any good reason for this, nor why we should have to import foreign cement, when all the requisite materials are to be had in great abundance in Canada. As, however, concrete is the coming material for public works, this state of affairs will doubtless right itself.

Structures connected with navigation will be built of greatly increased dimensions at less price than those now in existence. This will have the effect of rendering practicable projects, the estimated cost of which (if built under the old régime) would have been considered prohibitory. For example, it will greatly stimulate the idea of connecting the great lakes with the sea by a navigable channel of 21 feet—a scheme which will probably be carried out in the near future.

On the Soulanges canal, as previously stated, about 350,000 cubic yards of rock, useless for masonry, had to be excavated to form the prism. To utilise a large part of this in the preparation of concrete was obviously sound policy. From various causes but little of this vast mass now remains thrown to spoil.

There has been, approximately 52,767 cubic yards of masonry built at a cost, including cement, of \$692,677, or \$13.13 per cubic yard, and 161,048 cubic yards of concrete for \$894,144, or say \$5.55 per cubic yard. If the whole had been built of masonry at a fair all round price of say \$9 per cubic yard (including cement), it would amount to \$1,924,335. Were it all concrete at the above price, \$5.55, it would be only \$1,186,673, or a saving of \$735,662. The comparative cheapness of concrete is apparent from these figures. But in addition to this there is the advantage of not being dependent on skilled labour to a large extent, also the fact that public works can be pushed on at a much faster rate than if masonry were used, and time is frequently of the utmost importance.

A large amount of the 350,000 cubic yards of rock, previously referred to, was used for protection lining instead of masonry walls. The obvious economy of this methods contrasts strongly with the plan adopted on the Manchester Ship canal where an enormous amount of money was expended on protection walls, while the present Chief Engineer, Mr. Hunter, confesses that if the canal had to be built over again the greater part of this outlay would be avoided.

Another feature which will have the effect of not only increasing the carrying capacity of canals but also of decreasing the cost of transit through them in the application of electrical power in their lighting and operation. I understand that vessels now arrange to arrive at this canal about dark because it is as easily navigable by night as by day, whereas, without light but little if any progress could be made, and that little would be dangerous both to the vessels and the canal. The Canada Atlantic Company have taken advantage of this state of affairs to push through to date this season some 5½ millions of bushels of grain to Montreal at an extremely low figure.

A great deal more might be said on this subject, but it is abundantly clear that

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every improvement, no matter how small, introduced into the operation of our great waterways is of national importance.

Further examination with the sweeps revealed some obstructions at the lower Cascades end of the canal, where none were supposed to exist. The channel at the outer end of the south pier has been widened so as to improve the approach, and some shoal spots have been removed. This work will be completed shortly, and is being done under contract with Messrs. Manning & Macdonald. As stated in my last annual report, some rock was met with in forming the western channel of approach from Lake St. Francis to the full width and depth required. This is also being excavated under contract with the same parties. The work has been carried on in a slow and unsatisfactory manner, but is now nearly completed. When this is done, both the range lights can be brought into use. The outer one only is lighted now. But the arrangements are such that even at present no complaints are made by vessel men.

Pintsch gas is used in the range lights and gas buoys, so that in case of interruption to or failure of the electrical lights, the canal entrance can be safely made in any weather. The range lights are fixed and show a bright ruby red.

There is little or no current at the lower entrance from the Ottawa river. At the upper end, however, before the canal was constructed, there was a velocity in some places of over two miles per hour. This has almost been eliminated by dredging shoals and deepening to the extent of some 200,000 cubic yards, so that tows of five vessels enter with the greatest ease. Of course, the canal was not designed for such craft, but the facts serve to show that certain predictions have not been realized.

During the phenomenally low water of the fall of 1895, which was greatly the lowest recorded (or that could be conjectured) since 1819, the surface of Lake St. Francis was only 152.55 above datum of sea level, or 14.55 on the mitre sills of the guard lock (138) at Coteau Landing. Since that time the depth there has not been less than 16 feet during the season of navigation. Last year (1900) the lake level was maintained with remarkable uniformity from May to December, the mean height being 154.6. Highest, 155.0, and lowest water 154.2. This year the mean so far has been 154.9.

The lower entrance is in the Vaudreuil branch of the Ottawa river, where, as might be expected, the fluctuations are very much greater. In 1895, there was a depth, at extreme low water, of only 14.83 on the lower mitre sill (54.5) of lock No. 1. But this depth is often, during spring floods, as much as 23½ feet. This contrast shows the effect of the great lakes as compensating reservoirs. There is probably no river in the world easier of canalization, as respects fluctuations of surface, than the St. Lawrence.

It may again be stated that the lighting of the canal is quite satisfactory. There are 216 closed arc lamps, generally 480 feet apart on one side, and of 2,000 stated candle power each. The hydraulic installation at the power house, where there is a head generally of about 18 feet, has power ample for the work, but the application of electricity in the operation of the locks, sluices and bridges did not prove so easy of successful accomplishment as was represented by the various electricians, who, in the beginning, examined into the scheme proposed by me for adoption, which was, in brief, that all the gates, sluices, &c., of each lock should be operated from a single point and by one man.

A contract was entered into on this basis with the Canadian General Electric Co. in January, 1899, but owing to the cropping up of unforeseen practical difficulties, the original plan had to be greatly modified, and a supplementary agreement was entered into, on the 23rd April last, to do this in such a way that each motor will be controlled separately. This will necessitate the employment of two men at each lock, but even then this will be a great saving when compared with the cost of hand

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power. It is hoped that the changes will be completed this fall, but previous experience of this company's movements does not lead one to hope that the terms of the contract will be satisfactorily carried out, at least as to the time agreed upon for the completion of the work, which is the 31st October proximo.

In March, 1898, before the present site of the power house was finally determined, a contract was let to Mr. Charles H. Rayner for the construction of a large weir at this place through which the summit level could be controlled, or if considered necessary completely emptied without passing any of this great volume of water through the locks at the Cascades end. The details of this weir were modified so that it now forms the foundation of the power house, and thus serves a double purpose. This combination has had the effect of lessening the cost of the latter, which will be about \$26,000. The whole installation should not cost more than \$160,000 complete. The expense of operation per annum should not exceed \$5,000, all contingencies included, so that this canal, 14 miles long, will be lighted in the best manner throughout and ample power supplied for working the locks, bridges, &c., for say (including interest) \$10,000 per annum, which is about the same sum as is paid for the feeble gas light which makes the locks of the Welland canal partly visible at night. In both cases the bulk of the expenditure will of course be during the season of navigation.

The following table shows the amounts returned in the progress estimates for the various section of the canal up to June 30, 1901 :—

Number of Section.	Name Contractor.	Date of Contract.	Number of Contract.	Number of Progress Estimate.	Gross Amount to 30th June, 1901.
					\$ cts.
1 and 2	Archibald Stewart	Sept. 24, 1892 . .	11331	51	516,934 85
	Ryan & MacDonell	Dec. 11, 1897 . .	12961	31	614,330 26
3	J. & M. O'Leary	Mar. 27, 1893 . .	11515	46 (F)	199,056 44
4, 5, 6 and 7	George Goodwin	May 9, 1893 . .	11518	31 (F)	326,246 75
	Andrew Onderdonk	April 17, 1897 . .	12701	38	627,123 87
8	Charles H. Raynor	Dec. 29, 1892 . .	11419	66 (F)	339,358 12
Weir	Charles H. Raynor	Mar. 1, 1898 . .	12996	15 (F)	43,916 74
9	Manning & Macdonald	Jan. 30, 1893 . .	11421	64 (F)	194,300 44
10	Rogers & Taylor	Sept. 24, 1892 . .	11423	59 (F)	297,047 26
11	George Goodwin	May 11, 1892 . .	11862		
	Thomas Feeny	Transfer	11862		
	Poupore & Fraser	"	11862	68 (F)	341,018 70
12	Denis O'Brien & Son	April 8, 1892 . .	11178	6 (F)	26,811 15
	George Goodwin	May 9, 1893 . .	11520	6 (F)	11,400 37
	M. J. Hogan	April 5, 1897 . .	12693	29 (F)	203,108 70
13	Manning & Macdonald	Sept. 24, 1892 . .	11278	76	643,949 79
Dredg'g in Canal	Manning & Macdonald	Oct. 23, 1899 . .	13631	8	37,522 00
					4,416,125 44

Note (F) means that a final estimate of the work has been forwarded to Ottawa. The final estimates for sections 1 and 2 and 13 are now nearly completed. The above return shows an additional expenditure of \$145,377.59 to that given on page 182 of the departmental report for 1900.

OPERATION.

Last season the canal was closed on December 6. Fortunately a partial thaw set in on the 5th, otherwise trouble would have been experienced with the lock gates, as ice about six inches in thickness had already formed at the lower entrance into the Ottawa river at Cascades point.

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There was no interruption to the passage of vessels in 1900, except on May 26 to 28, when as stated in my last report (printed) some changes were made in the sluice gates at lock No. 1. Two thousand nine hundred and seventy-six vessels of all kinds (not including tugs), passed through the canal last year. The Canada Atlantic Railway sent down this year from Parry Sound, about 11½ millions of bushels of grain. Nearly 8½ millions came down the St. Lawrence, or in all say 19½ millions. A considerable amount of coal and package freight was also carried to Montreal.

To give an idea of the carrying capacity of the canal under proper conditions, I may say that if this grain were loaded in barges of full size (say 80,000 bushels each), it could be passed down in less than ten days, at the rate of, say thirty lockages per diem, which, if the barges were well handled would not interfere with a large movement of other freight through the canal.

This year the canal was opened on May 1, and no delay whatever has occurred to date. The men on the locks can now turn the handles properly, and do not wind up the counter-weight of the sluices as formerly. As previously stated, the machinery of the gates is now operated with ease. The sluices, 6 feet x 6 feet under 25 feet head can be rapidly raised by two men although the pressure on one of these is then about 30 tons. The gate and sluice machines are strong and simple and the danger of accident, even under existing conditions, is small.

Experience has demonstrated fully that the manner of filling or emptying the locks of this canal has been a real benefit to the navigation. The water being admitted to the chamber through ten 30-inch tubes on each side, placed exactly opposite to each other, has the effect, in a measure, of neutralizing the disturbance which otherwise would follow the introduction of some 300,000 cubic feet in about five minutes. At all events there is little or no surging on the lines, as so frequently occurs where the old plan is in use, and a very considerable element of danger both to the vessels and the locks is in this way removed. This is especially important as bargemen persist in using lines long after they have become so worn as to part very easily, and this cannot well be discovered until after an accident has happened.

It is expected that the electrical power will be applied to the working of the locks, bridges, &c., this fall, when the number of men required to operate the canal will be considerably reduced.

Up to date the Canada Atlantic has sent 5½ millions of bushels of grain this way, and the St. Lawrence has given 3½ millions, or an aggregate of 9½ millions, principally wheat and corn. About 160,000 tons of coal has passed down to Montreal, together with some 23,000 tons of general merchandise.

A fleet of four steel steamships, equipped for navigating either the lakes or salt water of full canal size and intended to trade directly between Chicago and European ports was started from the west this spring. An ice-jam which occurred in the St. Clair river in May, delayed two of them for several days; and owing to an accident at Sparrowhawk point the *Northwestern* after her release from the ice was run ashore in the river. She was soon got off, however, and without much damage. This was an unfortunate beginning, but all four crossed safely to Liverpool, Hamburg or Antwerp. Only two have returned so far. It is not known here if the venture will prove profitable, owing to the very high rates of insurance which handicap the St. Lawrence route, and there is, of course, at first difficulty in obtaining return cargoes promptly. Another vessel, built at Dundee, in Scotland (and of full canal size, is on her way out here now from Manchester with a full cargo for Chicago. No doubt there will be many trials and some failures before regular lines are established, but ultimate success seems certain as the advantages which follow direct trade, and the avoidance of transfers must be great, and a profitable traffic will be developed with second-class European ports, and carried on profitably by steamers of comparatively small tonnage.

There is no doubt whatever that a practicable channel of 14 feet at the present stage of the water exists via Canadian canals and the St. Lawrence between Lake Erie and Montreal. The great lakes are now tapped for vessels of from 2,000 to 2,200 tons,

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and it seems inevitable that with such a vast and rapidly increasing volume of trans-Atlantic trade our national route must, even with its present restricted dimensions obtain a considerable share of it. The vessels of the Comselman fleet fit the locks so as not to leave much space around them, but hitherto their draught when passing through this canal has been only from 12 to 13 feet.

It is, however, encouraging to know that several vessels of the kind which our canals were made to accommodate, are in course of construction at upper lake ports and elsewhere. That is to say, now that we have got a 14 foot navigation after working at it for about thirty years, a beginning has been made to build a fleet, which can utilize this enormous outlay to the best advantage, and it is to be hoped that there is little or no truth in the premature conclusion arrived at by some transportation theorists, that the 14 foot Canadian canals will fail to divert commerce from the lake and railroad lines of New York, the principal business of which centres in Buffalo.

In my last report I referred to the preparation of plans of piers, &c., intended to form sheltered berths for the spare gates, gate lifter, &c., at the lower end of the canal at Cascades Point.

The contract for this work, which has become urgently necessary, has been let to Messrs. Quinlan & Robertson, and will be pushed ahead as fast as possible. The site chosen is on the north side of the canal, in a well sheltered bay, and is easily accessible in case of accident to the gates of the canal. It is also out of the reach of ice action in the spring, which is a source of great danger in this vicinity. The repair shops will be put in hand later on. At present little or no repairs of any kind are necessary.

It is hoped that at the furthest, the next season of navigation will be begun with the canal completed in every particular, and the electrical apparatus in full and successful operation. No exertion will be spared to ensure this.

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

THOMAS MONRO, M. Inst. C.E.,
Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer, Railways and Canals,
Ottawa, Ont.

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QUEBEC CANALS.

MONTREAL, September 4, 1901.

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

SIR,—I have the honour herewith to submit my annual report on the works under my charge for the fiscal year ended June 30, 1901.

The canals in this division are the Lachine and the Beauharnois on the St. Lawrence route; the Ste. Anne, the Carillon and the Grenville canals, on the Ottawa river, and the St. Ours lock and the Chambly canal, on the Richelieu river.

Of these, the Lachine canal is by far the most important, on account of its immediate connection with the harbour of Montreal, the great export centre of the Dominion.

The traffic through it has rapidly increased of late years, owing to the development of industries and agriculture in western Canada and the Canadian North-west, and it will certainly take a still greater importance with the completion of the deepened canals, especially when adequate facilities for handling freight and grain shall have been provided.

The Ottawa canals afford a most convenient route for the transportation of the produce of the extensive forests of the Ottawa valley, a large proportion of which finds its way to the United States through the Richelieu river canals.

LACHINE CANAL.

Length, $8\frac{1}{2}$ miles; 5 locks, 270 by 45 feet; 14 feet water on sills; total rise, 45 feet. Old locks, 200 by 45 feet; still available with 9 feet of water on sills.

Mr. Denis O'Brien was appointed overseer of this canal on June 14, 1900, vice John Conway, who had died on May 2 previous, the position of overseer having been filled in the meantime by Mr. George Yale, superintendent of the canal dredging fleet.

The following interruption to navigation occurred during the year: Six hours on October 11, 1900, while repairing Brewster's bridge, which had been thrown off its pivot by steamer *Alexandria*; and nine hours on November 21, 1900, while repairing Côte St. Paul bridge, where a similar accident happened, the barge *Frontenac*, in tow of steam tug *Jackman*, having collided with the said bridge during a terrific wind and thunderstorm. In both cases the cost of the repairs was paid by the owners of the boats.

Another accident, which might have been attended with serious consequences, happened on May 6, 1901, when the steamer *Monkshaven* on her trip upwards collided with the upper gates of lock No. 5, the lower gates being opened. Fortunately, the gates were not thrown down, and the damage was speedily repaired.

REPAIRS AND RENEWALS.

The water was drawn out of the canal on March 15, and readmitted into it on April 30, 1901.

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Repairs and renewals were executed as follows during the year :—The cast-iron rollers under Wellington bridge, 96 in number, were replaced by cast-steel ones, which are giving entire satisfaction.

Over one hundred arc lamps were repaired by the canal electricians at our own shop.

Four pairs of gates were remodelled, and the Townsend valves in them replaced by butterfly valves, which are much more satisfactory.

A new set of stop logs, 18 inches by 18 inches and 50 feet long were provided for new lock No. 5.

The masonry at the west of the pier between flour shed basins Nos. 1 and 2 was taken down to water level and rebuilt, partly with the old stone and partly with concrete, a strong cast-iron snubbing post being placed at that point.

Slope walls at several points of the canal were repaired while the canal was unwatered in April.

Each of the five new locks was provided with four cast-iron mooring posts, set in a heavy block of concrete. These were rendered necessary owing to the increased size of the vessels using the canal since the deepening to 14 feet was completed.

The roadway above Wellington bridge, along the north side of the canal, 650 feet long and 40 feet wide, was macadamized, iron cross being placed over a heavy bed of stone.

The bridges, locks, buildings, roads, fences, wharfs, &c., received the usual attention during the year.

I beg to call your attention to the fact that owing to the larger class of vessels now using the canal, the passage-way both at Brewster's and Côte St. Paul bridges is practically too narrow. The swing at those points only covers a channel 45 feet wide on either side of the centre pier, the outer side of each channel being formed by a small isolated pier acting as abutment for the swing bridge, as well as for a fixed span from it to the bank. I would strongly advise the replacing of the said two antiquated bridges by steel structures of sufficient length to dispense with the fixed spans.

REGULATING WEIR AT LACHINE. •

The object of this work is to ensure the proper feeding of the canal.

A number of mills, located between Côte St. Paul and Montreal, use the canal water as propulsing power, and owing to the large quantity of water consumed by them, it had become a very difficult matter to keep the canal at regulation level during periods of low water on the St. Lawrence. This state of affairs was of no serious importance until the deepening of the St. Lawrence canals to 14 feet navigation was completed. But it is now imperative to have the full depth of 14 feet on the lock sills at all times, and the new regulating weir just completed will ensure this.

The work has been executed under contract by Mr. M. J. Hogan. Operations were begun on April 18, 1900, and brought to a termination on May 13, 1901.

The two centre piers in the old weir have been preserved, two new piers and abutments being constructed, providing eight new sluices by means of which the area of waterway was doubled. The head and tail races are now 50 feet wide at their narrowest points, and their sides lined with heavy rock face masonry walls laid in Portland cement. The widening of the head race has necessitated the lengthening of the fixed bridge between the two locks and the insertion of an additional stone pier to support it.

A heavy boom has been placed at the upper entrance to the weir in order that vessels using the small lock may approach it with safety.

The plans and specifications for this regulating weir had been prepared by Mr. L. G. Papineau, but Mr. G. L. Viger had charge of the contract.

NEW LOCK FOR LOWER ENTRANCE OF LACHINE CANAL.

Two sets of plans were prepared last fall with a view to replacing the present locks of the 200 x 45 feet type which were built in 1843.

In the first case it was proposed to preserve such portions of the old work as would be sound and to lengthen the locks to 270 feet to make them conform with those of the present St. Lawrence route. In this system the gates of the 200 feet lock were to be retained as intermediate gates, the smaller lock thus created to be used in passing market and passenger boats in as short a time as possible.

The second system contemplated one large lock 375 feet long, 50 feet in width, with 20 feet of water on the sills to take the place of the present locks Nos. 1 and 2. It was to have been built on the site of the old entrance lock and would have extended into old basin No. 1, equivalent basin space being provided at the upper end near Black's bridge.

The water level in the new basin would have been the same as in basin No. 2.

Of the two systems submitted the latter was adopted and tenders for the work invited in September, 1900. No contract, however, was awarded, and I was instructed to prepare new plans and specifications for a lock 600 feet long, 50 feet wide, 30 feet lift and with 20 feet of water in the mitre sills, and a pair of intermediate gates dividing the lock into two chambers, one 375 feet and the other 225 feet long.

Tenders for this new scheme were called for in January last, but no contract has been awarded at the time of writing.

PONTON GATES.

A sum of \$20,000 was appropriated under the above head towards providing a patented gate to be tried on Côte St. Paul lock. It is the invention of Mr. C. N. Dutton, C.E., of New York, and consists of a strong steel structure in the shape of an arc of a circle spanning the entire width of the lock. When placed in position it will add about 50 feet to the length of the chamber. Should a tail gate be inserted at the lower end of the lock the total length gained would be in the neighbourhood of 150 feet. Some years ago Mr. C. N. Dutton made a proposition to the Minister of Railways and Canals to so lengthen all the locks on the St. Lawrence and Welland canals, the cost per lock to be between \$60,000 and \$70,000.

This gate is to be tried on one of the locks on the Lachine canal, provided a similar one built by Mr. Dutton for the Erie canal would prove satisfactory.

Owing to the conditions of the metal trade in the United States for the last two years, the gates intended for the Erie canal could not be finished in time for a trial last summer as promised. It was, however, inspected in November, 1900, by Mr. L. G. Papineau and myself at the Edgemoor Bridge Works, where it was being constructed and there seems to be no doubt that it will prove to be a practical and satisfactory method of lengthening our locks at a moderate cost.

POWER-HOUSE AND ELECTRIC STATION.

The new electric station for the Lachine canal is located at the Côte St. Paul lock. It will consist of a brick building 38 feet 6 inches x 45 feet, resting on concrete and masonry foundations. At the north-west corner a semi-detached tower from which the various lines transmitting the power and the light to the locks and bridges from Brewster's bridge to the end of the long entrance pier at Lachine will issue.

The foundations were built by day's labour and carried above water level before the 1st of May last; the balance up to the level of the main floor was finished towards the end of May.

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The upper or brick part of the building is being erected under contract by Messrs. J. B. Gratton & Co.

The hydraulic machinery consisting of two 60-inch turbines to drive the generators, and a smaller wheel for the exciter is now in position. These with two water wheel regulators have been supplied by the Wm. Kennedy & Sons, Ltd., of Owen Sound.

A wooden flume to carry the water from the upper reach to the turbines, a distance of 305 feet, was built during April, 1901, the contractors being Messrs. O. Martineau & Son.

Two more contracts have been awarded in connection with the electric installation, one for the electric machinery, controlling and distributing apparatus, as well as arc and incandescent lamps to the Canadian General Electric Company; the other for poles, wire, cables and erection of the distributing lines from Brewster's bridge to the end of the entrance pier at Lachine, a distance of seven miles, to Messrs. Ahearn & Soper, Ltd., of Ottawa.

The work under these two contracts was progressing at the close of the fiscal year.

SLOPE WALLS ABOVE CÔTE ST. PAUL.

This work is under contract with Mr. J. B. de Lorimier since October, 1899.

The portion of the walls below water line can only be repaired during the short time, when the canal is unwatered every spring; the completion of the work may, therefore, be delayed several years.

The repairs on the north bank of the canal are in a fair state of progress and should be very nearly completed before July, 1902. The south side has not been touched yet.

DEEPENING RIVER ST. PIERRE.

I have much pleasure in reporting this work, as completed, and in stating that the effect of the deepening has already been felt in a very satisfactory manner. There were no complaints about flooding by the stream last spring, and the chances are that little will be heard of River St. Pierre until such time as the ever increasing pollution of its waters by the various kinds of refuse discharged into them by factories and municipalities, will have rendered it a menace to public health.

The work was done under contract by Messrs. Brewder & McNaughton. Mr. L. G. Papineau was in charge of the various works above described, except the regulating weir at Lachine.

DEEPENING BETWEEN LOCK NO. 2 AND LOCK NO. 3.

This work is steadily going on. The bulk of the dredging last year was done in the St. Gabriel basins; basins Nos. 1 and 2 are now deepened to 15 feet.

A large quantity of material was also excavated during May and June last in connection with the rebuilding of the south wall of basin No. 2 from Black's bridge westward.

A good deal of difficulty is experienced in disposing of the excavated material. A large quantity of it was deposited on the north bank of the canal at St. Henri and on the south bank of Côte St. Paul. The town authorities have agreed to remove it free of charge and are to use it in raising and improving their streets.

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LAKE ST. LOUIS CHANNEL.

As reported last year, this work was completed during the month of June, 1900.

The engineering staff, however, was engaged all last summer and winter cross-sectioning the channel, and preparing the final estimate, as well as a second set of cross-sections showing the actual depth of the channel.

Soon after the opening of navigation last spring the necessary spar buoys were placed in such position as to clearly indicate both sides of the new channel, and two large gas buoys anchored at the turning points.

The gas tanks ordered for the two range lights at the Lachine wharf were put in position late last fall. They are $4\frac{1}{2}$ feet in diameter and 7 feet high. The lights in the towers are pulsating ones, the period being 10 seconds bright and one second dark. The channel can now be navigated with perfect safety day and night.

During May last, the depth of the new channel was thoroughly tested with the sweeping scow belonging to the Montreal harbour commissioners. The lower portion was found to be free from any obstruction, but a few boulders were located immediately below the Dorval shoals. They were undoubtedly carried into the cut by moving ice. These boulders are now being removed by the canal dredge.

REBUILDING WALL AT BASIN NO. 2.

Work on this wall could only be resumed on the 19th April, owing to high water in the St. Lawrence, which at times backs up into the canal as far as lock No. 3. It was continued until the end of the month, 250 feet of the new wall being built up to the bottom of the old one.

REPAIRS TO VESSELS.

Besides the usual overhauling of the vessels composing the canal dredging fleet, a considerable amount of work was done in connection with the tug *Frank Perew*, lately added to the fleet. On examination of it last fall, it was found that its hull had to be almost entirely removed. This work, as well as a general overhauling of the machinery, was completed in time for the opening of the season. The boiler, however, was only temporarily repaired as it was found to be so far gone, that a new one will have to be procured next winter. When this has been done the tug will be in perfect condition.

The wooden boom of the floating steam derrick being no longer safe was replaced by a steel one 70 feet long, and steel wire rope substituted for the heavy and cumbersome hoisting chain formerly used. In addition to the above changes, a pair of swinging engines operated independently of the main engine was placed on the derrick thus increasing its capacity in a very marked manner.

WRECKING SCOW.

This scow is intended for use in repairing breaks on any of the canals in this division. It is 56 feet long, 22 feet beam and 5 feet deep. Part of the deck is covered over by a cabin 30 feet x 17 feet wherein the following machinery, &c., has been placed: A twenty-five horse-power boiler, a hoisting engine, a 6-inch centrifugal pump, a portable forge, ropes, pulleys, jack-screws, steam fittings, spikes, nails, blacksmith's and carpenters' tools, &c.

It is to be kept in the Lachine canal, and can at very short notice be towed up to any point where a break-down has taken place, thus doing away with delays in getting together the necessary appliances required for repairs.

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The deepening of the canal between locks No. 2 and No. 3, the rebuilding of the wall on the south side of basin No. 2, the finishing of the work on Lake St. Louis channel, the repairing of the dredging fleet vessels, and the building of the wrecking scow were in charge of Mr. L. S. Pariseau.

BEAUHARNOIS CANAL.

Length, $11\frac{1}{4}$ miles ; 9 locks, 200 feet x 45 feet ; 9 feet of water on sills ; total rise, $82\frac{1}{2}$ feet.

Since the opening of the Soulanges canal to navigation, the traffic through the Beauharnois canal has been very light, a few market boats only using it. The day will soon come when it will have to be permanently closed. A number of bridges, roads, &c., will, however, have to be maintained by the department unless the whole canal were leased for industrial purposes.

REPAIRS AND RENEWALS.

The canal locks, bridges, banks, buildings and other structures were kept in good repair throughout the year. The waste weir at lock No. 10, which had been carried away in 1899 and had been replaced by a temporary timber one was rebuilt during last spring, the old stone being used.

A large quantity of stone was deposited along the road on the Hungry Bay dyke, and a considerable portion of the said road freshly macadamized last spring.

SURVEYING AND MARKING LAND BOUNDARIES.

During the month of June last, boundary stones were planted, marking the property purchased last year by the department along both sides of the Hungry Bay dyke. This has been a long and tedious work on account of the heavy spring rains, whereby the swampy lands along the dyke have been kept full of water.

PROTECTION DYKE ALONG THE SOUTH SHORE OF LAKE ST. FRANCIS IN THE PARISH OF STE.
BARBE.

This work is now completed, except the refilling of some of the pits, where clay for the dyke was taken. The farmers can now undertake the draining of their lands and do the necessary filling when required. The dyke is 12,297 feet long, $4\frac{1}{2}$ feet wide and averages about 5 feet in height.

PROTECTION WALLS ON THE NORTH SHORE OF LAKE ST. FRANCIS.

These walls were completed by Messrs. Dussault & Pageau, contractors, during the fall of 1900.

A gap was left on the front of the farm of Mr. McKie, who refused to give the necessary right of way over his land, because he considered the wall as built too weak to last.

The portions built, however, have sustained the test of the winter and of last spring's flood without showing any sign of weakness, and I am satisfied that it can be kept in good repair by the farmers whose property has been thus protected at a very small cost.

The total length of the walls is 3,903 lineal yards.

Mr. L. S. Pariseau superintended the building of these walls, and of the dyke on the opposite side of the lake, as well as the planting of the boundary stones at Hungry bay.

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CHAMBLY CANAL.

Length, 12 miles ; 9 locks, 118 feet x $22\frac{1}{2}$ feet ; $6\frac{1}{2}$ feet of water on the sills ; total rise 74 feet.

Navigation was uninterrupted on this canal during the year.

REPAIRS AND RENEWALS.

Outside of the ordinary works of maintenance, the following repairs and renewals were executed during the year :—

Lock No. 4.—The upper sill was raised and the foundations rebuilt with concrete as well as the lock gate platform.

Lock No. 6.—The lower sill was treated in the same manner as the upper sill of lock No. 4.

Waste Weir No. 2.—This waste weir which is 75 feet long was almost entirely rebuilt, concrete being used in the abutments.

Bridge No. 1.—The abutments on the towpath side were rebuilt.

Bridge No. 2.—One abutment was rebuilt.

Guide Pier at St. Johns.—The filling of the top of this pier with gravel in lieu of the old planking was completed during the year, and the west side of the pier sheeted with 4-inch tamarack. The two boom piers immediately above the guide pier were taken down and rebuilt.

Wharf at Chambly.—A part of this wharf, 208 feet long, was taken down and rebuilt last fall.

Boundary Stones on Ste. Thérèse Island.—A strip of land from 4 to 27 feet wide was purchased a couple of years ago for the purpose of widening the towing path. The fence along that strip had been built in 1899-1900, but the boundary stones were only laid during last year.

Iroquois River Bridge.—This bridge is on the public road alongside of the canal. The old cribwork abutments were removed and concrete ones resting on piles substituted. The superstructure consists of strong iron girders and iron railings.

Both approaches were raised and macadamized. The work was completed in May last.

ST. OURS LOCK AND DAM.

Length of canal, $\frac{1}{2}$ mile ; one lock 200 x 45 feet ; 7 feet of water on the sills ; total rise, 5 feet.

There was no interruption to navigation at this point last year.

The lock and its approaches, as well as the grounds, buildings, fences, &c., were kept in good repair during the year.

Between Chambly and Sorel, the Richelieu river is provided at various points with land marks, beacons, &c., indicating the channel. Most of them are in a state of decay, and it is a question as to whether the Department of Railways and Canals or the Department of Public Works, or again, the Department of Marine and Fisheries, should restore and maintain them.

In the absence of instructions with regard to these land marks and aids to the navigation, I think it my duty to call your attention to their present condition and to state that they should be attended to without delay.

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REPAIRS TO DAM.

The St. Ours dam in connection with the lock at this point, is a cribwork structure 690 feet long, 30 feet wide and about 15 feet high. The superstructure of it, and the covering especially, had become considerably decayed and worn out so that a large quantity of water went through it lowering the level above the structure in a very appreciable manner. To remedy this state of things, it was decided to rebuild the superstructure of the dam, and to this effect a contract was awarded to Messrs. Fynn & Filion on the 29th September, 1900. The contractors commenced operations shortly after and at the close of navigation had some 200 feet of the dam completed, except the covering. A sudden rise in the river, however, prevented their finishing it, and until the close of the fiscal year, the state of the water did not permit the work to go on.

The repairs will be completed during the fall of 1901, under the supervision of Mr. L. S. Pariseau.

OTTAWA RIVER CANALS.

STE. ANNE'S LOCK.

Length of canal, $\frac{1}{2}$ mile ; one lock 200 x 45 feet ; 9 feet of water on sills ; total rise, 3 feet. Old lock still available, 200 x 45 feet ; 6 feet of water on sills ; total rise, 3 feet.

Navigation at this point was uninterrupted during the last fiscal year.

All the structures in connection with the lock were kept in a good state of repair, and the following works were executed beyond ordinary maintenance :—

The south face of the pier on the south side of the lock was rebuilt on a length of 200 feet and the filling raised a couple of feet.

The puddle trench commenced the year before in order to staunch the south wall of the old lock, was continued a length of some 30 feet being done.

The roof of the overseer's house was covered with Canada plate.

CARILLON AND GRENVILLE CANALS.

Carillon Canal.—Length, $\frac{3}{4}$ miles ; 2 locks, 200 x 45 feet ; 9 feet of water on sills ; total rise, 16 feet.

Grenville Canal.—Length, $5\frac{3}{4}$ miles ; 5 locks, 200 x 45 feet ; 9 feet of water on sills ; total rise, $43\frac{3}{4}$ feet.

Both these canals are under one overseer. They are separated by a stretch of navigable river about five miles long, and between them is to be found the old Chute-à-Blondeau lock which has been abandoned since the completion of the dam at the head of the new Carillon canal in 1883, the rise at that point having been practically obliterated.

M. H. G. Simpson, having sent in his resignation as superintendent of these canals on December 12, 1900, Mr. James B. Cushing was appointed overseer in his place on February 1, 1901. Mr. Francis J. Lynch, resident engineer filling the position during the interregnum.

REPAIRS AND RENEWALS.

Beyond ordinary repairs little was done on these canals during the last fiscal year. A couple of scows to be used in connection with the gate lifting apparatus.

Two of the boom-piers at the upper entrance to the Carillon canal were rebuilt from the water line to the top, and a piece of dry wall about 150 feet long, 13 feet high was built on the north side of the upper approach to Lock No. 6, by which this approach was considerably improved.

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The lower approach will be attended to in the course of next winter, the necessary stone for the walling to be done having been purchased last fall.

GUIDE PIER AT THE UPPER ENTRANCE.

The work contemplated here is the renewal of the upper part of the pier concrete being substituted for the old timber work.

The pier is about 800 feet long, 30 feet wide and stands about 16 feet above normal low water.

Messrs. Martineau, Fils & Lemoine, signed the contract for the work on April 30, 1901, but had not commenced operations at the close of the fiscal year.

Mr. Francis J. Lynch is in charge of the above works.

GRENVILLE CANAL ENLARGEMENT.

As stated in my last annual report, this work was completed by Messrs. Piggott & Ingles, contractors, in May, 1900.

The details of final estimate were forwarded to you on March 1, 1901.

The widening of the section now completed has proved quite an improvement, especially as regards the approaches to lock No. 5, and the cutting off of a point above the lock which had always been a serious obstacle to navigation.

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

ERNEST MARCEAU,

Superintending Engineer, Quebec Canals.

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QUEBEC CANALS.

Opening and closing of navigation.

	Closing.	Opening.
	1900.	1901.
Lachine Canal	3rd December.....	1st May.
Beauharnois Canal.....	1st "	17th "
Chambly Canal.....	4th "	2nd "
St. Ours Lock	3rd "	25th April.
C. & G. Canals	30th November	29th "
St. Anne's Lock	28th "	24th "

LACHINE CANAL.

STATEMENT of Fines and damages collected during the fiscal year ending the 30th June, 1901.

Date.	Name of Vessel.	Name of Owner.	Fines.	Total.
1900.			\$ cts.	\$ cts.
Oct. 26....	Str. <i>Alexandria</i>	E. B. Smith	10 00	10 00
1901.				
May 31....	Tug <i>Plover</i>	Is. Clement	5 00	5 00
June 22....	" <i>May</i>	"	5 00	5 00
		Totals.....	20 00	20 00

LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of old Lock No. 1, at lower entrance and old Lock No. 5, at upper entrance, during the fiscal year ended June 30, 1901.

MONTHS.	OLD LOCK NO. 1, LOWER SILL.		OLD LOCK NO. 5, UPPER SILL.	
	Highest.	Lowest.	Highest.	Lowest.
1900.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
July.....	19 4	16 11	12 6	11 1
August.....	17 9	16 3	11 8	10 8
September.....	16 2	15 7	10 8	10 2
October.....	16 4	15 5	10 6	10 0
November.....	18 8	15 0	12 2	9 10
December.....	29 3	16 1	11 8	10 4
1901.				
January.....	29 2	25 9	12 1	9 9
February.....	26 10	24 5	11 8	9 4
March.....	27 1	23 6	11 9	8 10
April.....	39 8	22 9	14 10	11 3
May.....	22 10	19 3	14 9	12 8
June.....	19 10	17 6	13 3	11 8

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LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of new Lock No. 1, at lower entrance and new Lock No. 5 at upper entrance, during the fiscal year ended June 30, 1901.

MONTHS.	NEW LOCK NO. 1, LOWER SILL.				NEW LOCK NO. 5, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1900.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July.....	21	6	19	1	17	6	16	1
August.....	19	11	18	5	16	8	15	8
September.....	18	4	17	9	15	8	15	2
October.....	18	6	17	7	15	6	15	0
November.....	20	10	17	2	17	2	14	10
December.....	31	5	18	3	16	8	15	4
1901.								
January.....	31	4	27	11	17	1	14	9
February.....	29	0	26	7	16	8	14	4
March.....	29	3	25	8	16	9	13	10
April.....	41	10	24	11	19	10	16	3
May.....	25	0	21	5	19	9	17	8
June.....	22	0	19	8	18	3	16	8

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 6, at lower entrance, and Lock No. 14 at upper entrance, during the fiscal year ended June 30, 1901.

MONTHS.	LOCK NO. 6, LOWER SILL.				LOCK NO. 14, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1900.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July.....	11	8	10	9	11	10	11	5
August.....	11	3	10	8	11	6	11	2
September.....	10	7	10	0	11	5	10	11
October.....	10	3	9	10	11	2	10	6
November.....	10	11	9	9	11	7	10	5
December.....	10	8	10	2	11	6	10	8
1901.								
January.....	14	10	10	10	11	11	11	3
February.....	16	4	14	0	11	6	11	0
March.....	14	1	13	0	11	10	10	6
April.....	14	7	13	4	12	4	11	4
May.....	13	10	12	2	11	10	11	2
June.....	12	7	11	5	11	11	11	2

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CHAMBLY CANAL.

STATEMENT showing the depth of river water on the mitre sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the fiscal year ended June 30, 1901.

MONTHS.	LOCK NO. 9. LOWER SILL.				LOCK NO. 1. UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1900.								
July	11	5	9	11	9	7	8	6
August	9	11	9	0	8	7	8	0
September	9	3	7	9	8	5	7	4
October	8	7	7	8	8	0	6	10
November	14	1	8	3	9	5	7	0
December	13	11	11	0	9	9	8	0
1901.								
January	15	10	12	6	9	6	8	9
February	17	5	15	1	9	1	8	8
March	16	8	13	3	10	2	8	5
April	24	11	16	11	12	10	10	2
May	18	7	15	1	12	7	11	1
June	15	1	12	7	11	2	9	11

ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of St. Ours Lock, during the fiscal year, ended June 30, 1901.

MONTHS.	LOCK NO. 1. LOWER SILL.				LOCK NO. 1. UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
1900.								
July	11	8	9	6	9	7	8	7
August	9	8	8	3	8	7	7	10
September	8	2	7	4	8	0	7	3
October	8	8	7	0	8	9	7	6
November	11	7	6	10	12	0	8	6
December	11	10	9	11	10	2	9	3
1901.								
January	11	3	9	3	9	5	7	10
February	10	2	8	8	8	7	7	7
March	15	7	8	6	12	0	7	10
April	25	3	15	9	21	2	12	2
May	17	9	13	5	14	6	11	10
June	13	8	11	0	12	0	10	4

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STE. ANNE'S LOCK.

STATEMENT showing the depth of river water on the mitre sills of the Ste. Anne's Lock, during the fiscal year, ended June 30, 1901.

MONTHS.	LOCK NO. 1. LOWER SILL.				LOCK NO. 1. UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1900.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July.....	12	5	11	1	14	7	11	11
August.....	11	8	10	7	13	5	11	10
September.....	10	7	10	2	11	9	11	2
October.....	10	5	10	1	12	1	11	9
November.....	11	9	10	0	13	2	11	5
December.....	11	7	10	5	12	7	11	4
1901.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
January.....	12	2	10	9	11	5	11	2
February.....	11	7	9	11	11	6	10	5
March.....	11	9	9	4	11	8	10	3
April.....	15	1	11	5	17	6	11	8
May.....	14	5	12	9	17	2	14	9
June.....	13	3	11	9	15	2	13	0

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 June 30, 1901.

MONTHS.	LOCK NO. 1, LOWER SILL.				LOCK NO. 2, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1900.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July.....	16	2	13	1	16	4	13	4
August.....	14	7	13	0	14	10	12	8
September.....	12	11	12	2	12	10	12	0
October.....	13	3	12	10	13	7	12	5
November.....	14	10	13	0	14	7	12	5
December.....	14	5	12	9	13	7	12	5
1901.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
January.....	13	2	12	10	17	8	13	5
February.....	13	2	12	4	17	8	14	1
March.....	13	6	11	7	14	0	11	4
April.....	19	9	13	4	20	0	12	2
May.....	19	3	16	5	19	10	16	11
June.....	16	11	14	0	17	7	14	3

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GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Locks Nos. 3 and 7, Grenville Canal, during the fiscal year ended June 30, 1901.

MONTHS.	LOCK NO. 3, LOWER SILL.				LOCK NO. 7, UPPER SILL.			
	Highest.		Lowest.		Highest.		Lowest.	
1900.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	20	0	16	2	17	2	13	9
August	18	1	15	5	15	6	13	0
September	15	5	14	6	12	10	12	0
October	16	3	15	0	13	8	12	9
November	17	6	15	3	15	8	12	4
December	17	0	15	6	13	11	12	8
1901.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
January	20	0	15	8	12	8	10	10
February	23	7	19	5	10	10	9	10
March	21	7	16	0	10	6	9	5
April	24	9	16	8	21	0	11	0
May	24	6	20	7	20	10	17	8
June	21	4	17	3	18	6	14	8

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TRENT CANAL.

PETERBOROUGH, August 30, 1901.

SIR,—I have the honour to submit the annual report on the works on the Trent canal under my charge for the fiscal year ending June 30, 1901.

The Trent canal is a term applied to the several water stretches lying for the greater part along the valley of the Trent river, between the Bay of Quinté, on Lake Ontario and Georgian bay, on Lake Huron, which, however, in their present condition does not form a continuous line of navigation. The object of the works at present going on is to connect these several water stretches by short canals so as to form a continuous line of land-locked navigation from Lake Huron to Lake Ontario. A glance at the map of the district will show how comparatively small the length of waterway to make or improve is to the length already provided by nature in the way of its beautiful and deep lakes and rivers. The total distance between Lake Huron and Lake Ontario is about 200 miles. By utilizing the numerous lakes and rivers and taking advantage of the natural features of the land to make flooded reaches, it is hoped that not more than 15 or 20 miles of the total length will be actual canal. The Imperial government as far back as the year 1835 chose this route as being the most natural and feasible to make a water communication between Lake Ontario and Lake Huron and they spent considerable sums in carrying out this project, and in fact a sufficient sum of money was voted by the government at that time, to construct that part of the work lying between Lake Ontario and Balsam lake. The works then constructed have ever since been used for local traffic.

When the two divisions at present under construction are completed, a continuous line of navigation between Heeley's falls and the ports on Lake Simcoe, a distance of about 160 miles, will then be available. Though a draught of six feet is provided on all the sills the lands necessary to flood for a draught of eight feet, has been purchased on the new sections at present under construction, so that if required a draught of eight feet could be provided at a comparatively little extra cost.

MAINTENANCE.

Navigation closed on the upper reach November 26, 1900, and opened April 22, 1901. On the lower reach navigation closed November 26, 1900 and opened April 27, 1901.

The height of water on the mitre sills of the locks was very fair throughout the season, though there is still room for much improvement in regard to the regulation of the water on the different reaches. The regulation of the water is under three different managements, namely, the Dominion government, the Ontario government and the lumbermen, consequently it is not surprising that there are complaints regarding the management of the water during the dry season. Owing to the immense country drained and the country becoming every year more cleared, the proper regulation of the water becomes more difficult. The regulation of the water also between Peterborough and Lakefield is, under the present circumstances, very unsatisfactory. Owing to the mills at Lakefield using all the surplus water, any temporary stoppage in the mills almost stops the entire flow, in consequence of which the mills below are often stopped for a time. If the mill-owners at Lakefield were to notify the caretaker of the dam at Lakefield when it was necessary to stop temporarily for repairs, the cause of complaint would be removed.

With reference to the water supply it is not generally known that such a vast system of reservoirs exists as there are in the country to the north of the direct route of the canal. From a recent survey of these reservoirs it was ascertained that there

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are over fifty dams at present constructed which control about 70,000 acres of water in which over 25 billion cubic feet of water can be stored, not considering the large quantity that could also be stored by many new dams which could be constructed but which do not at present exist. The proper storing and regulating of the large quantity of water above referred to is a most important matter, not only to navigation but to the vast commercial interests that are located along the valley of the Trent.

The total number lockages for the season was 4,328, though this does not fairly represent the traffic on the canal, as owing to many of the longer routes of the steamers not passing through a lock, no record of the traffic is kept. There are thirty steamers engaged in commerce on the reach between Lakefield and Balsam lake besides a large number of small steamers belonging to private individuals.

There are seven steamers on the reach between Peterborough and Heeley's falls and several on Lake Simcoe. Many of the larger steamers are of considerable size some of them carrying as many as 450 passengers.

REPAIRS.

The following repairs were executed at the different stations.

CHISHOLM'S RAPIDS.

The dam at this station is in such a bad condition that it would be a waste of money to repair it. A new dam is required.

HEELEY'S FALLS.

The only works at this station is a dam which is made up of two sluice ways and 451 feet of flat tumble dam. An appropriation was made at the last session of parliament for the construction of four new sluice ways in this dam, in order that more control may be had over the water in the reach between Heeley's Falls and Hastings. This work is being proceeded with at the present time.

HASTINGS.

The lock walls were pointed and some small repairs were done to the swing bridge. The dam, which was a very old structure, was repaired by removing part of the old flat tumble dam, and constructing three new sluiceways in place of it. The construction of these new sluiceways has been a great improvement as it gives much greater control of the water during the spring freshets. When the new sluiceways are constructed at Heeley's Falls, the facilities for regulating the water at these two stations will be about as perfect as can be.

PETERBOROUGH.

The lock walls were pointed and minor repairs were done to the dam which is in a very bad condition. An appropriation has been made for the construction of a new dam. The lock gates are very old and leak badly, but new gates are to be constructed this year.

OTONABEE RIVER.

The new channels which were dredged were buoyed out and the river was snagged.

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LAKEFIELD.

New stop-logs were provided for the dam and the platform of the dam was repaired.

YOUNG'S POINT.

The Lakefield Portland Cement Company were about to construct a large power house below the dam, through the two west sluices, of which the water passed through to the power house. The dam was in a leaky condition and the company asked that the dam be put in a suitable condition to correspond with their work. An appropriation was made for this purpose, and the portion of the old dam in front of the power house was removed, and a new concrete dam with four sluices was constructed in its stead. The foundation of the concrete cut-off, below the stop-log sills, was excavated to the rock and all the sluiceway piers were excavated to the solid bottom.

STONY LAKE.

The buoys marking the navigation channel were painted and some new buoys were added. These buoys are constantly being removed by the drives of logs passing down the channel, and some stringent measures will have to be taken to prevent the removal of these buoys by the carelessness of lumbermen.

BURLEIGH.

The swing bridge was repaired and the platform over the dam was partly re-floored; some stop-logs were supplied for the dam.

LOVESICK.

The works at this station are in good repair. The lock gates were painted and some minor repairs were done to the dams.

BOBCAYGEON.

The lock and canal are located on limestone rock, through which run fissures in every direction. A great deal of money has heretofore been spent on this lock and canal in order to make them water-tight. A cut-off wall of concrete was run at right angles to the line of the canal at a distance of about 50 feet above the lock. A trench for this wall was excavated to the solid rock on the bottom, and run into the solid material on the sides. A wall of concrete was placed in this trench. Short side walls and a floor of concrete connect the lock with the cut-off. A most satisfactory job has been done and the heavy draft at this lock has been stopped for the first time. The power flume at the south side of the lock was also re-floored and the lock wall between the lock and flume was caulked.

The swing bridge was painted and the track on the pivot pier was lined up.

INCOME.

The following work chargeable to income was executed :—

OTONABEE RIVER.

The navigation channel at 'Yankee Bonnet' was dredged for a width of eight feet and a depth of six feet. The channel was also buoyed out.

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KATCHAWANNOE LAKE.

The channel at the 'Three Islands' was widened and straightened to a width of eighty feet and a depth of seven feet.

BUCKHORN.

The channel through the sawdust shoal below the lock was dredged for a width of one hundred feet and a depth of seven feet and buoyed out.

FENELON FALLS.

Five guard piers, sixteen feet square, were built at the upper entrance to the canal, on which were placed a double line of timbers which form a guard at this point.

CAPITAL.

Construction.

Section No. 1, Simcoe—Balsam lake division. The contract for this work was awarded to Andrew Onderdonk on April 22, 1895. There was only a small amount of work remaining to be done at the date of my last report, and this has been satisfactorily completed.

Section No. 2, Simcoe—Balsam lake division. The contract for this section was awarded to Messrs Larkin & Sangster, on September 7, 1900. The work on this section is being prosecuted with energy, and a large force of men are employed in excavating. No structural work has so far been done.

Section No. 3, Simcoe Balsam lake Division. The contract for this section was awarded to Messrs. Brown & Aylmer, on September 6, 1900. This firm are making fair progress with their work. The only work so far are clearing, excavating and fencing. No concrete work has been done up to the end of the fiscal year.

Section No. 1, Peterborough—Lakefield division. The contract for this section was awarded to Messrs. Brown, Love & Aylmer, on August 19, 1895. This section is about in the same condition as it was at the date of my last annual report. The only work to be done is the completion of the dredging in the channel below lock No. 1, at Lakefield. The dredge was not obtained by these contractors till late last fall and only one cut was made. The high water this spring prevented an early start being made this season. This work should be completed by the end of October.

Section No. 2, Peterborough—Lakefield division. The contract for this section was awarded to Messrs. Corry & Laverdure, on May 21, 1896, and the time for completion was fixed by this contract on November 1, 1897. As has been reported so often before, the progress being made on this section is very slow. From the mode of operations adopted by this firm, it is difficult to say when this contract will be completed. About the only works remaining to be done is in connection with the hydraulic lock. The main retaining wall is up about three-quarters of the completed height and the wing walls are the same level. The east and west chamber walls are completed and work on the centre walls is being proceeded with. On an average only about 150 yards of earth per day is being excavated by the steam shovel whose capacity should be about 1,000 cubic yards per day.

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Press Wells.

The contract for the excavation and the foundations of the main press wells for the hydraulic lock was awarded to Messrs. Corry & Laverdure, on January 15, 1900, and they were to be completed on May 1, following. This contract has been satisfactorily completed with the exception of a small part of the tops of the wells which are delayed in order to make a proper junction with the floor when it is put in.

Hydraulic Lock.

The contract for the steel work in connection with the hydraulic lock was awarded to the Dominion Bridge Company. The date in the contract calling for the completion of this work was May, 1900, but owing to the concrete work nor the press wells not being completed it was impossible to commence the erection of the steel work. Only such parts of the steel work as is to be embedded in the concrete has so far been supplied. This includes the Taylor Air Compressor, which is almost completed. A great part of the required material has been delivered on ground leased to the government on which an advance has been made to the contractor.

Port Hope Route.

The surveys, plans and estimate of the cost of the proposed route via Port Hope has been completed and forwarded to the department.

Plant.

The dredge *Otonabee* was employed continuously throughout the year. Up to the end of September the dredge was loaned to the Department of Public Works for deepening the navigation channel at Lindsay. For the balance of the season it was leased to the contractors, Messrs. Brown, Love & Aylmer for excavating the channel below Lakefield.

The dredge *Trent* was employed for a great part of the season in removing the shoals in the Otonabee river, between Peterborough and Wallace Point bridge.

Tug 'Empire.'

The tug *Empire* has been fully employed throughout the year at hauling scows of dredged material from the dredge, buoying out the navigation channel, delivering timber, gravel and stone for the various works of repair along the route.

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

RICH. B. ROGERS, M. Ins., C.E.,
Superintending Engineer.

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

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STATEMENT showing the Highest and Lowest Water level at each Lock on the Trent Canal for the fiscal Year ended June 30, 1901.

[illegible]

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RIDEAU CANAL.

SUPERINTENDENT ENGINEER'S OFFICE,

OTTAWA, July 4, 1901.

SIR,—I have the honour to submit herewith, my annual report on the Rideau canal, under my charge, for the fiscal year ended June 30, 1901.

Navigation closed at Ottawa, November 29, 1900.

“ “ Kingston Mills, November 24, 1900.

“ opened at Ottawa, May 1, 1901.

“ “ Kingston Mills, May 1, 1901.

The depth of water maintained in the various levels throughout the whole season of navigation was excellent ; no trouble on account of low water having occurred anywhere.

The freshet this spring was exceptionally violent, and the ice, which was unusually thick, moved out before it was honeycombed, and caused considerable damage to our works at various stations (as will be detailed below, under separate headings) ; but I am glad to be able to report that we were able to repair the damage without any delay to navigation.

The principal works and repairs performed along the line of the canal, at the various lock stations, is as follows :—

OTTAWA.

One pair of lock gates was renewed in lock No. 3. Portion of the coping on the east side of lock No. 8 was taken up and renewed, it being the intention to renew the west side this year. Some of the hollow quoin copings were also renewed ; and we have a few more of these stone, ready cut, and they will be put in this year. The roadway round the basin wharfs was repaired, and the planking of the wharfs was renewed in places where it required it. A large number of boulders were removed from the basin, and the life-saving chains round the face of the wharfs and approaches to the locks were overhauled and repaired.

STEWARTON SWING BRIDGE.

The pivot and the two rest piers of the bridge were rebuilt from low water mark up, and the protection piling up and down stream from the bridge piers, being worn out, was cut down and open cribwork substituted therefor ; and sundry small repairs made to some of the bents, flooring, and handrailing of the bridge ; the work having been done by our own carpenters.

HARTWELL'S LOCK STATION.

Sundry small repairs were made to this station, and the tow path road was gravelled and repaired in places.

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HOG'S BACK LOCK STATION.

Considerable damage was done to this station by the ice during the late freshet. One of the bents in the east bulkhead was carried away (rendering it impossible to put in the stoplogs until it was replaced), and the protection boom was broken in four places. The damage has been repaired without delay to navigation, however. The long cribwork pier below the west bulkhead was renewed, as well as portion of the planking of the apron below the same. Small repairs were made to the swing bridge ; and some gravel was placed on the tow path road. Some winter sash were purchased for the lock house. The chamber wall on the west side of the lower lock will have to be taken down and rebuilt next winter. This wall has bulged out to a dangerous extent, and has for many years been held in place by iron rods passed through the stone, being fastened at the back into cribwork. Last summer I had test pits sunk to ascertain the condition of the timber, and found it completely rotted away, so that the lock wall has now no support therefrom.

BLACK RAPIDS LOCK STATION.

Four ice breaker cribs, with a triple boom connecting them were built here. This had the effect of preventing much damage being done by the ice, although the boom was broken, but not before it had served its purpose. The down stream side of the long retained dam was replanked with 4-inch plank, and repairs were made to the bulkhead and station in general.

LONG ISLAND LOCK STATION.

The two wing walls of the upper lock were taken down and rebuilt as far as the gate recesses, the work having been done by our own mason, and the stone having been taken out and cut by them last summer, in Elgin quarry: One pair of lock gates were renewed, one pair of new swing beams were put on, and four new chain blocks put in place. A considerable quantity of clay was put in front of the bulkhead, the pockets of which were washed out. The masonry of the locks is gradually being grouted with Portland cement ; but as a very large quantity of this will be required, it is being done year by year. The upper sill of the upper lock, and one of the lower piers of the middle lock will require to be rebuilt soon, but there is no immediate necessity for this ; and it will be attended to in due course.

MANOTICK BRIDGE.

Small repairs to the planking were made from time to time by the bridge tender. One of the trusses of one of the small spans gave way last fall, but was repaired at once without any delay to travel. Provision has been made in the current estimates to rebuild the whole bridge (excepting the swing span, which is comparatively new), this coming winter.

WELLINGTON BRIDGE.

Small repairs to the planking, painting, &c., were made by the bridge tender.

BECKET'S LANDING BRIDGE.

Small repairs made by the bridge tender. This bridge is getting old now, and in another year will require to be entirely rebuilt.

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BURRITT'S RAPIDS LOCK STATION.

Sundry small repairs were made to the station in general. Some gravel was placed on the dam and bulkhead repaired.

NICHOLSON'S LOCK STATION.

The lock gates and swing bridge were painted, some gravel was placed on the dam, and sundry small repairs were made to the station in general.

CLOWES' LOCK STATION.

One pair of lock gates were renewed. The center bent of the waste weir was carried away by the ice during the late freshet, but 30-foot stoplogs were put in, instead of two sets of short ones, so navigation was not delayed. As the weir at this station is particularly exposed to the full force of the freshet each spring, I think that it would be best to leave it as it is at present with long stoplogs, instead of rebuilding the bent in the centre, as the latter is liable to be carried away every spring.

MERRICKVILLE LOCK STATION.

One pair of lock gates were renewed. The north waste weir was entirely built by our own carpenters. The south wall of the upper basin, which failed last spring, was rebuilt by our masons, the stone being supplied by contract with Mr. A. White, of Burritt's Rapids. Portion of the station was grouted with Portland cement; but as at other stations, this has to be done year by year. Two sheds (one for cement, and the other for our portable engine) were erected complete by Mr. Alex Mills, of Merrickville, for the sum of \$150. As the masonry at this station requires a large amount of repairs, these sheds will be required for some years to come. The freshet this spring took out four or five stones from one of the lower courses of the bridge across the by wash, but they will be replaced as soon as the water falls low enough to do the work.

MAITLAND'S LOCK STATION.

Small repairs were made to the station, and to the dry wall above the lock.

EDMOND'S LOCK STATION.

Sundry small repairs were made to the station. The ice this spring damaged the stone dam and weir; but this will be repaired in due course, there being no danger to navigation.

OLD SLY'S LOCK STATION.

The bulkhead was entirely renewed. Two pairs of sluice frames were put in, and sundry small repairs were made to the station in general.

SMITH'S FALLS COMBINED LOCK STATION.

One pair of lock gates were renewed. The basin bulkhead was rebuilt, and two foot-boards placed on the middle lock gates. A granolithic sidewalk was built in place

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of the old wooden one on the west side of the approaches to the swing bridge, and on the south side the roadway was widened out so as to bring the fencing into its proper line on the street.

SMITH'S FALLS DETACHED LOCK STATION.

Sundry small repairs were made to the station and swing bridge.

POONAMALIE LOCK STATION.

One pair of lock gates were renewed. One pair of draw bars placed on the upper gates, and four new chain blocks framed and put in place ; and small repairs to station generally. The upper wing walls of the lock appear to be heaving outwards, and next winter when the water is out of the cut, they will be examined, and if necessary rebuilt.

BEVERIDGE'S BAY LOCK STATION.

Sundry small repairs made to station generally. The pier on the west side of the retaining dam, which was burnt last summer, was rebuilt and new guard posts put in the bents of the bulkhead.

PERTH BASIN.

Sundry small repairs were made to the wharfs and bridges, by the two bridge tenders. The wharf on the south side of the basin requires to be repaired, which will be done this summer ; and some of the culverts on the tow path road will also be raised and repaired. Some tile drains were put in near the town to carry off the surface water from land that was flooded by the bank of the tow path.

OLIVER'S FERRY BRIDGE.

Sundry small repairs made to the turntable of the swing span and to the planking of main bridge.

THE 'NARROWS' LOCK STATION.

Sundry small repairs were made to the station in general, and the long dam was gravelled and the roadway raised.

NEWBORO' LOCK STATION.

The lower wing wall on the west side was taken down and rebuilt last winter by our own masons, who quarried and cut the stone during last summer in Elgin quarry. The lower gates were run into and slightly damaged last summer by a steam scow called the *Kenirving*. Fortunately the damage was confined to the foot-board of the gate and the sluice racks ; the gate itself being uninjured. The owner of the boat made the damages good. Attempts were made this spring to cut away our reservoir dam at the outlet of Wolfe lake, which supplies the level above Newboro'. I therefore placed a special watchman to look after this dam until the freshet had subsided ; the lockmaster at Newboro' being too far away from the dam to watch it at such a time, as closely as the occasion required. I may state that this dam is over 7 miles from Newboro' lock station.

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CHAFFEY'S LOCK STATION.

Sundry small repairs were made to the station in general. The bridge across the waste water channel is getting old, and will be rebuilt this year. A new set of foot-boards and drawbars have been ordered, and will be placed on the upper lock gates this summer.

DAVIS'S LOCK STATION.

Sundry small repairs were made to the station in general. The lock labourers cottage and the storehouse require to be resingled, and this will be done during the summer.

JONES'S FALLS LOCK STATION.

Sundry repairs were made to the station in general. Some settlements in the big dam were filled up ; the face of the big stone dam is now being cleared of the ferns and moss which have accumulated between the joints of the dry stone facing. As this dam is over 60 feet high, the men have to be let down with slings. The freshet was passed through Morton dam without any material damage being done.

BRASS'S POINT BRIDGE.

The swing span of this bridge was rebuilt, and repairs made to the piers and hand-railings, by our own carpenters. Small repairs to the planking were made by the bridge tender. Next year the remainder of the bridge will have to be rebuilt.

BREWER'S UPPER MILLS LOCK STATION.

The violent freshet this spring made a breach in the retaining dam, which at one time threatened serious consequences. However, by working day and night the break was repaired, and the whole dam has been widened out and strengthened, so that it is now stronger than it ever was.

The wing walls of the upper lock were grouted, and small repairs made to the station in general.

BREWER'S LOWER MILLS LOCK STATION.

Some gravel was placed on the dam, and sundry small repairs made to the station in general.

KINGSTON MILLS LOCK STATION.

One pair of lock gates were renewed. Several sluice frames put in, and sundry repairs made to the masonry. A considerable quantity of grout was put into the walls ; but the masonry at this station requires a large quantity of cement before it is thoroughly tight. This winter the stone weir will be rebuilt. A quantity of stone was placed on the stone dam, the roadway of which was getting low.

GENERAL.

The pointing and grouting of the lock masonry was done as usual by our lock men, the cement for which, as well as that for the special repairs was purchased from

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Messrs. Bellhouse, Dillon & Co., of Montreal, under contract. The painting of the houses, bridges, lock gates, &c., was also done by the lock men ; the paint being supplied, under contract, by Mr. W. E. Dickson, of Montreal. The Douglas fir dimension timber for lock gates, bulkheads, &c., was supplied, under contract, by Mr. M. Ryan, of Smith's Falls, who carried out his contract most satisfactorily.

DREDGING PLANT.

The dredge *Rideau* was employed last season in completing the new channel below Kingston Mills locks. She has just about finished the same; the new channel being over three miles long. The dredge is in first-class order, having had additional frames placed under her hoisting engines last spring, when fitting out. She, however, requires a new boiler, for which provision has been made in the current estimates, and the boiler will be placed in position before next spring.

The tug *Shanly* is also in fair condition, but draws too much water for this canal. She was employed last season in attendance on the dredge, delivering stores along the canal, buoying out the channel, removing stumps, snags, &c., from the channel at various points, and also on inspection work.

The dump scows are now getting old ; but as they have not been used for some years, it is hardly worth while building new ones until dredging is required where scows are used, which will not be for sometime yet, as the work proposed to be done is all in cuts where our boom dredge can swing the material 25 feet clear of her mast each side.

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, M.C. Soc. C.E.
Superintending Engineer.

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

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RIDEAU CANAL.

Showing monthly the highest and lowest water, on the mitre sills of the locks at Ottawa and Kingston Mills, respectively, from July 1, 1900, to June 30, 1901.

OTTAWA.				KINGSTON MILLS.			
Highest.		Lowest.		Highest.		Lowest.	
	Ft. In.		Ft. In.		Ft. In.		Ft. In.
July 15.....	15 2	July 2.....	10 8	July 1 31.....	8 0	July 1-31.	8 0
Aug. 1.....	13 8	Aug. 31.....	9 11	Aug. 1-5.....	8 0	Aug. 27-31.....	7 6
Sept. 23-25.....	9 10	Sept. 15.....	8 8	Sept. 1-5.....	7 6	Sept. 29 and 30 .	7 1
Oct. 17-20.....	11 4	Oct. 4-5....	10 0	Oct. 1-11.....	7 0	Oct. 23-25.....	6 10
Nov. 25-27.....	12 0	Nov. 18.	9 4	Nov. 1-11.....	6 11	Nov. 28-30.....	6 9
Dec. 1-2.....	11 2	Dec. 28-31....	9 7	Dec. 1-16.....	6 11	Dec. 17 31....	6 10
Jan. 1-3.....	9 6	Jan. 27-31....	8 7	Jan. 1-10.....	6 10	Jan. 21-31.....	6 8
Feb. 1-5.....	8 6	Feb. 17-28.....	8 4	Feb. 1.....	6 8	Feb. 23 28.....	6 5
Mar. 24 31.....	8 5	Mar. 12-21....	8 3	Mar. 29 31.....	7 0	Mar. 1-15.....	6 5
April 27-30....	21 2	April 1.....	8 10	April 27-30....	8 0	April 1.....	7 0
May 1.....	21 2	May 31.....	16 4	May 1.....	8 0	May 14 31.....	7 10
June 8.....	17 6	June 30.....	12 3	June 14-30....	8 0	June 1-10.....	7 10

A. T. PHILLIPS,

Superintending Engineer.

RIDEAU CANAL OFFICE,
OTTAWA, July 4, 1901.

ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,

CORNWALL, July 1, 1901.

SIR,—I beg to submit my annual report upon work of construction, survey, &c., as connected with the enlargement of the St. Lawrence canals, for the year ending June 30, 1901.

CORNWALL CANAL.

(Opened for traffic, 1843.)

This canal was originally designed and constructed to allow vessels of not over nine feet draught to surmount the Long Sault Rapids, extending from Cornwall to Dickenson's Landing, a distance of $11\frac{1}{4}$ miles, with a rise of 48 feet, originally made in six locks, but since reduced to five.

The canal is situated on the north side of the St. Lawrence river on ground sloping rapidly towards the river, and generally about 30 feet above it. The high embankments thus rendered necessary when not perfectly constructed, or when resting on treacherous foundations, which are common along this section of the river, have given rise to frequent landslides, accompanied by subsidence, entailing as in 1888, very serious consequences.

In order to make the St. Lawrence navigable by vessels of the same class that pass through the Welland canal, and to carry out the general scheme of enlargement adopted by the government, work was commenced on the Cornwall canal division in 1876.

This work consisted in deepening, widening and straightening the original channel, strengthening and protecting the embankments, and in building enlarged locks 270 feet long by 45 feet wide, with not less than 14 feet of water on the mitre sill, when the river is at its lowest stage, supply weirs, bridges, &c., also in addition to the above, and not included in the original contracts, the repair or renewal of the foundations and general restoration of the damaged masonry of the old locks 15, 16, 17, 18, 19 and 20, and the adaptation of the basin between old locks 16 and 17 to the purpose of a dry-dock. Also dams, weirs and guard gates, with the automatic dam at lock 20, rendered necessary by the adoption of the Sheik's Island channel, and the masonry superstructure with ice-breaker on the old pier at the upper entrance.

The Sheik's Island channel does away with the imperfectly constructed embankments west of Milleroches, embraced in contracts Nos. 6 and 7 and parts of 5 and 8, which were abandoned when the decision to construct the channel had been arrived at. This diversion from the line of the old canal does away with $3\frac{1}{2}$ miles of very tortuous canal navigation, unfit for the class of vessels for which the enlarged canal system was intended and substitutes $2\frac{3}{4}$ miles of what can be classed as lake navigation, thus dividing the canal into two sections, the lower or eastern section 6 miles long, upper or western section $2\frac{1}{4}$ miles, with $2\frac{3}{4}$ miles of lake navigation between, and saving about half a mile in distance.

The guard gates and automatic dam at lock 20 were constructed to protect the lower reaches from the large body of water impounded by the construction of the Sheik's Island dams, in case of accident to the locks or other structures.

For the purpose of construction, the canal was divided into nine sections, commencing with No. 1 at the lower or eastern entrance. The work of enlargement was

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commenced on this section in 1876 and was finished in 1882, except some work on old lock 17 and the weir and headrace to the mills, which were afterwards completed under the contract for section No. 2.

The next section to be let was No. 10 to Messrs. Jocks, Delorimier & Broder, who commenced work in 1884, and with the exception of the upper entrance, completed it in 1895.

LIST OF CONTRACTORS.

Locality.	Section.	Contractors.	Date of Contract.
Cornwall.....	2	Wm. Davis & Sons.....	Nov. 5, 1888.
Lock No. 19.....	3	".....	"
Maple Grove.....	4	".....	"
Sheik's Island Dams.....		".....	June 19, 1893.
Mille-roches.....	5	The Gilbert Blasting and Dredging Co.....	Nov. 2, 1888.
Moulinette.....	6	".....	"
Sand Bridge.....	7	".....	"
Long Sault.....	8	".....	"
Dickenson's Landing.....	10	Jocks, Delorimier & Broder.....	April 7, 1884.
Upper Entrance.....		The Weddell Dredging Co.....	Sept. 28, 1899.

NOTE.—Section No. 8 adjoins Section No. 10.

The work to complete the upper entrance was let to Messrs. Weddell & McAuliffe under contract entered into on September 28, 1899, to be completed by November 13, 1900.

It consists in the extension, straightening and widening of the channel on the north or landward side of the present entrance, from deep water which commences 900 feet west of the upper gates of guard lock No. 21 and extends to a point about 1,100 feet west of the lighthouse on the south entrance pier, a distance of about 3,500 feet. The dredging operations mentioned in my last report were carried on until September 6, 1900, when the dredges were removed to Mariatown Point, Rapide Plat canal. At this time the excavation below water was nearly completed to the bottom angle of the north slope, and the entire channel from upper entrance of guard lock No. 21 westerly was cleaned up to afford the required 14 foot navigation at low water.

Excavation above water by means of steam shovel, was commenced on August 27, 1900, and carried on until January 5, 1901, and again resumed May 28, 1901, and is still in progress.

The fencing along the new canal limits was completed in July, 1900.

Protection of slopes and preparing the seat for the same was commenced on August 1, 1900, and continued until November 15, 1900, and again resumed on April 15, 1901, and is still in progress.

The old locks have been kept in a state of repair so that they could be used in case of accident to the new ones, by vessels of 9 feet draught, as hitherto employed on the St. Lawrence, also for the purpose of admitting vessels for repair to the dry-dock formed in the basin between locks 16 and 17.

In connection with the additional water-power recently granted at lock 18 to the Paper Mill Company, attention is directed to the necessity for enlarging the regulating weir at old lock 17, and for protecting the north bank of the canal east of Pitt street.

Electric power, in connection with the operation and lighting of the canal, contracts were entered into June 25, 1896, and October 19, 1900, with Mr. M. P. Davis, and work commenced on the power-house at lower dam, Sheik's island, during the latter month, the cedar poles were provided during the winter and distributed after

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the opening of navigation, the work of setting them in place and wiring is now being proceeded with.

The cables for crossing at, and operating the locks and bridges, were placed in position whilst the canal was unwatered in April.

It is expected to have the lighting installed in time for the fall trade and the operating machinery at the locks ready for the opening of navigation in 1902.

FARRAN'S POINT CANAL.

(Opened for traffic, 1847.)

This canal is situated about five miles west of the village of Dickenson's landing, the head of the Cornwall canal. It was built to overcome a short, swift rapid above the village of Farran's Point, and was about $\frac{3}{4}$ mile long, with a lockage of $3\frac{1}{2}$ feet.

In the year 1847 the original canal, for 9 feet navigation was opened for traffic. The present enlarged canal has been extended to Empey's bay, thus increasing the length to $1\frac{1}{2}$ miles and the lockage to 4 feet.

The enlargement having been authorized, tenders were advertised for, and on June 1, 1897 a contract was entered into with the Canadian Construction Company to undertake the necessary work and to have it completed by January 31, 1899.

The time for completion has since been extended.

The works undertaken in connection with the enlargement consisted of, forming a new eastern or lower entrance, north of the original and free from the eddies produced by the above rapids.

The building of a 'flotilla lock' 800 feet long and 50 feet wide, with 14 feet of water on sill at the lowest known stage of the river, and extending from deep water at its eastern entrance to a point about 200 feet west of the old lock, and nearly parallel to it on the north side, also of the deepening and straightening the old channel to the head of the old canal and its extension through Point Avoyon to Empey's bay, also the building of a road to replace a portion of the Queen's old highway occupied by the enlargement. It is intended to keep the old lock in repair so that it can be used in case of accident to the new lock.

The new lock was ready for traffic September 6, 1899, and has since been used by all deep draught vessels.

The work done during the past fiscal year was as follows :—

At the lower or eastern entrance, filling in and forming bank in rear of north pier was completed, two additional cribs were placed at east end of north pier, masonry superstructure on north and south piers completed, repairs to old government wharf in progress.

At the upper or western entrance, masonry superstructure on north pier completed in July, 1900

The work of putting stone protection on banks is nearing completion.

The necessary repairs to the masonry of the old lock was completed in November, 1900.

The work of protecting the banks by sodding is nearly finished.

The dredging operations in deepening the south side of the channel at the western curve have been carried on during the present season and are nearing completion.

It is expected that the whole of the works on this canal will be completed this season.

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WILLIAMSBURGH CANALS.

RAPIDE PLAT CANAL.

(Opened for traffic, 1847.)

The lower entrance of the Rapide Plat or Morrisburg canal is situated about 9½ miles west of the Farran's Point canal. It was designed to overcome the rapids of 'Rapide Plat' by lock of 11½ feet lift, and extends from the village of Morrisburg to Flagg's bay, a distance of 3¾ miles.

The original canal intended for vessels of 9 feet draught was opened for traffic in 1847.

The works of enlarging for the 14 feet draught vessels was commenced in 1884, and consisted in the deepening and widening of the old channel, the building of a new lift and a guard lock of 270 feet by 45 feet, supply weirs, and regulating weirs, &c., and the construction of a new road to replace the highway destroyed by the canal improvements.

The old lift lock was put in thorough repair, and the sill lowered so as to admit of 9 feet navigation through it at lowest water.

LIST OF CONTRACTORS.

Locality.	Section.	Contractors	Date of Contract.
Morrisburg	1	Poupore & Fraser.....	January 26, 1891.
Mariatown	2	Weddell Dredging Co.....	" 12, 1891.
New Road	3	Poupore & Fraser.....	" 26, 1891.
Flagg's Bay.....	4	William Broder	April 2, 1884.
Upper Entrance		P. H. Gilbert	" 17, 1891.

The work on all sections except at Mariatown and upper entrance has been completed, and the final estimates forwarded to the department for approval.

The work of widening and straightening at Mariatown point, commenced but afterwards discontinued, was again resumed by the Weddell Dredging Company under their contract for section No. 2, in August, 1900, and completed in June, 1901.

Upper Entrance.—This work consists in the straightening, deepening and widening of the channel, the removal of the old north and south piers and the construction of a new and more extensive pier with stone superstructure and ice-breaker on the south side.

The contract for this work was awarded to Mr. P. H. Gilbert and was commenced on April 17, 1901.

Up to June 30, 125 lineal feet of cribwork was built and placed in position and 50 lineal feet built ready to be placed.

GALOPS CANAL.

(Opened for traffic, 1847.)

Between the head of the Rapide Plat canal and the foot of the Galops, at the village or Iroquois, there is a 4½ mile stretch of river navigation. What is now known the the Galops canal was originally built as two separate canals, with a short stretch of river navigation between.

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These were opened for 9-foot navigation in 1847. The lower or easterly section, called the Point Iroquois canal, commenced at the village of Iroquois and extended to Presqu'île. It was 3 miles long and had a lockage of 5 feet 7 inches, which overcame the rapid of Pointe aux Iroquois.

The upper or westerly section commenced at the village of Cardinal and extended up a stream 2 miles to the head of the Galops rapids; it had a lockage of 6 feet 8 inches, and surmounted the Cardinal and Galops rapids. This was known as the Galops canal.

About ten years after the completion of these canals, they were connected by an embankment, otherwise the 'Junction canal,' built in the river, and other improvements made increasing the total length of canal to $7\frac{1}{2}$ miles and the lockage to 14 feet 10 inches, thus avoiding the rapid current of the short stretch of river navigation.

In 1888 Messrs. Murray & Cleveland entered into a contract with the government to enlarge the upper entrance; the work consisting of the building of a new lift lock, connecting directly with the river immediately below the Galops rapids, and a new guard lock, both 270 feet long by 45 feet wide, and a supply weir. The removal of the old guard lock, and also the deepening, widening and straightening of the channel from the upper entrance past McLaughlin's Point to the new locks at Round bay, a distance of about one mile.

The improvement of the channel at McLaughlin's Point by widening it towards the north, as authorized, was commenced with steam shovel from Drummond's Island last September; it is progressing slowly but satisfactorily.

The excavation under water consists of hard pan and boulders, and it will become necessary to resort to blasting the earth in advance of the steam shovel.

It is also proposed to build a toll-house for the collector at locks 27 and 28.

It is proposed to extend the south-east pier below lock 28, a distance of 250 feet, to render the entrance safe for downward bound vessels with tows.

In the year 1897, the government advertised for tenders for the enlargement of the other portions of the canal, dividing it into two sections or contracts of about 3 miles each, Iroquois and Cardinal. Messrs. Larkin & Sangster obtained the first named and Messrs. Wm. Davis & Sons the latter. In each case the work was to be completed by January 31, 1899.

The time for completion has since been extended.

The scheme of enlargement contemplated the raising of the level of the reach between Iroquois and Cardinal six feet, that is to the height of the lowest known level of the river at the head of the Galops rapid, and overcoming the whole rise with one lift lock at Iroquois.

The lift lock at Cardinal will be cut off from the canal and connected directly with the river and used only to accommodate the village of Cardinal and the coasting trade.

IROQUOIS SECTION.

Work on the enlargement of this section was commenced in May, 1897. It consisted of excavating a new entrance channel, the building of two entrance piers, 'Flotilla lock,' 800 feet long by 50 feet wide, weirs, bridges, retaining walls, &c., and the straightening, deepening and widening of the canal for about 3 miles, also the reconstruction of the highway north of the old canal, &c.

During the past fiscal year all the masonry in connection with retaining walls, culverts, fencing, &c., &c., was completed; the excavation at the entrance is practically finished, although a small quantity of rock has yet to be removed from the north side of the channel.

The extension of the north-east pier for a distance of 150 feet was completed.

The prism of the canal is down to grade with the exception of a portion of the old canal bank, which has yet to be removed.

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The stone protection of slopes is practically complete except at points where the banks require strengthening, the sodding and soiling of banks is also completed, except where repairs due to contractors dredging operations are rendered necessary.

During the early part of the season this section was brought into use for 14 feet navigation. Between 16th May and 23rd June the following steamers drawing over 13 feet were locked through, viz.: S.S. *Theano*, *Michigan*, *Parthia*, *Monkshaven*, *Paliki*, *Bothnia* and *Paraguay*.

Besides the above several minor details were attended to, such as painting gates and bridges, placing iron railing and fencing, iron ladders in sluiceways, iron gratings over sluice tubes, &c.

The work now remaining to be done on this section consists in completing the masonry foundation walls for the Iroquois water works, the renewal and repair of the old government wharf at the village of Iroquois, and the widening and deepening of the government ditch on the north side of the canal.

CARDINAL SECTION.

Commencing at the western end of the Iroquois section at Presqu'île it extends west through the rear of the village of Cardinal to Gate's point, the eastern end of the upper entrance contract, a distance of about three miles.

The work consists in the widening, deepening and straightening of the old canal at each end of the section and construction of an entirely new piece of canal, through and on either side of the village of Cardinal, requiring the excavation of the prism, the building of banks and their protection, and the construction of crib-work and masonry revetments through the 'deep cut,' also the building of bridge piers and abutments, &c.

The chief feature is the 'deep cut' in rear of the village of Cardinal, 5,900 feet long and 68 feet deep at the highest point, requiring the excavation of about 2,000,000 cubic yards of material.

The excavation for the 'deep cut' is now about completed, there only remains to be done the trimming of the upper slopes to receive the pitched stone facing, and sodding, and the cleaning up of the lower slopes at the east and west ends, with dredge, all of which work is now in progress.

Earth Excavation.—The total quantity of excavation on this section was originally about 2,600,000 cubic yards, of which there still remains to be excavated about 150,000 cubic yards, principally at Fraser's point, east of the 'deep cut' where one dredge is now at work, and at Gate's point where one shovel is at work.

Rock Excavation.—The total quantity of rock excavation on this section has proved to be about 18,000 cubic yards, of which about 10,000 cubic yards was contained in the 'rock in situ' found in the bottom of the 'deep cut.' The only rock now remaining to be excavated will be the boulders which may be encountered during the dredging operations at Fraser's point.

Crib-work.—The crib-work revetment through a portion of the 'deep cut' is completed, except about 350 lineal feet at west end, which will be put in place after the removal of the dam across the canal.

The total length of this crib-work will be about 5,400 lineal feet, and will contain about 300,000 cubic feet of timber, 275,000 pounds of iron in bolts and 42,000 cubic yards of stone filling.

The masonry revetment walls built on top of this crib-work are now completed as far as the crib-work extends and filled behind with stone; these walls contain about 9,000 cubic yards of masonry.

Embankment.—At east end of section about 5,800 lineal feet of the south bank is protected with stone facing, and also about 1,200 lineal feet of the south bank across Gate's bay. All embankments are now made to their required height and width, except that portion forming dam across old canal at east end of 'deep cut.'

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The work of protecting the slopes of the 'deep cut' by pitched stone facing, resting on quarry waste, was commenced in September, 1900, and has been carried on continuously, except during the winter. Five building derricks are employed, building altogether about 3,000 cubic yards per month. There still remains to be done about 30,000 cubic yards.

A dam was thrown across the old canal at east end of the 'deep cut' to provide for the raising of the water in the lower level. On May 6 lower level was gradually filled, when a few leaks were found in the banks of the Iroquois section which necessitated the lowering of the water, after proper repairs were made the water was again raised on May 23, and several of the larger class of vessels, such as the *Monkshaver*, &c., passed through without any difficulty.

The cutting of an opening through the old canal bank below lock No. 26 in order to carry away the water used by the Edwardsburg Starch Company's mills will be proceeded with at an early date.

GALOPS RAPID IMPROVEMENT.

This work comprises the excavation of a straight channel 200 feet wide and 17 feet deep through the shoals of the rapid, which are known by the following names, viz. :—Upper bar, North and Caledonia shoals, Island shoal and Lower bar. The whole of these shallow places are included in a distance of 3,300 feet.

The work is subaqueous and consists in blasting and dredging the rock in the rapid.

The work as originally designed for the 200 foot channel was finished in November, 1888, but in view of the apparent permanent lowering of the water surface of the River St. Lawrence, and for the purpose of making a satisfactory test and survey of its bottom, and at the same time to be prepared for the removal of any material above the original contract grade, an agreement was entered into in the year 1897 with the Gilbert Brothers Engineering Company, Limited, to perform the necessary work. Operations were commenced the same year. In the year 1898 it was decided to widen the entrance to the existing channel south or towards Adam's Island, with a view to eventually increase the width of the channel as originally excavated to 300 feet.

The plant employed consists of a dredge, drill scow, tugs, scows, &c., all adapted to the special work in hand.

During the past fiscal year the widening and deepening of the channel on south side of Upper bar by dredging was completed in October, 1900.

The total quantity of excavation for Upper bar was 10,300 cubic yards, including a berme on the south side of the cut ; and the final soundings show the completed bottom to be below grade over the whole area covered by the dredging operations.

Excavation on north point of Island shoal for the additional width was commenced in October and continued until the end of November, when work was stopped for the season.

During the first part of the season of 1901 the dredge was engaged on Toussaint's Island shoal ; on June 14, after the accident to the *Northwestern*, she was removed to North shoal and recommenced the work of widening and deepening the channel.

The drill scow was engaged in drilling and blasting on the north point of Island shoal, from July 1, to August 4, 1900, and was subsequently engaged on the 200 foot channel and on the North shoal when work was closed down for the season.

Operations on North and Island shoals were resumed in May and June, 1901, will be continued until the close of the season.

The appropriation for the Galops rapid lapsed on June 30, 1901, of which due notice was given to the contractors.

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NORTH CHANNEL.

This channel commences about one mile west of the upper entrance to the Galops canal and extends in a straight line to deep water off Chimney Point, a distance of $2\frac{1}{4}$ miles.

It was constructed to avoid the sinuous natural channel passing through American waters, which is about three-quarters of a mile longer and could not be navigated with safety by the class of vessels for which the present enlarged canals were designed.

The work consists in the excavation of a channel originally 200 feet wide, which was subsequently increased to 300 feet, through the bed of the St. Lawrence river, and Drummond and Spencer islands, the construction of embankments on either side of the channel and of piers of cribs at its eastern and western entrances.

The work having been authorized and tenders advertised for, it was let to Mr. M. A. Cleveland, May 14, 1897, the work to be finished on January 31, 1899.

The time has since been extended.

At Drummond's island dredging was continued until December, the steam shovel also working until September, when it was removed to the upper entrance.

A channel 300 feet wide and of a minimum depth of 16 feet is completed through the shoal above upper entrance of the Galops canal.

The excavation by dredging of both eastern and western entrances has been completed to a width of 200 feet.

Drilling and blasting operations have been carried on without interruption during the working season, from July 1, 1900, to June 30, 1901, in prism below east dam.

About 6,500 lineal feet of protection walls above water line and backing to curbing has been completed.

During the year 53 cribs, 30 x 20 feet, were sunk, closing the gap between guide crib and cribwork from head of Spencer's island.

Pier at south side of eastern entrance has been completed and protected by stone talus.

Timber for cribs required in connection with the proposed dam across the 'Gut' between Adam's and Ogden's islands has been delivered.

The question of the dam calls for a decision, as the rock from the excavation at North channel and upper entrance is intended to be utilized in its construction.

All classes of vessels have now adopted the North channel, and it has practically become the main channel of the St. Lawrence, between Prescott and the Galops, owing to its accessibility, depth of water, and saving in distance.

RIVER REACHES.

Improvement of Channel—Lake St. Francis.

From head of Soulanges canal to foot of the Cornwall canal, the length of the navigable channel is about $32\frac{1}{4}$ miles, of this distance 30 miles is through Lake St. Francis.

A channel has been located between the above mentioned points, with a minimum depth of 16 feet at lowest water.

St. Regis Section, Two and a Half Miles East of Cornwall.

It is situated about midway between the foot of Cornwall island and First Crab island. The work here consists in the dredging of a channel 1,100 feet long and 300 feet wide through what is known as the St. Regis shoals, and protecting it with a dyke terminating with crib piers. This work was let to Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

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The time has since been extended.

This work was completed before the close of navigation in 1900, and (as in the case of the 'north channel') is now considered the principal deep water channel.

Hamilton Island Section.

Between the seventh and eleventh mile east of the foot of the Cornwall canal.

The work consists in the dredging of a channel through, or of the removal of the following shoals :—

The Middle Ground.	10 miles east of Cornwall.
The Highlander shoal.	10½ “
The Horseback.	11 “

A contract was entered into with Messrs. Manning & Macdonald, May 24, 1898, to be completed November 30, 1898.

The time for completion has since been extended.

The work on the Middle Ground, 700 feet long, was completed during the past fiscal year.

On Highlander shoal, 600 feet long, the work proving too difficult for the class of dredge employed there, the contractors decided to wait until they could bring their more powerful machine from St. Regis shoal.

This has since been done and the shoal has now 16 feet over it at lowest water.

Work has been commenced at Clark's island and will be completed this season.

ST LAWRENCE RIVER AND CANALS.

During the past fiscal year all the reaches of the River St. Lawrence between Coteau Landing and Prescott have again been thoroughly examined and swept.

The inauguration of the system of gas buoys to define the deep water channel for 14 foot navigation was begun in October, 1900, when the buoy tender *Scout*, which was being adapted to the buoy service was first rendered available.

Although but half finished as regards machinery and interior fittings, she nevertheless succeeded in placing all the important buoys for the fall trade, and afterwards in removing them to winter quarters at Morrisburg, and replacing them before the opening of navigation in 1901.

The fact of the existence of a 14 foot navigation has been sufficiently demonstrated. No accident having occurred to vessels of 13 or 14 feet draught beyond what was clearly due to the incapacity of the pilot, or to defects in the steering gear, as in the case of the *Northwestern* and the *Leafields*.

I have the honour to be, sir,

Your obedient servant,

TOM S. RUBIDGE,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer,

Railways and Canals, Ottawa, Ont.

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ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,

CORNWALL, July 1, 1901.

SIR,—I have the honour to report on the maintenance of the canals under my charge during the fiscal year ending June 30, 1901.

The St. Lawrence district includes the Cornwall, Farran's Point, Rapide Plat, Galops, North Channel and Murray canals, the improvement of the rapids and channels of the navigable reaches of the River St. Lawrence and Lake St. Francis.

CORNWALL CANAL.

Navigation for the season of 1900 closed on December 8, 1900.

The canal was unwatered for repairs on March 28, 1901, and so continued until May 1, when it was open for traffic.

The locks at lower entrance were dismantled and secured for winter.

The dry-dock was used to its full capacity during the winter.

The usual work was carried on at the workshops in preparation for spring repairs.

Navigation was maintained without interruption.

Extensive repairs and renewals to the south-east wing wall of the weir at lock 19, and also to the channel below it, were made, whilst the canal was unwatered.

An addition to the house of the lockmaster at lower entrance was constructed by order of the newly appointed overseer.

The overseer's house and premises were papered, painted and generally overhauled by order of the overseer.

No accidents have occurred.

Fines will be dealt with by the superintendent.

A new regulating and supply weir at the headrace to the lower mills, old lock 17, and extensive repairs to north bank are necessary.

The highest water recorded during the season of navigation at lock 15, lower entrance, was 10 feet 9 inches, and the lowest 8 feet 10 inches.

The highest water recorded during the season of navigation at lock 21, upper entrance, was 10 feet 3 inches, and the lowest 7 feet 9 inches.

The highest and lowest water during the year ending June 30, 1901, at locks Nos. 15 and 21, is as under :—

Lock 15, highest—21 ft. 6 in., January 21, 1901.

“ 15, lowest—8 ft. 9 in., December 29, 1900.

“ 21, highest—10 ft. 3 in., May 13, 1901.

“ 21, lowest—7 ft. 9 in., November 26, 1900.

The above levels are with reference to the mitre still of old locks 15 and 21

WILLIAMSBURG CANALS.

The several divisions of these canals, viz. :—Farran's Point canal, Rapide Plat canal, and the Point Iroquois, the Junction and the old Galops canal, collectively known as the 'Galops canal,' were closed on December 11, 1900, and re-opened for the season of 1901 on May 1, but the actual date on which the several locks were

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opened was varied to suit the requirements of the contractors for the enlargement.

Navigation was maintained in a fairly satisfactory manner during the past year, in view of the extensive works of enlargement now in progress.

No accidents have occurred during the year.

Fines, if any, dealt with by the superintendent.

The new lock at Farran's Point was opened for traffic on August 13, 1900.

The upper gates of old lock No. 22 were replaced by new ones shortly after the opening of navigation ; this structure has now been put into perfect repair, and can be used in case of accident to new lock.

The old buoy boat was rebuilt during the winter.

The buoy service was performed by the buoy tender *Scout*.

The usual repairs were made at all locks, to operating gear, snubbing posts, &c.

The old government wharf at Morrisburg was rebuilt, extra men being employed to assist the repairs staff.

The storehouse at Morrisburg was repaired and removed to Stata's bay.

Spar buoys were prepared and ironed during the winter.

The lockmaster's house at lock 23, Morrisburg, was pulled down to make way for the new electric light power house.

The lowest water on the mitre sill of old lock 23, formerly the governing point on the canals in this district, during the season of navigation, was 5 feet 2 inches on November 26, 1900.

The lowest water on the mitre sill of old guard lock No. 27, during navigation, was 6 feet 7 inches on November 26, 1900, and the highest, 10 feet 4 inches, on June 8, 1901.

MURRAY CANAL.

Navigation closed on December 6, 1900, and opened again on April 16, 1901.

Eight hundred and twelve vessels passed through the canal from July 1, 1900, to June 30, 1901.

No accidents occurred during the year.

The towpath ditches and back ditches were cleaned out. Weeds and brush were cut.

Floors of all bridges repaired where required.

The riprap was repaired for a distance of 1,150 yards, and 1,115 cubic yards of broken stone used.

All culverts are in good repair and one new one has been built.

The highest water recorded during the season of navigation, 1900-1901, was 13 feet 6 inches on June 13, 1901, and the lowest, 11 feet 3 inches, on November 14, 1900.

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 1900, both inclusive.

I have the honour to be, sir,

Your obedient servant,

TOM. S. RUBIDGE,
Superintending Engineer.

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

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STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, for the year ended June 30, 1901.

MONTH.	CORNWALL CANAL.						WILLIAMSBURG CANALS.						LAKE ONTARIO.			
	Lock 15.		Lock 21.		Lock 22.		Lock 23.		Lock 24.		Lock 25.		Lock 27.		Murray Canal.	
	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1900.	10 0	9 9	10 2	9 7	9 4	8 10	9 1	8 5	9 5	8 5	11 10	41 1	10 0	9 3	13 0	12 7
	10 0	9 7	9 10	9 2	9 1	8 6	8 9	7 10	8 9	8 0	11 5	10 0	9 7	8 9	12 10	12 7
	9 8	9 3	10 2	8 11	8 9	8 2	9 0	7 6	9 5	7 5	12 1	10 0	10 3	8 6	12 7	12 2
	9 7	8 10	9 3	8 5	8 6	7 9	7 10	6 6	8 0	6 1	10 7	8 3	9 0	8 1	12 3	11 10
	10 2	8 10	10 2	7 9	10 4	6 5	8 0	5 2	7 8	5 3	10 7	7 8	8 8	6 7	12 0	11 3
	9 10	8 9	10 0	8 4	10 5	7 9	8 5	7 1	8 5	7 2	10 9	9 3	9 6	8 2	12 9	11 0
1901.	21 6	8 11	9 9	8 0	9 6	8 0	8 11	5 11	8 5	6 2	10 8	6 0	9 2	8 1	12 0	11 9
	19 3	16 9	10 0	8 9	10 5	8 0	8 9	6 8	7 5	6 3	10 0	8 3	8 3	7 2	11 10	11 6
	18 9	15 2	9 7	8 6	9 3	8 4	7 9	6 0	7 8	6 1	10 0	7 6	8 5	7 4	11 11	11 4
	15 0	10 1	9 11	8 9	9 2	8 3	8 11	7 3	9 0	7 2	11 9	9 10	9 6	8 4	13 1	11 11
	10 4	10 0	10 3	9 5	9 7	8 3	9 5	7 10	9 8	7 5	12 3	10 6	10 2	8 9	13 1	13 0
	10 5	10 0	10 3	9 9	9 4	8 8	9 4	8 0	9 8	8 6	12 3	10 6	10 4	8 9	13 6	13 1

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STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each year.

YEAR.	CORNWALL CANAL.						WILLIAMSBURG CANALS.					
	Lock No. 15.			Lock No. 21.			Lock No. 22.			Lock No. 23.		
	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.
	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.
1891.....	May.....	11 10	Nov.....	11 11	Nov.....	8 2	May.....	10 11	Nov.....	7 6	Nov.....	7 0
1892.....	August.....	12 1	May.....	10 10	"	8 10	July.....	10 3	"	9 9	May.....	7 6
1893.....	May.....	12 5	Nov.....	11 9	"	9 0	May.....	11 2	"	7 10	May.....	7 1
1894.....	June.....	11 0	"	10 11	"	8 6	June.....	10 6	"	7 3	June.....	7 0
1895.....	May.....	9 10	"	9 4	"	7 4	May.....	8 9	"	5 10	"	4 10
1896.....	"	10 2	Oct.....	9 11	"	7 8	"	9 4	"	6 11	"	5 9
1897.....	August.....	10 3	Nov.....	10 0	"	7 5	"	9 10	"	8 11	"	4 9
1898.....	May.....	10 4	"	10 2	Oct.....	8 1	"	9 7	"	7 2	"	6 0
1899.....	"	10 7	"	10 4	"	7 11	"	9 6	"	9 3	Oct.....	6 4
1900.....	June.....	10 9	"	10 3	Nov.....	7 9	Nov.....	10 4	"	5 2	Nov.....	5 2

STATEMENT of the Highest and Lowest Water on the Canals in the St. Lawrence District, May to November in each year—Continued.

YEAR.	WILLIAMSBURG CANALS—Continued.						LAKE ONTARIO.					
	Lock No. 24.			Lock No. 25.			Lock No. 27.			Murray Canal.		
	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.	Highest.		Lowest.
	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.	Month.	Ft. in.
1891.....	May.....	12 0	Nov.....	13 11	Nov.....	9 0	May.....	12 0	Nov.....	8 0	Nov.....	11 5½
1892.....	Sept.....	10 0	"	12 8	"	9 4	July.....	10 3	"	8 3	"	12 1
1893.....	May.....	11 2	Aug.....	13 10	"	10 0	May.....	11 6	"	8 2	"	12 2
1894.....	June.....	10 5	Nov.....	13 3	"	9 1	June.....	10 9	"	9 1	"	12 2
1895.....	May.....	8 3	"	10 10	"	6 8	May.....	10 6	"	6 9	"	11 4
1896.....	"	9 3	"	12 0	"	8 3	"	10 6	"	7 6	"	11 1
1897.....	July.....	9 3	"	11 8	"	6 0	June.....	10 0	"	6 8	July.....	11 2
1898.....	June.....	9 6	"	12 0	"	8 0	"	10 0	"	7 2	"	11 0
1899.....	May.....	9 9	"	12 3	Oct.....	8 5	May.....	10 4	"	7 7	"	11 6
1900.....	"	9 5	"	12 3	Nov.....	7 8	June.....	10 5	Nov.....	6 7	"	11 3

WELLAND CANAL.

ST. CATHARINES, ONT., July 1, 1901.

SIR,—I have the honour to report upon the operation and maintenance of the Welland canal and its branches for the fiscal year ending June 30, 1901.

I was appointed Superintending Engineer on December 1, 1900, upon the resignation of Mr. W. G. Thompson.

The operation of the canal was interrupted twice during the season of navigation by accidents to the locks. The steamer *Waccamaw* bound down on October 10, 1900, ran into the lower gates of lock No. 6, breaking the upper 14 feet of them very badly, but did not carry them away; this caused a delay to navigation of about sixty hours.

On May 1, 1901, the small steam barge *Van Allen*, bound down, ran into the lower gates of lock No. 6, carrying them away, and the rush of water breaking the fastenings on the upper gates, carried them away also. Four spare gates were stepped in forty-eight hours and navigation resumed.

The level of Lake Ontario has kept well up throughout the year, and there has not been less than 14 feet on the mitre sill of the lock at Port Dalhousie. Lake Erie, however, has been very low, being below the 14 foot mark at Port Colborne several times in the fall of 1900, and in the months of April, May and June, 1901, it remained almost continuously below that mark, causing a great deal of trouble to vessels navigating the canal.

It is proposed to lower the sills of the entrance lock at Port Colborne next winter so that there will be at least 14 feet on them at all stages of the lake level. It is also proposed to deepen the rock cut from Port Colborne to Humberstone, and tenders have been invited for this work. This portion of the canal has caused a great deal of trouble and delay to vessels during periods of low water.

The following employees have been superannuated during the year :—

Barnett Darby
Nelson Higgins

Robert Brady
Aaron Higgins

John Henshaw, lockmaster at Port Colborne, who was on the superannuation list, died on March 3, 1901, aged 70 years.

The following superannuated employees died during the year :—

R. D. Dunn, died August 28, 1900, age 78.

J. B. Smith, died February 19, 1901, age 77.

The Dominion police force established on the canal last year has been continued.

Last year the Grand Trunk Railway Company built the substructure for a new double track bridge to cross the canal below lock No. 17, but no further work has been done since.

The usual minor repairs to locks, weirs, bridges, &c., have been made, and in addition a great deal of heavy repair work was done this spring out of the 'repairs' appropriation. The lock at Port Robinson was unwatered and the foundation thoroughly repaired, large cavities under the mitre sills being filled up with concrete and the lower mitre sill and planking renewed. A cut-off was arranged at the lower end of the lock for future use in unwatering to save the expensive dam found necessary this time.

The east retaining wall below the weir at new lock No. 25, which is falling into the raceway was torn down and partly rebuilt in concrete.

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While the water was out of the old canal in the spring from April 8 to 20, extensive repairs were made to supply weirs Nos. 13 and 15, which were badly undermined, and the side wall of No. 24 weir was taken down and rebuilt. The old locks were also overhauled as far as possible in the time and the mitre sills repaired.

A sand pumping plant fitted out in the spring has performed valuable service in cleaning out the old and new locks of several years deposit of silt, gravel, &c., which impeded the working of the gates.

A new and powerful gate lifting-pontoon was built during the winter.

All the heavy working gates on the new canal are now being lifted out and fitted with new steps where required, and such other means taken as are necessary to put them in proper working order.

It is proposed to place a simpler valve in the lock gates as the ones now in use are not at all satisfactory.

The old floating tow-path on the old canal between locks 1 and 2 is being torn up and the timber used to make floating fenders for portions of the long level.

The canal was closed December 15, 1900, and opened for navigation April 24, 1901.

CAPITAL ACCOUNT.

The bridge across the canal on the line of the 4th concession of Humberstone was completed last spring and brought into use, and the ferry at this point discontinued.

INCOME ACCOUNT.

Mr. John Riley, under contract, continued the work of placing a concrete superstructure on the west pier at Port Dalhousie, and Messrs. J. and T. Riley have entered into contract and commenced work at renewing the superstructure of the east docking with concrete.

The dry wall on the canal side of the high bank at the head of lock No. 24 on the new canal was found to be an insufficient protection, and dangerous leaks have developed at various times. To guard against this a contract was entered into with Mr. Joseph Battle, of Thorold, to build a concrete facing to the wall four feet thick at the bottom and eighteen inches at the top. This work was done in the spring of 1901, the water being let out of the canal for that purpose, and has proved eminently satisfactory. Another part of this contract, namely, the rebuilding part of the wall south of the high bank, which was falling down, was not quite completed owing to bad weather, and will have to stand over for another year.

The pile fenders of several bridges have been renewed.

The outlet into the canal for the surface drainage of Port Colborne has never been sufficient to properly fulfil its duties, and to remedy this, a new outlet has been made, and to further facilitate the flow of water and also to prevent the possibility of any sewerage getting into the canal a 24-inch tile pile has been laid along King street and connected with the outlets. There are no openings in this pipe, except the surface catch basins, so that it will be impossible for any sewerage to enter and contaminate the water of the canal.

Attached is a statement of fines collected for breaches of canal rules and regulations. Also a statement of damages to canal property and amounts collected for the same and to whom paid. Also a statement of the highest and lowest recorded depths of water on the mitre sills of the locks at Port Dalhousie and Port Colborne for each month in the year.

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

J. L. WELLER,

Superintending Engineer.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Deputy Minister and Chief Engineer,

Department of Railways and Canals.

Ottawa.

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WELLAND CANAL.

STATEMENT of fines collected from Lock Tenders for dereliction of duties for the fiscal year ending June 30, 1901.

Date of Fine.	Name of Locktender.	AMOUNT OF FINE.		Date Paid.	WHERE PAID. Collector's Office.
		Paid.	Unpaid.		
1900.		\$ cts.	\$ cts.	1900.	
May 19	J. P. Pegg	5 00	.....	July 27.	St. Catharines.
" 19.	Robt. Gibson	5 00	.....	" 27.	"
" 19.	T. Commarford.	5 00	.....	" 27.	"
" 19.	John McLeod.	5 00	.....	" 27.	"
June 18.	Henry Hare	10 00	.....	" 27.	"
Aug. 27.	Mich. Coady	5 00	.....	Sept 14.	"

WELLAND CANAL.

STATEMENT of damages to Welland Canal property during the fiscal year ending June 30, 1901, and the amount paid and unpaid on account of said damages.

Date of Damage.	Name of Vessel.	AMOUNT OF DAMAGES.		Date Paid.	WHERE PAID. Collector's Office.
		Paid.	Unpaid.		
1900.		\$ cts.	\$ cts.	1900.	
Oct. 11.	Steamer Waccamaw.	1,235 25	.....	Oct. 12.	Deposited \$4,000, St. Catharines.
Dec. 10.	" Strat cona.	18 51	.....	April 29.	Port Dalhousie.
1901.					
May 1.	" D. R. Van Allen. ....	.....	.....	May 4 ..	Deposited \$4,000, Port Dalhousie.
" 15.	" New York.	5 00	.....	" 15.	Port Colborne.
" 22.	" A. D. Thompson.	" 22.	Deposited \$150, Port Dalhousie.
June 1.	" Strathcona.	12 53	June 20.	Port Dalhousie.

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WELLAND CANAL.

STATEMENT showing the Highest and Lowest Depth of Water on the lowest mitre sill of Lock No. 1, new Welland Canal, Port Dalhousie, for the fiscal year ending June 30, 1901.

MONTHS.	LOWER SILL.		MONTHS.	LOWER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1900.	Ft. In.	Ft. In.	1901.	Ft. In.	Ft. In.
July.....	15 11	15 7	January..	14 9	14 4
August.....	15 9	15 4	February..	14 11	14 3
September.....	15 7	14 11	March.....	16 8	13 11
October.....	15 1	14 6	April.....	16 0	14 10
November.....	14 9	14 0	May.....	16 3	15 9
December.....	14 11	14 3	June.....	16 3	15 10

STATEMENT showing the Highest and Lowest Depth of Water on the upper mitre sill of Lock No. 26, New Welland Canal, Port Colborne, for the fiscal year ending June 30, 1901.

MONTHS.	UPPER SILL.		MONTHS.	UPPER SILL.	
	Highest.	Lowest.		Highest.	Lowest.
1900.	Ft. In.	Ft. In.	1901.	Ft. In.	Ft. In.
July.....	15 7	14 3	January.....	15 4	13 2
August.....	15 3	14 0	February.....	14 7	13 0
September.....	15 2	13 6	March.....	14 4	11 5
October.....	14 4	13 8	April.....	13 9	12 1
November.....	16 2	12 6	May.....	14 1	13 1
December.....	15 8	13 3	June.....	14 9	13 6

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PORT COLBORNE ENTRANCE IMPROVEMENT.

PORT COLBORNE, ONT., August 24, 1901.

SIR,—I have the honour to submit the annual report on the works, known as the Port Colborne entrance improvement, for the year ending June 30, 1901.

Contract No. 13,807 was entered into on May 4, 1900, with Messrs. M. J. Hogan and Allan R. MacDonnell. The works embraced in this contract may be divided into two parts.

One part includes the removal of the present side slopes and walls on both sides of the basin at Port Colborne, and the construction of the docking formed by sinking cribwork and building upon it a concrete wall with stone filling in the rear of the wall. It also includes the cleaning up of the bottom of the present entrance and basin to the depth below the elevation of the normal water of fifteen feet to the north end of the basin, and of sixteen feet at the south end of the basin and through the entrance. Thirty-one cribs are required for the work in the basin. Ten have already been sunk on the west side and filled with stone. Four more cribs have been framed but have not been placed in position yet. One hundred and seven concrete blocks for use in the walls on the top of the cribs were made during the year.

The work of excavating in the basin is reserved for days when it is too stormy for the dredging plant to work in the lake. About forty-five thousand cubic yards have been removed and about sixty thousand cubic yards remain to be handled.

The other part of the work embraced in this contract is of the more general interest than that referred to above.

It may be described as the preliminary work necessary for the creation of a station for transferring cargoes from the large vessels used on the upper lakes to vessels of canal size.

Rock and other materials are being removed by submarine drilling and blasting and by dredging from an area of about seventy acres, and to a depth of eight feet below the mitre sills of the lock, or twenty-two feet below normal water in Lake Erie.

The plans provide for a slip six hundred feet long by two hundred feet wide, and two piers each six hundred feet by two hundred feet, connected by a head pier one hundred feet in width.

The piers and the slip will have a depth of twenty-two feet of water, and will form an extension of the present west pier.

The faces of the piers below the water will be formed of cribwork on top of which the concrete walls will be placed.

The rock excavated from the bottom of the lake will be used as filling behind the crib and concrete walls.

Five of the thirty-nine cribs required have been placed in position and filled with stone. Thirty-six thousand six hundred cubic yards of material have been removed, and forty-two thousand two hundred cubic yards have been drilled and blasted but not removed.

The total quantity of excavation in connection with this part of the work is about two hundred and six thousand cubic yards.

The progress of the work was retarded to some extent by southerly winds during the summer and fall of 1900.

The contractors' drill boats were taken to Port Dalhousie for extensive repairs during the winter, and much valuable time was lost in the spring of 1901 before the plant was ready to resume operations.

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

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

F. LAWLOR,

Deputy Minister and Chief Engineer,

Engineer in Charge.

Department of Railways and Canals.

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ST. PETER'S CANAL.

DEPARTMENT OF RAILWAYS AND CANALS,

CANALS REVENUE BRANCH,

CANAL OFFICE, ST. PETERS, June 30, 1901.

DEAR SIR,—I have the honour to submit my annual report on the work performed on St. Peter's canal, under my charge, during the fiscal year ending June 30, 1901.

HEAVY REPAIRS.

1. Renewed the coping on both sides of canal at south entrance.
2. Renewed the balance remaining of the old wall, on the east side of canal.
3. Renewed 150 feet of wall on the west side at north entrance of canal. There is about 150 feet more of this No. 3 section to be completed, with all necessary fenders, and some dredging will be required in order that there may be water enough for vessels to haul out of way of steamers, &c.

ORDINARY REPAIRS.

4. The pointing of the lock masonry with cement completed.
5. Placing 13 new pitch pine mooring posts on east side of canal at south entrance and 13 of same kind on west side south entrance.
6. Repairing the government road leading up on the west side of canal. Near lock and opening up the side ditches to improve drainage completed.
7. Replaced eight new brackets and sixteen new pulleys in lock wall. The angle brackets did not fit and had to have them recasted and will have them placed at an early date, also renewed five new lock chains.

There are other improvements required at south entrance, which were pointed out to E. V. Johnson, Esq., Inspecting Engineer.

Navigation closed on St. Peter's canal on January 5, 1901, and opened April 9, 1901. During the fiscal year ending June 30, 1901, 1,603 steamers and vessels passed through the St. Peter's canal.

There is one tidal lock and four pairs of gates on St. Peter's canal.

The operation at this present time is in first-class condition.

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

JNO. H. DEVEREAUX,

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

Chief Engineer and Deputy Minister,

Railways and Canals, Ottawa, Ont.

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OTTAWA RIVER SURVEYS.

*Report by Henry A. F. MacLeod, M. Inst. C.E., on Surveys made in the
Autumn of 1900.*

193 SPARKS STREET,

OTTAWA, March 13, 1901.

SIR,—In compliance with your instructions of August 28, directing me to make a survey of the Ottawa river, from the head of the Allumette Rapids, near Pembroke, to Portage du Fort, and subsequently, of the Culbute and Calumet channels, I beg to say that preparations were at once commenced for carrying out the same.

The object of the survey was to ascertain the best route for a canal of the same scale of navigation as the St. Lawrence canals, or of 14 feet draught of water, with locks, 280 feet long and 45 feet wide, with approximate estimates of the cost of construction.

The route selected by Mr. T. C. Clarke, of this portion of the river, and on which his reports and estimates of 1860 are based, leaves the Allumette lakes at the head of the Allumette island, and passes down the Culbute Channel, through Lake Coulonge and the Rocher Fendu channel.

Surveys have now been made, though not entirely complete, of the routes on each side of the Allumette and Calumet islands.

Two parties were engaged in carrying out the work of examination.

Mr. Henry Carre, in charge of one party, having completed his camp outfit, and secured some experienced river men at Pembroke, left that place on September 14, and proceeded down the river to Black's Falls, near the head of the Rocher Fendu channel, where the rest of his party met him with tents, &c.

Soundings were taken on the way down from Pembroke to the foot of Lake Coulonge, which show that there is deep water to the Allumette rapids.

In the lower Allumette lake the water is shoal along the north shore for a considerable distance. From the foot of Paquette rapids to the foot of Lake Coulonge deep water can be found.

The survey was commenced at the foot of Black's Falls, on September 18, and was continued down the Rocher Fendu channel to the Sable rapids at the foot of Calumet Island.

Levels were then taken to the head of the Grand Calumet Falls, near Bryson, and the survey was carried on down the Calumet channel to Split Rock rapids, two miles from Portage du Fort. A connection was made with the Rocher Fendu survey at Sable rapids.

Outside work was discontinued on December 10, in consequence of the state of the river, the ice preventing the use of boats and not being strong enough to carry on foot.

In consequence of the very broken and rocky shores of the Rocher Fendu channel, and the very rapid descent in the waters, it was necessary to conduct the survey almost entirely by triangulation, using also micrometers, only short base lines could be measured here and there. It was also very difficult to get soundings as the rapids can only be navigated at intervals. The triangulation points have been well marked on the rocks, and with stout hubs and stakes where practicable.

Bench marks have been established on the rocks and on trees, their positions are shown on the plans and profiles. The levels have all been thoroughly checked.

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The proposed sites of locks in the Rocher Fendu channel, at Black rapids, Norman's, LaFontaine's, Long rapids and Rocher Fendu chute, with the necessary dams and prism excavations were surveyed and cross-sectioned where it was possible to do so. The same was done for the lock sites in the Calumet channel, at the Grand Calumet, three at Dargais and Sable rapids.

The fall in the water between the head of Black's Falls and the foot of Rocher Fendu chute is 80 feet, the distance $7\frac{1}{2}$ miles. Of this $\frac{3}{4}$ mile will be occupied by the locks and channel requiring excavation when the water in the reaches is raised to the proposed height.

There are several abrupt bends in the direction of this channel, which will require curves of about seven hundred feet radius.

In the Calumet channel, between the head of the Grand Calumet and the foot of the Sable Rapids, there is a fall of 84 feet, in a distance of five miles. About one-fifth miles of this distance is taken up with locks and shoal water.

Some sharp curves, about seven hundred feet radius, will be required near the Calumet and Mountain Rapids.

The other party was in charge of Mr. H. G. Stanton, who is the first place went to Rutherglen, on the Canadian Pacific Railway, to have his camping outfit shipped from there to Pembroke.

While in that neighbourhood, he searched for and found one of Mr. Shanly's bench marks, made in 1857, at the lower end of Talon lake, and connected his own levels taken for me in 1899 with Mr. Shanly's.

He then proceeded to Pembroke, where he met the rest of his party, and commenced the survey of the Allumette rapids on September 18.

Of the three channels into which these rapids are divided, the north one, next the Allumette island, was selected for examination. The centre channel, and the one next to the Ontario shore, were also hastily examined. The centre channel is not so favorable as the north, and the other next the Ontario shore, is very shallow at the western entrance, while towards the east end, an extensive cutting through granite would have to be made.

In the entrance to the north channel, deep water is found to the head of Morrison's island, which bounds it on the south.

The survey was carried on down the rapids, to the lower Allumette lake. Soundings on the shallows of this lake were not taken, it being thought advisable to wait until the ice has formed.

The east and west channels of the Paquette rapids were surveyed, more attention being given to the western, because the most suitable for the canal.

A more hasty survey was then made, up the Culbute channel, from the foot of the Paquette rapids, to the last of the islands and shoals which obstruct navigation, about 2 miles east of Fort William.

Lastly, soundings were taken from the foot of Paquette rapids to La Passe, at the head of Calumet island, when work had to be suspended on December 10 in consequence of the state of the river.

The shores of the Allumette and Paquette rapids are low and even, and the waters can be navigated at most places. The surveys were therefore made by traverse lines along the shore, which were well marked, while the soundings were taken with micrometer measurements. All levels have been carefully checked. The sites for two locks were surveyed and cross-sectioned, one at the foot of the Allumette rapids, on Morrison's island, and the other at the foot of the Paquette rapids, on the Allumette island shore.

The lift for the lock to overcome the Allumette rapids is 23 feet, and that for the Paquette rapids 25 feet, which latter will be reduced a few feet, when the water in the lower reach is raised, as intended.

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The survey up the Culbute channel, from the foot of the Paquette rapids to near Fort William, was made with the transit and micrometer. The soundings were also made with the micrometer.

This is an alternative route to that by the Allumette lakes and is about 10 miles shorter.

From high water in the lake, near Fort William, to low water at the foot of Paquette rapids, 18 miles, there is a fall of 32 feet, which will require two locks, one at Chapeau, and the other at L'Islet, where the present wooden locks are situated,

As the waters are now, shoals of rock and sand are found for $7\frac{1}{2}$ miles of the above distance. When the lock at Chapeau is put in, the shallow water will be reduced to 6 miles.

The Black river joins the Ottawa about two miles above the foot of Paquette rapids, and carries down yearly a large quantity of sand; this can be diverted by a new channel to Coulonge lake.

The Culbute channel is generally narrow and crooked, widening out occasionally into small lakes. Above the Culbute locks, there are about 2,000 feet of narrow and crooked channel, with perpendicular granite rocks, 40 feet high at the water's edge. At one point they are only 85 feet apart, and it will require a considerable expenditure to make it suitable for large vessels to pass with safety.

Above this, there are some small shoals till the upper narrows are reached, where the channel is 120 feet wide. Beyond there is sufficient water to Deep river.

In the Pembroke channel, through the Upper Allumette lake, about 6 miles above Pembroke, there is a shoal which is being deepened to 8 feet by the Department of Public Works, and beyond this, other shoals will be encountered, until deep water is reached, about two miles to the east of Fort William.

Upon examining some profiles (by G. H. Perry, C.E., in 1877) in this office, after the above surveys were made, it was discovered that in 1876, the flood water rose to a height of five and a half feet above the high water of 1857, upon which the estimates made in 1860 were based. The high water mark of 1876 has also been nearly reached in subsequent years.

The large volume of water produced by such high water, as that of 1876, if allowed to pass through the narrow portions of the Rocher Fendu channel, when the dams are built, would create currents, possibly exceeding 7 miles per hour, which would make the navigation unsafe.

The flood waters if turned down through the Calumet channel would probably be very destructive to its low lying sandy banks, so it is considered to be safer to change the location of the canal to the Calumet channel, and to send all the flood water down the Rocher Fendu channel, admitting only sufficient water for navigation and other purposes to pass into the Calumet channel. The length of the Calumet channel, cutting across the low marshy point between Grand Marais and the village of Coulonge, will be about three miles longer than that by the Rocher Fendu channel.

The following is a description of the work required in the Calumet channel from the village of Coulonge to the foot of the Paquette rapids, and from the foot of the Paquette rapids via the Culbute channel to deep water about two miles east of Fort William.

Commencing at the lower end of the Calumet channel below the Sable rapids, the proposed raised water, now, is some 6 feet lower than that in Mr. Clarke's estimate which will reduce the height of the long dams and the lock at Portage du Fort, just so much.

At Sable rapids there will be a lock of 17 feet lift, at Mountain rapids of 15 feet, and at the Grand Calumet rapids two of 24 feet each, and one of 17 feet, which will be a guard lock. There are no combined locks intended. The locks are of concrete with masonry facing above the 14 feet line. Each lock is provided with tight dams of con-

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crete or crib-work and concrete, and all have regulating weirs. The upper dam at the head of the Calumet rapids is intended to hold back all the flood water and send it down through the Rocher Fendu channel. A new dam will be built in Flat rapids at the head of the Rocher Fendu channel, in place of the old one now built, to control the low water level from the Calumet rapids to the lock at Chapeau. There are entrance piers of crib-work at all the locks.

Between the locks the channel is excavated to a depth of 16 feet below raised water, the base of the excavation being as in all other channels, 100 feet wide, with slopes in earth of two to one, and in rock of one-quarter to 1.

The estimated cost of this section, five miles long, amounts to \$1,670,900 as shown in appendices A, B, C, D, E and F.

From the head of the Grand Calumet to the mouth of the Coulonge river, no survey has been made by me, but an estimate is made from Mr. Perry's profile made in 1877.

These quantities will likely be much reduced when a proper location of the channel is made. The cutting across the Grand Marais will cost \$200,000 more than by La-Passe but will save four miles of distance.

From the mouth of the Coulonge river to the foot of the Paquette rapids soundings were taken by Mr. Carre, and an estimate is made from those. Only one shoal is found in this part, near the head of Lake Coulonge.

Two public road, swing bridges, will be required.

The cost of this section from the head of the Grand Calumet to the foot of the Paquette rapids, 25 miles long, including the new dam at Flat rapids, and a small dam over a stream which flows across the north end of Calumet island, is shown in Appendix 'G,' and amounts to \$801,600.

From the foot of the Paquette rapids up the Culbute channel to deep water, about two miles east of Fort William, the estimate is based upon Mr. Stanton's survey.

There is a large amount of material that can be dredged, and there is also rock to be excavated between the foot of Paquette rapids and the proposed lock at Chapeau.

This lock has a lift of 15 feet with guide piers of crib-work.

It is intended to hold back the flood waters by a tight dam at Culbute. There will also be a tight dam at the Chapeau lock. These dams are of concrete and have regulating weirs in each. There will be a swing bridge at Chapeau for the public road.

Only a small quantity of rock excavation is required between the Chapeau lock and the Culbute lock.

This lock has a lift of 17 feet and has guide piers of crib-work.

From the Culbute lock to the end of the section, two miles east of Fort William, a few shoals of rock are found, and the channel between some high points of rock will have to be widened.

The cost of this section from the foot of the Paquette rapids to deep water east of Fort William, 17½ miles long, is found in appendix 'H,' and amounts to \$1,319,470.

The estimated cost of the whole section from the Sable rapids to near Fort William, 47½ miles long, appendix 'I,' amounts to \$3,791,970.

Good stone for lock masonry can be found at Portage du Fort, on the Calumet Island, and on the islands in the Allumette rapids near Pembroke.

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

HENRY A. F. MACLEOD,

M. Inst. C. E.

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APPENDIX A.—SABLE RAPID, LOCK No. 5.

ESTIMATED cost of Lock No. 5, with Excavation, Dams, Crib-work, &c., required.

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$
Guide piers	9,333	C. yds.	4 00	37,332
" "	8,889	"	4 00	35,556
Excavation in approaches	4,262	"	1 00	4,262
Excavation in lock-pit	18,161	"	1 00	18,161
Sable Rapid Lock 12 ft. lift				105,000
Gates				11,700
Culvert sluices				1,200
Gate machinery				1,000
Cribwork in dam	2,074	C. yds.	4 00	8,296
Planking	10,000	B. M.	20 00	200
Concrete in dam	2,854	C. yds.	6 00	17,144
" "	4,622	"	6 00	27,732
" "	105	"	6 00	630
Dam embankment earth	8,500	"	25	2,125
Lock embankment	9,000	"	50	4,500
Sluices for regulating weir				1,500
Unwatering				25,000
Add for engineering and contingencies				60,282
				361,600

HENRY A. F. MACLEOD,
HENRY CARRE.

APPENDIX B.—MOUNTAINS RAPIDS, LOCK No. 4.

ESTIMATED cost of Lock No. 4, with Excavation, Dams, Crib-work, &c., required.

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$
Guide piers	10,667	C. yds.	4 00	42,668
" "	7,556	"	4 00	30,224
Excavation in Lock pit and approaches	12,000	"	1 00	12,000
Mountain Rapid Lock 15 ft. lift				117,000
Gates				12,600
Culvert sluices				1,200
Gate machinery				1,000
Concrete in dams	967	C. yds.	6 00	5,802
" "	289	"	6 00	1,734
Dam embankment	1,800	"	25	450
Embankment for Lock	10,000	"	50	5,000
Sluices for regulating weir				1,500
Unwatering				15,000
Add for engineering and contingencies				49,222
				295,400

HENRY A. F. MACLEOD,
HENRY CARRE.

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APPENDIX C.—GRAND CALUMET FALLS.

ESTIMATED cost of Lock No. 3, with Excavation, Dams, Crib-work, &c., required.

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$
Guide piers.....	8,889	C. yds.	4 00	35,556
" ".....	4,444	"	4 00	17,776
Excavation in lock pit.....	11,623	"	1 00	11,623
No. 3 lock, 24 feet lift.....				151,300
Gates.....				15,900
Culvert sluices.....				1,200
Gate machinery.....				1,000
Cribwork in 3rd dam.....	1,482	C. yds.	4 00	5,928
Planking.....	8,000	B.M.	20 00	160
Concrete in 3rd dam.....	3,600	C. yds.	6 00	21,600
3rd dam embankment.....	9,000	"	25	2,250
Embankment for lock No. 3.....	9,000	"	50	4,500
Sluices for regulating weir.....				1,500
Unwatering.....				15,000
Add for engineering and contingencies.....				57,007
				342,300

HENRY A. F. MACLEOD,
HENRY CARRE.

APPENDIX D.—GRAND CALUMET FALLS.

ESTIMATED cost of Locks Nos. 1 and 2, with Excavation, Dams, Cribwork, &c., required.

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$ cts.
Guide piers, cribwork.....	8,889	C. yds.	4 00	35,556
Excavation of rolling dam now in use.	1,112	"	2 00	2,224
Excavation of lock pit.....	12,265	"	1 00	12,265
No. 1 lock, 17 feet lift.....				123,900
Gates.....				16,000
Culvert sluices.....				1,000
Gate machinery.....				1,000
Passing basin.....	10,284	C. yds.	1 00	10,284
Excavation of lock pit No. 2.....	15,073	"	1 00	15,073
No. 2 lock, 24 feet lift.....				151,300
Gates.....				15,900
Culvert sluices.....				1,200
Gate machinery.....				1,000
Cribwork in dam.....	3,556	C. yds.	4 00	14,224
Planking.....	22,000	B.M.	20 00	440
Concrete dam, lock No. 1.....	4,287	C. yds.	6 00	25,722
Dam across channel from Island to left bank.....	1,600	"	4 00	6,400
Cribwork, lock No. 2.....				
Planking.....	8,000	B.M.	20 00	160
Concrete for same.....	602	C. yds.	6 00	3,612
Wooden dam for mill.....	556	"	4 00	2,224
Crib along right bank of passing basin, guide.....	2,778	"	4 00	11,112
Pier.....				
1st dam embankment earth.....	10,000	C. yds.	25	2,500
Embankment for lock No. 1.....	6,700	"	50	3,350
2nd dam embankment earth.....	1,800	"	25	450
Embankment for lock No. 2.....	8,000	"	50	4,000
Sluices for two regulating weirs.....				3,000
Unwatering.....				40,000
Add for engineering and contingencies.....				160,904
				605,000

HENRY A. F. MACLEOD,
HENRY CARRE.

SESSIONAL PAPER No. 20

APPENDIX G.—CALUMET CHANNEL.

From Head of Calumet Falls to Paquette Rapids.

ESTIMATE of cost of Rock Excavation, Dredging, Dams, &c., required

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$
Earth excavation, head of Calumet Falls to mouth of Coulouge River (dredging).....	1,872,390	C. yds.	0 15	280,858
Rock excavation	14,347	"	1 50	21,520
Cribwork in dams across main channel at Flat Rapids.....	6,770	"	4 00	27,080
Planking in dams.....	9,900	B. M.	20 00	198
Dam embankment.....	2,024	C. yds.	0 50	1,012
Dredging southerly channel, head of Coulouge Lake.....	60,000	"	0 15	9,000
Stone lining Grand Marias Cut.....				50,000
Swing bridges at Bryson and Coulouge				70,000
Engineering and contingencies				91,932
Land damages.....				250,000
				801,600

HENRY A. F. MACLEOD,
HENRY CARRE.

APPENDIX H.—CULBUTE CHANNEL.

Including Locks, Dams and Crib-work.

Description.	Quantity.	Unit.	Rate.	Cost.
			\$ cts.	\$
Guide piers above and below locks	42,740	C. yds.	4 00	170,960
Earth excavation in channel	832,924	"	0 15	124,939
Rock " "	199,607	"	1 50	299,411
Rock excavation in lock pits	19,181	"	1 50	28,772
Lock, 15 ft. lift				117,000
Gates				12,600
Culvert sluices				1,200
Gate machinery				1,000
Lock, 17 ft. lift.....				123,900
Gates				16,000
Culvert sluices.....				1,000
Gate machinery				1,200
Concrete dams.....	11,947	C. yds.	6 00	71,682
Sluices in dams.....				3,000
Embankment behind lock walls.....	30,000	C. yds.	0 50	15,000
Dam embankment.....	12,913	"	0 25	3,228
Swing Bridge at Chapeau	Sum.			12,000
Removing old wooden locks	15,000	C. yds.	2 00	30,000
Unwatering	Sum.			25,000
Engineering and contingencies				211,578
Land and damages				50,000
				1,319,470

HENRY A. F. MACLEOD,
H. G. STANTON.

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APPENDIX I.—CALUMET AND CULBUTE CHANNELS.

SUMMARY—Total Estimated cost from Sable Rapids to Deep Water near Fort William.

Miles.		\$
5	Sable Rapids to head of Calumet Rapids, Appendix F.....	1,670,900
25	Calumet Rapids to foot of Paquette Rapids " G.....	801,600
17½	Paquette Rapids to near Fort William " H.....	1,319,470
47½		3,791,970

HENRY A. F. MACLEOD.

OTTAWA RIVER SURVEYS.

193 SPARKS STREET,

OTTAWA, March 13, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

DEAR SIR,—Referring to my report to you on the Ottawa river surveys, of March 13, which did not contain an estimate for the Allumette and Paquette rapids, I now beg to inclose one, being for 14 feet navigation, as follows :—

Allumette rapids.. . . .	\$ 652,000
Paquette rapids.. . . .	942,000
Total	<u>\$1,594,000</u>

This does not include the cost of a considerable amount of rock excavation required in the Lower Allumette lake, and also in the Upper Allumette lake, between Pembroke and Fort William.

I am, yours truly,

HENRY A. F. MACLEOD.

SESSIONAL PAPER No. 20

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

ESTIMATE in Allumette Rapids for 14 feet draught from Upper Allumette to Lower Allumette Lake. Length of Canal and approaches, 5,400 feet.

Description.	Quantity.	Price.	Amounts.
		\$ cts.	\$ cts.
Rock excavation in prism.....	245,823	1 00	245,823 00
" " lock pit.....	29,089	1 50	43,643 00
Cribwork in cross dam.....	7,000	3 00	21,000 00
Wing walls above lock.....	1,700	4 00	6,800 00
Earth embankment above lock.....	4,300	0 50	2,150 00
Guide piers below lock.....	11,850	4 00	47,400 00
Lock, 23 feet lift.....			147,400 00
Lock gates.....			17,100 00
Culvert sluices.....			1,200 00
Gate machinery.....			1,000 00
Unwatering.....			10,000 00
Engineering and contingencies.....			108,484 00
Total.....			652,000 00

HENRY A. F. MACLEOD,
H. G. STANTON.

Ottawa, April 25, 1901.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

(Length of Canal approaches, 2.69 miles.)

ESTIMATE in Paquette Rapids for 14 feet draught from foot of Lower Allumette Lake to Calumette Channel.

Description.	Quantity.	Price.	Amounts.
		\$ cts.	\$ cts.
Rock excavation in prism.....	336,301	1 00	336,301 00
" " lock pit.....	30,000	1 50	45,000 00
Water tight embankment on islands.....	42,547	0 50	21,274 00
Cribwork in dams in openings between islands.....	8,073	3 00	24,219 00
" dam at lock site.....	33,300	3 00	99,900 00
" approaches above and below lock.....	11,187	4 00	44,748 00
Siphon culvert say (2,300 ft.).....			25,000 00
Lock, 25 feet lift.....			156,000 00
Lock gates.....			20,100 00
Culvert sluices.....			1,200 00
Lock gate machinery.....			1,000 00
Unwatering say.....			10,000 00
Engineering and contingencies.....			157,258 00
Total.....			942,300 00

HENRY A. F. MACLEOD,
H. G. STANTON.

Ottawa, April 25, 1901.*

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193 SPARKS STREET,

OTTAWA, March 21, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

SIR,—I beg to inclose a copy of an estimate of the cost of the proposed Montreal, Ottawa and Georgian Bay canal, from Montreal to Georgian bay.

The estimate is based on the surveys of Mr. T. C. Clarke, made in 1859, on the recent survey of the summit-section, from Talon lake to Lake Nipissing, also on information obtained from Mr. H. G. Stanton, in reference to the work, between Lake St. Louis and Ottawa.

The estimate is for 14 feet navigation with 16 feet in the open reaches, the locks of 280 feet long and 45 feet wide. The number of locks has been reduced from 64 to 50 by increasing the lifts, and there are now only two sets of combined locks instead of thirteen.

As the level of water in the reaches is unchanged, Mr. Clarke's estimate for the dams and walls remains the same, except in a few unimportant instances.

I inclose the details of Mr. Stanton's estimate from Lake St. Louis to Ottawa, and the details of my estimates from Ottawa to the Georgian bay, including those for the summit section of October 28, 1899. Also a list and description of the locks, &c.

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

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY NAVIGATION.

ESTIMATED COST OF WORKS FROM MONTREAL TO GEORGIAN BAY.

Based on Mr. T. C. Clarke's surveys and on the recent survey of the summit section, Talon lake to Lake Nipissing, 14 feet navigation.

Ste. Anne's to Ottawa	\$ 3,263,000
Ottawa to Lake Deschenes	1,105,000
Lake Deschenes to Talon lake	7,433,000
Talon lake to Lake Nipissing Summit section	5,170,000
Lake Nipissing to Georgian bay (French river)	1,067,000
C.P. Ry. bridge, \$100,000, six road bridges, \$110,000	210,000
Engineering and contingencies, 20 per cent.	3,650,000
Land and damages	2,000,000
	<hr/>
	<u>\$23,898,000</u>

HENRY A. F. MACLEOD,

M. Inst. C. E.

OTTAWA, February 12, 1900.

NOTE.—In the above estimate the levels of the water stretches are not changed but are the same as proposed by T. C. Clarke.

Ottawa, April 26, 1900.

H. A. F. MACLEOD.

OTTAWA, February, 1900.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

*Description of work required to be done to get 14 feet navigation or 16 feet in prism,
Lake St. Louis to Ottawa.*

About two miles of excavation will have to be done below Ste. Anne's lock to deep water in Lake St. Louis. The present channel is very crooked and is only for 9 feet navigation.

Estimated excavation required for a 14 foot channel, 70,000 cubic yards at \$1.50, \$105,000.

Ste. Anne's lock (lock No. 1) will have to be rebuilt, also retaining walls above and below lock, length of walls about 1,500 feet.

Rock excavation required in present channel about 10,000 cubic yards in a distance of about $\frac{1}{4}$ mile, and about 35,000 cubic yards, hard-pan, in a distance of about 1 mile; the rock cutting is about in the middle of this piece of work.

About three miles from Ste. Anne lock there is a shoal or bar across the channel of about $\frac{1}{4}$ mile wide which will have to be cut through from this point to St. Placide light, a distance of about 17 miles, there is deep water varying from 20 to 40 feet. At St. Placide light, there is a bar of boulders and rock about three-quarters of a mile wide running across the lake. Beyond this bar to the foot of Jones's island, a distance of 5 miles, the depth of water varies from 12 to 20 feet. The cuttings here will be through clay and sand.

From the foot to the head of Jones's island in a distance of about three miles, there will be encountered rock hard-pan and boulders, the cuttings here will be comparatively heavy, as there is difficulty in getting through at low water. At about 500 feet above Jones's island there is a small sand shoal to be removed from this point to the entrance of the Carillon canal, a distance of about seven miles, the river is quite deep, varying from 20 to 40 feet. I have estimated all the work through the Lake of Two Mountains at \$300,000, which I consider a fair one, based, as it is, only on my knowledge of the lake during many trips in steam and sailing yachts, and also to passing through it last fall in a yacht taking soundings with a sweep suspended at 16 feet from the water surface.

Rebuilding Carillon Lock (Lock No. 2) \$97,000.

In this case I have estimated for an entirely new lock, as it will not be possible to lengthen or deepen the existing one without interfering with navigation. I have estimated the excavation in the prism of this canal at \$120,000, which will possibly cover the cost of lock pit excavation as well.

I have taken into account the possibility of raising the water in the prism by raising the embankment on the south side of the canal, otherwise the cost at this point will be considerably increased.

Rebuilding Guard Lock (No. 3 at head of Carillon Canal).

This lock will also have to be an entirely new one. I have estimated it at \$112,000 which is low, owing to the excavation in lock pit being included. There is about 5 miles of river navigation from the head of Carillon canal, which will have to be improved. Immediately after leaving the canal, there is a shoal of about three-quarter miles which I have considered as rock; the work here will be light.

At Chute au Blondeau, about 4 miles further up the river, there is a bar running across; here the work will be rather heavy, as the present channel is narrow and hardly deep enough for 9 feet at low water. This bar is about three-quarters of a

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mile in width. During the winter season, it is not possible to get soundings in this portion of the river owing to the fragile ice.

Rebuilding Lock at Lower Entrance of Grenville Canal (Lock No. 4).

This lock will have to be an entirely new one, the cost of which will be \$97,000.

There is a passing basin of about 500 feet in length, the prism of which will have to be lowered, the cost of which I have estimated at \$15,000. In doing so I have allowed a good margin for rebuilding retaining wall and weir.

Lock No. 5 will have to be an entirely new one, and has been estimated at \$112,000.

From lock No. 5 to lock No. 6, at Stonefield, a distance of about 1 mile, the prism of the canal will have to be lowered from 10 feet, as it now is, to 14 feet, and the width from 45 to 50 feet as at present to 100 feet.

I have estimated this at \$133,000, made up as follows:—Rock, 115,000 cubic yards at \$1; earth excavation, 75,000 cubic yards at 25 cents. This estimate includes a weir which will have to be rebuilt, also lowering the tail race to river.

Lock No. 6 will have to be an entirely new one, the cost of which is estimated at \$82,000; there will be a road-bridge across this lock, which I have estimated at \$1,500.

Rock excavation in prism from lock No. 6 to lock No. 7, a distance of about 3 miles, I have estimated at \$460,000. Earth excavation in slope and embankment, 300,000 cubic yards at 25 cents = \$75,000.

Lock No. 7 will have to be an entirely new one and has been estimated at \$93,000.

Rock excavation in prism from lock No. 7 to lock No. 8, a distance of about 1 mile, I have estimated at \$115,000. Earth excavation in slope, estimated at 80,000 cubic yards at 25 cents = \$20,000.

Lock No. 8 will have to be an entirely new one, and has been estimated at \$112,000.

There is a road-bridge across the lock which has been allowed for at \$1,500.

From lock No. 8 to the upper entrance of the canal, a distance of about 2,000 feet, the prism will have to be lowered, and the present masonry walls on either side will have to be rebuilt, as at present the standard width of 100 feet cannot be obtained. These walls are about 28 feet high.

I have estimated the cost of rebuilding these walls at \$150,000. Rock excavation in this portion of the canal, I have estimated at \$50,000.

I have included dams, pumping, &c., in my estimate and have allowed \$100,000 for this item.

From the head of Grenville canal to L'Original wharf is about 6 miles, where the first shoal occurs, or more correctly, a series of shoals in a distance of about $\frac{3}{4}$ miles. I have estimated the cost of removing them at \$15,000.

From the nature of the shore formation, I consider these shoals to be of clay and boulders.

The river here is quite wide, being fully $\frac{3}{4}$ of a mile, and is known locally as L'Original bay.

About 2 miles from L'Original wharf, another clay and boulder shoal occurs, which appears to be about of the same dimensions as the last. I have estimated the cost of removing this at \$15,000.

From this point to Clark's Island, a distance of about 20 miles, the river is from 20 to 40 feet deep and varying from 1,000 to 2,000 feet in width.

At Clark's Island the channel is narrow and crooked; here the shoal appears to be of rock with hard pan and boulders, and is between $\frac{3}{4}$ to 1 mile long.

I have estimated the cost of removing this shoal at \$75,000, which I consider ample.

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From Clark's Island to the Blanche river, a distance of about 20 miles, the river is deep, varying from 20 to 40 feet and varying in width from 1,000 to 2,000 feet. Here a series of shoals occur for the next 14 miles; only at one point, however, at about half way, does rock appear, and then only for about $\frac{1}{2}$ a mile, the rest of the shoal being clay and boulders and sand—the sand shoal occurring at the upper side of the rock shoal. I have estimated the cost of removing these shoals at \$250,000, which may, after an instrumental survey, prove to be below rather than above the mark.

In estimating the work required through the Grenville and Carillon canals, I have added \$360,000 to cover the cost of increasing the width of present prism and for lock pit excavations, which I consider ample. All these figures are subject to revision, as they are based wholly on observations, guided from a residence of some years on these works.

A summary of the work required in a condensed form is attached, to which I have added 8 pairs of lock gates at \$7,000.

ESTIMATE of cost for 14 foot navigation or 16 feet in the prism from Lake St. Louis to Ottawa.

Rock excavation in present channel to Ste. Anne's lock (lock No. 1)	\$ 105,000
Rebuilding Ste. Anne's lock	82,000
Rock excavation in present channel	15,000
Hard pan excavation	31,500
Removing shoals through Lake of Two Mountains	
Removing hard pan shoal at about 3 miles from Ste. Anne	10,000
Removing shoal at St. Placide rock	50,000
Hard pan excavation from St. Placide to foot of Jones' island	100,000
Rock excavation from foot to head of Jones' island . . .	100,000
Rebuilding Carillon lock (lock No. 2)	97,000
Rock excavation in prism of Carillon canal	120,000
Rebuilding guard lock, Carillon canal (lock No. 3) . . .	112,000
Removing shoals between Carillon and Grenville canals.	50,000
Rebuilding lock No. 4 at Greece's Point	97,000
Raising embankment between locks 1 and 2	15,000
Rebuilding lock No. 5	112,000
Rock excavation in prism of canal from lock No. 5 to No. 6, about 1 mile	115,000
Earth excavation in prism of canal from lock No. 5 to No. 6, about 1 mile	20,000
Bridge lock No. 6	1,500
Rebuilding lock No. 6	82,000
Rock excavation in prism from lock No. 6 to No. 7, about 4 miles	460,000
Earth excavation in prism from lock No. 6 to No. 7, about 4 miles	75,000
Rebuilding lock No. 7	93,000
Rock excavation from lock No. 7 to lock No. 8, about 1 mile	115,000
Earth excavation from lock No. 7 to lock No. 8, about 1 mile	20,000
Bridge at lock No. 8	1,500

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Rebuilding lock No. 8.	\$112,000
Rock excavation from lock No. 8 to deep water	50,000
Rebuilding dry walls above lock 8	150,000
Dams, pumping, &c., &c.	100,000
Removing shoal at L'Original	15,000
" " head of bay	15,000
" " Clark's Island	75,000
" shoals from River Blanche to head of Kettle Island, about 14 miles, say	250,000
Total.	<u>\$2,846,500</u>
Add 50 per cent to earth and rock excavation in prism of Grenville canal.	360,000
Eight pair lock gates at \$7,000	56,000
	<u><u>\$3,262,500</u></u>

H. G. STANTON.

ESTIMATE of cost for a 14 foot navigation (16 feet in the prism).

OTTAWA TO DESCHENES.

Description.	Quantity.	Unit.	Rate.	Cost.
	C. yds.	C. yds.	\$ cts.	\$ cts.
Rock excavation (Clarke)	244,000			
Add $\frac{1}{4}$ for 14 ft. navigation	61,000			
Add for deeper locks, 24 ft. lift.	26,400			
		331,400	0 90	298,300 00
Rock excavation under water.		8,400	1 50	12,600 00
" at Remoux.		16,000	2 00	32,000 00
Removing old works.				1,900 00
Embankment		35,000	0 30	10,500 00
2 locks, 24 ft. lift.				302,600 00
" 12 "				209,800 00
8 pairs gates.				52,000 00
32 culvert gates				9,600 00
Swing bridge.				12,000 00
Dams and canal walls (Clarke).				110,000 00
Coffer dams.				54,000 00
				<u>1,105,300 00</u>

HENRY A. F. MACLEOD.

LAKE DESCHENES TO TALON LAKE.

SUMMARY of Estimates based on T. C. Clarke's plans—Water Levels not changed.

Page.

1. Lake Deschenes.. . . .	\$ 71,000
1. Chats Canal.. . . .	837,000
2. Chenaux Canal	150,200
2. Portage du Fort.. . . .	349,900
3. Rocher Fendu Chute.. . . .	201,300
3. Long Rapids.. . . .	307,400
4. La Fontaine's Rapids.. . . .	307,200
4. Norman's Rapids.. . . .	238,400
5. Black's Falls.. . . .	190,600
Lake Coulonge.. . . .	500,000
6. Chapeau, L'Islet and Culbute.. . . .	380,200
6. Des Joachims.. . . .	494,200
7. McSorley's.. . . .	225,500
8. Rocher Capitaine.. . . .	650,800
8. Deux Rivières.. . . .	636,300
9. Johnson's Rapids.. . . .	395,200
9. Plein Chants.. . . .	225,100
10. De la Rose.. . . .	174,700
10. Paresseux Chute.. . . .	248,800
11. Petite, Paresseux.. . . .	234,500
11. Talon Chute.. . . .	369,200
12. Talon Lake Rapids.. . . .	128,700
12. Talon Lake Narrows.. . . .	116,700

\$ 7,433,000

For details of above see following pages.

HENRY A. F. MACLEOD.

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SUMMARY of Estimates—Continued.

Estimates of Quantities.	C. Yds.	Cost.	Amount.	Total.
<i>Lake Inshénes.</i>		\$ cts.	\$	\$
From Mr. Shanley's report page 6,.....	88,600	0 80	71,000	71,000
Say 2,600 ft. x 9 ft. of cutting.....				
<i>Chats Canal.</i>				
Earth excavation.....	156,000	0 25	39,000	
Rock excavation.....	153,000	1 00	153,000	
Rock excavation and pumping.....	12,000	2 00	24,000	
2 locks, 24 ft. lift 1 of 13 ft. lift.....			411,400	
6 pairs gates complete, say.....			43,000	
12 culvert gates.....			3,600	
1 regulating weir and 2 gates.....			12,000	
Dams and piers (Clarke).....			118,000	
Timber stone filling, &c.....				
Coffer dams (Clarke).....			33,000	
Half to be removed.....				837,000
<i>Cheneaux Canal.</i>				
Rock excavation 16,600 c. yds. (Clarke).....	20,000	1 50	30,000	
Add $\frac{1}{4}$ th 2,400.....				
Embankment (17,000 c. yds. (Clarke).....	17,000	0 30	5,100	
1 lock, 6 ft. lift.....			82,400	
2 pairs lock gates, say.....			10,000	
4 culvert gates, say.....			1,200	
Dams and piers (Clarke).....			16,500	
Coffer dams to be removed (Clarke).....			5,000	150,200
<i>Portage du Fort.</i>				
Rock excavation.....	80,900	1 25	101,100	
Embankment.....	7,000	0 30	2,100	
1 lock, 24 ft. lift.....			151,700	
2 pairs lock gates.....			15,000	
4 culvert gates.....			1,200	
Dams (Clarke).....			75,000	
Coffer dams $\frac{1}{2}$ removed (Clarke).....			4,200	349,900
<i>Rocher Fendu.</i>				
Rock excavation.....	16,500	1 50	24,800	
Embankment.....	8,000	0 30	2,400	
1 lock, 18 ft. lift.....			127,900	
2 pairs gates.....			13,000	
4 culvert gates.....			1,200	
Dams ($\frac{1}{4}$ th Clarke).....			30,000	
Coffer dam (Clarke).....			2,000	201,300
<i>Long Rapids.</i>				
Rock excavation.....	24,500	1 50	36,800	
Embankment.....	8,000	0 30	2,400	
1 lock, 13 ft. lift.....			108,700	
1 lock, 13 ft. lift } combined.....			108,700	
3 pairs lock gates.....			17,000	
6 culvert gates.....			1,800	
Dams ($\frac{1}{4}$ th Clarke).....			30,000	
Coffer dams (Clarke).....			2,000	307,400
<i>La Fontaine Rapids.</i>				
Rock excavation.....	25,700	1 50	38,600	
Embankment.....	8,000	0 30	2,400	
1 lock, 12 ft. lift.....			104,900	
1 lock, 12 ft. lift.....			104,900	
4 pairs gates.....			22,000	
8 culvert gates.....			2,400	
Dams ($\frac{1}{4}$ th Clarke).....			30,000	
Coffer dams (Clarke).....			2,000	307,200

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SUMMARY of Estimates—Continued.

Description.	C. Yds.	Cost.	Amount.	Total.
<i>Norman's Rapids.</i>				
		\$ cts.	\$	
Rock excavation	24,300	1 50	26,500	
Embankment	8,000	0 30	2,400	
1 lock, 24 ft. lift			151,300	
2 pairs gates			15,000	
4 culvert gates			1,200	
Dams ($\frac{1}{2}$ th Clarke)			30,000	
Coffer dams (Clarke)			2,000	
				238,400
<i>Black's Falls.</i>				
Rock excavation	19,000	1 50	28,500	
Embankment	8,000	0 30	2,400	
1 guard lock, 14 ft. lift			112,500	
2 pairs gates			11,000	
4 culvert gates			1,200	
Dams ($\frac{1}{2}$ th Clarke)			30,000	
Waste weir			3,000	
Coffer dam			2,000	
				190,600
<i>Chapcan, L'Islet and Culbute.</i>				
Rock excavation	48,000	1 50	72,000	
" " and pumping	14,400	2 00	28,800	
Embankment (Clarke)			3,700	
2 locks, 12 ft. lift each			209,800	
4 pairs gates complete say			22,000	
8 culvert gates, say			2,400	
Dams and piers (Clark)			22,000	
Timber, stone filling, &c ... }				
Coffer dam (Clarke) to be removed			17,000	
Waste weir (Clarke) masonry, &c. }			2,500	
				380,200
<i>Des Joachims.</i>				
Rock excavation	53,000	1 50	79,500	
Embankment	66,500	0 50	33,250	
Removal of piers, &c., (Clarke)			1,000	
1 lock, 24 ft. lift			151,300	
1 lock, 19 ft. lift			131,800	
4 pairs gates say			28,000	
8 culvert gates			2,400	
Dams and cribs, &c. (Clarke) 44,500				
Add additional paving 3,500			48,000	
Coffer dams (Clarke) to be removed, say			7,000	
1 regulating weir and gates			12,000	
				494,200
<i>McSorley's.</i>				
Rock excavation	22,000	1 50	33,000	
Embankment	9,000	0 50	4,500	
1 lock, 17 ft. lift			123,900	
2 pairs gates			12,000	
4 culvert gates			1,200	
Dams and cribs (Clarke)			48,800	
Coffer dams to be removed (Clarke)			2,100	
				225,500
<i>Rocher Capitaine.</i>				
Rock excavation	139,000	1 25	173,800	
Embankment	16,000	0 50	8,000	
2 locks, 24 ft. lift			302,600	
4 pairs of gates			30,000	
8 culvert gates			2,400	
Dams and banks, &c. (Clarke)			134,000	
				650,800

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SUMMARY of Estimates—Continued.

Description.	C. Yds.	Cost.	Amount.	Total.
		\$ cts.	\$	\$
<i>Deux Rivières.</i>				
Rock excavation.....	37,000	1 25	46,300	
Earth ".....	50,000	0 25	12,500	
Embankment.....	26,000	0 25	6,500	
1 lock, 24 ft. lift.....	\$ 151,300			
1 " 12 ft. ".....	104,900			
1 " 13 ft. ".....	108,700			
6 pairs lock gates.....			37,000	364,900
12 culvert gates.....			3,600	
Additional concrete in foundation—				
2 locks on each.....			26,000	
Timber, &c., in do.....			8,000	
Dams, banks, &c. (Clarke).....			100,500	
Coffer dams (Clarke).....			7,000	
2 regulating weirs.....			24,000	636,300
<i>Johnson's.</i>				
Rock excavation.....	12,200	1 50	18,300	
Earth ".....	81,300	0 25	20,325	
Embankment.....	11,000	0 25	2,750	
1 lock, 12 ft. lift.....	\$ 104,900			
1 " 14 ft. ".....	112,500			
4 pairs gates.....			217,400	
8 culvert gates.....			22,000	
1 regulating weir.....			2,400	
Dams, banks, &c.	\$ 87,000 (Clarke)		12,000	
Add $\frac{1}{2}$ th.....	7,000			
Coffer dam (Clarke).....			94,000	
			6,000	395,200
<i>Plein Chants.</i>				
Rock excavation.....	21,000	1 50	31,500	
Embankment.....	9,000	0 30	2,700	
1 lock, 24 ft. lift.....			151,300	
2 pairs of gates.....			15,000	
4 culvert ".....			1,200	
Dam, &c. (Clarke).....			18,600	
Wall.....	950	5 00	4,800	225,100
<i>De La Rose.</i>				
Rock excavation.....	8,500	1 50	12,750	
Embankment.....	3,000	0 30	900	
1 lock, 16 ft. lift.....			120,100	
2 pairs gates.....			11,000	
4 culvert gates.....			1,200	
Dam (Clarke).....	\$ 26,500			
Add $\frac{1}{2}$ th raised 2 ft.....	2,200		28,700	174,700
<i>Puressoux Chute.</i>				
Rock excavation.....	56,200	1 25	70,250	
Embankment.....	8,000	0 30	2,400	
1 lock, 24 ft. lift.....			151,300	
2 pairs gates.....			15,000	
4 culvert gates.....			1,200	
Dams (Clarke).....	\$ 7,400			
Less $\frac{1}{2}$ th 2 ft. lower.....	600			
	\$ 6,800			
Add 2 walls.....				
L 1 4+6.....				
Ea. 100' x 11' x 2.....				
— 370 c. yds at \$5.00.....	\$ 1,800		8,600	248,800

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SUMMARY of Estimates—Continued.

Description.	C. Yds.	Cost.	Amount.	Total.
<i>Petite Paroissieux.</i>				
		\$ cts.	\$	\$
Rock excavation.....	23,900	1 25	29,600	
Embankment.....	6,000	0 30	1,800	
1 lock, 24 ft. lift.....			151,300	
2 pairs gates.....			15,000	
4 culvert gates.....			1,200	
Dam (Clarke).....	\$ 32,000			
Add wall 150 ft. x 20 ft. x 6½.....	3,600		35,600	
				234,500
<i>Talon Chute.</i>				
Rock excavation.....	36,800	1 25	46,000	
Embankment.....	20,000	0 30	6,000	
2 locks, 22 ft. lift each (combined).....			287,000	
3 pairs gates.....			25,000	
6 culvert gates.....			1,800	
Dam (Clarke).....			3,400	
				369,200
<i>Talon Lake Rapids.</i>				
Rock excavation.....	21,700	1 25	27,100	
Embankment.....	6,000	0 30	1,800	
1 guard lock, 6 ft. lift.....			82,400	
2 pairs gates.....			10,000	
4 culvert gates.....			1,200	
Dam (Clarke).....			6,200	
				128,700
<i>Talon Lake Narrows.</i>				
Rock excavation.....	77,800	1 50	116,700	116,700
<i>Chaudière Portage, French River.</i>				
Rock excavation.....	49,000			
Add ¼ for 14 ft. nav'n.....	13,000	62,000	1 50	93,000
Embankment.....		42,000	0 30	12,600
1 lock, 24 ft. lift.....				151,300
1 lock, 10 ft. lift.....				97,400
4 gates.....				26,000
8 culvert gates.....				2,400
Dam (Clarke).....				26,000
				408,700
<i>Rapide du Buisson.</i>				
Rock excavation.....	10,400			
Add ¼ for 14 ft. nav'n.....	2,600	13,000	1 50	19,500
Embankment.....		3,000	0 30	900
1 lock, 10 ft. lift.....				97,400
2 pairs gates.....				11,000
4 culvert gates.....				1,200
Dams and piers.....				36,400
				166,400
<i>Rapide de Parisien.</i>				
Rock excavation.....	8,000			
Add ¼ for 14 ft. nav'n.....	2,000	10,000	1 50	15,000
Embankment.....		7,000	0 30	2,100
1 lock, 10 ft. lift.....				97,000
2 pairs gates.....				11,000
4 culvert gates.....				1,200
Dams and piers.....				15,700
				142,000

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SUMMARY of Estimates—*Concluded.*

Description.	C. Yds.	Cost.	Amount.	Total.
<i>Grand Recollet Falls.</i>		\$ cts.	\$	\$
Rock excavation... 17,006				
Add $\frac{1}{4}$ for 14 ft. nav'n... 4,200	21,200	1 50	31,800	
Embankment... 5,000		0 30	1,500	
1 lock, 13 ft. lift...			108,700	
2 pairs gates...			11,000	
4 culvert gates...			1,200	
Dams and piers...			13,000	
Coffer dams...			2,000	
				169,200
<i>Les Petites Dalles.</i>				
Rock excavation... 19,300				
Add $\frac{1}{4}$ for 14 ft. nav'n... 4,800	24,100	1 50	36,200	
1 lock, 14 ft. lift...			112,500	
Embankment... 3,000		0 30	900	
2 pairs gates...			11,000	
4 culvert gates...			1,200	
Dams and piers...			12,000	
Coffer dams...			7,100	
				180,900

HENRY A. F. MACLEOD.

SUMMIT LEVEL.

The following is a report and estimate of the cost of the summit section, between Lake Nipissing and Talon lake, made for the Montreal, Ottawa and Georgian Bay Canal Company, by me in the autumn of 1899 :—

OTTAWA, October 28, 1899.

Montreal, Ottawa and Georgian Bay Canal Company:

DEAR SIRS,—In accordance with your instructions of July 1, 1899, accompanied with a memorandum and profile, from Mr. Walter Shanly, C.E., I have to report that surveys have been made, under my direction, by two parties of engineers, of the summit section of the Georgian bay canal, extending from the easterly shore of Lake Nipissing to Lake Talon, a distance of 19.71 miles.

One of the parties, under Mr. Henry Carre, commenced operations on July 5 at Lake Nipissing and made surveys and explorations required from Lake Nipissing to the outlet of Turtle lake, a distance of 15.98 miles, besides explorations and surveys of harbours, finishing on October 9.

The other party, under Mr. H. G. Stanton, began on August 8, at the outlet of Turtle lake and made the surveys, &c., to deep water in Talon lake, a distance of 3.73 miles, besides explorations, finishing on October 7.

The nature of the surveys, and the information required to be ascertained by your instructions, were such as would enable contractors to make up tenders for the construction of the works, and you particularly required that the nature of the material to be excavated should be ascertained by borings made at as frequent intervals as necessary for the purpose. This involved *location*, as well as trial surveys.

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The survey, suggested by Mr. Shanly's memorandum, was of a more preliminary character, and a system of borings was not anticipated.

His proposal, on which these surveys just made are based, is, to obtain the supply of 'feed water' for the proposed canal, eastward from the summit, from the water of Lake Nipissing, whose natural outlet is westward, through the French river to the Georgian bay, Lake Huron.

The actual summit-water of the route is Trout lake, 23 feet higher and four miles to the east of Lake Nipissing, and one of the sources of the Mattawa river, but Mr. Shanly says that its outflow is wholly inadequate to the requirements of the contemplated navigation, and this statement is doubtless correct.

The changed conditions of affairs on the shores of Lake Nipissing, the building of the Canadian Pacific Railway, and the settlements along the margin of the lake referred to in the memorandum, now prevent the raising of the waters of Lake Nipissing, as proposed in the original reports of Mr. Shanly and Mr. T. C. Clarke. Yet, I believe, that the waters might be maintained at mean summer level, three feet above low water, to the advantage of all concerned, on the shores of the lake, the improvement of the navigation of the lake, and the effecting of a very large saving in the cost of the canal works, provided that means be taken to prevent the high water in the early summer from rising above its ordinary high level mark.

This survey, however, is made to carry out Mr. Shanly's intention of not interfering in any way with the variations of the water level of Lake Nipissing.

To effect this, a channel will have to be cut through the summit ridges, at the same time lowering the waters of Trout and Turtle lakes, 23 and 22 feet respectively to the low water level of Lake Nipissing.

Mr. Shanly gives a general idea of the work to be encountered in making such a channel in a summary as follows :—

1st. Cutting through the summit ridge, Nipissing to Trout lake.

2nd. The cutting away of such obstruction to the needed depth of navigation, as may be found to exist in Trout and Turtle lakes.

3rd. Cutting through the rocky barrier, which forms the Turtle rapids, dividing Turtle lake from Lake Talon.

'The surveys will thus extend over a distance of about 21 miles.'

'In estimating quantities, the following dimensions to be used' :—

Bottom width of canal.	100 feet.
Slopes of cuttings (average)	1 to 1 "
Canal bottom below low water in Lake Nipissing	11 "
" " " Trout lake	34 "

Mr. Shanly also gives a description of the probable materials to be excavated, and suggests the routes, via the 'Little Vase river' and also via the 'Ojibwaysippi' as the most suitable. After surveying and exploring these routes, and two other routes further west, that via Ojibwaysippi, except the first mile from Lake Nipissing, was selected as the most favourable. The Ojibwaysippi was also selected by Mr. T. C. Clarke, as mentioned in his report of January 2, 1860, page 21.

Mr. Shanly suggests, that all bench marks, of forty years ago, have of course disappeared, or been obliterated, but with the assistance of one of Mr. Shanly's camp plans a bench mark was discovered by Mr. Carre, on the shore of Trout lake, which enabled him to apply all the soundings marked on the plan to his own work.

The scale of navigation, proposed in the memorandum, is nine feet on the lock sills, at lowest stage of Nipissing water, and canal bottom two feet lower. Surveys and borings were made in compliance with this scale (9 feet) until August 19, when you instructed me to make the borings, &c., for 14 feet on the sill and canal bottom two feet lower, or 16 feet. This change made it necessary to bore a considerable part of the line over again, on account of the increased depth.

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The width of 100 feet for the bottom of the canal has been adhered to in the estimates. The slopes in rock are estimated at $\frac{1}{4}$ to 1, except in places where the surface of the rock is below the new water level, where the slopes are to be 1 to 1.

A berm of 6 feet is made on the surface of the rock. Earth and other materials, except rock, are estimated at slopes of 2 to 1.

WATER SUPPLY.

The quantity of water obtainable at the summit level must be sufficient for the lockage of vessels, eastward to Ottawa river, and westward to the Georgian bay.

Mr. Shanly, in his report on the Ottawa and French river navigation project, of March 22, 1858, page 35, states, that an inexhaustible supply can be obtained from Lake Nipissing, for even setting aside the enormous storage capacity of its immense area (upwards of three hundred square miles) the accession of water which Lake Nipissing receives from its many tributaries is ample to guarantee a sufficiency for whatever drafts may be made upon it, for any possible purposes of lockage in the most distant future.

Mr. Clarke, in his report above quoted, page 23, says that 'the waters of Lake Nipissing are sufficient for any scale of navigation, and for all time to come.'

'The quantity of water found, by careful gauging, to be flowing in French river, at a low stage, was 9,500 cubic feet per second, or 820,800,000 cubic feet in 24 hours. Assuming the locks to be 250 feet by 50 feet by 12 feet, and that 50 lockages are made each way in 24 hours, it would require 15,000,000 cubic feet of water, or less than 1-50th part of the supply. The whole amount of water flowing is equivalent to 5,472 lockages each 24 hours. This at once sets at rest any idea of the necessity of a storage reservoir.'

GENERAL DESCRIPTION OF ROUTE, LAKE NIPISSING TO TROUT LAKE.

It is proposed to make the entrance of the canal from Lake Nipissing, near Rocky Point, half a mile north of the outlet of Ojibwaysippi, and to join the Ojibwaysippi line at about one mile out.

Surveys and borings were made for the entrance at Rocky Point, and at the mouth of Ojibwaysippi, and also of both lines to the junction.

The Rocky Point line is selected, because deep water in Lake Nipissing is reached in a shorter distance, the distance to the junction is also shorter by 900 feet. There is no rock excavation in this entrance, while there is a considerable amount in the Ojibwaysippi entrance, and the quantity of rock excavation in the Rocky Point line is less than in the other.

It is proposed to dredge out the entrance to a width of 400 feet. The length to deep water (16 feet at low water) is 1,850 feet. Entrance piers of cribwork will nearly surround this basin, founded on the bottom of the space dredge extending to low water, and surmounted by piers of concrete, 10 feet high. The estimated cost of this entrance, and of all other works, will be found in the Appendix C.

From zero to station 98, the line passes through low-lying marshy land, which can be dredged, occasionally, overlying hard granite rock, which will have to be excavated. At station 47, the Canadian Pacific Railway is crossed. Here a swing bridge, of 100 feet opening is proposed, the piers and abutments of concrete, founded on rock and coped with masonry, the superstructure of steel.

The roads at stations, 79 + 50, and station 151, are proposed to be diverted to a swing bridge, close to the lock, near station 100.

From station 98 to station 112 in lake No. 1, is a heavy rock cutting, in some places exceeding 40 feet in depth.

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In this cutting it is proposed to build a guard lock and a regulating weir, with two sets of gates and sluices, so as to be able to control the high water in Lake Nipissing and Trout lake respectively. It is quite likely that the waters in Trout lake and the other lakes to the east will rise more rapidly than Lake Nipissing, in the spring.

This lock is intended to be of the same general dimensions as those on the Soulanges canal, viz., length, 270 feet between the hollow quoins, 45 feet wide and 14 feet on the mitre sills. The walls to be of concrete to the 14 feet line, above this, concrete with masonry facing, and coping of masonry, entrance piers of cribwork and concrete, at each end are included. The regulating weir, of concrete, with masonry coping.

Lake No. 1 is the first of a chain of five lakes, which follow one another, with short intervening portages, until Trout lake is reached, at station 212. Of this lake, No. 1, about 500 feet of the bottom is below the proposed bottom of the canal. The cuttings approaching this where shallow are widened to a base of 150 feet.

In borings made in this lake, and in a large proportion of borings to the east of this, material, composed of compact gravel and boulders was encountered, through which it was impossible to bore with the appliances we had on hand, particularly so when making borings from rafts. The services of Mr. W. J. Ellard, of Ottawa, who is accustomed to making borings, were secured, and a large number of borings were made by him, but he also failed to penetrate this material. It has been returned as gravel and boulders, at a special price.

The cutting between lakes No. 1 and 2 is heavy, over 40 feet deep in some places.

No portion of the bottom of lakes 2, 3 and 4 is below the bottom of the canal, and the cuttings between them are heavy, exceeding 40 feet in depth in places.

The portage between lakes 4 and 5 is the summit portage, 1,500 feet long. This will be a heavy cutting, a large part will be rock, and over 40 feet deep in places. Rock appears on each side of the ravine, so that the slopes are not so wide as they would otherwise be on the remainder of the cutting. The material is put down as gravel and boulders, below the line of the borings made.

The bottom of lake No. 5 is generally above the proposed bottom of the canal, only a few places and for short distances is the bottom lower. The shallow cuttings in this lake are widened out to 150 feet, on a curve in the centre line.

The last portage cutting to deep water is Trout lake will be 2,300 feet long, and, generally, 42 feet deep. The greater part is put down as rock, and it is the largest rock cut on the western portion of the section. Deep water in Trout lake is reached at 1,100 feet from the shore.

CLEARING, FENCING, AND PUBLIC ROAD.

An estimate is made for clearing and fencing on the part of the line from Lake Nipissing to Trout lake. Also for a public road along the north side of the canal, near the top of the slopes, not on the tow-path level, as it is not considered necessary to form a tow-path.

RIGHT OF WAY.

From Lake Nipissing to lake No. 4, the right of way for 70 acres will probably cost \$2,000. Beyond this to Lake Talon there is not likely to be any claim.

TROUT LAKE.

A line of soundings was taken along the most direct route through Trout lake, from deep water at the western entrance to a point near Camp island, at station 514, nearly $5\frac{1}{2}$ miles, which showed a depth of from 70 to over 150 feet, or when the lake is reduced to low water level in Lake Nipissing, of from 45 feet to 125 feet. For over

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two miles no bottom was reached with 150 feet of sounding line. The outlines of the shores were approximately fixed, by triangulation and micrometer measurements.

From stations 514 to 531 the bottom of the lake rises above the bottom of the canal, except to the eastern end of this cutting, where the bottom is irregular. The excavation ranges from 10 to 20 feet deep. The material in this, and other cuttings under the waters of Trout lake, are returned as gravel and boulders.

For the next 4,000 feet the water is deep, being 20 to 40 feet below low water level in Lake Nipissing.

Another shoal is reached at station 570, which extends to station 612. This will be a large cutting, from 15 feet to 30 feet deep, and includes the shoal known as the 'Stepping Stones,' which were some feet above water when these soundings were made.

The lake is then deep, from 16 to 30 feet, for 2,500 feet, and the beginning of the entrance to the outlet of Trout lake is reached at station 637.

The outlet cutting extends from stations 637 to 662, and includes a rock cutting in the narrows between Trout lake and Turtle lake. The entrance extends 600 feet into Turtle lake.

Two lines were surveyed for this outlet, and the one more westerly, following an old channel, was selected, being the most economical and in the best alignment.

The gravel and boulders cutting will range from 10 to 30 feet deep, and the rock cutting from 30 to 60 feet, the deepest cut on the section, 900 feet long.

TURTLE LAKE.

The water continues deep for 3,600 feet from the outlet cutting of Trout lake, being from 17 to 25 feet below low water in Lake Nipissing.

From station 698 to station 719 the water is shoal, and a cutting will have to be made in gravel and boulders, ranging from 10 to 30 feet deep.

The water is still shoal from station 719 to 731, through the first narrows of Turtle lake. The cutting will be in rock, running from 20 to 50 feet deep.

From station 731 to 753 the water is shoal, except at two places, aggregating 500 feet where it is deeper than the bottom of the canal; the depth of the cutting is from 5 to 18 feet.

From station 753 to 759 the line passes through the second narrows of Turtle lake, and will be in rock cutting, ranging from 5 to 30 feet deep.

The water continues shoal from station 759 to 763, and the cutting will run from 3 to 16 feet in gravel and boulders.

From station 763 to the beginning of the outlet cutting at station 825 + 50, a distance of a mile and one-fifth, the lake widens out and the water is deep, from 16 to 90 feet under low water level in Lake Nipissing.

The western portion of the survey ends at 825 + 50, 15.98 miles from the entrance at Lake Nipissing.

TURTLE LAKE OUTLET.

The excavation for the outlet of Turtle lake commences at 850 feet out from the shore, and follows through a succession of rapids and lagoons until Big Whitefish lake is reached. The first division of the cutting extends from station 0 to 18, and is composed, as far as can be ascertained, of gravel and boulders. The depth of cutting ranges from 20 to 40 feet.

A timber dam has been built at the outlet of Turtle lake, by which the waters in Trout and Turtle lakes are sometimes raised five or more feet.

From station 18 to station 30 the cutting is made up of rock, gravel and boulders, and mud. The depth runs from 25 to 30 feet.

From station 30 to station 83 is a very large cutting of rock, covered with a few feet of mud, passing through Moose Pond Lagoon. The rock cutting is the largest on the Summit section, is a mile long and from 20 to 38 feet deep.

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Two outlets of this lagoon were surveyed and the more southerly one is selected, being about 800 feet shorter, with a much better alignment than the other. Judging from the elevations, the quantities will also be less.

The water is deep in Big Whitefish lake, for 2,100 feet, the bottom being in part 34 feet under low water, Lake Nipissing.

The outlet cutting of this lake begins at section 104, and there is a continuous cutting of gravel and boulders, and mud to deep water in Falon lake, at station 124, ranging from 6 to 20 feet deep.

Falon lake is deeper than the bottom of the canal for 1,800 feet, the greatest depth being 11 feet lower.

At station 142 the outlet cutting of Falon lake begins, and there is a continuous cutting of earth and sand till deep water is reached in Talon lake, and the end of the Summit section, at station 197 + 20. This cutting passes through a level flat, formed by deposit from North river, which comes in from the north. The depth of the cutting is from 5 to 20 feet.

The waters of North river should not be permitted to enter the canal cutting, but should be diverted along the north edge of the flat, through an old channel, costing with some cribwork, about \$4,500.

TALON LAKE.

The level of Talon lake, when the survey was made was only one foot three inches lower than low water in Lake Nipissing, caused by a timber dam at Talon Chute. This dam, when entirely closed, raises the water over five feet higher. It will be unnecessary to raise these waters as high as has been customary to raise them for some years back.

A line of soundings was taken through Lake Talon, and deep water was found for 8 miles. Beyond this, there are two shoals, a mile apart. At the lowest shoal, which is narrow and rocky and half a mile above Talon Chute, a dam, lock and, guard lock, should be built, to control the summit level, from Lake Nipissing eastward.

STONE PROTECTION.

The slopes of the canal will require to be protected with stone from Lake Nipissing to station 100, and from Falon lake to Talon lake. It is intended to excavate and fill the whole length of the slopes, with two feet of quarry stone. It is not considered necessary to protect the slopes in the gravel and boulder cuttings.

LOW WATER IN LAKE NIPISSING.

The Department of Public Works is building a wharf at North Bay, the plans of which refer to a bench mark, which is 3'73 feet above low water in Lake Nipissing, and which was verified by one of the contractors for the wharf last spring. The contractors are instructed by the department engineers to make use of this bench mark.

Low water mark was shown to me, also, at the mouth of the Wisawasa river, near Calendar, by Mr. Thomas Darling, agent for Mr. Booth, who has lived there for a number of years.

By taking simultaneous observations there, and at North Bay, this level of low water was found to be almost the same as that at North Bay.

Independent check levels were taken by both parties from the bench mark to Trout lake, and the levels were carried across Trout lake and Turtle lake by a series of simultaneous observations. From Turtle lake to Talon lake, levels were taken on the banks of the rapids and lakes.

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PLANS, ETC.

The plans, profiles, and cross sections show the positions of the various cuttings and their extent, also the alignment of the centre line. To avoid heavy work, curves of 478 feet radius have been used in a few confined places.

COST.

The estimated cost of the section is \$5,950,000, which includes 15 per cent for engineering, contingencies, &c.

APPENDIX A is a schedule of quantities of the various cuttings in the western portion of the Summit section.

APPENDIX B is a schedule of quantities of the eastern portion.

APPENDIX C is an estimate in detail of quantities and cost in the Summit section.

Should the bottom of the canal be raised 3 feet, to the average summer level, it would effect a saving of about \$750,000.

I am, yours truly,

(Signed) HENRY A. F. MACLEOD,

M. Inst. C.E.

APPENDIX A.

WESTERN PORTION OF SUMMIT SECTION.

Lake Nipissing to Turtle Lake Outlet, 15.98 miles.

SCHEDULE OF QUANTITIES.

From Station to Station.	Earth, cubic yards.	Gravel and Boulders, cubic yards.	Rock, cubic yards.
Rocky Pt. Harbour, 0 + 00 to 18 west.....	260,870		
Station 0 + 00 to 49.....	440,000		
" 40 to 99 + 75.....	697,850		
	1,398,720		
Station 0 + 00 to 40.....			66,000
" 40 to 67.....			68,485
" 97 to 115 ..			178,871
" 99 + 75 to 115 ..	17,000	22,413	
" 115 to 140.....	76,000	8,926	152,936
" 140 to 154 + 35.....	86,830	44,561	61,050
" 154 + 35 to 180 ..	129,872	213,219	38,209
" 180 to 200 + 75.....	69,388	163,071	131,057
" 200 + 65 to 223 + 70.....	3,866	50,221	204,215
<i>Trout Lake.</i>	382,956	502,411	900,823
Station 514 + 27 to 531 + 35.....		86,727	
" 570 + 00 to 612 + 00.....		485,840	
" 637 + 00 to 662 + 00.....		120,426	
" 652 + 70 to 662 + 00.....	(the divide).		85,812
<i>Turtle Lake.</i>		692,993	85,812
Station 698 + 00 to 719 + 50		167,394	
" 719 + 50 to 731 + 50			102,885
" 732 + 00 to 752 + 50		38,400	
" 753 + 00 to 758 + 50			44,915
" 759 + 00 to 763 + 00.....		18,861	
		224,655	147,800
Total rock.....			1,134,435
" gravel and boulders.....		1,420,059	
" earth.....	1,781,676		

(Signed) HENRY CARRE.

" HENRY A. F. MACLEOD.

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APPENDIX B.

EASTERN PORTION OF SUMMIT SECTION.

Turtle Lake Outlet to Talon Lake, 8.73 Miles.

SCHEDULE OF QUANTITIES.

From Station to Station.	Earth, cubic yards.	Gravel and Boulders, cubic yards.	Rock, cubic yards.
0 . 00 to 19 + 00.....		301,705	
19 + 75 to 30 + 42.....		91,893	
16 + 98 to 23 + 01.....			34,770
16 + 98 to 30 + 42.....	56,821		
30 + 42 to 83 + 05.....	89,715		
30 + 42 to 82 + 04.....			563,924
104 + 52 to 109 + 82.....	10,311	22,261	
109 + 82 to 118 + 67.....		54,445	
118 + 67 to 121 + 71.....	2,680	6,308	
121 + 71 to 124 + 05.....	1,739		
	161,266		
142 + 48 to 171 + 85.....	190,301		
171 + 85 to 177 + 85.....	47,409		
177 + 85 to 197 + 20.....	85,873		
	323,583		
Total rock.....			598,694
" gravel and boulders.....		476,612	
" earth.....	484,849		

(Signed) H. G. STANTON.

" HENRY A. F. MACLEOD.

APPENDIX C.

SUMMIT SECTION.

ESTIMATE OF QUANTITIES AND COST.

Right of way, 70 acres.....	\$ 2,000
Clearing 60 acres at \$20.....	1,200
Fencing 52,400 feet at 6c.....	3,200
Public road, 4 miles at \$6,000.....	24,000

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EXCAVATION.

Dredging, west.	1,398,720	c. yds.	
“ east.	323,583	“	
	1,722,303	“ at 15c. . .	258,345
Earth, west.	382,956	c. yds.	
“ east.	161,266	“	
	544,222	“ at 25c. . .	136,055
Gravel and boulders, west.	1,420,059	“	
“ “ east.	476,612	“	
	1,896,671	“ at 80c. . .	1,517,337
Rock, west.	1,134,435	“	
“ east.	598,694	“	
	1,733,129	“ at \$1.50. .	2,599,694
Stone protection, 120,000 c. yds. at \$1.			120,000
Guard lock (compound)—			
Concrete, 11,500 c. yds. at \$6.			69,000
Masonry, 1,610 c. yds. at \$15.			24,150
Cast-iron pipes, segments, dowels, mitre sills.			5,600
4 pairs lock gates.			28,000
Regulating Weir—			
Concrete, 336 c. yds. at \$6.			2,016
Masonry, 130 c. yds. at \$15.			1,950
8 sluice gates.			2,000
C. P. Ry. Swing bridge—			
Concrete, 1,800 c. yds. at \$6.			10,800
Masonry, 100 c. yds. at \$15.			1,500
Superstructure.			20,000
Public Road Swing Bridge—			
Pivot pier, &c.			3,500
Superstructure.			7,500
Nipissing Entrance Piers—			
Cribwork, 43,318 c. yds. at \$3.50.			151,613
Concrete superstructure, 14,951 c. yds. at \$6.			89,706
Stone in concrete, 4,676 c. yds. at \$1.50.			7,014
Mooring posts, fenders, &c.			4,000
Guard Lock, Guide Piers—			
Cribwork, 8,300 cubic yards at \$3.50			29,050
Concrete superstructure, 3,200 c. yds. at \$6.			19,200
Mooring posts and fenders.			2,000
Beacon Crib—			
Cribwork, 7,143 c. yds. at \$3.50.			25,000
North River Diversion.			4,500
Add engineering, contingencies, &c.			780,070
Total.			<u>\$5,950,000</u>

HENRY A. F. MACLEOD.

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PROPOSED LOCKS BETWEEN MONTREAL AND GEORGIAN BAY.

Numbers on plan.	Names.
1	Saint Anne's
2 & 3	Carillon
4 to 8	Grenville
9 & 10	Ottawa
11	Little Chaudière
12	Britannia Bay
13 to 15	Chats
16	Cheneaux
17	Portage du Fort
18	Rocher Fendu chute (combined)
19 & 20	Long Rapids
21 & 22	La Fontaine
23	Normans
24	Blacks
25	Chapeau
26	L'Islet
27 & 28	Des Joachims
29	McSorley's
30 & 31	Rocher Capitaine
32 to 34	Deux Rivières
35 & 36	Johnsons
37	Plein chants
38	De la Rose
39	Paresseux Chute
40	Petit Paresseux
41 & 42	Talon Chute (combined)
43	Lake Talon
44	Summit
45 & 46	Chaudière Portage
47	Du Buisson
48	Du Parisien
50	Les Petites Dalles

50 Locks

Locks requiring names : Nos. 3, 5, 6, 7, 8, 10, 11, 14, 15, 22, 28, 36.

PRECIS OF PROPOSED ROUTE FOLLOWED BY CANAL BETWEEN MONTREAL AND GEORGIAN BAY.

Lock No. 1	<i>Saint Annes</i> : Existing lock to be altered, 4 ft. lift. Possibly the railway bridge may have to be altered so as not to interfere with the new lock.
From lock No. 1 to lock No. 2	26½ miles of lake and river navigation, part of which will have to be improved.
Lock No. 2	<i>Carillon Canal</i> . Present lock to be altered. Lift 5 ft.
From lock No. 2 to lock No. 3	The canal will have to be deepened from present depth of 9 ft. to 14 ft. waterway.
Lock No. 3	Existing lock to be altered, lift 12 ft.
From lock No. 3 to lock No. 4	Distance about 6 miles ; about 3,000 ft. of this will have to be improved.

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- Lock No. 4 *Grenville Canal*. Present lock to be altered; lift varies from 0 ft. to 6 ft. according to state of river.
- From lock No. 4 to lock No. 5..... Passing Basin to be deepened. Distance between locks about 500 ft.
- Lock No. 5 Present lock to be altered, lift from 14 to 18 ft.
- From lock No. 5 to lock No. 6..... Canal of 1 mile to be deepened and widened. South side to be strengthened by dry masonry walls.
- Lock No. 6 Existing lock to be altered, lift 7 ft.
- From lock No. 6 to lock No. 7..... Canal 4 miles long to be deepened and widened, and two waste weirs rebuilt.
- Lock No. 7..... Present lock to be altered, lift 7 ft.
- From lock No. 7 to lock No. 8..... Canal of about 1 mile long to be widened and deepened.
- Lock No. 8 Present lock to be altered. Lift varies from 0 ft. to 14 ft. according to the state of the river. This lock is the last on the Grenville canal to the end of which there is about 2,500 ft. of dry walls on each side. This length of canal will have to be widened and deepened; and rights of way will have to be bought. The Grenville and Carillon canals are through rock.
- From lock No. 8 to lock No. 9..... After leaving the Grenville canal there is river navigation for about 60 miles of which 5 will have to be improved by dredging.
- Lock No. 9 and lock No. 10..... *Ottawa*. Here the canal between Ottawa and Georgian Bay commences. Right of way will have to be bought, though there are leased government lands through which the canal might pass, and which might be obtained at less cost. Lock to be built with lift of 24 ft., leading into a passing basin 1,000 ft. long, and about 200 ft. wide, which leads into lock No. 10, with lift of 24 ft.
- From lock No. 10 to lock No. 11..... About $\frac{1}{4}$ mile of canal to be made through rock, and then $1\frac{1}{4}$ miles of river navigation all of which will have to be deepened by dredging. On this section a swing bridge will have to be erected for the C. P. R. crossing.
- Lock No. 11 *Little Chaudiere*. Lock with lift of 12 ft.
- From lock No. 11 to lock No. 12..... After passing lock 11, a canal will have to be built 1 mile long on the river shore in order to drown the Rimaux Rapids of 3 ft. After this canal is left, deep water navigation exists for $2\frac{3}{4}$ miles.
- Lock No. 12..... *Brittannia Bay*. Lock with 12 ft. Half a mile of canal to be built from the upper end of this lock.

NOTE.—From lock 8 to lock 12 there are five different routes that are available in case of necessity. The above one is that selected by Clarke.

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From lock No. 12 to lock No. 13.....	Navigation through Lake DesChenes for about 26½ miles. The average depth varies from 20 to 30 ft. but there are some portions of the channel which will have to be deepened.
Lock No. 13 and lock No. 14.....	<i>Chats</i> . Two locks each with a lift of 24 ft. and with a passing basin between.
From lock No. 14 to lock No. 15.....	River navigation for about 1½ miles: the level of the water to be raised about 10 ft.
Lock No. 15.....	<i>Chats</i> . Lock with lift of 12 ft.
From lock No. 15 to lock No. 16.....	Navigation through Chats lake, deep water. Distance about 23 miles to lock 16.
Lock No. 16.....	<i>Chenneaux</i> . Lock with 6 ft. lift. Dam also to be built.
From lock No. 16 to lock No. 17.....	About 5 miles of navigation through the head of the lake.
Lock No. 17.....	<i>Portage du Fort</i> . Lock with lift of 24 ft. built on an island, rock excavation. Dam to be built.
From lock No. 17 to lock No. 18.....	River navigation for about 7½ miles, deep water.
Lock No. 18.....	<i>Rocher Fendu</i> . Lock of 18 ft. lift with dam. Rock excavation.
From lock No. 18 to lock No. 19.....	River navigation for about 1½ miles.
Lock No. 19 and lock No. 20.....	<i>Long Rapids</i> . Combined locks, each with lift of 13 ft. with dam, excavation, and embankment.
From lock No. 20 to lock No. 21.....	River navigation for about 4½ miles.
Lock No. 21 and lock No. 22.....	<i>La Fontaine</i> . Two locks with lift of 12 ft. each, 550 ft. apart, and dam.
From lock No. 22 to lock No. 23.....	Distance about half a mile.
Lock No. 23.....	<i>Normans</i> . Lock of 24 ft. lift, with dam, and embankment.
From lock No. 23 to lock No. 24.....	Distance about three-quarters of a mile.
Lock No. 24.....	<i>Blacks</i> . Lock of 14 ft. lift, with dam, embankment and waste weir.
From lock No. 24 to lock No. 25.....	About 50 miles of river and lake navigation.
Lock No. 25.....	<i>Chapeau</i> . Lock of 12 ft. lift, with dam, embankment and waste wier.
From lock No. 25 to lock No. 26.....	About 5½ miles of good river navigation.
Lock No. 26.....	<i>L'Islet</i> . Lock of 12 ft. lift, with dam, embankment and waste weir.
From lock No. 26 to lock No. 27.....	About 37 miles of navigation passing through the Upper Allumette lake, and Deep river.
Lock No. 27.....	<i>Des Joachims</i> . Lock of 24 ft. lift, with dam, embankment, and regulating weir.
From lock No. 27 to lock No. 28.....	Distance of 1,800 ft. arranged for a passing basin.

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Lock No. 28.....	<i>Des Joachims</i> . Lock of 19 ft. lift, with dam and embankment.
From lock No. 28 to lock No. 29.....	River navigation for about 14 miles.
Lock No. 29.....	<i>McSorley's</i> . Lock of 17 ft. lift, with dam and embankments.
From lock No. 29 to lock No. 30.....	About 6 miles of river navigation.
Lock No. 30.....	<i>Rocher Capitaine</i> . Lock of 24 ft. lift, with dam, and embankment.
From lock No. 30 to lock No. 31.....	A distance of about 1,000 yards requiring improvement.
Lock No. 31.....	<i>Rocher Capitaine</i> . Lock of 24 ft. lift, with dam, and embankment.
From lock No. 31 to lock No. 32.....	A distance of about 14 miles through river.
Lock No. 32 and lock No. 33 and lock No. 34.....	<i>Deux Rivières</i> . Lock No. 32 has a lift of 24 ft. entered from a short canal, and leading into a passing basin; thence into lock 33 with a lift of 12 ft; from it into a second passing basin, and from that into lock 34 with a lift of 13 ft. Dams, embankment, and two regulating weirs also to be constructed.
From lock No. 34 to lock No. 35.....	About 18½ miles through the Ottawa river.
Lock No. 35.....	<i>Johnson's</i> . Lock of 12 ft. lift with embankment.
From lock No. 35 to lock No. 36.....	Distance about 1,900 ft. formed into a passing basin by means of an embankment along the north bank of the river.
Lock No. 36.....	<i>Johnson's</i> . Lock of 14 ft. lift, with dam, embankment, and regulating weir.
From lock No. 36 to lock No. 37.....	The Ottawa river turns to the north after lock 36 is passed, and the Mattawa river is followed for about 2¾ miles.
Lock No. 37.....	<i>Plein Chants</i> . Lock of 24 ft. lift, with dam and embankment.
From lock No. 37 to lock No. 38.....	A distance of about 6½ miles through the Mattawa river.
Lock No. 38.....	<i>De la Rose</i> . Lock of 16 ft. lift, with dam and embankment.
From lock No. 38 to lock No. 39.....	About 4 miles of river navigation.
Lock No. 39.....	<i>Paresseux Chute</i> . Lock of 24 ft. lift, with dams, embankment and walls.
From lock No. 39 to lock No. 40.....	A distance of about ¾ of a mile through the river.
Lock No. 40.....	<i>Petit Paresseux</i> . Lock of 24 ft. lift, with dam, embankment and wall.
From lock No. 40 to lock No. 41.....	A distance of about 1½ miles.
Lock No. 41 and lock No. 42.....	<i>Talon Chute</i> . Combined locks each with a lift of 22 ft. leading one into the other; with dam, and embankment. Both locks on the south side of the river.
From lock No. 42 to lock No. 43.....	A distance of about ½ a mile.

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Lock No. 43	<i>Lake Talon.</i> A guard lock of 6 ft. lift, with dam and embankment. This lock is on the north side of the river.
From lock No. 43 to lock No. 44.....	This is the section which has lately been re-surveyed, and it forms the summit portion of the canal. It is about 26 miles in length, and passes through Lakes Talon, Turtle and Trout as well as through a chain of small lakes before lock No. 44 is reached. Rock excavation will have to be made at the Talon Lake Narrows, and some of the heaviest rock excavation on the whole route lies in this section.
Lock No. 44	<i>Summit.</i> A compound lock with a lift of 6 ft. arranged to overcome high water in Lakes Nipissing and Trout alternately.
From lock No. 44 to lock No. 45.....	Through Lake Nipissing, a distance of about 32 miles.
Lock No. 45 and lock No. 46.....	<i>Chaudière Portage.</i> Lock 45 has a lift of 24 ft. and leads into a passing basin, and from there into lock 46 with a lift of 10 ft. These two locks and basin are situated in a neck of land on the south side of the river cutting off a bend.
From lock No. 46 to lock No. 47.....	Through the French river, a distance of about 10 miles.
Lock No. 47.....	<i>Du Buisson.</i> Lock of 10 ft. lift, with dams and embankments.
From lock No. 47 to lock No. 48.....	A distance of about 3 miles.
Lock No. 48.....	<i>Du Parisien.</i> Lock of 10 ft. lift, with dam and embankments.
From lock No. 48 to lock No. 49.....	Distance about 16 miles through the broadest portion of the French river.
Lock No. 49.....	<i>Grand Recollet.</i> Lock of 13 ft. lift, with embankment and dams.
From lock No. 49 to lock No. 50.....	About 17 miles through the lower reaches of the French river.
Lock No. 50	<i>Les Petites Dalles.</i> Lock of 14 ft. lift, with dams and embankment. After passing this last lock there is a distance of about $2\frac{1}{2}$ miles to the mouth of the French river in Georgian Bay.

NOTE.—All the locks are to have a standard length of 280 ft. between the quoins, with a width of 45 ft.

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REPORT ON A 20-FEET NAVIGATION, MONTREAL TO GEORGIAN BAY.

OTTAWA RIVER SURVEYS.

OTTAWA, April 25, 1901.

COLLINGWOOD SCHREIBER, Esq., C.M.G.,

DEAR SIR,—Since I gave you my report on the Ottawa river surveys, dated March 13 last, I beg to say that Mr. Stanton has extended the survey on the ice, up stream, from Black's Falls, in the Rocher Fendu channel, to a point near the mouth of the Coulonge river, and from the head of the Grand Calumet rapids, up the Calumet channel crossing the point of land from Grand Marais to the village of Coulonge, and closing on the point above mentioned near the Coulonge river.

The levels all around the Calumet island were closed and checked, but the sudden breaking up of the ice prevented him from closing the lower levels (Mr. Carre) with his own levels, at the foot of Paquette rapids.

Soundings and borings were made, and the material to be excavated was ascertained.

Mr. Stanton was engaged on this survey from March 14 to March 30.

I received instructions on March 21 to make estimates for 14 feet, and 20 feet navigation of the whole canal, from Georgian bay to Montreal. A copy of the estimate for 14 feet was sent in on March 21, and the estimate for 20 feet, has been in progress ever since.

I now beg to hand you a copy of the 20-feet estimate, amounting to \$72,672,000 with details of the same.

The estimate was made in the first place on the same line as that for the 14-feet estimate, having some curves of 478 feet radius.

New lines have since been projected with curves of from 4,000 to 5,000 feet radius, at most of the places where the curves were sharp, and the estimate has been increased in consequence.

A large increase would also have to be made to the estimate for 14-feet navigation to flatten the curves.

There are still some places where there are sharper bends than 4,000 feet radius, but the water at these points is wide and deep.

From the Georgian bay to Lake Nipissing, the estimate is made upon the plans of lock sites, on the French river, made by Mr. Clarke, and upon Mr. Bender's plans of the channels, with soundings most of the way. There are, however, no levels given of some parts of the river banks and islands, which have to be widened and removed. The total length of these excavations is not great, so that they will not make a material difference in the estimate.

The summit section from Lake Nipissing to Talon lake is estimated from our plans made in 1899. A large increase has been made for curves of 5,000 feet radius, which extend beyond the limits of our levels. It is probable that a more economical line can be found by leaving lake No. 2 and following a chain of lakes to the north and east, and across a ridge to Trout lake. The flat curves make a considerable difference in the length of the canal, and will effect a large saving in quantities.

From the best information it was learned that the waters of Lake Nipissing are shoal for a distance of three miles from the canal entrance—soundings were taken for one mile out. An estimate is made to cover three miles.

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From Lake Talon, down the Mattawan river, to the confluence of the Ottawa river, at Mattawa, the estimate is made from Mr. Clarke's plans of the lock sites, and from Mr. Shanly's plans, which give soundings in still water. The quantities are increased by improving the alignment, and some points and islands are crossed for which we have no levels.

From the mouth of the Mattawan river to a point about two miles below Fort William, on the upper Allumette lake, the estimate is made from Mr. Clarke's plans of the lock sites, and from Mr. Perry's plans with soundings, except in Deep river. At the foot of the DesJoachims rapids is the only place where a sharp bend occurs at the junction with Deep river, which here is over a quarter of a mile wide and 25 feet deep.

A better alignment may be had by following a chain of lakes and rejoining the Ottawa about three miles up stream.

From two miles below Fort William to the foot of the Paquette rapids, the plans for the Ottawa river surveys just made have been used. A line with curves of 5,000 feet radius has been projected and an estimate made upon it. The distance saved on this line is over 6,000 feet.

From the foot of the Paquette rapids to the head of the Calumet rapids the estimate has been made from Mr. Perry's plans and profiles, crossing the point of land from the village of Coulonge to the Grand Marais.

From the head of the Calumet rapids to the foot of the Sable rapids at the foot of Calumet island, the estimate is made from the surveys and plans just made for the Ottawa river surveys.

A line has been projected with curves of from 2,000 to 5,000 feet radius, the smaller occurring where the waters are wide and deep. The estimate is made on this line which is 2,400 feet shorter than the survey line. In some places the projected line is beyond the area levelled and cross sectioned.

From the foot of the Sable rapids to Britannia at the foot of Lake Deschenes, the estimate is made from Mr. Clarke's plans of the lock sites, and from Mr. Shanly's plans of the lakes and reaches, which give soundings in still water.

From Britannia to Ste. Anne, excluding the Grenville and Carillon canals, the plans and profiles made for the Ottawa river surveys, in 1899 and 1900, have been used when necessary, a line with curves of a mile radius has been projected on which the estimate is made.

For the Grenville, Carillon, Ste. Anne and Lachine canals it is proposed to execute new works parallel to the present lines. Estimates for these have been made from plans obtained from the Department of Railways and Canals. That for the Grenville canal was made by Mr. Carre, supplemented by information obtained from Mr. Stanton who has been for many years engaged on the construction of the Ottawa canals.

The estimates for the Carillon canal and the Ste. Anne lock and approaches were made by Mr. Stanton who also made the estimate for work to be done in Lake St. Louis, a chart of Lake St. Louis has just been received from the Hydrographic Office at Washington. The soundings given show that the estimate is approximately correct.

Mr. W. J. Crawford, who is familiar with the location has made the estimate for the Lachine canal.

The locks are intended to be 500 feet long between the quoins, 60 feet wide and 20 feet 6 inches on the sills.

Approximate estimates for a 24 feet lift lock and a 12 feet lift lock, with gates, were made by Mr. Crawford, who is also familiar with the work on the Sault Ste Marie canal, having been for several years engaged on its construction. The estimated cost for each of the locks is based upon these estimates.

The number of locks, not including the new proposed lock at the Montreal entrance of the Lachine canal, is 50, which number will probably be reduced, and the lifts increased thereby saving large quantities of excavation, though damaging land, which is not very valuable as a rule.

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The size estimated for the prism of the canal, in the reaches is, base, 100 feet, increased occasionally on curves to 125 feet. Slopes in rock $\frac{1}{4}$ to 1, in earth 2 to 1, depth of water 22 feet.

As the levels of the various reaches have been but little altered, except where the late surveys have been made. Mr. Clarke's estimate for dams, coffer dams and weirs has only been changed in a few instances.

I am sorry that it has been impossible to properly finish the plans for the Ottawa river surveys, made last autumn and winter, in consequence of the amount of time occupied in making estimates for the 20 feet navigation.

The expense of additional assistance had to be deducted from the appropriation so that the balance available was expended on the 15th instant.

The plans and profiles are now sufficiently advanced to be readily understood. The following is a list of the same :—

Plans.

The Calumet channel, from Sable rapids to Bryson, scale 200 feet to an inch.

The Rocher Fendu channel, from Split Rock to Black's Falls, scale 200 feet to an inch.

Profile.

Sable rapids to Bryson, scales—hor., 200 feet ; ver., 20 feet.

Cross Sections.

Locks and dams, Calumet channel.

Locks and dams, Rocher Fendu channel.

Plans.

The Calumet channel—

From Bryson to Coulonge Scale 200' to an inch.

The Allumette rapids—

North channel " 200' "

The Paquette rapids—

West or Log channel " 200' "

The Paquette rapids—

East, or Timber channel " 200' "

The Allumette rapids—

Hayley's bay and islands " 200' "

Calbute channel—

From foot of Paquette rapids to the
Pitawawie river " 2,000' "

Culbute channel—

From Paquette rapids to Nicaban Pt.. " 200' "

Culbute channel—

From Nicaban Pt. to Poupore's bay.. " 200' "

From Poupore's bay to head Allumette
island " 200' "

Profiles.

Allumette rapids—

The North channel. Scales—Hor. 200' Ver. 20'

Culbute channel—

L'Islet to Deep river. " " 200' " 20'

Paquette rapids—

The West or Log channel " " 200' " 20'

Culbute channel—

Paquette rapids to L'Islet. " " 200' " 20'

Calumet channel—

From Bryson to Coulonge. " " 2,000' " 20'

The following particulars are taken from Mr. Clarke's report of 1860.

Total length of navigation from Montreal to Georgian bay, 430 miles.

Ascent from Montreal to Lake Nipissing, 621'55 feet ; descent from Lake Nipissing to Georgian bay, 60'30 feet.

I am, yours truly,

HENRY A. F. MACLEOD,
M. Inst. C. E.

SESSIONAL PAPER No. 20

ESTIMATES—MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Twenty feet Navigation, Georgian Bay to Montreal.

1. Summit level.....		\$ 8,889,167
2. Excavation in reaches—		
a. Nipissing to Ste. Anne	2,710,837	
Increase, Fort William to Paquette Rds.....	311,000	
b. Ste. Anne to Montreal.....	2,186,100	
c. French River, and extra in Mattawan.....	2,430,834	
Increase in French river.....	421,500	
		8,060,271
3. Dams, coffer-dams and weirs—		
Whole length, Georgian Bay to Montreal.....		1,835,600
Locks, with gates, sluices and machinery—		
a. Georgian Bay to Ottawa	10,514,500	
Ottawa to Montreal	2,486,500	
		13,001,000
b. Addition, to make walls 10 ft. wide on top.....		495,000
c. Excavation in lock pits and approaches—		
Georgian Bay to Ottawa.....	4,105,000	
(Ottawa to Montreal is included in No. 5.)		
Increase, Ottawa to Deschenes.....	1,063,000	
" Sable to Bryson.....	387,400	
		5,555,400
d. Embankments for locks—		
Georgian Bay to Ottawa.....	608,106	
Ottawa to Montreal	132,400	
		740,500
e. Entrance guide piers—		
Georgian Bay to Ottawa		6,774,000
(Ottawa to Montreal is included in No. 5.)		
f. Electric plant, and power		2,650,000
5. Canals—		
a. Grenville	4,199,999	
b. Carillon.....	1,668,715	
c. Ste. Anne.	330,250	
d. Lachine	4,181,000	
		10,379,964
6. Bridges—		
Georgian Bay to Ottawa.....		444,000
(Ottawa to Montreal is included in No. 5.)		
7. Add for engineering and contingencies		11,764,328
8. Land and damages—		
a. Georgian Bay to Ottawa....	2,000,000	
b. Grenville Canal.....	12,770	
Carillon and Ste. Anne.....	Nil.	
c. Lachine canal	25,000	
		2,037,770
		\$ 72,627,000

HENRY A. F. MACLEOD.

OTTAWA, April 25, 1901.

1-2 EDWARD VII., A. 1902

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Summit Section.—Summary of Excavation.

Description.	Quantity.	Unit.	Rate.	Cost.
	Cubic Yds.	Cubic Yds.	\$ cts.	\$
Dredging (West).	1,782,678			
" (East)	517,912			
	2,300,590		0 15	345,088
Earth (West)	401,819			
" (East)	191,917			
	593,736		0 25	148,434
Gravel and boulders (West).	2,077,200			
" (East)	651,976			
	2,729,176		0 80	2,183,341
Rock (West)	1,560,843			
" (East)	732,249			
	2,293,092		1 50	3,439,638
Excess of cost of new line to Trout lake.				2,164,437
Add 25 p.c. of excavation on curves of 1 mile rad., 25 p.c. of \$2,432,917.				608,229
				8,889,167

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Excavation in Reaches 22 feet, Ste. Anne to Nipissing.

Locality.	Quantity.	Rate.	Cost.
	Cubic Yds.	\$ cts.	\$
Ste. Anne to Ottawa, rock	50,000	1 00	50,000
" " earth	3,048,000	0 15	457,200
Lake Deschenes, 2,600 ft. x 15 ft. deep, rock	150,000	1 00	150,000
Portage du Fort to Bryson, rock	158,000	1 00	158,000
" " earth	62,000	0 15	9,300
Bryson to Coulonge river, rock	95,000	1 00	95,000
" " earth	3,066,000	0 15	459,900
Paquette rapids to Fort William, rock	612,200	1 50	918,300
" " earth	1,535,000	0 15	230,250
Talon lake, rock	134,200	1 50	201,300
Lake Nipissing 3 ms. 6 ft. deep, earth.	394,000	0 15	59,100
			2,788,350
Deduct Portage du Fort to Bryson, new line			77,513
			2,710,837
Add, increase Fort William to Paquette rapids.			311,000
" increase in French river.			421,500

HENRY A. F. MACLEOD.

SESSIONAL PAPER No. 20

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Lake St. Louis.—Earth and Rock Excavation from Ste. Anne to Lachine.—
Approximate Estimate.

Description.	Quantity.	Rate.	Cost.
	Cubic Yds.	\$ cts.	\$
Rock excavation	1,403,700	1 50	2,105,550
Earth excavation	537,000	0 15	80,550
Total			2,186,100

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Excavation Reaches.—French river, and extra in Mattawan river.

French river	\$1,069,277
Mattawan river	727,777
	<u>\$1,797,054</u>

Add increase—

Above de La Rose and Plein Chants	633,780
	<u>\$2,430,834</u>

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Dams, Coffor Dams and Weirs.

Ottawa to Deschenes	\$503,000
Chats	163,000
Cheneaux	21,500
Portage du Fort	79,200
Sable	106,900
Mountain	31,400
Calumet, 3 dams	176,000
Chapeau and L'Islet	41,500
Des Joachims	67,000
McSorleys	50,900
Rocher Capitaine	134,000
Deux Rivières	131,100
Johnson's	112,600
Plein Chants	23,400
De La Rose	28,700
Paresseux Chute	8,600
Petit Paresseux	35,600
Talon Chute	3,400
Talon Lake	6,200
Chaudiere Portage	26,000
Rapide du Buisson	36,400
Rapide de Parisien	15,700
Grand Recollet	15,000
Les Petites Dalles	19,100

Dams and coffer dams, &c. \$1,835,600

HENRY A. F. MACLEOD.

1-2 EDWARD VII., A. 1902

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Estimate for Locks.

No.	Name.	Lift.	Cost (Including Gates).	Remarks.
	<i>From Montreal to Ottawa.</i>	Ft. In.	\$	
1a	Montreal entrance	12 3	...	Under Dominion Govt. contract.
2a	.....	18 2	226,600	
3a	St. Gabriel.	8 10	180,600	
4a	Cote St. Paul.	7 4	173,600	
5a	Lachine entrance	3 5	212,300	
1	Ste. Anne.	3	22,000	
2	Carillon.	16	244,400	
3	"	4	277,100	
4	Greeces' Point.	17	253,200	
5	.....	16	244,400	
6	.....	8	173,600	
7	Grenville.	19	278,700	To high water at low water, nil.
8	.....			Lock No. 8 not required.
	<i>From Montreal to Georgian Bay.</i>			
9	Ottawa,	25	324,400	
10	"	25	328,100	
11	Little Chaudière.	19	273,700	
12	Britannia Bay.	18	265,300	
13	Chats.	24	315,000	
14	"	24	317,500	
15	Chats lake.	12	211,000	
16	Cheneaux.	11	203,100	
17	Portage du Fort.	24	317,500	
18	Sable.	8	173,600	
19	Mountain rapids	15	235,600	
20	Grand Calumet.	24	315,000	
21	"	24	315,000	
22	"	24	317,500	
23	Chapeau.	15	235,600	
24	L'Islet	17	257,000	
25	Des Joachims.	24	315,000	
26	"	19	273,300	
27	McSorley's.	17	256,100	
28	Rocher Capitaine	24	317,500	
29	"	24	317,500	
30	Deux Rivières.	24	315,000	
31	"	12	209,000	
32	"	13	220,300	
33	Johnson's	12	209,000	
34	"	14	229,100	
35	Plein Chants.	24	315,000	
36	De la Rose.	16	244,400	
37	Paresseux Chute.	24	315,000	
38	Petite Paresseux.	24	315,000	
39	Talon Chute.	22	306,600	
40	"	22	273,200	
41	Talon lake.	6	158,500	
42	Summit.	6	232,000	
43	Chaudière Portage.	21	291,900	
44	Du Buisson.	16	246,900	
45	De Parissien.	14	229,100	
46	Grand Recollet.	17	253,700	
47	Les Petites Dalles.	18	264,500	
			13,001,000	

SESSIONAL PAPER No. 20

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Add increase lock walls, from 5 feet to 10 feet on top.

Add 1,650 cubic yards concrete at \$6 to each lock=9,900 each x 50

locks..... \$495,000

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Estimate of Quantities in Lock Pits and Approaches for 20 foot Navigation 22 feet on Reaches.

Number.	Locality.	Quantity.	Rate.	Cost.
		Cubic Yds.	\$ cts.	\$
9, 10, 11, 12	Ottawa to Lake Deschene.....	Rock. 777,942	1 25	972,427
13, 14, 15	Chats.....	Earth. 156,000	0 25	39,000
"	".....	Rock. 481,750	1 00	481,750
16	Cheneaux	" 56,000	1 50	84,000
17	Portage du Fort	" 151,200	1 25	189,000
18	Sable.....	" 43,681	1 00	43,681
19	Mountain.....	" 24,266	1 00	24,266
20, 21, 22	Grand Calumet.....	" 150,875	1 00	150,875
23, 24	Chapeau and L'Islet.....	" 85,660	1 50	128,490
25, 26	Des Joachims	" 132,340	1 50	198,510
27	McSorley's.....	" 57,100	1 50	85,650
28, 29	Rocher Cap taine.....	" 251,140	1 25	313,925
30, 31, 32	Deux Rivières	" 177,130	1 25	221,412
33, 34	Johnson's.....	" 156,750	1 50	235,125
"	".....	Earth. 94,000	0 25	23,500
35	Plein Chant	Rock. 47,250	1 50	70,875
36	De la Rose.....	" 22,580	1 50	33,870
37	Parisseux Chute.....	" 68,330	1 25	85,412
38	Petite Parisseux.....	" 105,261	1 25	131,576
39, 40	Talon Chute	" 77,590	1 25	96,987
41	Talon lake.....	" 38,060	1 25	47,575
42	Summit, included in summit estimate.....			
43	Chaudière Portage.....	Rock. 161,340	1 50	242,010
44	Du Buisson	" 37,750	1 50	56,625
45	Parisien	" 31,290	1 50	46,935
46	Grand Recollet.....	" 43,140	1 50	64,710
47	Les Petite Dalles	" 24,100	1 50	36,150
Total in lock, pits and approaches— say \$4,105,000.....				4,104,336
Add, increase in cost on new line Ottawa to Deschenes.....				1,063,000
Add, increase in cost on Sable to Bryson, new line.....				387,400
				5,555,400

HENRY A. F. MACLEOD.

1-2 EDWARD VII., A. 1902

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Estimate for Embankment around Locks from Montreal to Georgian Bay.

No.	Lift.	Cubic Yds., Embankments.	No.	Lift.	Cubic Yds., Embankments.
			Brought forward.....		589,100
1.....			27.....	17	29,000
2.....			28.....	24	39,300
3.....			29.....	24	39,300
4.....			30.....	24	39,300
5.....			31.....	12	21,500
6.....			32.....	13	23,000
7.....			33.....	12	21,500
8.....			34.....	14	24,500
9.....	25	40,800	35.....	24	39,300
10.....	25	40,800	36.....	16	27,500
11.....	19	31,900	37.....	24	39,300
12.....	18	30,400	38.....	24	39,300
13.....	24	39,300	39.....	22	36,400
14.....	24	39,300	40.....	22	36,400
15.....	12	21,500	41.....	6	12,600
16.....	11	20,100	42.....	6	12,600
17.....	24	39,300	43.....	21	34,900
18.....	8	15,600	44.....	16	27,500
19.....	15	26,000	45.....	14	24,500
20.....	24	39,300	46.....	17	29,000
21.....	24	39,300	47.....	18	30,400
22.....	24	39,300	Embankment.....		1,216,200
23.....	15	26,000	" at 50c.		\$ 608,100
24.....	17	29,000	Locks 1a to 8, page 2.		132,400
25.....	24	39,300			
26.....	19	31,900			
Carried forward		589,100	Total embankment around locks.....		\$ 740,500

HENRY A. F. MACLEOD.

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MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Estimate for Embankment around Locks from Montreal to Ottawa.

	No.	Lift.	Cubic Yds. Embankments.
		Ft. In.	
Lachine canal, under contract	1a	12 3	
" " St. Gabriels.	2a	14 0	24,468
" " Cote St. Paul	3a	9 0	17,048
" " Lachine entrance	4a	8 0	15,564
Ste. Anne	5a	12 0	21,500
Carillon	1	13 0	22,984
" " " " " " " " " " " " " "	2	16 0	27,436
Grenville canal, Greeces' Point	3	19 0	31,888
" " " " " " " " " " " " " "	4	17 0	28,920
" " " " " " " " " " " " " "	5	16 0	27,436
" " " " " " " " " " " " " "	6	8 0	15,564
No. 8 lock, not wanted.	7	19 0	31,888
264,696 cubic yds at 50c.			\$ 132,348

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Entrance Guide Piers.—Ottawa to Georgian Bay.

Name.	Nos.	Length.	Breadth.	Height.	Cubic Yards.
CHIM					
Chaudière	1	600	20	30	13,320
Mechanicsville	4	"	"	30	53,332
Britannia	4	"	"	40	71,112
Chats	8	"	"	36	133,336
Cheneaux	4	"	"	30	53,332
Portage du Fort	4	"	"	"	53,332
Sable	4	"	"	"	53,332
Mountain	4	"	"	"	53,332
Grand Calumet	12	"	"	"	139,996
Chapeau	4	"	"	"	53,332
L'Islet	4	"	"	"	53,332
Des Joachims	4	"	"	"	53,332
McSorley's	4	"	"	"	53,332
Rocher Capitaine	8	"	"	"	106,664
Deux Rivières	4	"	"	"	53,332
Johnson's	4	"	"	"	53,332
Plein Chants	4	"	"	"	53,332
De la Rose	4	"	"	"	53,332
Paresseux Chute	8	"	"	40	142,224
Talon Lake and Chute	8	"	"	30	106,664
Chaudière	4	"	"	"	53,332
La Petite Dalles	4	"	"	"	53,332
Grand Recollet	4	"	"	"	53,332
Rapide du Buisson	4	"	"	"	53,332
Rapide de Parisien	4	"	"	"	53,332
					1,693,292

1,693,292 at \$4 00 = \$6,773,168	Total cost.
Say,— 6,774,000	"

HENRY A. F. MACLEOD.

1-2 EDWARD VII., A. 1902

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Estimate for Electric Plant and Power for Locks.

Lachine canal, 5 locks, less 1 to be built by Government	4 locks.
St. Anne	1 "
Carillon	2 "
Grenville	4 "
Ottawa to Georgian Bay	39 "
	50 locks.

MEMO : The cost of the electric plant at the Sault Ste. Marie canal is \$53,000.
 \$53,000 x 50 locks = \$2,650,000.

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Grenville Canal.

Items.	Quantities.	Unit.	Rate.	Cost.
			\$ cts.	\$
Total rock excavation (dry)	2,337,709	C. yds.	1 00	2,337,709
" " " (under water)	174,554	"	1 50	261,831
Total earth excavation in prism	1,792,674	"	0 25	448,169
Waste water ditches	7,407	"	0 25	1,852
<i>Bridges.</i>				3,049,561
Stone coping of swing pier	29	"	16 00	464
Concrete in piers and abutments	5,227	"	6 00	31,362
Superstructure in two railway bridges				34,000
" " road bridges				16,000
<i>Guide piers.</i>				81,826
Cribwork 16=600 ft. x 20 ft. x 25 ft.	177,778	C. yds.	4 00	711,112
" 4=600 ft. x 20 ft. x 45 ft.	80,000	"	4 00	320,000
				1,031,112
4 regulating weirs				6,000
Stone protection	31,500	C. yds.	1 00	31,500
				37,500
Total cost				4,199,999

HENRY A. F. MACLEOD.

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MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Carillon Canal.—Summary of Approximate Quantities of Earth and Rock Excavation in Carillon Canal.

	Rock in Canal.		Earth in Canal.		Cost.
	C. yds.	\$ cts.	C. yds.	cts.	\$
			109,976	15	16,496
Chute à Blondeau	1,097,894	1 00			1,097,894
Water tight embankment	192,592	1 50			288,888
Guide piers above and below the lock ..	11,250	0 75			8,437
Unwatering canal and lock pits	58,000	4 00			232,000
					25,000
Total					1,668,715

HENRY A. F. MACLEOD.

H. G. STANTON.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Ste. Anne's Lock.—Approximate Estimate.

Description.	C. yds.	Price.	Total.	Remarks.
		\$ cts.	\$	
Dredging temporary channel	13,000	1 25	16,250	
Rock excavation	34,000	1 00	34,000	
C. P. Railway pier			8,000	Single track.
G. T. Railway pier			12,000	Double track.
C. P. Railway swing bridge			100,000	Single track.
G. T. Railway swing bridge			130,000	Double track.
Coffer dam			10,000	
Unwatering lock pit			20,000	
Total			330,250	

HENRY A. F. MACLEOD.

H. G. STANTON.

1-2 EDWARD VII., A. 1902

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Approximate Estimate for 20 feet Navigation at Lachine Canal.—Being practically a new Canal 100 feet wide at bottom with earth slopes 2 to 1, on North Side of and parallel to present Canal.

Description.	C. yds.	Quantity.	Price.	Amount.
			\$ cts.	\$
From upper end lock No. 1 to Wellington Basin....	29,444			
Add, say 10 per cent.....	3,556			
Rock excavation.....		33,000	1 50	49,500
Wellington Basin to Lachine—				
Rock excavation.....	1,494,667			
Add, say 10 per cent.....	155,333	1,650,000	1 50	2,475,000
Add. clay and earth.....	942,614			
Add, say 10 per cent.....	97,386	1,040,000	0 25	260,000
Add. bog.....	350,051			
Add, say 10 per cent.....	35,949	386,000	0 25	96,500
Excavating upper entrance channel—				
Inside piers, 100 ft. ch. slopes, 2 to 1.....	267,289			
Outside of piers, 250 ft. wide.....	184,800			
	452,089			
Add, say 10 per cent.....	46,911	499,000	1 50	748,500
Removing lock walls, piers, &c.....		60,000	1 50	90,000
Excavation for culverts, earth.....		4,608	0 25	1,152
" " rock.....		5,074	1 50	7,611
Stone lining of banks, including excavation.....		64,000	1 25	80,000
G. T. R. swing bridge superstructure.....				15,000
6 road bridges superstructure.....			7,000 00	42,000
Masonry for culverts.....		1,570	12 00	18,840
" swing bridges.....		7,000	12 00	84,000
Waste weir at Côte St. Paul.....				10,000
Fencing.....	Miles.	6	500 00	3,000
Right of way.....	Acres.	80	100 00	8,000
Removing houses.....	No.	34	500 00	17,000
Guide piers for 4 locks.....	C. yds.	50,000	4 00	200,000
				4,206,103
Less, Rt. of w. and houses—a and b.....				25,103
				4,181,000

HENRY A. F. MACLEOD.

SESSIONAL PAPER No. 20

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Bridges.—Ottawa and Georgian Bay.

Interprovincial Bridge, Ottawa.	\$100,000
Main Street, Ottawa.	12,000
C. P. R. Bridge, Ottawa.	46,000
Portage du Fort.	50,000
Bryson.	40,000
Fort Coulonge.	30,000
Chapeau.	12,000
Des Joachims.	40,000
C. P. Ry. Mattawa to be raised.	50,000
Mattawa Public Road.	20,000
Summit Public Road.	11,000
C. P. Ry. Summit Section.	33,000
	<u>\$444,000</u>

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Grenville Canal.—Right of Way.

Station to Station.	Dimensions.	Acres.	Rate.	Cost.	Remarks.
			\$ cts	\$ cts.	
0 30	3,000 × 80	5·5	100 00	550 00	
20 68	3,800 × 80	7·0	30 00	210 00	
68 75	700 × 80			*10,000 00	*Stonefield Village.
75 215	14,000 × 80	25·5	30 00	765 00	
215 315	10,000 × 180	41·5	30 00	1,245 00	
				12,770 00	

NOTE.—Government land excluded.

HENRY A. F. MACLEOD.

MONTREAL, OTTAWA AND GEORGIAN BAY CANAL.

Lachine Canal.

80 acres at \$100.	\$ 8,000
Moving 34 houses at \$500.	17,000
	<u>\$25,000</u>

HENRY A. F. MACLEOD.

REPORT

OF THE

SECRETARY OF THE RAILWAY COMMITTEE

OF THE

PRIVY COUNCIL

RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The Honourable the Minister of Railways and Canals being the 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 October 1, 1900, to October 1, 1901, and the decisions arrived at, they are as follows :—

1. Application of the Kingston, Napanee and Western Railway Company, for the permission to cross the Canadian Pacific Railway, at rail level, at Tweed.—Under consideration.

2. Petition of the county of Frontenac, asking that the Grand Trunk Railway Company be compelled to place protection at the crossings at Cataraqui and Perth roads and at the Outer station, Kingston.—Under consideration.

3. Application of the corporation of the city of Toronto, for an order directing that gates and watchmen be placed at the crossing of Dunn avenue, by the Grand Trunk Railway, Toronto.—Interim order granted.

4. Application of the corporation of the city of Toronto, for an order directing that gates and watchman be placed at the crossing of Cherry street by the Grand Trunk Railway, Toronto.—Under consideration.

5. Application of the corporation of the city of Toronto, for an order directing that gates and watchmen be placed at the crossing of Dowling avenue, by the Grand Trunk Railway, Toronto.—Interim order granted.

6. Application of the corporation of the city of Toronto, for an order directing that gates and watchmen be placed at the crossing of Jamieson avenue, by the Grand Trunk Railway, Toronto.—Under consideration.

7. Application of the corporation of the city of St. Henri, *re* opening of Gareau street across the tracks of the Grand Trunk Railway.—Under consideration.

8. Application of the corporation of the town of Galt for permission to make a highway crossing over the track of the Canadian Pacific Railway at Myrtle avenue.—Under consideration.

9. Application of the Winnipeg Street Railway Company, for permission to cross, at rail level, the Canadian Pacific Railway at Main street and Higgins avenue, in the city of Winnipeg.—Under consideration.

10. Petition of the Toronto, Hamilton and Buffalo Railway Company, asking that Order No. 7447, *re* highway crossing at Station 100 + 12, be rescinded, and that the matter be reconsidered.—Under consideration.

11. *Re* protection to be provided at the crossing of the Intercolonial Railway by the St. John Electric Street Railway, in St. John, N.B.—Under consideration.

12. Application of the Central Ontario Railway Company for permission to remove the packing from the frogs and wing rails from the month of December to the month of April of each year, both months inclusive.—Under consideration.

13. Petition from the parish of St. Jerusalem d'Argenteuil, asking that the Great Northern Railway Company be compelled to provide gates and watchmen at the proposed crossing of the front road on south side of the North river, near Lachute.—Under consideration.

1-2 EDWARD VII., A. 1902

14. Application of the corporation of the city of Toronto for an order authorizing the construction and maintenance of a street by means of an overhead bridge at York street, Toronto, cross the tracks of the Grand Trunk and Canadian Pacific Railway Companies.

15. Complaint of the Municipal Council of the village of Lennoxville that the Canadian Pacific Railway Company have laid a new siding across College street, which is already crossed by tracks of the Grand Trunk, Canadian Pacific and Boston and Maine Railways, and asks the committee to prevent sidings being laid across this street or to compel the railway companies to adopt measures of protection to the public.—Arranged by parties interested.

16. Application of the Corporation of the city of Fredericton for permission to extend Church street across the Canada Eastern and the Canadian Pacific Railways.—Under consideration.

17. Application of the Niagara, St. Catharines and Toronto Railway Company, for permission to intersect and unite with the Wabash Company's line, which the latter have leased from the Grand Trunk Railway Company.—Application postponed.

18. Petitions from the Municipal Councils of the county of Peterborough and the township of Woodhouse, South Norfolk and others, asking that the various railway companies be compelled to observe the Railway Act, by building cattle guards that will effectually safeguard the interests of the farmers and the travelling public.—Under consideration.

19. Application of the Canadian Pacific Railway Company, for permission to run a track along Wolfe street, Peterborough, also to cross three other tracks on the said street, and to divert a portion of the street, the said siding to extend easterly across George street.—Granted.

20. Application of the Toronto, Grey and Bruce Railway Company (C.P. Ry.), for permission to build a branch line from a point on their line near Queen's wharf, Toronto, to a point on the south limit of Fraser avenue.—Withdrawn.

21. Application of the township of Nepean, the Corporation of the county of Carleton and the Corporation of the City of Ottawa, for an order directing that a subway or overhead crossing be constructed under or over the tracks of the Canadian Pacific and Canada Atlantic Railways, on Wellington street (commonly known as Richmond road), in the city of Ottawa. Order issued directing that until further or other order be made in the premises, the Canada Atlantic Railway Company shall place and maintain gates at its crossing, and the Canadian Pacific Railway Company shall place and maintain two extra pairs of gates at its crossings in addition to the present gates maintained by that company at the place aforesaid.

22. Application of the Rutland and Noyan Railway Company for approval of plan showing slight change in the crossing of the Canada Atlantic Railway by its railway at Noyan junction, and that the said plan be substituted for the plan already approved of.—Approved.

23. Application of the South Shore Railway Company, for approval of the plan and proposed site of a bridge to be built by that company across the St. Francis river at St. Francis, P.Q.—Approved.

24. Application of the Hamilton Radial Electric Railway Company, for approval of the plan and proposed site of a bridge to be built by that company across the Grand river at Freeport, Ontario.—Approved.

25. Application of the Montreal Street Railway Company, for permission to cross with its railway the tracks of the Montreal Terminal Railway Company, on Valois avenue, Montreal and La Salle avenue, Maisonneuve.—Granted.

SESSIONAL PAPER No. 20

26. Complaint of the Yarmouth Steamship Company against the Dominion Atlantic Railway Company, *re* unjust discrimination in rates by the Dominion Atlantic Railway Company, in favour of their own steamers, and also in the connection of the trains with the Yarmouth Steamship Company's boats.—Under consideration.

27. Application of the Grand Trunk Railway Company for permission to construct a branch or siding along Charles street, in the town of Berlin.—Granted.

28. Complaint that the crossings of the Grand Trunk Railway on Wentworth street, Victoria avenue and Wellington street, in the city of Hamilton, are dangerous, and should be protected by gates and watchmen.—Under consideration.

29. Application of the Corporation of the town of Peterborough, for an order directing that gates and watchmen be established by the Grand Trunk Railway Company at its crossings on Charlotte and Simcoe streets in the said town.—Granted.

30. Application of the Pontiac Pacific Junction Railway Company for approval of plan and profile of proposed overhead crossings of Alma, Inkerman, Britannia, Allison, Kent and Lake streets, in the city of Hull.—Approved.

31. Application of the Canada Atlantic Railway Company, for permission to cross Bridge street and the tracks of the Ottawa Electric Railway Company thereon, in the city of Ottawa.—Granted.

32. Application of the Great Northern Railway Company, for approval of change in the location of its main line at Grand Mere, in the province of Quebec, as shown on plan, profile and book of reference submitted.—Approved.

33. Application of the Ottawa and Gatineau Valley Railway Company, for approval of change in the location of its line north of the city of Hull to the intersection with the Interprovincial bridge approach, near Lake Flora, as shown on plan, profile and book of reference submitted.—Approved.

34. Application of the Chateauguay and Northern Railway Company, for approval of plan and proposed site of bridge across the Rivière des Prairies, at Charlemange, in the province of Quebec.—Approved.

35. Application of the Canadian Pacific Railway Company, for approval of plan and proposed site of a bridge across the Red river at Winnipeg.—Approved.

36. Application of the Canadian Pacific Railway Company, for approval of change in the location of its line approaching on each side of the proposed bridge across the Red river at Winnipeg.—Approved.

37. Application of the Canadian Pacific Railway Company, for approval of change in the location of its line between Field and Ottertail, in the province of British Columbia, shown on plan, profile and book of reference submitted.—Approved.

38. Application of the Grand Trunk Railway Company, for permission to build a branch line from Brookholme station, county of Grey, to the works of the Grey and Bruce Portland Cement Company, of Shallow lake, and crossing Eyre street, Kempt street and Raglan street, in town plot of Brook and township of Sarawok.—Granted.

39. Application of the Grand Trunk Railway Company, for permission to build a branch line from Port Credit to the works of the St. Lawrence Starch Company.—Granted.

40. Application of the Ottawa and Gatineau Valley Railway Company, for approval of plans and profiles of its crossings of St. Florent, St. Henri, St. Hyacinthe, Chaudière, Brigham and Leamay streets, in the city of Hull.—Approved.

41. Application of the Ottawa and Gatineau Railway Company, for approval of plan and profile of its under crossing of the Canadian Pacific Railway at Gatineau junction.—Approved.

1-2 EDWARD VII., A. 1902

43. Application of the Ottawa and Gatineau and the Pontiac Pacific Junction Railway Companies, for approval of plan and profile of overhead crossing of Laurier avenue and the track of the Hull Electric Railway Company thereon, in the city of Hull.—Approved.

44. Application of the Ottawa and Gatineau and the Pontiac Pacific Junction Railway Companies, for approval of plans and profiles of proposed under crossings of Dufferin bridge, on Wellington street, and Sappers bridge, on Sparks street, in the city of Ottawa.—Approved.

45. Application of the Ottawa and Gatineau and the Pontiac Pacific Junction Railway Companies, for approval of plans and profiles of under crossings of highways at Station 72, south approach to the Interprovincial bridge, in the city of Ottawa.—Approved.

46. Application of the Ottawa and Gatineau and the Pontiac Pacific Junction Railway Companies, for approval of plan and profile of under crossing of highway at or near Hull, approach to the Interprovincial bridge, in the city of Hull.—Approved.

47. Application of the Grand Trunk Railway Company, for approval of plan of a siding across and along Forest street to Lawlor's Factory, in the town of Dunnville.—Approved.

48. Application of the St. Lawrence and Adirondack Railway Company, for permission to cross the Canada Atlantic Railway at Cecile junction without stopping.—Granted.

49. Application of the Lake Champlain and St. Lawrence Junction Railway Company, for approval of change in the location of its railway in the parish of St. Simon, county of Bagot and province of Quebec.—Approved.

50. Application of the Canadian Pacific Railway Company, for approval of plan and profile of a proposed spur on Fonseca street, in the city of Winnipeg, and crossing Henry street and Logan avenue.—Approved.

51. Application of the Montreal and Ottawa Railway Company (C.P. Ry.), for approval of plan and profile of its proposed crossing of the Richmond road or Wellington street, in the city of Ottawa.—Approved.

52. Application of the Canadian Northern Railway Company, for approval of plan and proposed site of a bridge across the Red river, at Winnipeg.—Approved.

53. Application of the Chateauguay and Northern Railway Company, for approval of an amended plan and proposed site of a bridge across River des Prairies, between Bout de L'Isle and Charlemagne.—Approved.

54. Application of the Ottawa and Gatineau and the Pontiac Pacific Junction Railway Companies, for approval of plan of temporary junction with the Canada Atlantic at Sapper's bridge, in the city of Ottawa.—Approved.

55. Order directing that the Grand Trunk Railway Company shall provide watchmen at its crossings on Dunn and Dowling avenues, in the city of Toronto, for a period of five months, from the 8th day of May, 1901, the wages of such watchmen to be borne one-half by the railway company and the other half by the corporation of the city of Toronto.

56. Application of the Ontario, Belmont and Northern Railway Company, now Marmora Railway and Mining Company, for running powers of a portion of the Central Ontario Railway,—Order issued to the effect, that as adequate and sufficient running powers could not be assured the Marmora Railway and Mining Company, recommends that a contract be entered into for the subsidy in accordance with the Railway Subsidy Act, 62-63 Vic., chap. 7, section 2 and subsection 46.

SESSIONAL PAPER No. 20

57. Application of the Grand Trunk Railway Company, for permission to construct a siding along and across a portion of Victoria avenue and across Glenelg street, in the town of Lindsay.—Granted.

58. Application of the Red Mountain Railway Company, for permission to build a branch line to the War Eagle and Centre Star Mining properties, and to junction with the Columbia and Western Railway, shown on plans and profiles submitted.—Granted.

59. Application of the Canadian Pacific Railway Company, for approval of plan and profile of a proposed crossing, at rail level, of Higgins avenue, in the city of Winnipeg, at a point between Point Douglass avenue and Louise bridge.—Approved.

60. Application of the Canadian Pacific Railway Company, for approval of the Governor in Council, the new rules and regulations.—Approved.

61. Application of the Canada Atlantic Railway Company, for approval of plan and profile of its proposed sidings, at the canal basin, in the city of Ottawa, which will cross Wilbrod, Court and St. James streets.—Approved.

62. Complaint of the Messrs. Brennan & Sons, Manufacturing Company, Limited, that the Grand Trunk Railway Company's siding on Rebecca street, in the city of Hamilton, to the premises of the F. W. Fearman Company, Limited, as constructed, injures their property, and ask that it be removed.—Order issued directing that the portion of the said siding extending from the Grand Trunk Railway to about 75 feet east of the eastern boundary of the Brennan property be removed and relaid in the position shown in red on the plan attached to the said order.

63. Application of the Great North West Central Railway Company, for approval of the place and mode of junction of its railway with the Canadian Pacific Railway on lot 27, township 10, range 18 west, in the province of Manitoba.—Approved.

64. Application of the Great North West Central Railway Company, for approval of change in the location of its railway in township 10, range 18, west 1st principal meridian, at or near Chater, in the province of Manitoba.—Approved.

65. Application of the Canadian Pacific Railway Company, for approval of change in the location of its railway from a point at Station 703, west of Selkirk, to the termination of the West Selkirk branch at Lake Winnipeg.—Approved.

66. Application of the Quebec and Lake St. John Railway Company, for approval of change in the location of a portion of its main line at Jacques Cartier river, in the province of Quebec.—Approved.

67. Application of the Canadian Northern Railway Company, for permission to construct a branch line from its main line to some mining properties in the Rainy River district.—Granted.

68. Application of the Canadian Northern Railway Company, for approval of plan and proposed site of a fixed bridge across the Narrows of Rainy lake.—Approved on condition, the company place a swing span in the bridge whenever required.

69. Application of the Dominion Atlantic Railway Company, for approval of plan of a proposed siding in the town of Yarmouth, Nova Scotia.—Approved.

70. Application of the Montreal and Atlantic Railway Company, for approval of change in the location of its railway between Cowansville and the intercolonial boundary.—Approved.

71. Application of the British Columbia Southern Railway Company, for approval of change in the location of the Morrissey Creek branch.—Approved.

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72. Application of the Vancouver, Victoria and Eastern Railway and Navigation Company, for approval of change in the location of its railway from 11th to 16th mile from Carson.—Approved.

73. Application of the Vancouver, Victoria and Eastern Railway and Navigation Company, for approval of change in the location of its railway from Cascades to Carson.—Approved.

74. Application of the Vancouver and Lulu Island Railway Company for approval of plan of proposed site and site of proposed bridge across the north arm of the Fraser river near Eburne, British Columbia.—Approved.

75. Application of the Thousand Island Railway Company for approval of the place and mode of junction of its railway with the Grand Trunk Railway at the New Junction station, in the township of Leeds and province of Ontario.—Approved.

76. Application of the Cape Breton Railway Company for approval of the place and mode of junction of its railway with the Intercolonial Railway at Point Tupper, Nova Scotia.—Approved.

77. Application of the Welland and Grand Island Bridge Company for approval of plan and proposed site of a proposed bridge across the west channel of the Niagara river.—Approved.

78. Application of the Great Northern Railway Company for approval of plans and profiles of two proposed crossings, at rail level, of the Canadian Pacific Railway on St. Andrew street, in the city of Quebec.—Approved.

79. Application of the Canadian Pacific Railway Company for approval of plan and profile of proposed crossing of Main street and Maple street, Winnipeg.—Under consideration.

80. Application of the Grand Trunk Railway Company for approval of plan and profile showing improvements made between what is known as Murray Hill on the west and Sidney on the east of the Trent river, a distance of about 8 miles, partly in township of Murray, and partly in town of Trenton, where the track was raised and carried across the Central Ontario Railway.—Approved.

81. Application of the Canadian Pacific Railway Company for an order amending the order of December 16, 1893, so that the city of Toronto shall hereafter bear and pay to the applicant half the cost of the protection and half the cost heretofore borne by the applicant, at the crossings of Dufferin and Bathurst streets, Toronto.—Under consideration.

82. Application of the corporation of the city of Toronto for a re-hearing of the matter of the York street bridge, Toronto.—Approved.

83. Application of the Tilsonburg, Lake Erie and Pacific Railway Company for approval of plans and profiles of two proposed crossings, at rail level, of Canada Southern Railway and a proposed crossing of the Grand Trunk Railway by means of an overhead bridge.—Under consideration.

84. Petition of the corporation of the parish of St. Anselme, P.Q., for an order directing that a highway may be constructed across the track of the Quebec Railway, at rail level, as shown on sketch accompanying the petition.—Under consideration.

85. Application of the Grand Trunk Railway Company for an order closing the Streetsville gravelled road and the Indian road where they cross the Grand Trunk Railway, and approving of their deviation to the proposed subway by a new street north of the track, as shown on the plan submitted, and of the construction of the subway under the company's railway.—Granted.

SESSIONAL PAPER No. 20

86. Application of the Niagara, St. Catharines and Toronto Railway Company for an order sanctioning the building of a branch line from their main line on the east of the new Welland canal, in Thorold, through the properties of the Hoover estate, Battle estate, Walker and Cartmell quarries.—Granted.

87. Application of the Sarnia Street Railway Company for approval of plans and profiles of its proposed crossings, at rail level, of the Grand Trunk Railway at Exmouth and Front streets, Sarnia.—Order issued approving of the Exmouth street crossing only.

88. Application of the corporation of the town of Lethbridge for permission to make, construct and maintain certain ditches and culverts on the right of way and under the tracks of the Canadian Pacific Railway Company for use in connection with its municipal water supply.—Granted.

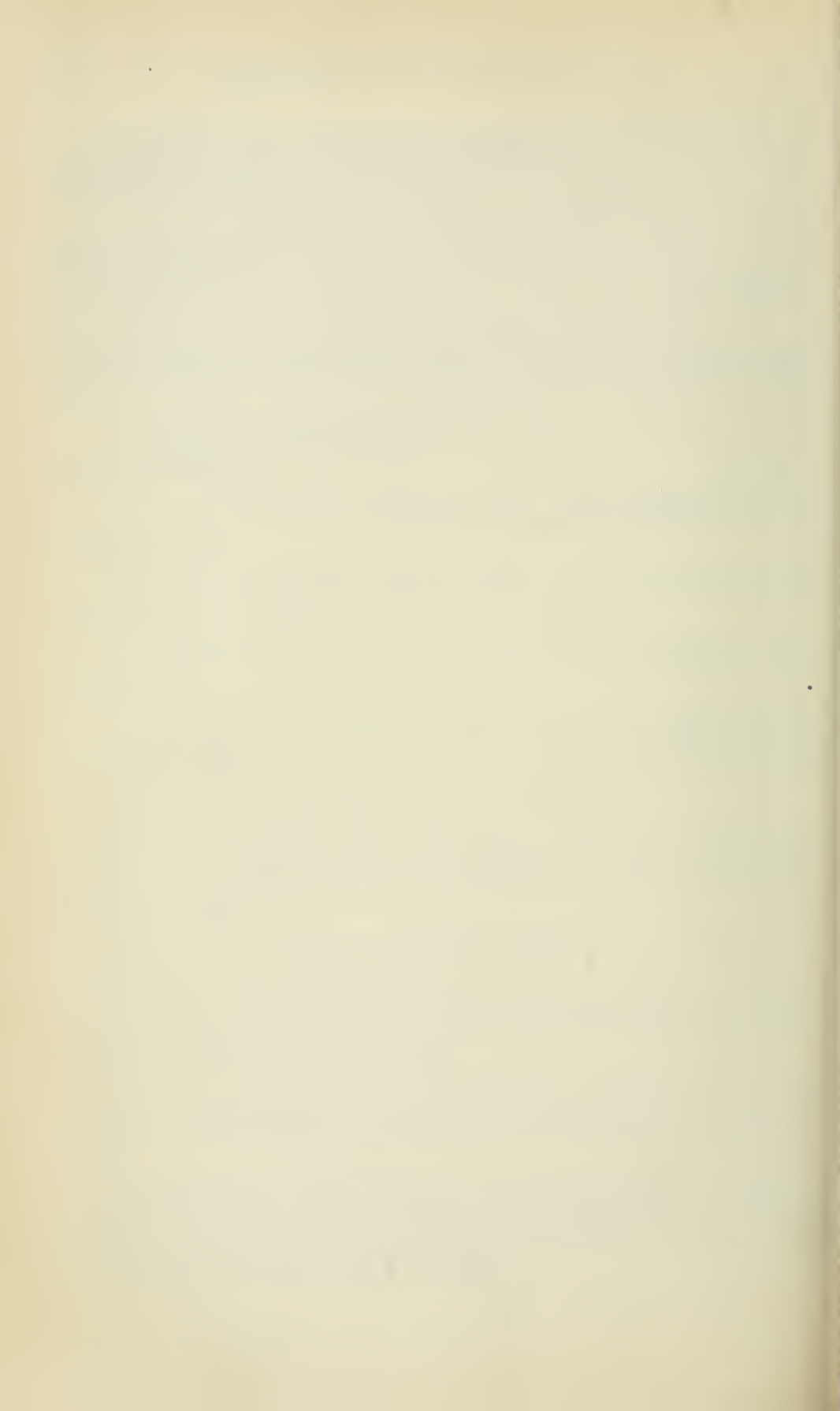
COLLINGWOOD SCHREIBER,

Secretary Railway Committee P. C.

Prepared by

J. W. PUGSLEY,

Clerk of the Railway Committee, P. C.



PART II

STATEMENTS OF THE ACCOUNTANT

No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals,
Dominion of Canada, during the Fiscal Year ended June 30, 1901.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
CANALS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Beauharnois.....		483 40	20,118 42	14,199 12
Carillon.....		9,331 95	13,342 22	13,416 00
Grenville.....	4,930 65			
Chambly.....		1,195 09	18,529 48	17,572 35
Cornwall.....	62,032 47		17,104 13	13,166 89
Culbute.....	327 00			
Lachine.....	97,305 52	12,072 87	58,364 29	50,005 48
Lake St. Louis.....	12,918 31			
Lake St. Francis.....	15,000 00	8,060 30		
Murray.....			5,175 74	1,138 15
Rideau.....			31,334 40	33,791 17
Sault Ste. Marie.....	323,353 93	48 39	13,730 93	10,289 18
Soulanges.....	462,626 36	115 00	25,154 78	5,888 77
Ste. Anne's.....			1,895 89	3,999 02
St. Lawrence.. { North Channel.....	184,790 34	3,610 06	2,128 25	1,681 44
{ Galops Channel.....	91,211 97			
{ River Reaches.....	19,389 75			
St. Ours.....		2,311 26	2,730 44	841 63
Trent.....	284,503 89	10,494 82	5,234 51	13,075 89
Welland.....	224,536 96	87,777 43	86,889 24	72,055 89
Williamsburg.. { Galops.....	390,112 73	12,342 32	11,755 09	
{ Rapide Plat.....	76,501 57			
{ Farran's Point.....	111,158 39			
Total.....	2,360,699 89	135,500 57	314,095 04	262,876 07
GENERAL ON CANALS.				
Arbitrations and awards.....		782 14		
Dredge vessels—Lachine.....				3,598 05
" Rideau.....				6,999 27
Miscellaneous.....		4,964 34	1,188 24	1,123 53
Salaries and contingencies, canal officers.....			32,957 57	
Sunday labour.....			16,071 95	
Surveys and inspections.....		2,268 34		
Ottawa River surveys.....		9,999 65		
Total.....		18,014 47	50,217 76	11,720 85
RAILWAYS.				
Annapolis and Digby.....		8,381 82		
Canadian Pacific.....	8,978 87			
Intercolonial.....	\$3,652,313 46			
Less refunds previous years.....	18,476 89			
	3,633,836 57		5,460,422 64	
Prince Edward Island.....	280,173 93		261,766 24	
Windsor Branch.....			16,862 66	
Total.....	3,922 989 37	8,381 82	5,739,051 54	
GENERAL ON RAILWAYS.				
Exploratory survey, Klondike district and ocean port, B.C.....		12,226 52		
Railway Statistics.....		590 54		
Carried forward.....		12,817 06		

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No. 1. —STATEMENT showing the amount expended by the Department of Railways and Canals, &c.—*Concluded.*

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....		12,817 06		
GENERAL ON RAILWAYS— <i>Concluded.</i>				
Railway Subsidies.....		2,512,328 86		
Repairs to Governor General's car.....		1,000 00		
Reporting evidence before Railway Committee of the Privy Council.....		342 60		
Subscription to Railway Congress, Brussels.....		97 33		
Surveys and inspections.....		6,019 97		
Total.....		2,532,605 82		
MISCELLANEOUS.				
Gratuity to widow of late J. R. Chamberlain.....		116 66		
Costs of litigation.....		4,306 57		
Salaries of engineers, draughtsmen, &c.....		20,661 08		
" extra clerks, &c.....		3,155 89		
Total.....		28,240 20		
RECAPITULATION.				
Total on Canals.....	2,360,699 89	135,500 57	314,095 04	262,876 07
" " general.....		18,014 47	50,217 76	11,720 85
Total on Canals.....	2,360,699 89	153,515 04	364,312 80	274,596 92
Total on Railways.....	3,922,989 37	8 381 82	5,739,051 54	
" " general.....		2,532,605 82		
Total on Railways.....	3,922,989 37	2,540,987 64	5,739,051 54	
Grand Total, Railways and Canals, including Miscellaneous.....	6,283,689 26	2,722,742 88	6,103,364 34	274,596 92

Total amount expended, \$15,384,393.40.

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

No. 2.

STATEMENT showing the amount expended on Construction, Renewals, Ordinary Repairs and Working Staff of the Canals of the Dominion of Canada, up to June 30, 1901.

ST. PETER'S CANAL.

—	Year ending June 30.	Capital.		Renewals, Chargeable to Income.		Staff.		Repairs.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation	.....	156,523	32	.....	.....	.....	.....	.....	.....
" since	1868	21,519	72	.....	.....	.....	.....	.....	.....
"	1869	70,719	80	.....	.....	.....	.....	.....	.....
"	1870	.....	.....	46,193	57	.....	.....	.....	.....
"	1871	.....	.....	.....	.....	225	36	555	78
"	1872	.....	.....	.....	.....	280	00	6,122	07
"	1873	.....	.....	.....	.....	343	32	6,539	58
"	1874	.....	.....	.....	.....	725	93	1,558	57
"	1875	20	97	.....	.....	560	00	889	35
"	1876	11,125	00	.....	.....	641	55	.....	.....
"	1877	63,330	18	.....	.....	600	00	17	45
"	1878	26,511	51	.....	.....	600	00	.....	.....
"	1879	197,337	75	.....	.....	631	50	.....	.....
"	1880	80,120	54	.....	.....	400	00	.....	.....
"	1881	69,434	76	.....	.....	959	58	.....	.....
"	1882	484	00	.....	.....	1,920	54	200	63
"	1883	.....	.....	.....	.....	2,089	19	232	42
"	1884	2,471	40	.....	.....	2,601	47	367	85
"	1885	16,820	15	.....	.....	1,929	11	183	11
"	1886	2,316	85	.....	.....	2,360	67	297	81
"	1887	1,087	75	750	00	2,777	13	343	23
"	1888	.....	.....	.....	.....	3,217	77	1,588	40
"	1889	.....	.....	500	00	3,085	29	353	38
"	1890	.....	.....	.....	.....	3,110	15	255	34
"	1891	972	65	510	53	3,255	30	312	02
"	1892	14,387	00	30,936	82	3,007	70	1,461	24
"	1893	811	59	9,987	78	2,938	15	1,856	30
"	1894	437	05	3,852	21	2,935	94	1,986	70
"	1895	868	44	26,222	46	2,499	81	353	55
"	1896	1,455	21	16,743	64	2,182	04	260	90
"	1897	.....	.....	.....	.....	2,728	38	1	20
"	1898	.....	.....	111	70	2,785	25	453	85
"	1899	.....	.....	.....	.....	2,819	86	456	61
"	1900	.....	.....	.....	.....	2,833	24	1,483	30
"	1901	.....	.....	2,311	26	2,730	44	841	63
LESS—Refunds of previous years.	.....	648,755	64	.....	.....	.....	.....	.....	.....
		208	50	.....	.....	.....	.....	.....	.....
Total	.....	*648,547	14	138,119	97	59,774	67	28,972	27

* Expenditure as above\$ 648,547 14

Less expenditure prior to Confederation..... 156,523 32

Agreeing with Public Accounts, 1901, page xvi.....\$ 492,023 82

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

LACHINE CANAL.

	Year ending June 30.	Chargeable to Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Expenditure by Imperial Government.....	1868	40,000 00			
Government expenditure prior to Confederation.....	1869	2,547,532 85			
Government expenditure since Confederation ..	1868		1,852 70	13,742 05	10,431 51
" " ..	1869	2,000 00		14,209 02	12,085 84
Cost of original construction and enlargement of 1843 to 1848..		2,589,532 85			
Expenditure by Dominion Government..	1870			15,834 49	13,302 39
" " ..	1871		12,231 40	17,478 52	15,093 25
" " ..	1872	36,708 15		16,076 93	12,334 69
" " ..	1873	7,824 28	35,158 21	23,601 03	34,300 60
" " ..	1874	158,618 35		25,811 07	22,828 66
" " ..	1875	197,420 52		28,592 01	30,057 34
" " ..	1876	327,769 39		33,797 73	29,103 65
" " ..	1877	1,439,375 73		33,148 86	19,824 33
" " ..	1878	1,484,619 63		39,062 97	13,646 41
" " ..	1879	958,053 30		42,338 84	12,400 78
" " ..	1880	369,566 74		38,950 90	10,223 62
" " ..	1881	292,165 51		39,027 99	19,888 33
" " ..	1882	252,821 33	2,978 66	41,158 90	17,116 46
" " ..	1883	396,496 96	1,859 68	45,554 91	18,199 59
" " ..	1884	188,266 18		48,624 51	19,683 24
" " ..	1885	111,215 23		49,004 85	20,199 78
" " ..	1886	210,509 42		50,969 10	19,199 18
" " ..	1887	28,772 52	12,981 59	53,113 97	22,567 81
" " ..	1888	19,414 34	7,996 38	52,229 61	19,999 64
" " ..	1889	76,032 96	972 71	54,110 67	22,957 71
" " ..	1890	7,448 03	8,238 46	53,114 34	22,999 38
" " ..	1891	217 53	16,155 75	50,721 69	36,292 98
" " ..	1892	87,852 35	27,480 80	52,729 37	67,499 62
" " ..	1893	445,983 21	50,937 40	53,185 00	51,616 79
" " ..	1894	64,345 14	17,152 48	60,174 03	40,939 70
" " ..	1895	189,944 36	32,405 20	56,337 44	25,891 45
" " ..	1896	184,998 25	8,193 15	58,342 96	24,950 20
" " ..	1897	282,052 48	14,664 21	57,533 20	25,820 73
" " ..	1898	216,717 44	819 62	57,282 50	33,391 92
" " ..	1899	162,351 83	3,103 99	55,990 00	35,776 90
" " ..	1900	123,009 41	12,210 88	56,791 45	31,988 81
" " ..	1901	97,305 52	12,072 87	58,364 29	50,005 48
Cost of enlargement.....		8,419,876 09			
Total.....		11,009,408 94	278,170 40	1,447,005 20	862,618 77

Total expenditure on capital account as above \$ 11,009,408 94

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, 1901, page xvi..... \$ 8,019,304 79

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

BEAUHARNOIS CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
			\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		1,611,424 11			
" since " " "	1868		63,193 75	9,349 99	6,216 98
" " " "	1869		55 00	9,626 99	6,498 57
" " " "	1870		27 50	10,117 57	6,384 81
" " " "	1871			12,316 53	5,722 36
" " " "	1872		27 50	11,792 46	13,733 38
" " " "	1873		5,122 50	12,210 73	9,882 06
" " " "	1874		26 00	15,392 51	10,990 56
" " " "	1875		36 00	14,399 32	12,253 01
" " " "	1876			14,465 86	17,170 83
" " " "	1877			14,377 63	15,207 36
" " " "	1878			14,383 37	9,861 05
" " " "	1879			15,015 86	10,370 71
" " " "	1880	266 15		15,362 61	8,997 34
" " " "	1881			17,659 93	10,770 67
" " " "	1882			18,804 53	20,813 86
" " " "	1883		6,727 44	18,287 77	15,826 71
" " " "	1884		3,277 98	19,107 38	16,232 61
" " " "	1885		7,999 79	18,960 40	14,637 70
" " " "	1886		8,491 80	19,228 90	14,356 00
" " " "	1887		3,633 57	18,867 45	14,999 88
" " " "	1888		14,411 97	19,325 05	14,285 98
" " " "	1889		10,993 52	20,019 11	14,982 54
" " " "	1890			19,847 42	14,999 20
" " " "	1891		17,085 68	18,886 86	12,537 39
" " " "	1892		1,696 23	20,050 01	14,999 80
" " " "	1893			20,348 34	14,107 11
" " " "	1894		6,547 72	20,574 53	13,903 46
" " " "	1895		27,982 93	10,128 59	12,299 49
" " " "	1896			20,725 47	15,050 85
" " " "	1897		9,813 15	21,012 64	14,862 98
" " " "	1898	25,000 00	5,799 34	20,650 00	16,164 92
" " " "	1899		1,000 00	20,613 22	13,463 01
" " " "	1900		4,959 22	20,147 59	14,505 30
" " " "	1901		483 40	20,118 42	14,199 12
Total		*1,636,690 26	199,391 99	582,475 04	113,287 60

* See page 9 for total cost of St. Lawrence River and Canals.

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

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

	Year ending June 30.	CHARGEABLE TO CAPITAL.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation					18,442 85	98,378 46
Government expenditure since Confederation..	1868					
" "	1869					
" "	1870					
" "	1871					
" "	1872					
" "	1873				33,241 69	
" "	1874				26,541 30	
" "	1875				20,611 36	
" "	1876				50,215 47	
" "	1877				47,377 31	
" "	1878				5,570 46	
" "	1879				9,265 77	
" "	1880				9,214 56	
" "	1881				6,927 96	
" "	1882		6,933 45	22,000 00	28,933 45	
" "	1883		3,574 31	41,300 00	44,874 31	
" "	1884		13,546 03	74,300 00	89,846 03	
" "	1885		13,710 17	101,400 00	115,110 17	
" "	1886		16,251 73	99,800 00	116,051 73	
" "	1887		20,037 31	54,400 00	74,437 31	
" "	1888		16,282 85	40,400 00	56,682 85	
" "	1889		1,293 92	17,200 00	18,493 92	
" "	1890		18,279 91	5,700 00	23,979 91	
" "	1891		35,137 25		35,137 25	
" "	1892		59,779 31		59,779 31	
" "	1893		52,643 39		52,643 39	
" "	1894		13,721 66		13,721 66	
" "	1895		1,223 72	181,552 03	182,775 75	
" "	1896		7,457 05		7,457 05	
" "	1897		12,347 31		12,347 31	
" "	1898	171,336 65	7,491 11	32,710 00	211,537 76	
" "	1899	461,979 50	9,366 47	42,430 00	513,775 97	
" "	1900	225,000 00	72,484 41	50,000 00	347,484 41	
" "	1901	184,790 34	19,389 75	91,211 97	295,392 06	
		1,043,106 49	402,951 11	854,404 00	2,527,670 33	98,378 46

ST. LAWRENCE RIVER AND CANALS.

St. Lawrence River and Canals, as above	\$ 2,527,670 33
Beauharnois Canal, see page 8	1,636,690 26
Cornwall Canal " 12	6,794,929 98
Williamsburg Canal " 14	8,615,997 65
Lake St. Louis " 10	274,750 49
Soulanges Canal " 26	6,254,692 43
Lachine Canal, from prior to Confederation to June 30, 1875, see page 7....	2,950,104 15
Lake St. Francis, see page 11	56,961 46
Agreeing with Public Accounts Balance Sheet, 1901, page xvi	\$29,111,796 75

S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

LAKE ST. LOUIS.

				Year ending June 30.	Chargeable to Capital.	Chargeable to Income.
					\$ cts.	\$ cts.
Government expenditure prior to Confederation.....				1868		
"	"	since	"	1869		
"	"	"	"	1870		
"	"	"	"	1871		
"	"	"	"	1872		
"	"	"	"	1873		
"	"	"	"	1874		
"	"	"	"	1875		
"	"	"	"	1876		
"	"	"	"	1877		
"	"	"	"	1878		
"	"	"	"	1879		
"	"	"	"	1880		
"	"	"	"	1881		
"	"	"	"	1882		
"	"	"	"	1883		
"	"	"	"	1884		
"	"	"	"	1885		
"	"	"	"	1886		
"	"	"	"	1887		
"	"	"	"	1888		
"	"	"	"	1889		
"	"	"	"	1890		
"	"	"	"	1891		
"	"	"	"	1892		
"	"	"	"	1893		
"	"	"	"	1894		
"	"	"	"	1895	4,753 14	
"	"	"	"	1896	49,909 31	
"	"	"	"	1897	73,300 41	
"	"	"	"	1898	64,495 83	
"	"	"	"	1899	57,607 79	
"	"	"	"	1900	11,765 70	
"	"	"	"	1901	12,918 31	
Total.					*274,750 49	

* Included in total cost of St. Lawrence River and Canals, see page 9.

S. LEONARD SHANNON,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

LAKE ST. FRANCIS.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.
		\$ cts.	\$ cts.
Government expenditure since Confederation.....	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
" " " "	1875		
" " " "	1876		
" " " "	1877		
" " " "	1878		
" " " "	1879		
" " " "	1880		
" " " "	1881		
" " " "	1882		
" " " "	1883		
" " " "	1884		
" " " "	1885		
" " " "	1886		
" " " "	1887		
" " " "	1888		
" " " "	1889		
" " " "	1890		
" " " "	1891		
" " " "	1892		
" " " "	1893		
" " " "	1894		
" " " "	1895		
" " " "	1896		
" " " "	1897		
" " " "	1898	3,420 00	
" " " "	1899	23,110 00	
" " " "	1900	15,431 46	12,288 39
" " " "	1901	15,000 00	8,060 30
Total.....		*56,961 46	20,348 69

* Included in total cost of St. Lawrence River Canals, see page 9.

S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

CORNWALL CANAL.

	Year ending June 30,	Chargeable to Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		£ cts.	£ cts.	£ cts.	£ cts.
Government expenditure prior to Confederation.....		1,933,152 69			
Government expenditure since Confederation..	1868		2,786 00	11,244 47	3,774 18
" " ..	1869	10,692 04		10,347 91	3,859 14
" " ..	1870		17,780 05	10,368 16	7,145 42
" " ..	1871		7 50	11,848 39	8,891 61
" " ..	1872		10,000 21	10,594 30	8,163 70
" " ..	1873		1,011 75	13,042 25	12,467 65
" " ..	1874			13,405 20	7,610 70
" " ..	1875	1,780 00		13,351 91	7,097 34
Cost of original construction...		1,945,624 73			
Expenditure by Dominion Gov- ernment..	1876			13,320 61	6,423 67
" " ..	1877	49,211 37		13,375 70	6,440 54
" " ..	1878	145,015 45		13,825 50	4,935 21
" " ..	1879	143,032 05		13,817 96	4,983 15
" " ..	1880	109,454 95		14,440 33	9,735 76
" " ..	1881	53,948 14		15,173 60	5,524 10
" " ..	1882	44,587 61		15,052 20	6,634 62
" " ..	1883	21,728 93		18,283 67	8,361 71
" " ..	1884	22,018 13		18,475 48	9,007 73
" " ..	1885	62,034 90	16,298 96	15,988 96	12,368 51
" " ..	1886	57,820 83	6,960 95	15,994 80	11,832 83
" " ..	1887	46,966 43		17,520 54	12,100 29
" " ..	1888	67,945 74		16,938 54	13,942 64
" " ..	1889	163,993 85		17,890 55	58,205 26
" " ..	1890	365,038 01	2,000 00	17,063 49	12,758 18
" " ..	1891	599,001 85	1,459 98	16,077 72	9,830 05
" " ..	1892	398,555 25	2,345 26	15,596 66	9,864 36
" " ..	1893	352,536 13		15,173 01	9,668 14
" " ..	1894	404,990 22		15,344 02	7,733 54
" " ..	1895	450,689 65	21,497 74	15,414 56	13,053 55
" " ..	1896	448,408 31	2,175 00	15,472 26	25,259 56
" " ..	1897	438,487 51		15,540 43	16,438 32
" " ..	1898	133,208 96		15,011 50	15,431 02
" " ..	1899	37,649 00	15,960 80	16,000 00	14,623 90
" " ..	1900	169,889 51	18,547 50	18,798 10	13,998 29
" " ..	1901	62,032 47		17,104 13	13,166 89
Cost of enlargement.....		4,849,305 25			
Total		*6,794,929 98	118,831 70	506,896 91	391,331 56

* Included in total cost of St. Lawrence River and Canals, see page 9.

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

WILLIAMSBURG CANALS.

	Year ending June 30.	Capital.				Renewals, Chargable to Income.	Staff.	Repairs.
		Farran's Point.	Gallops.	Rapide Plat.	Total.			
		§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.
Government expenditure prior to Confederation being amount of original construction.....	1868				1,320,655 54		5,745 97	6,442 41
Government expenditure since Confederation.....	1869						5,769 81	5,670 88
"	1870						6,573 13	6,546 16
"	1871						6,382 17	5,308 41
"	1872					1,077 06	5,542 94	3,230 07
"	1873						6,424 49	7,347 75
"	1874						6,857 19	7,395 92
"	1875						6,547 62	4,110 29
"	1876						7,418 39	11,690 98
"	1877						7,388 08	10,053 61
"	1878						7,430 11	4,449 78
"	1879						7,517 20	3,549 71
"	1880						7,590 15	3,999 77
"	1881						7,572 35	5,090 73
"	1882						7,589 44	7,447 69
"	1883				13 19		7,423 48	7,299 39
"	1884				2,473 44		7,757 04	7,349 37
"	1885		70,764 07	32,473 65	103,237 12		7,696 67	8,198 03
"	1886		78,014 92	149,835 71	247,850 63		7,671 54	7,847 05
"	1887		32,862 02	82,990 98	115,853 00		7,635 54	7,904 76
"	1888		16,628 95	53,199 34	70,128 29	1,613 67	7,646 79	8,190 13
"	1889		37,661 15	22,206 11	59,867 26		7,485 28	8,794 61
"	1890		126,417 42	12,660 95	139,078 37		8,951 53	8,191 69
"	1891	2,853 76	172,779 88	55,036 96	230,670 60		8,978 25	7,987 40
"	1892		218,511 17	158,034 15	376,545 32	797 83	9,458 33	8,551 32
"	1893		154,534 01	217,669 28	372,193 29	3,675 00	8,676 03	8,347 97
"	1894		223,992 81	274,397 42	498,390 23		10,230 09	7,029 95
"	1895		118,464 53	228,892 70	347,357 23	13,720 36	9,675 69	7,371 37

SESSIONAL PAPER No. 20

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

WELLAND CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		222,220 00			
Government expenditure prior to Confederation.....		7,416,019 83			
" " since "	1868	12,097 84		37,679 05	38,852 96
" " "	1869	43,486 36		39,060 61	50,773 03
" " "	1870		22,173 72	40,340 45	65,009 19
" " "	1871		48,569 10	42,383 33	53,381 02
" " "	1872	53,680 32	6,022 44	37,085 37	50,276 90
" " "	1873	82,282 20	47,876 27	45,382 99	66,550 73
" " "	1874	746,420 61		50,966 48	103,666 99
" " "	1875	1,047,119 91		52,595 00	88,539 99
" " "	1876	1,569,478 19	700 00	57,623 31	81,376 12
" " "	1877	2,199,962 61		59,963 47	49,783 93
" " "	1878	2,138,392 99		60,138 59	66,393 53
" " "	1879	1,552,697 41		59,912 23	56,755 57
" " "	1880	1,252,924 75		63,198 10	76,535 25
" " "	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " "	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " "	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " "	1884	432,336 21		113,276 87	90,926 97
" " "	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " "	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " "	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " "	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " "	1889	225,910 21	48,803 80	113,587 05	77,547 77
" " "	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " "	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " "	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " "	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " "	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " "	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " "	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " "	1897	2,282 35	22,283 06	88,095 20	41,247 81
" " "	1898		34,803 25	84,806 54	59,571 66
" " "	1899		30,099 84	86,110 88	56,270 60
" " "	1900	18,167 29	37,164 84	84,888 36	59,507 64
" " "	1901	224,536 96	87,777 43	86,889 24	72,055 89
Total		*24,014,340 01	591,561 66	2,695,677 89	2,314,248 07

*Total expenditure as above.....\$ 24,014,340 01
Less expenditure by Imperial Government. 222,220 00

Agreeing with Public Accounts Balance Sheet, 1901, page xvi. . . \$ 23,792,120 01

Original cost of construction, including first enlargement.....\$ 7,693,824 03
Enlargement, including new Welland Canal..... 16,320,515 98

Total expenditure as above.....\$ 24,014,340 01

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAY CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 24

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

CARILLON AND GRENVILLE CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government....		*			
Government expenditure prior to Confederation		63,053 64			
" since	1868		19,817 22	6,301 88	8,911 28
"	1869			6,549 38	10,157 42
"	1870		4,167 96	6,617 81	9,852 09
"	1871		23,119 37	8,676 90	8,218 24
"	1872	165,257 28		8,324 51	17,235 31
"	1873	133,199 10	3,051 38	10,068 28	8,781 50
"	1874	245,258 38		10,710 88	10,605 82
"	1875	339,864 76		10,378 57	18,520 44
"	1876	326,203 16		10,764 38	11,475 96
"	1877	245,738 04		11,050 27	10,304 06
"	1878	22,676 20		11,401 30	5,082 72
"	1879	243,141 24		11,501 22	7,629 98
"	1880	281,514 27		11,959 14	7,625 54
"	1881	336,707 53		13,059 18	8,076 91
"	1882	433,034 39		14,387 49	7,582 68
"	1883	433,575 10		17,479 58	8,310 02
"	1884	399,267 16		17,393 91	7,918 42
"	1885	157,187 72		19,702 30	10,429 26
"	1886	104,973 24	75 00	20,597 82	9,303 31
"	1887	20,747 11		20,011 36	10,554 41
"	1888	38,996 29		21,531 12	10,036 62
"	1889	298 17		22,098 88	10,135 66
"	1890	17 58	4,526 61	15,896 16	7,582 38
"	1891		4,395 25	21,230 22	10,796 68
"	1892	34,585 64	15,036 48	17,458 69	8,620 15
"	1893	207 00	42,298 74	16,762 71	10,669 28
"	1894	385 55	20,034 94	14,144 98	11,620 09
"	1895		5,963 76	15,453 21	12,303 25
"	1896	3,850 31		13,995 69	12,161 10
"	1897	1,908 44	4,939 20	13,780 29	11,607 95
"	1898	82,663 37	5,082 03	11,697 81	10,993 61
"	1899	39,999 37		11,919 27	11,478 88
"	1900	22,802 27	4,476 50	13,657 06	14,666 71
"	1901	4,930 65	9,331 95	13,342 22	13,416 00
Total.....		†4,182,092 96	166,316 39	469,904 77	352,663 73

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

† Included in total cost of Ottawa River Works, see page 19, cost of enlargement, \$4,119,039.32.

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

CULBUTE LOCK AND DAM.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.	1868	.....	.....	.....	.....
" " " "	1869	.....	.....	.....	.....
" " " "	1870	.....	.....	.....	.....
" " " "	1871	.....	.....	.....	.....
" " " "	1872	.....	.....	.....	.....
" " " "	1873	.....	835 53	.....	.....
" " " "	1874	.....	38,388 99	.....	.....
" " " "	1875	63,659 29	.....	.....	.....
" " " "	1876	76,842 44	.....	.....	.....
" " " "	1877	56,081 87	.....	.....	.....
" " " "	1878	5,933 53	.....	.....	.....
" " " "	1879	20,694 19	.....	.....	.....
" " " "	1880	16,688 20	.....	202 50	259 31
" " " "	1881	4,721 62	.....	962 85	.....
" " " "	1882	29,567 15	.....	790 00	162 33
" " " "	1883	14,249 60	.....	695 00	288 99
" " " "	1884	8,151 16	.....	733 50	.....
" " " "	1885	19,071 76	.....	730 00	572 75
" " " "	1886	26,385 27	.....	730 00	2,396 14
" " " "	1887	7,760 88	.....	730 00	967 33
" " " "	1888	7,573 99	.....	739 50	730 60
" " " "	1889	17,112 01	.....	1,050 00	116 53
" " " "	1890	2,818 35	.....	747 83	.....
" " " "	1891	2,183 15	9,122 05	745 25	499 91
" " " "	1892	.....	1,546 25	736 00	.....
" " " "	1893	.....	1,420 65	749 00	13 55
" " " "	1894	.....	2,540 14	730 00	494 43
" " " "	1895	.....	1,475 26	436 05	434 28
" " " "	1896	.....	.....	.....	.....
" " " "	1897	.....	.....	.....	.....
" " " "	1898	.....	.....	.....	100 00
" " " "	1899	.....	.....	.....	.....
" " " "	1900	3,085 00	.....	.....	.....
" " " "	1901	327 00	.....	.....	.....
Total.....	.....	*382,906 46	55,328 87	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 19.

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS.

OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

RIDEAU CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....		3,911,701 47			
Government expenditure prior to Confederation.....		153,062 60			
" since ".....	1863	166 50	7,298 12	18,397 28	16,475 21
" " ".....	1869			19,250 71	13,140 77
" " ".....	1870		13 16	20,022 37	19,469 33
" " ".....	1871		11,732 98	22,814 58	18,120 52
" " ".....	1872		4,967 50	22,139 48	14,005 32
" " ".....	1873		18,070 97	22,841 51	26,074 49
" " ".....	1874		5,793 16	26,815 44	22,957 40
" " ".....	1875	9,310 85		26,553 37	19,699 81
" " ".....	1876	2,163 96		26,430 77	14,428 25
" " ".....	1877	214 11		25,959 56	14,198 18
" " ".....	1878			26,651 51	11,034 22
" " ".....	1879	7,703 88		26,042 52	7,134 55
" " ".....	1880			26,463 88	11,434 05
" " ".....	1881		133 50	26,024 71	8,627 00
" " ".....	1882			26,915 29	13,860 28
" " ".....	1883		70 65	27,322 81	23,524 84
" " ".....	1884		4,597 50	26,938 95	19,245 02
" " ".....	1885		2,098 76	26,971 32	18,189 55
" " ".....	1886		550 00	27,045 95	35,648 04
" " ".....	1887		20,823 96	29,440 46	18,565 34
" " ".....	1888		18,889 43	33,458 83	25,478 87
" " ".....	1889		6,665 22	33,801 77	18,106 36
" " ".....	1890		21,124 10	34,270 57	18,025 21
" " ".....	1891		20,967 25	34,641 98	21,537 56
" " ".....	1892		31,363 23	35,500 82	21,507 16
" " ".....	1893		24,274 71	35,022 49	18,789 50
" " ".....	1894		14,485 11	34,943 35	16,939 47
" " ".....	1895		31,559 48	33,827 08	19,897 32
" " ".....	1896		21,452 29	34,052 77	30,196 38
" " ".....	1897		19,079 11	31,461 55	29,535 94
" " ".....	1898		13,608 39	30,759 05	26,599 93
" " ".....	1899		700 29	30,751 20	28,199 49
" " ".....	1900		11,780 41	30,623 27	30,237 09
" " ".....	1901			31,334 40	33,791 17
Total.....		4,084,323 37	312,099 33	965,491 60	684,673 62

* Ottawa River Works.

Ste. Anne's Lock, page 16.....	\$ 1,170,215 63
Carillon and Grenville Canal, page 17.....	4,182,092 96
Culbute Canal, page 18.....	382,906 46
Rideau Canal as above.....	\$ 4,084,323 37
Less expenditure by Imperial Government.....	3,911,701 47
Total Ottawa Works (Capital).....	\$ 172,621 90
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.....	\$ 7,351,971 18
Less expenditure, 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous..	165,257 28
	485,875 56
Agreeing with Balance Sheet, Public Accounts. 1900, page xvi	\$ 6,866,095 62

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.S. LEONARD SHANNON,
Accountant.

1-2 EDWARD VII., A. 1902

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

ST. OURS LOCK.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		121,537 65			
" " since " .. 1868	1868			1,532 75	753 74
" " " " .. 1869	1869			1,755 15	1,399 18
" " " " .. 1870	1870			1,458 09	1,006 22
" " " " .. 1871	1871			1,414 48	1,210 98
" " " " .. 1872	1872			1,565 80	1,263 19
" " " " .. 1873	1873			2,076 50	1,575 10
" " " " .. 1874	1874			2,219 13	2,363 42
" " " " .. 1875	1875			1,362 22	1,245 69
" " " " .. 1876	1876			1,403 92	1,601 71
" " " " .. 1877	1877			1,533 40	750 80
" " " " .. 1878	1878			1,556 65	283 77
" " " " .. 1879	1879			1,581 55	456 07
" " " " .. 1880	1880			1,614 01	705 54
" " " " .. 1881	1881			1,741 97	1,299 77
" " " " .. 1882	1882			2,002 71	1,902 41
" " " " .. 1883	1883		17,230 32	2,361 65	2,188 08
" " " " .. 1884	1884		5,279 17	2,315 37	1,494 99
" " " " .. 1885	1885		4,700 64	2,271 57	3,652 63
" " " " .. 1886	1886			2,311 70	4,143 47
" " " " .. 1887	1887			2,175 37	5,864 78
" " " " .. 1888	1888			2,216 04	2,801 17
" " " " .. 1889	1889		17,964 45	2,421 14	2,002 63
" " " " .. 1890	1890		24,571 96	2,138 40	1,935 44
" " " " .. 1891	1891		21,696 74	2,011 08	4,460 16
" " " " .. 1892	1892		3,585 34	2,168 44	1,944 33
" " " " .. 1893	1893			2,136 66	1,994 34
" " " " .. 1894	1894			2,216 68	924 55
" " " " .. 1895	1895			2,161 63	915 50
" " " " .. 1896	1896			2,094 91	1,678 49
" " " " .. 1897	1897			2,135 60	707 06
" " " " .. 1898	1898			2,049 67	692 04
" " " " .. 1899	1899			2,244 12	1,494 93
" " " " .. 1900	1900		1,596 88	2,181 43	2,681 10
" " " " .. 1901	1901		3,610 06	2,128 25	1,681 44
Total		*121,537 65	100,235 56	66,558 04	61,074 72

* Included in the total cost of Chambly Canal and River Richelieu, *see* page 21.S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 24

STATEMENT Showing the amounts expended on Constructions, Renewals, &c.—*Con.*

CHAMBLY CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	634,711 76		8,312 90	9,355 70
" since	1869			8,437 22	13,120 97
"	1870			8,934 41	20,180 73
"	1871		2,839 85	10,214 71	22,426 33
"	1872		1,906 40	9,628 50	22,327 99
"	1873		759 00	10,390 44	11,789 27
"	1874		2,810 00	11,675 67	16,427 19
"	1875	2,415 00		12,201 99	16,306 91
"	1876			10,593 14	13,273 56
"	1877	80 00		10,281 78	10,111 32
"	1878			10,413 99	6,022 96
"	1879			11,301 53	8,809 77
"	1880			11,516 22	12,377 74
"	1881			13,950 47	20,705 17
"	1882		31,796 41	16,686 78	16,843 60
"	1883		21,332 36	15,904 38	15,182 24
"	1884		41,640 77	18,448 85	12,003 34
"	1885		21,049 23	18,378 55	13,046 95
"	1886		14,547 27	19,501 28	11,999 77
"	1887		17,911 17	19,053 62	20,071 37
"	1888		65,536 54	20,073 60	11,823 74
"	1889		51,437 87	19,679 22	19,392 18
"	1890		23,221 48	19,655 38	14,399 93
"	1891		43,344 41	19,204 76	11,399 93
"	1892		38,353 99	19,665 22	12,976 48
"	1893		21,127 65	19,310 29	12,451 03
"	1894		8,567 78	19,040 93	11,920 74
"	1895		6,147 63	19,325 49	11,779 12
"	1896		3,694 63	19,349 65	11,801 12
"	1897		12,665 88	18,754 17	13,128 55
"	1898		13,184 68	17,992 90	12,466 51
"	1899		15,255 42	18,336 50	11,997 51
"	1900		5,448 88	18,397 58	13,995 00
"	1901		1,195 09	18,529 48	17,572 35
Less proceeds of sale of piece of land		637,206 76 150 00			
Total		*637,056 76	465,774 49	523,141 60	479,487 07

* Chamby Canal and River Richelieu.

Chamby Canal as above \$ 637,056 76

St. Ours Lock, *see* page 20..... 121,537 65

\$ 758,594 41

Less amount deducted at Confederation, *see*

Public, Accounts 1868, part i, page 9.

Government expenditure prior to Confederation.

Chamby Canal as above \$ 634,711 76

St. Ours Lock. (*See* page 20). 121,537 65

\$ 756,249 41

Returned as an asset in Public Accounts, 1868. 433,807 83

322,441 58

Agreeing with Public Accounts, 1901, page xvi..... \$ 436,152 83

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

MURRAY CANAL.

		Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation						
"	since	1868		400 00		
"	"	1869				
"	"	1870				
"	"	1871				
"	"	1872				
"	"	1873				
"	"	1874				
"	"	1875				
"	"	1876				
"	"	1877				
"	"	1878				
"	"	1879				
"	"	1880				
"	"	1881				
"	"	1882	7,135 63			
"	"	1883	84,071 68			
"	"	1884	118,187 43			
"	"	1885	148,902 66			
"	"	1886	179,704 52			
"	"	1887	142,563 66			
"	"	1888	146,754 37			
"	"	1889	215,326 46			
"	"	1890	106,760 35		494 31	
"	"	1891	61,260 49		5,137 03	173 53
"	"	1892	5,964 22		5,803 48	3,505 15
"	"	1893	30,838 79		5,499 62	5,341 34
"	"	1894			5,667 52	5,295 57
"	"	1895			5,354 97	5,063 49
"	"	1896			5,409 10	5,410 33
"	"	1897			5,526 87	3,966 41
"	"	1898			5,799 94	4,710 23
"	"	1899			5,073 70	3,533 68
"	"	1900			5,613 83	2,777 60
"	"	1901			5,175 74	1,138 15
Total.....			*1,247,470 26	400 00	60,556 11	40,915 48

* Agreeing with Public Accounts Balance Sheet, 1901, page xvi.

S. LEONARD SHANNON

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

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

TRENT CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	309,371 31			
" since	1869				
"	1870				
"	1871				
"	1872				
"	1873				
"	1874				
"	1875				
"	1876				
"	1877				
"	1878				
"	1879				
"	1880	561 50		1,188 92	3,568 89
"	1881			2,489 93	2,233 50
"	1882		5,836 51	2,011 92	8,115 50
"	1883	40,767 16	9,303 66	2,235 50	3,047 42
"	1884	120,393 91	6,198 57	2,208 64	5,264 35
"	1885	121,382 84		3,303 87	4,653 50
"	1886	75,103 30		1,639 75	5,917 88
"	1887	179,541 63		1,938 08	6,008 88
"	1888	114,879 35		1,770 29	5,151 42
"	1889	47,592 13	29,677 92	3,242 05	5,935 94
"	1890	58,644 50	11,522 65	3,450 99	730 55
"	1891	9,826 49	3,164 81	3,803 66	4,888 98
"	1892	4,457 28	6,506 97	3,695 85	4,721 85
"	1893	5,962 47	10,838 90	3,739 86	2,087 17
"	1894	3,412 32	20,403 93	3,785 47	4,988 59
"	1895	53,907 70	21,143 41	4,184 18	3,374 49
"	1896	392,976 08	6,185 75	4,349 34	3,329 97
"	1897	486,575 70	13,880 37	4,965 39	3,497 90
"	1898	351,273 31	8,991 54	5,034 60	4,998 80
"	1899	166,611 49	6,179 79	5,048 72	6,454 49
"	1900	334,583 01	8,043 39	5,131 52	9,989 26
"	1901	284,503 89	10,494 82	5,254 51	13,075 89
Total		3,162,327 37	178,372 99	74,473 04	112,035 22

Total expenditure on Capital account as above..... \$ 3,162,327 37

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

" Year 1880..... 561 50

309,932 81

Agreeing with Public Accounts Balance Sheet, 1901, page xvi \$ 2,852,394 56

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

TAY CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.	1868	.....	.....	.....	.....
" " "	1869	.....	.....	.....	.....
" " "	1870	.....	.....	.....	.....
" " "	1871	.....	.....	.....	.....
" " "	1872	.....	.....	.....	.....
" " "	1873	.....	.....	.....	.....
" " "	1874	.....	.....	.....	.....
" " "	1875	.....	.....	.....	.....
" " "	1876	.....	.....	.....	.....
" " "	1877	.....	.....	.....	.....
" " "	1878	.....	.....	.....	.....
" " "	1879	.....	.....	.....	.....
" " "	1880	.....	.....	.....	.....
" " "	1881	.....	.....	.....	.....
" " "	1882	.....	748 65	.....	.....
" " "	1883	4,831 80	.....	.....	.....
" " "	1884	50,878 12	.....	.....	.....
" " "	1885	92,473 97	.....	.....	.....
" " "	1886	65,561 51	.....	.....	.....
" " "	1887	49,617 92	.....	.....	.....
" " "	1888	54,166 57	.....	.....	.....
" " "	1889	89,486 18	.....	.....	.....
" " "	1890	22,226 23	.....	*	*
" " "	1891	17,114 78	.....	*	*
" " "	1892	29,771 65	.....	*	*
" " "	1893	.....	.....	*	*
" " "	1894	.....	.....	*	*
" " "	1895	.....	.....	*	*
" " "	1896	.....	.....	*	*
" " "	1897	10,720 50	.....	*	*
" " "	1898	.....	.....	*	*
" " "	1899	.....	.....	*	*
" " "	1900	2,750 00	.....	*	*
Total.....	.....	†489,599 23	748 65	*	*

* Included in Rideau. Canal

† Agreeing with Public Accounts, 1901, page xvi.

S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 24

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

SAULT STE. MARIE CANAL.

	Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation	1868	.....	.....	.....	.....
" " "	1869	.....	.....	.....	.....
" " "	1870	.....	.....	.....	.....
" " "	1871	.....	.....	.....	.....
" " "	1872	.....	949 35	.....	.....
" " "	1873	.....	.....	.....	.....
" " "	1874	.....	.....	.....	.....
" " "	1875	.....	.....	.....	.....
" " "	1876	.....	.....	.....	.....
" " "	1877	.....	.....	.....	.....
" " "	1878	.....	.....	.....	.....
" " "	1879	.....	.....	.....	.....
" " "	1880	.....	.....	.....	.....
" " "	1881	.....	.....	.....	.....
" " "	1882	.....	.....	.....	.....
" " "	1883	.....	.....	.....	.....
" " "	1884	.....	.....	.....	.....
" " "	1885	.....	.....	.....	.....
" " "	1886	.....	.....	.....	.....
" " "	1887	.....	.....	.....	.....
" " "	1888	8,145 06	.....	.....	.....
" " "	1889	34,018 95	.....	.....	.....
" " "	1890	176,568 55	.....	.....	.....
" " "	1891	325,336 33	.....	.....	.....
" " "	1892	341,474 31	.....	.....	.....
" " "	1893	589,801 25	.....	.....	.....
" " "	1894	1,316,529 29	.....	.....	.....
" " "	1895	466,151 50	.....	3,432 73	.....
" " "	1896	189,986 59	.....	16,074 70	2,650 17
" " "	1897	209,561 82	.....	15,381 59	7,671 79
" " "	1898	21,004 56	.....	14,389 92	8,172 09
" " "	1899	63,935 48	.....	13,840 24	6,564 40
" " "	1900	27,157 98	.....	13,901 40	13,219 87
" " "	1901	323,353 93	48 39	13,730 93	10,289 18
Total		*4 093,025 60	997 74	90,751 51	48,567 50

* Agreeing with Public Accounts, 1901, page xvi.

S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

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

SOULANGES CANAL.

				Year ending June 30.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
					\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation				1868				
"	since	"	"	1869				
"	"	"	"	1870				
"	"	"	"	1871				
"	"	"	"	1872				
"	"	"	"	1873				
"	"	"	"	1874				
"	"	"	"	1875				
"	"	"	"	1876				
"	"	"	"	1877				
"	"	"	"	1878				
"	"	"	"	1879				
"	"	"	"	1880				
"	"	"	"	1881				
"	"	"	"	1882				
"	"	"	"	1883				
"	"	"	"	1884				
"	"	"	"	1885				
"	"	"	"	1886				
"	"	"	"	1887				
"	"	"	"	1888				
"	"	"	"	1889				
"	"	"	"	1890				
"	"	"	"	1891				
"	"	"	"	1892	54,235 76			
"	"	"	"	1893	210,336 24			
"	"	"	"	1894	723,380 95			
"	"	"	"	1895	752,016 53			
"	"	"	"	1896	535,939 07			
"	"	"	"	1897	363,126 06			
"	"	"	"	1898	1,016,401 00			
"	"	"	"	1899	1,442,824 22			
"	"	"	"	1900	693,806 24		6,711 84	5,000 00
"	"	"	"	1901	462,626 36	115 00	25,154 78	5,888 77
Total.....					*6,254,692 43	115 00	31,866 62	10,888 77

* Included in total cost of St. Lawrence River and Canals, *see* part ii, page 9.S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Construction and Enlargement of Canals, to June 30, 1901.

Canal.	Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
St. Peters	248,762 84	399,784 30	684,547 14
Lachine	2,589,532 85	8,419,876 09	11,009,408 94
Beauharnois	1,636,690 26	.....	1,636,690 26
St. Lawrence River and Canals.	18,442 85	2,509,227 48	2,527,670 33
Lake St. Louis .....	.....	274,750 49	274,750 49
Lake St. Francis. ....	.....	56,961 46	56,961 46
Cornwall	1,945,624 73	4,849,305 25	6,794,929 98
Williamsburg. { Farran's Point .....	.....	797,804 77	8,615,997 65
Galops .....	.....	4,528,749 43	
Rapide Plat. ....	.....	1,966,301 28	
Williamsburg.	1,320,655 54	2,486 63	
Welland	7,693,824 03	16,320,515 98	24,014,340 01
Ste. Anne's	134,456 51	1,035,759 12	1,170,215 63
* Carillon and Grenville	63,053 64	4,119,039 32	4,182,092 96
Culbute	382,906 46	.....	382,906 46
Rideau	4,084,323 37	.....	4,084,323 37
St. Ours	121,537 65	.....	121,537 65
Cham. bly	637,056 76	.....	637,056 76
Murray	1,247,470 26	.....	1,247,470 26
Trent	3,162,327 37	.....	3,162,327 37
Tay	489,599 23	.....	489,599 23
Sault Ste. Marie	4,093,025 60	.....	4,093,025 60
Soulanges	6,254,692 43	.....	6,254,692 43
	36,123,982 38	45,280,561 60	81,404,543 98

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

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

* RECAPITULATION—EXPENDITURE on Canals, also showing Revenue received.

	Year ending June 30.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation, including Imperial Government.		20,593,866 13	98,378 46			
Government expenditure since Confederation.....	1868	33,784 06	95,347 79	113,084 50	101,646 44	403,879 19
" " " " " " " " " " " "	1869	126,898 20	55 00	116,069 76	118,579 31	400,263 32
" " " " " " " " " " " "	1870		90,355 96	120,403 02	150,176 70	414,687 02
" " " " " " " " " " " "	1871		116,429 54	135,040 81	140,467 52	488,538 76
" " " " " " " " " " " "	1872	255,645 75	33,289 27	124,137 09	152,086 25	466,847 52
" " " " " " " " " " " "	1873	256,347 27	127,369 55	148,581 18	186,373 13	486,433 26
" " " " " " " " " " " "	1874	1,189,591 91	51,037 05	107,194 40	213,613 86	510,755 99
" " " " " " " " " " " "	1875	1,714,830 37	479 00	168,401 21	203,226 85	414,979 59
" " " " " " " " " " " "	1876	2,388,733 46	810 75	178,411 80	190,578 45	390,337 04
" " " " " " " " " " " "	1877	4,131,374 30	22 30	179,661 40	138,448 51	390,857 37
" " " " " " " " " " " "	1878	3,843,338 62		187,521 31	122,251 60	373,814 17
" " " " " " " " " " " "	1879	3,064,098 61		191,892 44	115,349 99	337,675 13
" " " " " " " " " " " "	1880	2,123,366 34		195,039 33	147,167 92	341,598 14
" " " " " " " " " " " "	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
" " " " " " " " " " " "	1882	1,593,174 09	55,925 03	224,572 61	187,399 02	325,231 54
" " " " " " " " " " " "	1883	1,763,001 97	62,503 14	269,415 01	178,617 86	361,604 01
" " " " " " " " " " " "	1884	1,577,295 42	60,993 99	280,657 29	192,219 38	372,561 69
" " " " " " " " " " " "	1885	1,504,621 47	58,297 59	280,226 20	201,708 47	321,289 47
" " " " " " " " " " " "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" " " " " " " " " " " "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" " " " " " " " " " " "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" " " " " " " " " " " "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" " " " " " " " " " " "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" " " " " " " " " " " "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" " " " " " " " " " " "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" " " " " " " " " " " "	1893	2,069,573 30	196,185 84	291,588 97	204,759 39	357,089 87
" " " " " " " " " " " "	1894	3,027,164 19	109,216 33	294,446 34	179,630 13	387,788 97
" " " " " " " " " " " "	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	339,890 49
" " " " " " " " " " " "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
" " " " " " " " " " " "	1897	2,348,636 91	101,205 74	287,970 36	178,385 47	384,780 53
" " " " " " " " " " " "	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
" " " " " " " " " " " "	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
" " " " " " " " " " " "	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
" " " " " " " " " " " "	1901	2,360,699 89	135,500 57	314,095 04	262,876 07	315,425 69
Total.....		81,404,543 98	2,874,258 92	7,932,881 60	6,178,457 14	12,717,343 01

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

S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 24

HYDRAULIC AND OTHER RENTS.

Balances due July 1, 1900.	Accrued during the Year ended June 30, 1901.	Totals.	—	Abatement.	Paid into hands of the Collectors.	Balances due June 30, 1901.	Totals.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.
31,779 31	12,733 76	44,513 07	Welland Canal.....	3,522 55	9,726 01	31,264 51	44,513 07
1,593 00	1,298 60	2,891 60	Williamsburg Canal.....		499 00	2,392 60	2,891 60
2,577 50	5,370 00	7,947 50	Cornwall ".....		5,115 00	2,832 50	7,947 50
8,164 00	3,361 00	11,525 00	Beauharnois ".....		1,658 50	9,866 50	11,525 00
16,673 31	31,190 02	47,863 33	Lachine ".....	100 00	30,552 52	17,210 81	47,863 33
375 84	124 00	499 84	Chambly ".....		73 00	426 84	499 84
3,207 56	3,071 04	6,938 60	Rideau ".....	0 75	4,356 29	2,581 56	6,938 60
83 00	90 50	173 50	Trent Valley ".....		28 50	145 00	173 50
	60 00	60 00	Sault Ste. Marie ".....		55 00	5 00	60 00
4,218 00	636 00	4,854 00	Carillon and Grenville Canal.....		823 00	4,031 00	4,854 00
	1,500 00	1,500 00	Soulanges Canal.....		1,500 00		1,500 00
4 00		4 00	Sundry Canals.....			4 00	4 00
68,735 52	60,034 92	128,770 44	Totals.....	3,623 30	54,386 82	70,760 32	128,770 44

LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

REVENUE STATEMENT.

CANAL REVENUE.					Total.	COLLECTION DIVISION.	DEPOSITS TO THE CREDIT OF THE RECEIVER GENERAL.		Total.	Cost of Staff, Repairs and Offices of Collection, Chargeable to Revenue.
Tolls.	Wharfage and Storage.	Fines.	Other Receipts.	Total Canal Revenue Accrued.			On Account, Canal Revenue.	On Account, Hydraulic Rents.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.
68,077 15			25 66	68,102 81	68,644 81	<i>Welland Canal.</i>	68,102 81	542 00	68,644 81	163,370 43
21,594 93		10 00	26 02	21,630 95	23,113 45	Port Colborne	21,630 95	1,482 50	23,113 45	3,391 70
529 18			2 52	531 70	747 70	Dumville	531 70	216 00	747 70	2,270 80
384 00		85 00	3 24	422 24	7,992 75	St. Catharines	122 24	7,480 51	7,992 75	790 22
55 40				55 40	60 40	Chippawa	55 40	5 00	60 40	210 61
90,640 66		45 00	57 44	90,743 10	100,469 11	Totals.	90,743 10	9,726 01	100,469 11	130 10
						<i>Laurence Canals.</i>				170,163 86
300 00				300 00	1,958 50	Beauharnois	300 00	1,658 50	1,958 50	236,835 14
36,926 84		5 00		36,931 84	5,115 00	Cornwall	36,931 84	5,115 00	42,046 84	1,025 44
477 95		30 00		507 95	1,006 95	Cardinal	507 95	499 00	1,006 95	1,763 50
2,702 88		9 65		3,473 50	3,473 50	Lachine	3,473 50		3,473 50	846 80
24,903 26		1,289 69		30,756 93	61,309 45	Montreal	30,756 93	30,352 52	61,309 45	2,216 06
24,520 17				24,520 17	24,520 17	Kingston	24,520 17		24,520 17	7,278 33
11,819 49				11,822 49	13,322 49	Coteau Landing	11,822 49	1,500 03	13,322 49	694 10
101,650 59	1,299 35	58 00	5,304 94	108,312 88	147,637 90	Totals.	108,312 88	39,325 02	147,637 90	1,501 04
						<i>Chamblly Canal.</i>				252,160 41
10,994 11				10,994 11	10,994 11	Chamblly	10,994 11		10,994 11	40,228 32
12,398 38		4 00		12,402 38	12,475 38	St. John's	12,402 38	73 00	12,475 38	1,642 05
578 61				578 61	578 61	St. Ours	578 61		578 61	1,715 11
23,971 10		4 00		23,975 10	24,048 10	Totals.	23,975 10	73 00	24,048 10	624 45
						<i>Ottawa Canals.</i>				44,209 93
22,186 10				22,186 10	22,186 10	Ottawa	22,186 10		22,186 10	32,905 13
5,263 98				5,263 98	5,563 98	Grenville	5,263 98	300 00	5,563 98	474 04
17 60		24 25		41 85	564 85	Carillon	41 85	523 00	564 85	663 85
1,064 17				1,064 17	1,064 17	St. Anne's Lock	1,064 17		1,064 17	680 45
28,531 85			24 25	28,556 10	29,379 10	Totals.	28,556 10	823 00	29,379 10	34,732 47

SESSIONAL PAPER No. 20

3,153 17	21 96	294 00	3,429 13	4,116 64	7,545 77	<i>Rideau Canal</i>	3,429 13	4,116 64	7,545 77	65,125 57
876 26			876 26	197 50	1,073 76	Ottawa	876 26	197 50	1,073 76	2,637 85
774 97			774 97	42 15	817 12	Kingston Mills	774 97	42 15	817 12	435 79
4,804 40	21 96	254 00	5,080 36	4,356 29	9,436 65	Smiths Falls	5,080 36	4,356 29	9,436 65	334 45
3,046 50			3,046 50		3,046 50	Totals	3,046 50		3,046 50	68,563 66
948 22			948 22		948 22	<i>St. Peter's Canal</i>	948 22		948 22	3,780 94
948 22			948 22		948 22	Murray Canal	948 22		948 22	6,645 09
						Brighton				335 90
						Totals	948 22		948 22	6,980 99
93 33						<i>Trent Valley Canal</i>				18,330 40
506 30		1 60	94 93	1 00	95 93	Burlington	94 93	1 00	95 93	100 00
85 31	21 00		527 30		527 30	Bokenyoon	527 30		527 30	56 12
20 73			85 31	10 00	95 31	Fenelon Falls	85 31	10 00	95 31	45 00
297 14			20 73		20 73	Hastings	20 73		20 73	10 00
121 57			314 61	17 50	314 61	Peterborough	297 14	17 50	314 61	15 68
			121 57		121 57	Buckhorn	121 57		121 57	110 00
1,124 38		22 60	1,146 98	28 50	1,175 48	Totals	1,146 98	28 50	1,175 48	18,667 20
				55 00	55 00	<i>Scout Ste. Marie Canal</i>		55 00	55 00	25,246 71
254,717 70	1,321 31	5,663 23	261,809 24	54,386 82	316,196 06	Dredge Vessels	261,809 24	54,386 82	316,196 06	624,536 17
						Inspection				10,597 32
						Department of Public Printing and Stationery				148 00
						General				1,239 86
						Grand Totals	261,809 24	54,386 82	316,196 06	2,388 37
						Less—Refunds	679 84	90 53	770 37	638,909 72
						Net Revenue	261,129 40	54,296 29	315,425 69	638,909 72

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

INTERCOLONIAL RAILWAY.

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

—	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Expenditure prior to Confederation.....		10,766,725 54			
" since ".....	1868	483,353 65		359,961 08	420,752 58
" ".....	1869	282,615 18		387,548 47	455,022 76
" ".....	1870	1,729,381 49		445,208 75	471,245 09
" ".....	1871	2,916,782 13		442,993 31	565,713 52
" ".....	1872	5,131,141 51		595,076 22	622,900 56
" ".....	1873	5,201,450 37		1,011,892 60	703,458 26
" ".....	1874	3,614,898 81		1,847,175 24	893,430 17
" ".....	1875	3,426,099 55		1,532,589 62	861,593 43
" ".....	1876	1,108,321 59		1,277,197 79	848,861 46
" ".....	1877	1,318,352 19		1,661,673 55	1,154,445 35
" ".....	1878	408,816 74		1,811,273 56	1,378,946 78
" ".....	1879	226,639 19		2,010,183 22	1,294,099 69
" ".....	1880	2,048,014 60		1,607,956 70	1,520,310 45
" ".....	1881	608,732 80		1,780,353 53	1,777,856 76
" ".....	1882	585,568 79		2,080,592 37	2,100,315 85
" ".....	1883	1,616,632 96		2,383,477 20	2,395,034 99
" ".....	1884	1,405,377 52		2,366,719 95	2,376,666 19
" ".....	1885	1,195,363 08		2,460,229 87	2,392,605 00
" ".....	1886	544,958 17		2,508,473 10	2,406,858 88
" ".....	1887	823,070 86		2,854,158 91	2,621,337 41
" ".....	1888	742,203 09		3,300,481 94	2,937,337 40
" ".....	1889	653,228 13		3,174,785 19	2,923,736 46
" ".....	1890	365,246 48		3,500,455 80	2,958,243 38
" ".....	1891	79,929 34		3,691,273 65	3,007,630 51
" ".....	1892	168,101 77		3,458,891 39	2,978,950 82
" ".....	1893	228,984 79		3,062,207 45	3,099,815 20
" ".....	1894	166,362 43		2,999,317 07	3,020,485 74
" ".....	1895	327,034 51		2,964,940 98	2,979,795 59
" ".....	1896	259,105 23		3,029,304 08	2,994,201 93
" ".....	1897	145,142 00		2,936,789 71	2,906,631 25
" ".....	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" ".....	1899	1,081,429 94	210,000 00	3,478,559 30	3,775,558 08
" ".....	1900	1,796,348 29		4,444,296 25	4,599,423 14
" ".....	1901	3,633,836 57		5,477,285 30	5,019,497 76
Total		*55,344,116 49	280,000 00	80,219,153 29	73,617,658 93

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

Total cost of construction as above \$ 55,344,116 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>\$ 88,363 18</u>
		208,509 72

296,872 90

Cape Breton Railway, page 35.....	\$ 55,047,243 59
Oxford and New Glasgow Railway, page 36..	3,860,679 14
Eastern Extension Railway, page 33.....	1,949,063 21
Montreal and European Short Line Railway, page 37.	1,324,042 81
Drummond County Railway, page 41.....	333,942 72
	<u>1,459,000 00</u>

Total capital cost of Intercolonial Railway system.....	\$ 63,973,971 47
Governor General's car 'Victoria'.....	1,290 31

Agreeing with Public Accounts, 1901, page xvi.....	<u>\$ 63,975,261 78</u>
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S. LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

EASTERN EXTENSION RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868			
" " since " ..	1869			
" " " " ..	1870			
" " " " ..	1871			
" " " " ..	1872			
" " " " ..	1873			
" " " " ..	1874			
" " " " ..	1875			
" " " " ..	1876			
" " " " ..	1877			
" " " " ..	1878			
" " " " ..	1879			
" " " " ..	1880			
" " " " ..	1881			
" " " " ..	1882			
" " " " ..	1883			
" " " " ..	1884	1,284,311 97	10,033 77	30,767 66
" " " " ..	1885	2,055 92	78,273 65	73,050 01
" " " " ..	1886	183 79	94,756 06	66,893 11
" " " " ..	1887		94,254 04	64,107 10
" " " " ..	1888		90,954 73	70,552 20
" " " " ..	1889	34,235 73	90,719 04	72,436 65
" " " " ..	1890		79,102 77	84,658 95
" " " " ..	1891	3,255 40	*	†
" " " " ..	1892		*	†
" " " " ..	1893		*	†
" " " " ..	1894		*	†
" " " " ..	1895		*	†
" " " " ..	1896		*	†
" " " " ..	1897		*	†
" " " " ..	1898		*	†
" " " " ..	1899		*	†
" " " " ..	1900		*	†
" " " " ..	1901		*	†
Total		† 1,324,042 81	538,094 06	462,465 68

* Included in Intercolonial Railway expenses. † Included in Intercolonial Railway revenue.

‡ Included in total cost of Intercolonial Railway system, page 32.

S. LEONARD SHANNON,
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868			
" since "	1869			
" " "	1870			
" " "	1871			
" " "	1872			
" " "	1873			
" " "	1874			
" " "	1875			
" " "	1876			
" " "	1877			
" " "	1878			
" " "	1879			
" " "	1880			
" " "	1881			
" " "	1882			
" " "	1883			
" " "	1884			
" " "	1885			
" " "	1886	85,610 69		
" " "	1887	2,299 62		
" " "	1888	500 17		
" " "	1889			
" " "	1890			
" " "	1891			
" " "	1892			
" " "	1893			
" " "	1894			
" " "	1895			
" " "	1896			
" " "	1897			
" " "	1898			
" " "	1899			
" " "	1900			
" " "	1901			
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.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

CAPE BRETON RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" since ".....	1869		
" " ".....	1870		
" " ".....	1871		
" " ".....	1872		
" " ".....	1873		
" " ".....	1874		
" " ".....	1875		
" " ".....	1876		
" " ".....	1877		
" " ".....	1878		
" " ".....	1879		
" " ".....	1880		
" " ".....	1881		
" " ".....	1882		
" " ".....	1883		
" " ".....	1884		
" " ".....	1885		
" " ".....	1886		
" " ".....	1887	76,501 89	
" " ".....	1888	689,450 50	
" " ".....	1889	1,083,276 60	
" " ".....	1890	1,170,523 62	
" " ".....	1891	521,441 62	
" " ".....	1892	99,936 96	
" " ".....	1893	59,982 74	
" " ".....	1894	158,770 61	
" " ".....	1895	*	
" " ".....	1896	*	
" " ".....	1897	405 00	
" " ".....	1898	389 60	
" " ".....	1899		
" " ".....	1900		
" " ".....	1901		
Total.....		\$3,860,679 14	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.
 § Included in total cost of Intercolonial Railway system, see page 32.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" since "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885	49,587 45	
" " "	1886	135,214 88	
" " "	1887	24,157 32	
" " "	1888	397 35	
" " "	1889		
" " "	1890		
" " "	1891	124,568 23	
" " "	1892		
" " "	1893		
" " "	1894	17 99	
" " "	1895		
" " "	1896		
" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
Total		*333,942 72	

* Included in total cost of Intercolonial Railway system, page 32.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		3,114,735 11		
" since	1874		750 00	
" "	1875	46,086 63	49,344 62	24,493 99
" "	1876	42,546 10	219,930 43	118,060 96
" "	1877	200,000 00	228,595 25	130,664 92
" "	1878	6,551 86	221,599 49	135,899 60
" "	1879	40,129 05	223,313 12	125,855 91
" "	1880	16,539 82	164,640 55	113,851 11
" "	1881		203,122 88	131,131 43
" "	1882	402 03	228,259 97	137,267 54
" "	1883	57,186 02	252,808 41	146,170 42
" "	1884	130,663 38	236,428 13	144,504 12
" "	1885	76,956 56	211,207 01	158,588 06
" "	1886	4,668 33	216,744 34	155,584 36
" "	1887	5,800 00	204,237 45	155,303 37
" "	1888		229,639 95	158,363 62
" "	1889		247,559 44	171,369 56
" "	1890		266,485 85	160,971 78
" "	1891		257,990 08	174,258 05
" "	1892	8,300 49	289,706 38	157,442 69
" "	1893		226,422 17	162,690 42
" "	1894		226,891 06	158,533 83
" "	1895		232,905 19	149,654 78
" "	1896		225,138 56	146,476 54
" "	1897		240,489 90	153,443 13
" "	1898	17,541 88	231,418 74	158,950 61
" "	1899	22,000 00	218,053 01	165,012 03
" "	1900	53,546 02	220,931 81	174,738 73
" "	1901	280,173 93	261,766 24	193,883 48
Total.....		*4,123,827 21	6,036,380 03	3,963,165 04

* Agrees with Public Accounts Balance Sheet, 1900-1901, page xvi.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including Subsidy of \$25,000,000.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....				
" since "	1868			
" " "	1869			
" " "	1870			
" " "	1871	30,148 32		
" " "	1872	489,428 16		
" " "	1873	561,818 44		
" " "	1874	310,224 88		
" " "	1875	1,546,241 67		
" " "	1876	3,346,567 06		
" " "	1877	1,691,149 97		
" " "	1878	2,228,373 13		
" " "	1879	2,240,285 47		
" " "	1880	4,044,522 72	78,892 01	104,975 69
" " "	1881	4,968,503 93	236,944 98	291,498 06
" " "	1882	(1) 4,589,075 79	1,786 20	
" " "	1883	(2) 10,033,800 04	266 09	
" " "	1884	(3) 11,192,722 02	327 02	
" " "	1885	(4) 9,900,281 53		
" " "	1886	(5) 3,672,584 81		
" " "	1887	(6) 915,057 49		
" " "	1888	52,098 65		
" " "	1889	86,716 07		
" " "	1890	40,980 54		
" " "	1891	37,367 00		
" " "	1892	66,211 39		
" " "	1893	413,836 49		
" " "	1894	146,539 87		
" " "	1895	49,209 77		
" " "	1896	65,669 49		
" " "	1897	14,054 50		
" " "	1898	692 17		
" " "	1899	8,418 53		
" " "	1900	236 11		
" " "	1901	8,978 87		
Total.....		*62,751,794 88	318,216 30	396,473 75

* Agrees with Public Accounts Balance Sheet, 1900-1901, page xx.

(1) Including	\$ 2,210,000	00 on account subsidy.
(2) "	5,323,076	60 "
(3) "	7,254,208	27 "
(4) "	6,862,201	00 "
(5) "	2,890,427	00 "
(6) "	460,087	13 "

†\$25,000,000 00

[†] See also Statement No. 3, page 47, for this expenditure.

S. LEONARD SHANNON,
Accountant

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

1-2 EDWARD VII., A. 1902

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation..	1868		
" since	1869		
"	1870		
"	1871		
"	1872		
"	1873		
"	1874		
"	1875		
"	1876		
"	1877		
"	1878		
"	1879		
"	1880		
"	1881		
"	1882		
"	1883		
"	1884		
"	1885		
"	1886		
"	1887		
"	1888		
"	1889	9,847 27	
"	1890	381,942 75	
"	1891	196,869 36	
"	1892	26,189 89	
"	1893	2,190 62	
"	1894	1,675 36	
"	1895	570 55	
"	1896		
"	1897	41,457 29	
"	1898		
"	1899		
"	1900		
"	1901		8,381 82
Total		*660,683 09	8,381 82

*Of this amount Parliament voted under 52 Vic., chap. 8, the sum of \$500,000 as a subsidy to the Western Counties Railway, which is also shown in the statement of subsidies, page 47.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

DRUMMOND COUNTY RAILWAY.

	Year.	Construction.	Working Expenses.
		\$ cts.	\$ c.
Government Expenditure prior to Confederation.....	1868	.....	.....
" " since. "	1869
" " " "	1870
" " " "	1871
" " " "	1872
" " " "	1873
" " " "	1874
" " " "	1875
" " " "	1876
" " " "	1877
" " " "	1878
" " " "	1879
" " " "	1880
" " " "	1881
" " " "	1882
" " " "	1883
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" " " "	1886
" " " "	1887
" " " "	1888
" " " "	1889
" " " "	1890
" " " "	1891
" " " "	1892
" " " "	1893
" " " "	1894
" " " "	1895
" " " "	1896
" " " "	1897
" " " "	1898
" " " "	1899
" " " "	1900	1,459,000 00
" " " "	1901	.....	.....
Total.....	.....	*1,459,000 00	.....

*Included in total cost of Intercolonial Railway system, page 32.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901

1-2 EDWARD VII., A. 1902

STATEMENT Showing Amount Expended on Capital Account on Railways.

Railways.	\$ cts.	\$ c.
Intercolonial	55,047,243 59	
Cape Breton	3,860,679 14	
Oxford and New Glasgow	1,949,063 21	
Eastern Extension	1,324,042 81	
Drummond County	1,459,000 00	63,640,028 75
Carleton Branch		48,410 48
Montreal and European Short Line		333,942 72
Prince Edward Island		4,123,827 21
Canadian Pacific		62,751,794 88
Annapolis and Digby		660,683 09
Governor General's car "Victoria"		1,290 31
Total		131,559,977 44
<i>Memo re Recapitulation—Railways.</i>		
Total cost as per statement above		131,559,977 44
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 43		131,856,850 34

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October, 31 1901.

RECAPITULATION—RAILWAYS.

	Year.	Construction.	Working Expenses	Revenue Received.
		\$ cts.	\$ cts.	\$ cts.
Government Expenditure prior to Confederation	1868	13,881,460 65	359,961 08	420,752 58
since	1869	483,353 65	387,548 47	455,022 76
"	1870	1,729,381 49	445,208 75	471,245 09
"	1871	2,946,930 45	442,993 31	565,713 52
"	1872	5,620,569 67	595,076 22	622,900 56
"	1873	5,763,268 81	1,011,892 60	703,458 26
"	1874	3,925,123 69	1,847,925 24	893,430 17
"	1875	5,018,427 85	1,581,934 24	886,087 42
"	1876	4,497,434 75	1,497,128 22	966,922 42
"	1877	3,209,502 16	1,890,268 80	1,285,110 27
"	1878	2,643,741 73	2,032,873 05	1,514,846 38
"	1879	2,507,053 71	2,233,496 34	1,419,955 60
"	1880	6,109,077 14	1,851,489 26	1,739,137 25
"	1881	5,577,236 73	2,220,421 39	2,200,486 25
"	1882	5,175,046 61	2,310,638 54	2,237,583 39
"	1883	11,707,619 02	2,636,551 70	2,541,205 41
"	1884	14,013,074 89	2,613,508 87	2,551,937 97
"	1885	11,224,244 54	2,749,710 53	2,624,243 07
"	1886	4,443,220 17	2,819,973 50	2,628,336 35
"	1887	1,846,887 18	3,152,650 40	2,840,747 88
"	1888	1,765,582 11	3,621,076 62	3,166,253 22
"	1889	2,709,837 37	3,513,063 67	3,167,542 67
"	1890	2,892,767 99	3,846,044 42	3,203,874 11
"	1891	1,184,317 34	3,949,263 73	3,181,888 56
"	1892	417,425 73	3,748,597 77	3,136,393 51
"	1893	711,917 44	3,288,629 62	3,262,505 62
"	1894	585,749 01	3,226,208 13	3,179,019 57
"	1895	376,814 83	3,197,846 17	3,129,450 37
"	1896	324,774 72	3,254,442 64	3,140,678 47
"	1897	204,624 31	3,195,959 58	3,060,074 38
"	1898	270,990 85	3,507,248 88	3,313,847 10
"	1899	1,112,348 47	3,696,612 31	3,940,570 11
"	1900	3,309,130 42	4,665,228 06	4,774,161 87
"	1901	3,922,989 37	5,739,051 54	5,213,381 24
Total		*131,895,560 03.	87,130,523 65	78,438,763 40

*Total amount paid on construction.....	\$131,895,560 03
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Less amount received from the City of St. John's, N.B., as purchase of the Carleton Branch Railway	40,000 00
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Total cost of construction.....	\$131,855,560 03
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Add expenditure Governor General's car "Victoria"	1,290 31
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Agreeing with amount expended on capital, see page 42.....	131,856,850	34
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S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1900.

1-2 EDWARD VII., A. 1902

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

Year ending June 30.	CHARGE- ABLE TO CAPITAL.	CHARGEABLE TO INCOME.				CHARGEABLE TO REVENUE.			Total Yearly Expenditure
	Railways.	Canals.	Railways.	General.	Canals.	Railways.	General.		
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1868.				6,305 66	12,000 00		2,416 66	20,722 32	
1869.				8,367 52	12,000 00		1,000 00	21,367 52	
1870.				7,853 03	18,698 89		7,679 78	34,231 70	
1871.				34,773 72	12,018 98			46,792 70	
1872.				20,049 50	12,208 76			32,258 26	
1873.				36,891 74	12,099 44		6,889 20	55,880 38	
1874.				40,098 84	12,959 25		5,428 98	58,487 07	
1875.				35,579 24	12,047 43		5,620 17	53,246 74	
1876.				42,920 10	86 08		5,690 28	48,696 46	
1877.					51 87	43,639 97		43,691 84	
1878.		1,860 00			556 00		34,388 59	36,804 59	
1879.									
1880.		2,561 55			323 16			2,884 71	
1881.		2,338 41			5,535 22			7,873 63	
1882.					9,826 23			9,826 23	
1883.		11,781 27			6,978 54			18,759 81	
1884.		7,486 62	62,256 58		8,305 41			78,048 61	
1885.		16,725 47	11,003 38		1,210 61			28,939 46	
1886.		20,323 62	10,383 59		776 30			31,483 51	
1887.		20,873 21	23,545 34		649 04			45,067 59	
1888.		34,533 07	22,898 90		5,799 83			63,231 80	
1889.		10,091 87	16,552 64		5,207 64			31,852 15	
1890.		16,426 69	50,909 74		49,550 21			116,886 64	
1891.		16,095 31	16,314 41		56,922 05			90,161 77	
1892.		6,540 49	19,062 51		65,074 07			90,677 07	
1893.		8,498 41	4,313 73	28,640 93	63,965 54			105,418 61	
1894.		4,178 85	4,855 11	15,746 31	60,265 22			85,045 49	
1895.		10,695 48	13,221 27	19,304 87	60,769 56			103,991 18	
1896.	1,290 31	10,893 40	5,271 89	25,194 21	70,340 22			112,990 03	
1897.		2,937 47	5,118 99	25,142 90	62,777 12		597 39	96,573 87	
1898.		1,719 69	8,327 96	28,042 10	56,284 42	1,400 00		95,774 17	
1899.		1,318 79	67,005 86	22,085 19	66,850 29			157,260 13	
1900.		11,873 25	22,408 00	22,202 18	58,836 57			127,009 09	
1901.		12,267 99	28,658 78	33,986 68	61,938 61			136,852 06	
	1,290 31	232,851 01	403,197 67	453,784 72	882,912 56	45,039 97	69,711 05	2,088,787 29	

S. LEONARD SHANNON

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

SESSIONAL PAPER No. 20

RECAPITULATION—RAILWAYS AND CANALS.

EXPENDITURE.

<i>Chargeable to Capital Account—</i>			
Railways, <i>see</i> Statement, page 42	.....	\$131,559,977	44
" " " 44	.....	1,290	31
Canals " " 27	.....	81,404,543	98
			\$212,965,811 73
<i>Chargeable to Consolidated Fund—</i>			
* Railway Subsidies, as per Statement No. 3, page 47	.....	25,737,891	37
<i>Income Account—</i>			
Intercolonial Railway, <i>see</i> page 23	.....	\$ 280,000	00
Railways " 44	.....	403,197	67
Canals " 28	.....	\$2,874,258	92
Less prior to Confederation.	.....	98,378	46
			2,775,880 46
Canals, <i>see</i> page 44	.....	232,851	01
General " 44	.....	453,784	72
			4,145,713 86
<i>Revenue Account—</i>			
Canals—Operating and maintaining staff, <i>see</i>			
page 28	.....	\$7,932,881	60
Repairs, <i>see</i> page 28	.....	6,178,457	14
			\$ 14,111,338 74
Railways—Working expenses, <i>see</i> page 43	.....	87,130,523	65
			101,241,862 39
Total Expenditure on Railways and Canals	.....	\$344,091,279	35

REVENUE.

Canals—Revenue received from July 1, 1867, to June 30, 1901 (for details <i>see</i> page 28)	.....	\$12,717,343	01
Railways—Revenue received from July 1, 1867, to June 30, 1901 (for details <i>see</i> page 43)	.....	78,438,763	40
Total Revenue, Railways and Canals	.....	\$91,156,106	41

* This amount does not include the annual payment of \$119,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 granted by 47 Vic., ch. 8 (1884), for the line between Ottawa and Quebec, which sum has now been transferred to the public debt as a liability. (*See* Public Accounts, 1898-99, p.x.) This item is dealt with by the Finance Department.

S. LEONARD SHANNON,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, October 31, 1901.

2 EDWARD 50

SESSIONAL PAPER No. 20

A. 1907

No. 33

STATEMENT showing Subsidies granted for Railways as to which contracts have been entered into and payments made up to June 30 1901

Name of Railway	Miles										Total
	1901-2	1902-3	1903-4	1904-5	1905-6	1906-7	1907-8	1908-9	1909-10	1910-11	
1. Grand Trunk Railway	131.000			5,300.00		5,300.00					10,600.00
2. Canadian Pacific Railway	1,084.000	187.700	107.100	222.100	18,100.00	18,100.00	26,100.00	1,147.00	1,222.00	1,222.00	17,140.00
3. Montreal and Ottawa											
4. Quebec and Montreal											
5. St. Lawrence and Ottawa											
6. Ottawa and St. Lawrence											
7. St. Lawrence and Montreal											
8. Montreal and St. Lawrence											
9. St. Lawrence and Quebec											
10. Quebec and St. Lawrence											
11. St. Lawrence and Montreal											
12. Montreal and St. Lawrence											
13. St. Lawrence and Quebec											
14. Quebec and St. Lawrence											
15. St. Lawrence and Montreal											
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97. St. Lawrence and Quebec											
98. Quebec and St. Lawrence											
99. St. Lawrence and Montreal											
100. Montreal and St. Lawrence											

PART III.

RAILWAY SUBSIDIES



No. 1.

RAILWAY SUBSIDIES.

TABLE of per mile Cash Subsidies paid in aid of Railway Construction, showing amount of Subsidy granted for same Railways.

Number.	Name of Railway.	ON FOLLOWING NAMED RAILWAYS.				
		No. of miles built up to June 30, 1891.	No. of miles paid and provided for.	Subsidy paid and available at June, 30, 1901.	Subsidy paid to June 30, 1901.	Subsidy paid to Oct. 10, 1901.
				\$ 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	350,400 00	350,400 00	350,400 00
11	+Canadian Pacific.....	1,905	1,905	25,000,000 00	25,000,000 00	25,000,000 00
12	" (extension) *.....	476 55	476 55	5,370,000 00	4,994,574 00	4,994,574 00
13	Caraget.....	67	67	224,000 00	224,000 00	224,000 00
14	Central (of New Brunswick).....	45 66	89 50	190,400 00	142,400 00	142,400 00
15	Cornwallis Valley	14	14	44,800 00	44,800 00	44,800 00
16	Columbia and Kootenay	27 75	27 75	88,800 00	88,800 00	88,800 00
17	Cumberland	14	14	39,850 00	39,850 00	39,850 00
18	Dominion Lime Co.....	4 80	4 80	15,360 00	15,360 00	15,360 00
19	Dominion Coal Co.....	27 44	27 44	87,808 00	87,808 00	87,808 00
20	+Drunmond Counties.....	133 03	135 60	423,936 00	423,936 00	423,936 00
21	Elgin, Petitediac 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 09	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.....	140 42	143 59	572,511 11	520,011 11	520,011 11
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
	Carried forward	3,731 64	3,786 22	37,046,993 68	36,554,967 68	36,554,967 68

1-2 EDWARD VII., A. 1902

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c — *Continued.*

Number.	Name of Railway.	ON FOLLOWING NAMED RAILWAYS.				
		No. of miles built up to June 30, 1901.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1901.	Subsidy paid to June 30, 1901.	Subsidy paid to October 10, 1901.
				\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	3,731·64	3,786·22	37,046,993 68	36,554,967 68	36,554,967 68
36	L'Assomption.....	3·50	3·50	11,200 00	11,200 00	11,200 00
37	Lake Erie and Detroit River.....	84·05	84·05	338,731 00	338,731 00	338,731 00
38	Lake Temisamingue Colonization...	45·84	45·84	310,335 95	310,335 95	310,335 95
39	Leamington and Lake St. Clair.....	16	16	51,200 00	51,200 00	51,200 00
40	Lotbinière and Mégantic.....	30	30	96,000 00	96,000 00	96,000 00
41	Montreal and Sorel (now South Shore Ry.).....	61·50	126·67	444,357 57	213,047 76	213,047 76
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 Maskinonge.....	12·90	12·90	41,280 00	41,280 00	41,280 00
45	Montreal and Ottawa.....	60	60	192,000 00	192,000 00	192,000 00
46	Montford Colonization.....	32·20	33·20	167,440 00	167,440 00	167,440 00
47	Nakusp and Slocan.....	36·90	38	117,760 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
49	New Glasgow Iron and Coal Co.....	12·45	12·45	39,840 00	39,840 00	39,840 00
50	Northern Pacific Junction.....	110	110	1,320,000 00	1,320,000 00	1,320,000 00
51	Nova Scotia Central.....	73·50	73·50	235,200 00	235,200 00	235,200 00
52	Ontario, Belmont and Northern.....	9·60	10	30,720 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 Navigation Co.	7	7	22,400 00	22,400 00	22,400 00
56	Ottawa and Gatineau Valley.....	54	86	384,000 00	284,128 00	284,128 00
57	+Ottawa, Arnprior and Parry Sound.	159·58	163	779,712 00	779,712 00	779,712 00
58	Parry Sound Colonization.....	47·75	47·75	152,800 00	152,800 00	152,800 00
59	Pontiac and Pacific Junction.....	70	70	331,850 00	193,578 00	193,578 00
60	+Phillipsburg Junction.....	7·41	7·41	23,712 00	23,712 00	23,712 00
61	Pontiac and Renfrew.....	4·25	4·25	13,600 00	13,600 00	13,600 00
62	Port Arthur, Duluth and Renfrew...	84·75	84·75	271,200 00	271,200 00	271,200 00
63	Quebec Central.....	74·86	74·86	348,342 00	348,342 00	348,342 00
64	Quebec and Lake St. John.....	245·85	245·85	1,006,743 50	1,006,743 50	1,006,743 50
65	Quebec, Montmorency and Charlevoix	30	30	96,000 00	96,000 00	96,000 00
66	Shuswap and Okanagan.....	51	51	163,200 00	163,200 00	163,200 00
67	South Norfolk.....	17	17	54,400 00	54,400 00	54,400 00
68	St. Catharines and Niagara Central..	12	12	38,400 00	38,400 00	38,400 00
69	St. Clair Frontier Tunnel.....	2·23	2·23	375,000 00	375,000 00	375,000 00
70	St. Lawrence and Lower Laurentian.	38·85	38·85	217,600 00	217,600 00	217,600 00
71	St. Louis, Richibucto and Buctouche	7	7	22,400 00	22,400 00	22,400 00
72	+St. Lawrence and Adirondack.....	33·51	33·51	149,481 60	149,481 60	149,481 60
73	Temiscouata.....	112·95	112·95	645,950 00	645,950 00	645,950 00
74	Thousand Island.....	4·33	4·33	24,400 00	24,400 00	24,400 00
75	+Tilsonburg, Lake Erie and Pacific..	19·41	19·41	69,271 48	69,271 48	69,271 48
76	Tobique Valley.....	27·88	27·88	134,016 00	134,016 00	134,016 00
77	Toronto, Grey and Bruce.....	4·58	4·58	14,656 00	14,656 00	14,656 00
78	+United Counties.....	59	65	188,816 00	188,816 00	188,816 00
79	Waterloo Junction.....	10·25	10·25	32,800 00	32,800 00	32,800 00
80	Western Counties.....	20	20	500,000 00	500,000 00	500,000 00
81	West Ontario Pacific.....	18·75	18·75	60,000 00	60,000 00	60,000 00
82	Cap de la Madeleine.....	2·32	2·32	7,424 00	7,424 00	7,424 00
83	+Gulf Shore.....	16·78	16·78	53,699 20	53,699 20	53,699 20
84	+St. Stephen and Milltown.....	4·64	4·64	14,848 00	14,848 00	14,848 00
85	+Coast (of Nova Scotia).....	28·25	61	195,200 00	90,400 00	90,400 00
	Carried forward.....	5,872·46	6,068·88	47,693,989 98	46,627,810 17	46,627,810 17

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TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Concluded*.

Number.	Name of Railway.	ON FOLLOWING NAMED RAILWAYS.				
		No. of miles built up to June 30, 1901.	No. of miles paid and provided for.	Subsidy paid and available at June 30, 1901.	Subsidy paid to June 30, 1901.	Subsidy paid to October 10, 1901.
				\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	5,872·46	6,068·88	47,693,989 98	46,627,810 17	46,627,810 17
86	Grand Trunk	Bridge.	Bridge.	500,000 00	500,000 00	500,000 00
87	+Ottawa and New York	53·87	53·87	262,384 00	262,384 00	262,384 00
88	+Restigouche and Western	10	40	78,930 00	46,930 00	46,930 00
89	+East Richelieu Valley.....	21·86	21·86	69,952 00	69,952 00	69,952 00
90	+Pembroke Southern.....	20	20	64,000 00	64,000 00	64,000 00
91	+Massawippi Valley	1·68	2·50	5,376 00	5,376 00	5,376 00
92	+Inverness and Richmond.....		53	313,600 00	132,800 00	132,800 00
93	+Canadian Northern.....		290	1,632,000 00	537,600 00	1,237,570 00
94	+Central Ontario.....		21	67,200 00	67,200 00	67,200 00
95	+Midland (Nova Scotia).....	40·96	58	219,350 00	170,264 00	170,264 00
96	Quebec Bridge Co	Bridge.	Bridge.	1,000,000 00	74,570 00	121,000 00
97	+St. Mary River	30	30	75,000 00	75,000 00	75,000 00
98	Pontiac and Pacific and Ottawa and Gatineau.....	Bridge.	Bridge.	212,500 00	212,500 00	212,500 00
99	+Atlantic and Lake Superior.....	30	30	96,000 00		14,800 00
100	+Montreal and Province Line.....	19	19	60,800 00		32,000 00
101	+York and Carleton.....		5·73	18,336 00		18,336 00
	Total.....	6,050·83	6,713·84	52,369,417 98	48,846,386 17	49,657,922 17

‡Add subsidy of used rails as per statement, part iii, page 7, \$152,305.20, and Atlantic and North-Western, \$2,239,200, less subsidy Canadian Pacific Railway, main line, \$25,000,000, and Western Counties Railway, \$500,000, which will then agree with statement of subsidies in part ii, page 47, viz., \$25,737,891.37.

*Includes the mileage of the North Shore Railway, 160 miles.

†By 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, and 1 Edward VII cap. 7, a subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of \$3,200 per mile and a further subsidy beyond the sum of \$3,200 per mile, of 50 per cent on so much of the *average cost* of the said specified mileage subsidized as in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile.

The amount of certain of the subsidies authorized by Parliament, given in this statement, includes the determined portion of the subsidies under 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, and 63-64 Vic., cap. 8, 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.

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The following is the mileage of certain of the Railways shown in this statement and subsidized under 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, and 63-64 Vic., cap. 8:—

	MILES.
Ottawa, Arnprior and Parry Sound.....	56
Phillipsburg Junction.....	0 66
St. Lawrence and Adirondack.....	13 50
Tilsonburg, Lake Erie and Pacific.....	3 50
United Counties.....	1
Great Northern.....	44
Gulf Shore.....	5 50
St. Stephen's and Milltown.....	1 14
Drummond County.....	42 50
Coast (of Nova Scotia).....	61
Ottawa and New York.....	53 87
Restigouche and Western.....	40
East Richelieu Valley.....	24
Ottawa and Gatineau.....	86
Pembroke Southern.....	40
Massawippi Valley.....	2 50
Inverness and Richmond.....	93
Canadian Northern.....	490
Central Ontario.....	41
Midland (Nova Scotia).....	58
Pontiac Pacific Junction.....	9
Canada Eastern.....	2 25
Canadian Pacific (Extension).....	70

STATEMENT showing Railways receiving Cash Subsidies of fixed amounts, payable Annually or Semi-annually for fixed period of years.

No.	Name of Railway.	Miles. Subsidized.	Amount of Instalment.	Amount paid up to June 30, 1900.
				\$
1	International (Atlantic and North-west) Railway Co.	252	\$93,300 per $\frac{1}{2}$ year for 20 years	2,239,200
2	Kingston, Smith's Falls and Ottawa Railway Co.	56	\$3,136 " 21 "	Nil.
	Total	308		2,239,200

STATEMENT showing railways aided by the Grant of Loans.

No.	Name of Railway.	Amount of Loans authorized.	Amount loaned.
		\$	\$ c.
1	Albert Railway Co.	15,000	14,725 56
2	Fredericton and St. Mary's Bridge Co.	300,000	300,000 00
3	St. John Bridge and Railway Extension Co	500,000	433,900 00
	Total.. ..	815,000	748,625 56

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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 on used Rails paid.
			\$ c.	\$ c.
1	Central Railway Co. of New Brunswick	4,052	83,612 54	83,612 54
2	Elgin, Petitoctiac 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.
			\$ c.	
1	Kent Northern Railway Co.	2,549	58,334 27	By 51 Victoria, chapter 3, these used rails will be granted as a subsidy (the section of road to be first laid with new steel rails weighing not less than 50 lbs. per lin. yard and after an O. C. had been passed authorizing transfer).
2	Halifax Cotton Co.	233	4,235 00	
3	Steel Company of Canada.	597	11,964 66	
4	Albert Railway Company	726	14,665 45	
	Total.	4,105	89,299 38	

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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. 2 }	Alberta Railway and Coal Co.—Main line, Dunmore to Lethbridge.	109·50	6,400	700,800
2	{ 52 Vic., c. 4 } { 52 Vic., c. 3 }	Alberta Railway and Coal Co.—From Leth- bridge 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.—Kenney and Estevan Branch..	156·86	6,400	1,003,904
8	57-58 Vic., c. 6.	C. P. R.—Pipestone Branch.	31·30	6,400	200,320
9	49 Vic., c. 11.	Great North-west Central Railway.	50·00	6,400	320,000
10	48-49 Vic., c. 60..	Manitoba and North-western Railway— Main line.	430·00	6,400	2,918,400
11	49 Vic., c. 11	Manitoba and North-western Railway— Branch from Biscarth.	26·60	6,000	
12	53 Vic., c. 4	Manitoba and South-eastern Railway Co.	98·00	6,400	627,200
13	{ 54-55 Vic., c. 10 } { 48-49 Vic., c. 10 }	Manitoba South-western Colonization Co.	218·25	6,400	1,396,800
14	{ 48-49 Vic., c. 60 } { 50-51 Vic., c. 23 }	Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Co.	253·96	6,400	1,625,344
15	{ 52 Vic., c. 4 } { 54 Vic., c. 9 }	Red Deer Valley Railway and Coal Co..	55·00	6,400	352,000
16	57-58 Vic., c. 6. . . .	Saskatchewan and Western Railway Co..	15·47	6,400	99,008
17	62-63 Vic., c. 57..	Canadian Northern Railway.	1,025·00	{ Div. A., 6,400 do B., 12,800 do C., 6,400 }	9,280,000
			2,937·21		39,725,130

NOTE.—By 62-63 Victoria (Session of 1899), chapter 57, the Lake Manitoba Railway and Colonization Company and the Winnipeg Great Northern Railway were amalgamated under the title of the Canadian Northern Railway, all the rights of the two companies being vested in the new company.

No. 2

LIST OF RAILWAY SUBSIDY ACTS PASSED IN EACH YEAR.

NOTE.—The marginal number opposite each subsidy has reference to the alphabetical list in the Deputy Minister's report showing the action taken in cases 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 Métapédia, on the Intercolonial Railway, to Paspebiac, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 320,000

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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

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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

28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last session of Parliament, towards Le Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$160,000
29. To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883).....	128,000
30. To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
31. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	262,400
32. To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
33. To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
34. For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole.....	200,000
35. For a line of railway from Richibucto to St. Louis, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
36. For a line of railway from Hopewell to Alma, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200
37. For a line of railway from St. Andrew's to Lachute, in the county of Argenteuil, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
38. For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	217,600
39. For a line of railway from Annapolis to Digby, in the province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
40. For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway between Sussex and St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	128,000
41. To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	76,800
42. For a branch of the Intercolonial Railway, from Metapediac eastward towards Paspebiac, twenty miles, in the province of Quebec, a sum not exceeding in the whole.....	300,000
43. For a branch of the Intercolonial Railway, from Derby Station to 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

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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.

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" Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized, as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, 1885 (*Assented to 20th July, 1885*):—

- 62.** For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, to Edmundston, in the province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.
- 63.** For a line of railway from the south bank of the St. Lawrence river, opposite or near Montreal, to the harbours of St. Andrew's, St. John and Halifax, via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such a line of railway for a period of twenty years, or a guarantee bond of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway.
- 64.** The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act, to aid in procuring the extension of

the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada.

The said Act further provided as follows in relation to this matter:—

“If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligation as the Government shall have assumed in acquiring it.”

By the Act 49 Vic., cap. 10, 1886 (*Assented to 2nd June, 1886*):—

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| 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 |

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76. For a railway from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the province of Nova Scotia, twelve miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 38,400
77. For a railway from L'Assomption to L'Epiphanie, in the province of Quebec, three miles and a half, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	11,200
78. To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly, towards Désert, in the province of Quebec, a subsidy of \$5,161 per mile, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, not exceeding in the whole	361,270
79. For a railway from St. Andrew's to the Canadian Pacific Railway at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
80. To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield, and from Lacolle, in the province of Quebec, to the international boundary, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
81. For a railway from Truro to Newport, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	156,800
82. To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding \$1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of \$3,200 per mile).....	186,295
83. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
84. For the construction of wharfs and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of.....	6,000
85. To the Gananoque, Perth and James Bay Railway Company, seventeen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	54,400
86. For a railway from St. Eustache to St. Placide, county of Two Mountains, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	37,600
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 Douglstown to a point on the River Miramichi, opposite the town of Chatham, in the province of New Brunswick, six miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. \$19,200
- 92.** For a railway from a point on the Canadian Pacific Railway to Eganville, in the province of Ontario, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 70,400
- 93.** To the Belleville and North Hastings Railway Company, for seven miles of their railway, from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, in the province of Ontario, a subsidy (in addition to the subsidy of \$1,500 per mile granted by 48-49 Victoria, chapter 59), not exceeding \$1,700 per mile, nor exceeding in the whole. 11,900
- 94.** To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of. 70,000
- 95.** To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of. 15,000

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose shall be granted to such companies respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies have been granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall be so constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company to the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements, and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By section 2 of this Act authority was given for the grant of a charter by the Governor in Council for the purpose of constructing a railway from Long Sault to the foot of Lake Temiscamingue.

By the Act 50-51 Vic., cap. 24, 1837 (*Assented to 23rd June, 1837*).

- 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

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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 Jogins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act 49 Victoria, chapter 10, to the wharfs, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	4,000
101.	To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act 49 Victoria, chapter 10, to Moncton, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	6,400
102.	To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
103.	To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	9,600
104.	To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
105.	To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	51,200
106.	To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North-western Railway near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
107.	To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to Tweed, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	12,800
108.	To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
109.	To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the town of Simcoe, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	54,400
110.	To the Jacques Cartier Union Railway Company, extending and completing their railway, a subsidy of.....	20,000
111.	For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	76,800
112.	To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	22,400
113.	To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000

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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

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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*):—

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| 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 |

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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

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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

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- 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

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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,	

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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

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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 Sault Ste. Marie Railway Company may be paid by instalments, on the completion of each section of the railway as follows, that is to say:—

Sections.	Length in miles.
From, at or near Newboro' to Westport.....	4
From Westport towards Palmers Rapids.....	16

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also of every such line of railway, shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, the first semi-annual payment upon which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of twenty-eight miles of the railway, and each subsequent payment at the end of each six months thereafter, for the term of twenty years,—except also as to the Quebec and Lake St. John Railway Company, the subsidy to which shall be paid upon the completion of the work,—except also as to the Brockville, Westport and Sault Ste. Marie Railway Company, the subsidy to which shall be paid as follows: on the completion of that portion of the said road from, at or near Newboro' to Westport, a distance of four miles, the sum of twelve thousand eight hundred dollars, and on the completion of the remaining sixteen miles from Westport towards Palmer's Rapids, the sum of fifty-one thousand two hundred dollars.

"Within one month after the commencement of each session of Parliament, whilst any of the said moneys are being paid out, there shall be laid before Parliament a statement showing all payments of such moneys during the then next preceding year, the names of the respective persons to whom such payments have been made, and the amounts paid them respectively, together with the engineer's report upon which pay-

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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 Montfort 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 Montfort 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

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- 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

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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

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Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, and the subsidy granted to the St. Catharines and Niagara Central Railway Company, the first semi-annual payments upon both of which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of their railways respectively, and each subsequent payment at the end of each six months thereafter, for the term of twenty years or less.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines."

294. Notwithstanding the expiration of the time limited by the Act 47 Victoria, chapter 8, and by the contract entered into with the Pontiac Pacific Junction Railway Company, the Governor in council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act.

295. Notwithstanding the expiration of the time limited by the Act 52 Victoria, chapter 3, and by the contract entered into with the Quebec and Lake St. John Railway Company, the Governor in Council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act; and notwithstanding anything contained in the Act 50-51 Victoria, chapter 24, the Governor in Council may also pay to the said company the balance remaining unpaid of the subsidy granted to the company by the said Act, amounting to \$12,800, on the four miles of their road from the north end of the main line subsidized towards Roberval.

By the Act 56 Vic., chap. 2, 1893 (*Assented to 1st April, 1893*):—

- | | |
|---|--------------|
| 296. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | \$ 64,000 00 |
| 297. To the United Counties Railway Company, for thirty-two miles of their railway, from a point at or near the town of Iberville to St. Hyacinthe, and thence towards Sorel, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, for a railway from St. Johns to Ste. Rosalie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | 102,400 00 |
| 298. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway, divided into two sections: first, from the Belmont Iron Mines to Marmora village; second, from Marmora village to the junction with the Ontario Central Railway, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... | 32,000 00 |
| 299. To the Central Ontario Railway Company, for twenty miles of their railway, from Coe Hill or Gilmore, or some point between | |

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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	

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Railway between Joliette and St. Félix de Valois, in lieu of the subsidy granted by the Act 53 Victoria, chap. 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... \$ 48,000 00

310. To the Montfort Colonization Railway Company, for twenty-one miles of their three-feet gauge railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Montfort and westward, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 67,200 00

311. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of St. Michel des Saints, on the river Mattawa, in the province of Quebec, and for fifteen miles of their railway from the north end of the fifteen miles above referred to, towards the parish of St. Michel des Saints on the river Mattawa, in the province of Quebec, in lieu of the subsidies granted by the Acts 52 Victoria, chap. 3, and 53 Victoria, chap. 2, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000 00

312. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the Northern Pacific Junction Railway, in the province of Ontario, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 97,600 00

313. To the Jacques Cartier Union Railway Company, for extending and completing their railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy of..... 20,000 00

314. To the Oshawa Railway Company, for seven miles of their railway and branches as follows: from Port Oshawa to a point at or near Edmondson's Falls mill site, near Mill Street, in the town of Oshawa (this portion being known as the "Lake" section of the said railway); thence to a point at or near the town hall in the town of Oshawa, and thence to the Oshawa station of the Grand Trunk Railway Company of Canada (this portion being known as the "Town" or "Northern" section of the said railway)—in lieu of the subsidy granted by the Act 54-55 Victoria, chapter 8, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400 00

"All the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"All the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed

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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

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322. To the Philipsburg Junction Railway and Quarry Company, for $\frac{87}{100}$ mile of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi and a branch to Missisquoi Bay, the balance remaining unpaid of the subsidy granted by chapter 5 of 1892, not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 2,912
323. To the Joliette and St. Jean de Matha Railway Company, for 8 miles of their railway from St. Félix de Valois to St. Jean de Matha, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	23,600
324. To the Lake Temiscamingue Colonization Railway Company, for their railway from Mattawa to the foot of the Kippewa Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$160,000,—also 15 per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not to exceed \$15,000 in all, in lieu of the subsidies granted by chapter 5 of 1892,—also the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, for their railway from Long Sault to Lake Kippewa, a subsidy not exceeding \$3,200 per mile of railway and 15 per cent on the value of the bridges,—also, a sum of \$1,750 additional per mile on their said railway from Mattawa to the foot of the Kippewa Lake; the whole not exceeding.....	274,940
325. For a railway from St. Placide to St. Andrews, 8 miles, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	25,600
326. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for 18 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	57,600
327. For a railway from a point on the line of the Canadian Pacific Railway on Isle Jésus, in the county of Laval, towards St. Eustache, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, to the Carillon and Grenville Railway Company, for 12 miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
328. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien, in the said county, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	38,400
329. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of \$31,500, to be paid out monthly as the work progresses, upon the certificate of the chief engineer of government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken; and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$9,600, in lieu of the subsidy granted by chapter 3 of 1888; provided that the entire work subsidized upon this railway shall be completed within 4 years from the passing of this Act; the subsidy granted by this Act not to exceed in the whole.....	41,100

330.	To the Pontiac Pacific Junction Railway Company, for the construction or acquisition of $7\frac{1}{2}$ 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

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340. For a railway from Lime Ridge, in the county of Wolfe, in the province of Quebec, northerly through the county of Wolfe and into the county of Megantic, a distance not exceeding 50 miles from Lime Ridge, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 160,000
341. To the Strathroy and Western Counties Railway Company, for 25 miles of their railway from St. Thomas through the counties of Elgin and Middlesex, towards Forest Station or Park Hill, on the Grand Trunk Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
342. To the Parry Sound Colonization Railway Company, for 20 miles of their railway east from Parry Sound, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
343. To the Manitoulin and North Shore Railway Company, for 10 miles of their railway from Little Current to Nelson, on the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	32,000
344. To the United Counties Railway Company for 32 miles of their railway from Iberville to Sorel, in addition to the 32 miles already subsidized, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	102,400
345. To the Joliette and St. Jean de Matha Railway Company, for 12 miles of their railway from St. Jean de Matha to Ste. Emelie de L'Energie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	38,400
346. To the Great Northern Railway Company, for 22 miles of their railway, from the eastern end of the 15 miles subsidized by chapter 2 of 1893 to a point between Joliette and St. Félix de Valois, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
347. To the Quebec and Lake St. John Railway Company, for 2 miles of the Chicoutimi branch of their railway, from the east end of the 50 miles already subsidized and built eastward to deep water at Chicoutimi, a subsidy not exceeding \$3,200 per mile; also for 12 miles from the 52nd mile on the Chicoutimi branch to Ha Ha Bay, a subsidy not exceeding \$3,200 per mile; the whole not exceeding.....	44,800
348. To the Pontiac and Ottawa Railway Company, for 23 miles of their railway from the point of divergence from the Pontiac Railway to Ferguson's Point, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	73,600
349. To the Ottawa and Gatineau Valley Railway Company, for 20 miles of their railway from the eastern end of the 62 miles already subsidized towards Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000
350. To the Canada Eastern Railway Company for 6 miles of their railway from the town of Chatham to Black Brook, a subsidy not exceeding \$3,200 per mile; also for 4 miles of their railway for a branch to the village of Nelson, a subsidy not exceeding \$3,200 per mile; the whole not exceeding.....	32,000
351. For a railway from Cross Creek Station, on the Canada Eastern Railway to Stanley village, in the county of York, in the province of New Brunswick, 6 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	19,200
352. To the Restigouche and Victoria Railway Company, for 20 miles of their railway from the western end of the 15 miles subsidized by chapter 5 of 1892, towards Grand Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000

353.	To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman station to the Newcastle coal fields, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$ 48,000
354.	To the Tobique Valley Railway Company, for 15 miles of their railway from the present terminus at Plaister Rock easterly, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000
355.	Towards the restoration or renewal of the railway bridge on the South-eastern Railway over the Yamaska River at Yamaska, a subsidy equal to one-third of the actual cost of the renewal of the bridge, but the grant not to exceed in the whole.....	50,000
356.	To the Boston and Nova Scotia Coal and Railway Company, for 10½ miles of their railway from the north end of the section already subsidized to Broad Cove, a subsidy not exceeding \$3,200 per mile; also for 25 miles of their railway from a point on the Cape Breton Railway at or near Orangedale towards Broad Cove, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding \$3,200 per mile; the whole not exceeding	113,600
357.	For a railway from Port Hawkesbury towards Cheticamp, 25 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	80,000
358.	To the Manitoba North-western Railway Company, for 100 miles of the extension of their main line from its present western terminus towards Prince Albert,—the company relinquishing 3,200 acres of the land grant per mile, and the whole road to be operated as a continuous line of railway under one management, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	320,000
359.	For a line of railway from the junction of the Elk and Kootenay Rivers to Coal Creek, a distance of 34 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	108,800
360.	For a railway from Abbotsford Station on the Mission Branch of the Canadian Pacific Railway to the town of Chilliwack, 21 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	67,200
361.	To the Nicola Valley Railway Company, for 28 miles of their railway from the western end of the section of their road subsidized by chapter 5, of 1892, towards Nicola Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	89,600
362.	To the Nakusp and Slocan Railway Company, for 38 miles of their railway from the town of Nakusp to a point at or near the Forks of Carpenter Creek, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	121,600
363.	To the Pontiac and Kingston Railway Company, for 22 miles of a railway from Portage du Fort to Upper Thorne Centre, via Shawville, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	70,400
364.	To the New Glasgow Iron, Coal and Railway Company, for 5 miles of their railway, from Sunnybrae to Kerrogare, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole....	16,000 00
365.	To the South Shore Railway Company, for 35 miles of their railway from Yarmouth towards Shelburne and Lockport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.	112,000 00
366.	To the Cape Breton Railway Extension Company, for 30 miles of railway from Port Hawkesbury to St. Peter's, on their line of railway from Port Hawkesbury to Louisbourg, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000 00

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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 53⁸⁷/₁₀₀ 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;

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- 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 $3\frac{1}{10}$ 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 $\frac{6}{100}$ 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 $1\frac{1}{100}$ 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 42½ miles of their railway from Moose Park to Chaudière River, provided that the amount of the said subsidy shall be refunded to the Government of Canada in the event of the company's railway from Ste. Rosalie to Chaudière River being purchased or leased for a term of years by the government.

3. The Governor in Council may grant the subsidies hereinafter mentioned to the railway companies and towards the construction of the railways also hereinafter mentioned, that is to say :—

- 407.** To the Great Northern Railway Company, for 67 miles of their railway between Montcalm and its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the St. Maurice River, the balance remaining unpaid of the subsidies granted by chapter 2 of 1893, and by chapter 4 of 1894, between these points, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....\$ 182,400 00
- 408.** To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, also for bridging the Ottawa River, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, and by chapter 4 of 1894, not exceeding..... 114,272 00
- 409.** To the Ottawa and Gatineau Railway Company, for 62 miles of their railway from Hull towards Désert, in the province of Quebec, the balance remaining unpaid of the subsidy granted by chapter 2 of 1893, not exceeding in the whole..... 35,872 00
- 410.** To the Grand Trunk Railway Company of Canada, for a subsidy towards the rebuilding and enlargement of the Victoria Bridge at Montreal over the St. Lawrence River, 15 per cent upon the amount expended thereon, not exceeding..... 300,000 00
- 411.** To the Montfort Colonization Railway Company, for 33 miles of their railway from Montfort Junction to Arundel, in the province of Quebec, a subsidy not exceeding \$2,000 per mile, nor exceeding in the whole..... 66,000 00
- 412.** To the Irondale, Bancroft and Ottawa Railway Company, the balance remaining unpaid of the subsidy for the last five miles of the company's railway ; the eastern terminus to be either at the village of Bancroft or at some point near the Hastings Road, in the township of Herschell, in lieu of the subsidy granted by chapter 2 of 1893, not exceeding in the whole..... 16,000 00
- 413.** To the Great Northern Railway Company, towards the construction of a railway bridge over the Ottawa River at Hawkesbury, 15 per cent upon the amount expended thereon, not exceeding..... 52,500 00
- 414.** For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa and the city of Hull, 15 per cent upon the amount expended thereon, not exceeding..... 112,500 00

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and

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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 :

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(i.) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it as stipulated for in the said agreement, become entitled to and shall get any lands as a subsidy from the Government of British Columbia which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, then the company will cause to be conveyed to the Crown, in the interest of Canada, a portion thereof to the extent of fifty thousand acres, the same to be of equal value per acre as coal lands with the residue of such lands. The said fifty thousand acres to be selected by the Government in such fair and equitable manner as may be determined by the Governor in Council, and to be thereafter held or disposed of or otherwise dealt with by the Government as it may think fit on such conditions, if any, as may be prescribed by the Governor in Council, for the purpose of securing a sufficient and suitable supply of coal to the public at reasonable prices, not exceeding two dollars per ton of two thousand pounds free on board cars at the mines.

And on the part of the Government, to pay the said subsidy by instalments as aforesaid.

2. The company shall be bound to carry out in all respects the said agreement, and may do whatever is necessary for that purpose.

3. In order to facilitate such financial arrangements as will enable the company to complete the railway as aforesaid without delay and to acquire and consolidate with it the railway from Dunmore to Lethbridge, hereinafter called "the Alberta Branch," which, under the authority of chapter thirty-eight of the statutes of 1893, it now operates as lessee, and is under covenant to purchase, the company may issue bonds which will be a first lien and charge and be secured exclusively upon the said Alberta Branch and Crow's Nest Line together in the same way and with the same effect as if both the said pieces of railway to be so consolidated were being built by the company as one branch of its railway within the meaning of section one of chapter fifty-one of the statutes of 1888, and that section shall apply accordingly, such first lien to be subject to the payment of the purchase money of the Alberta Branch, as provided for in the said covenant to purchase.

By the Act 62-63 Vic., chapter 7 (*Assented to 11th August, 1899*).

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

415. To the Central Ontario Railway Company, for an extension of their railway from, or from near, either Coe Hill or Rathbun Station on the company's railway to, or near to Bancroft, not exceeding 21 miles, in lieu of the subsidy granted by chapter 5 of 1892;

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- 416.** To the Great Northern Railway Company, for a railway between Montcalm and St. Tite Junction, on the Lower Laurentian Railway, Quebec, not exceeding $53\frac{1}{2}$ miles ; and for a branch from their main line to Shawenegan Falls, Quebec, not exceeding $6\frac{1}{2}$ miles.
- 417.** To the Phillipsburg Railway and Quarry Company, shortage in the extension of their railway from a point on the company's line at or near the end of the subsidized section, to the government wharf at Phillipsburg, Quebec, not exceeding $1\frac{6}{10}$ of a mile ;
- 418.** To the Strathroy and Western Counties Railway Company, for a line from Strathroy, Ontario, via Adelaide and Arkona, to either Forest, Tedford, or Park Hill, not exceeding 24 miles, in lieu of the subsidy granted by chapter 4 of 1894 ;
- 419.** To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton, in the county of York, New Brunswick, to Woodstock, in the county of Carleton, not exceeding 59 miles ;
- 420.** For a railway from Port Hawkesbury, on the Strait of Canso, Nova Scotia, to St. Peter's, not exceeding thirty miles ;
- 421.** For a railway from Windsor, Nova Scotia, to Truro, via the township of Clifton, not exceeding 58 miles, in lieu of the subsidy granted by chapter 4 of 1894 ;
- 422.** For a railway from a point at or near Brookfield Station, Nova Scotia, on the Intercolonial Railway, to Eastville, not exceeding 25 miles, in lieu of the subsidy granted by chapter 4 of 1897 ;
- 423.** For a railway from Cross Creek Station, on the Canada Eastern Railway, to Stanley Village, New Brunswick, not exceeding 6 miles ;
- 424.** For a railway from the village of St. Rémi to Stottville or some point on the Delaware and Hudson Railway (Grand Trunk) in the parish of St. Paul de l'Île aux Noix, not exceeding 19 miles ;
- 425.** For a railway between Pontypool and Bobcaygeon, via Lindsay, Ontario, not exceeding 40 miles.
- 426.** To the Pontiac Pacific Junction Railway Company, for a railway from Aylmer to Hull, Quebec, not exceeding 9 miles, in lieu of the subsidy granted by chapter 4 of 1897 ;
- 427.** To the Portage du Fort and Bristol Branch Railway Company, for a branch line from a point on the Pontiac Pacific Junction Railway at or near the village of Quyon, towards the village of Portage du Fort, Quebec, not exceeding 15 miles, in lieu of the subsidy granted by chapter 4 of 1897 ;
- 428.** To the Orford Mountain Railway Company, for a branch from their railway from a point between Lawrenceville and Eastman to Waterloo, not exceeding 13 miles ;
- 429.** To the Atlantic and Lake Superior Railway Company, for an extension of their railway from Caplin to Paspebiac, Quebec, not exceeding 30 miles ;
- 430.** To the United Counties Railway Company, for a railway from St. Robert Junction to Sorel, $6\frac{1}{2}$ miles, (this subsidy to be payable only in the event of adequate running rights over the South-eastern Railway between the two points above mentioned not being granted to the first mentioned Company on terms to be approved by the Railway Committee of the Privy Council,) and from Mount Johnson to St. Grégoire Station, 1 mile, not exceeding $7\frac{1}{2}$ miles.
- 431.** For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia, via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles ;
- 432.** For a railway from Indian Gardens, Queen's County, Nova Scotia, to Shelburne, in the said province, a distance of 35 miles ;
- 433.** The subsidy which the Ontario and Rainy River Railway Company is entitled to receive under chapter 4 of 1897, shall be \$6,400 per mile for the 80 miles mentioned in the said Act ; not exceeding in all \$512,000.

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- 434.** To the Bay of Quinté Railway Company, for such extensions, branches or additions to their system as will enable the said Company to connect their lines of railway or connecting lines with iron or other mines or mineral or wood lands in the counties of Peterborough, Northumberland, Hastings, Lennox and Addington, Frontenac or Leeds, payable in instalments regulated by the length of each of the said extensions or branches or additions, as the case may be, in lieu of part of the balance remaining unpaid of the subsidy granted to the Kingston, Napanee and Western Railway Company, by chapter 5 of 1892, but not exceeding \$3,200 per mile for 10 miles, nor exceeding in the whole \$32,000 ;
- 435.** To the Quebec and Lake St. John Railway Company, for 12 miles of their railway from the end of their line at deep water on the Chicoutimi branch of their railway, to Ha Ha Bay, in the lieu of the subsidy for the 12 miles granted by chapter 4 of 1894 ;
- 436.** For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles ;
- 437.** For a railway from Sault Ste. Marie, Ontario, towards Michipicoten River and harbour and towards the main line of the Canadian Pacific Railway, not exceeding 40 miles ;
- 438.** For a branch line of railway from the main line of the Ottawa, Arnprior and Parry Sound Railway to the town of Parry Sound, Ontario, not exceeding 5 miles ;
- 439.** For a railway from the village of Haliburton, via the village of Whitney, towards the town of Mattawa, Ontario, not exceeding 20 miles ;
- 440.** For an extension of the Tilsonburg, Lake Erie and Pacific Railway, from Tilsonburg to Ingersoll or Woodstock, Ontario, not exceeding 28 miles ;
- 441.** To the South Shore Railway Company, from Sorel Junction along the South Shore to Lotbinière, Quebec, a distance not exceeding 82 miles ;
- 442.** To the Massawippi Valley Railway Company for an extension of their railway to the village of Stanstead Plain, Quebec, not exceeding $2\frac{1}{2}$ miles ;
- 443.** For a railway from Port Hawkesbury on the Strait of Canso, to Caribou Cove, Nova Scotia, a distance of 10 miles ;
- 444.** For a railway from Fort Frances, Ontario, westerly to a point at or near the mouth of Rainy River, a distance not exceeding 70 miles ;
- 445.** To the Central Railway Company of New Brunswick, for an extension of their line of railway from Newcastle Coal Fields to Gibson, New Brunswick, not exceeding 30 miles ;
- 446.** To the Canadian Northern Railway Company, for a railway from a point on the present line of the Winnipeg Great Northern Railway north of Swan River to Prince Albert, North-west Territories, not exceeding 100 miles ;
- 447.** For a railway from some point near Antler Station to a point near Moose Mountain, Manitoba, not exceeding 50 miles ;
- 448.** For a railway from Sunnybrae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, Nova Scotia, to make up the deficiency in mileage between points mentioned and subsidized by chapter 4 of 1897, additional mileage not exceeding 15 miles ;
- 449.** For a railway from Port Clyde towards Lockeport, in the province of Nova Scotia, not exceeding 20 miles ;
- 450.** For a railway from a point on the Intercolonial Railway at or near Halifax towards the Central Railway in the county of Lunenburg, not exceeding 20 miles ;
- 451.** For a railway from Labelle, in the province of Quebec, in a north-westerly direction, to Nomingue, via Notre Dame de l'Annonciation, a distance not exceeding 22 miles ;
- 452.** For a railway from Owen Sound, in the province of Ontario, to Meaford, not exceeding 21 miles ;
- 453.** To the Ottawa and Gatineau Railway Company, for their line of railway in and through the city of Hull, Quebec, not exceeding 4 miles ;

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- 454.** To the Western Alberta Railway Company, from a point on the United States boundary, west of Range 27, north-westerly towards Anthracite, in the district of Alberta, not exceeding 50 miles ;
- 455.** To the Edmonton, Yukon and Pacific Railway Company, for a railway from the town of South Edmonton, North-west Territories, to North Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles ;
- 456.** To the Restigouche and Western Railway Company, in addition to the 20 miles subsidized by chapter 4 of 1897, and in continuation from the westerly end of the said 20 miles towards the St. John River, a further distance not exceeding 15 miles, and for the company's railway from a point on the St. John River, New Brunswick, at or near Grand Falls, or St. Leonard, or between Grand Falls and St. Leonard, and extending easterly towards Campbellton, such point to be approved by the Governor in Council, a distance of 12 miles ; in all not exceeding 27 miles ;
- 457.** For a railway in extension of the St. Francis branch of the Temiscouata Railway to the mouth of the St. Francis River, a distance not exceeding 3 miles ;
- 458.** To the Canada Eastern Railway Company, for a line of railway from Nelson, New Brunswick, to connect with the company's main line running into Chatham, to complete the connection from Nelson to such main line, not exceeding in the whole $2\frac{1}{2}$ miles ;
- 459.** To the Bay of Quinté Railway Company, for an extension of their line in a westerly direction from a point at or near Richmond boundary road near Deseronto for a distance not exceeding 2 miles ; also for an extension of their line from its present terminus at Tweed in a northerly direction for a distance of 2 miles, and for an extension of their line from the end of the last 2 miles mentioned in a northerly direction for a distance not exceeding 3 miles—in all 7 miles ; subsidies payable on each of the sections mentioned as each of such sections is completed ;
- 460.** To the Ontario, Belmont and Northern Railway Company, for an extension of their railway from its present terminus at Iron Mines in a north-westerly direction, a distance not exceeding 5 miles ; and also for an extension of the company's railway southerly, from the present southern terminus thereof to the Central Ontario Junction of the Canadian Pacific Railway, a distance not exceeding 2 miles ; but the last mentioned aid for the said 2 miles of railway shall not be granted in case the Railway Committee of the Privy Council finds that adequate running powers on fair terms can be secured to the company over that portion of the line of the Central Ontario Railway between the present southerly end of the Ontario, Belmont and Northern Railway and the Canadian Pacific Railway Company's line at Central Ontario Junction ; subsidies payable on each of the sections mentioned as each of such sections is completed ;
- 461.** For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, Ontario, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, not exceeding 20 miles ;
- 462.** For a line of railway from Paspébiac, Quebec, to Gaspé in the said province, a distance not exceeding 82 miles ;
- 463.** To the Lake Erie and Detroit River Railway Company, for a line of railway from Ridgetown, Ontario, to St. Thomas, in the said province, a distance not exceeding 44 miles ; this subsidy to be payable only in the event of adequate running rights over the Canada Southern Railway between the two points above mentioned not being granted to the first mentioned company on terms to be approved by the Railway Committee of the Privy Council ;
- 464.** To the Kingston and Pembroke Railway Company, for the construction of branches from the Company's main line to the iron mine at Bluff Point and to the Martele mine in the county of Renfrew, not exceeding 5 miles ;

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465. For a railway from the town of Parry Sound extending northerly towards Sudbury, a distance not exceeding 20 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the railways also hereinafter mentioned, that is to say :—

466. The Ontario and Rainy River Railway Company, for a railway from a point 80 miles west of Stanley Station, on the Port Arthur, Duluth and Western Railway, to Fort Frances, for a distance of 140 miles, at \$6,400 per mile, not exceeding in the whole	\$ 896,000 00
467. To the Quebec Bridge Company, towards the construction of a railway bridge over the St. Lawrence River, at Chaudière Basin, near Quebec, one million dollars, 40 per cent of which amount may be paid on monthly progress estimates, approved by the Government engineers, of materials delivered and work done...	1,000,000 00
468. To the South Shore Railway Company, towards the restoration and renewal of the railway bridge over the Yamaska River at Yamaska, Quebec.....	50,000 00
469. Towards the construction of a bridge over the Richelieu River at Sorel, 15 per cent upon the amount expended thereon, not exceeding.....	35,000 00
470. Towards the construction of a bridge across the St. Francis River, 15 per cent of the amount expended thereon, not exceeding....	50,000 00
471. Towards the construction of a bridge across the Nicolet River, 15 per cent upon the amount expended thereon, not exceeding....	15,000 00
472. To the Midland Railway Company, Limited, towards the construction of a bridge across the Shubenacadie River, 15 per cent upon the amount expended thereon, not exceeding.....	33,750 00
473. To the Great Northern Railway Company, towards the construction of a bridge across the St. Maurice River, 15 per cent upon the amount expended thereon, not exceeding.....	16,425 00
474. Also towards the construction of a bridge across the Rivière du Loup, 15 per cent upon the amount expended thereon, not exceeding	15,000 00
475. Also towards the construction of a steel bridge and viaduct at the Maskinongé River, 15 per cent upon the amount expended thereon, not exceeding.....	15,000 00

4. The subsidies granted to the Ontario and Rainy River Railway Company, the Canadian Northern Railway Company and the Edmonton, Yukon and Pacific Railway Company are granted upon the condition, and, if received and paid under the authority of this Act to the above mentioned companies respectively, shall be received upon the condition, that the said companies shall not, nor shall any of them, at any time amalgamate with, or lease its line or lines to, any railway company other than those mentioned in this section, except as may be authorized by Parliament; nor shall any of the said railways be leased to or operated by any other company; nor shall any of the said companies make an agreement for a common fund or for pooling its receipts with any other railway company; and any such lease, amalgamation or agreement shall be absolutely void, excepting in so far as such agreement may extend to traffic or running arrangements which have been approved by the Governor in Council.

5. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of

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which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

7. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect to which it is hereinbefore otherwise provided.

8. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and in case of disagreement, then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

By the Act 63-64 Vic., chapter 8 (*Assented to July 18, 1900*).

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his

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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 :—

- 476. For a railway from a point at or near the junction of the Irondale, Bancroft and Ottawa Railway and the Grand Trunk Railway to the village of Minden, in the county of Haliburton, Ontario, not exceeding 12 miles.
- 477. To the Strathroy and Western Counties Railway Company, for a railway commencing at a point at or near Caradoc station, on the Canadian Pacific Railway, and extending to the town of Strathroy, Ontario, not exceeding 7 miles.
- 478. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, Ontario, for the further extension of such railway westerly from the western terminus of the 20 miles subsidized by chapter 4 of 1897, for a distance not exceeding 20 miles.
- 479. To the Algoma Central Railway Company for 25 miles of its line of railway from its terminus at Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, and for a further extension of this company's line of railway from Sault Ste. Marie towards Michipicoten River and Harbour, Ontario, towards the main line of the Canadian Pacific Railway, 25 miles in all, not exceeding 50 miles.
- 480. To the Central Ontario Railway Company, for a further extension of their railway from, at or near Bancroft to a point on the Canada Atlantic Railway between Whitney and Barry's Bay, Ontario, not exceeding 20 miles.
- 481. To the Manitoulin and North Shore Railway Company, for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, on the Canadian Pacific Railway, the company undertaking to bridge between Little Current and the main land, the bridge to be so constructed and maintained as to afford suitable facilities, in the opinion of the Minister of Railways and Canals, for free vehicular and passenger traffic, the same as upon a public highway, the work to be begun and prosecuted from Little Current and Sudbury, one-half of the subsidy to be applicable, as earned, in respect of the work beginning at Little Current and carried on towards Sudbury, and one-half thereof to be applicable, as earned, in respect of the work beginning at Sudbury and carried on towards Little Current, the course of the line of railway to cross the Sault Ste. Marie branch of the Canadian Pacific Railway, not exceeding 66 miles.
- 482. For a railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, not exceeding 15 miles.
- 483. For a railway beginning at a point northerly 20 miles from Parry Sound, and extending from that point to the French River, Ontario, not exceeding 35 miles.
- 484. For a railway from a point 20 miles north-easterly from the village of Haliburton, via the village of Whitney, towards the village of Mattawa, Ontario, not exceeding 40 miles.
- 485. To the Kingston and Pembroke Railway Company, for a branch line of railway to iron mines in Bedford township, Ontario, not exceeding 12 miles.
- 486. To the Thousand Islands Railway Company for an extension of their railway from the present northerly terminus to a point easterly thereof, not exceeding 2 miles;

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And also for an extension from a point on the railway to connect their railway with the Brockville, Westport and Sault Ste. Marie Railway, the Bay of Quinté Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, the balance remaining of the subsidy granted by chapter 5 of 1892, not exceeding $9\frac{1}{2}$ miles.

- 487.** For a railway from Dymont, on the Canadian Pacific Railway, to the New Klondike mining district, Ontario, not exceeding 7 miles.
- 488.** To the Schomberg and Aurora Railway Company, for an extension of their line from its easterly terminus to a point at or near Bond's Lake, Ontario, not exceeding 4 miles.
- 489.** To the Nipissing and James Bay Railway Company, for a railway from, at or near North Bay station, on the Canadian Pacific Railway, towards James Bay, or Lake Tamagaming, Ontario, not exceeding 20 miles.
- 490.** In aid of the Ottawa and New York Railway Company's bridge over the St. Lawrence River, and for the Canadian portion of such bridge, a sum not exceeding \$90,000.
- 491.** To the Grand Trunk Railway Company of Canada, towards the cost of the rebuilding and enlargement of the Victoria Bridge over the St. Lawrence River, Quebec, in addition to the amount received by the company on account of the subsidy granted by chapter 4 of 1897, viz: \$270,000, to make up the grant in aid of the undertaking to \$500,000, upon condition that the tolls upon the bridge for passenger and vehicular traffic shall be subject to the approval of the Governor in Council, a sum not exceeding \$230,000.
- 492.** For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa, Ontario, and the city of Hull, Quebec, upon condition that the bridge be so constructed as to provide suitable facilities, to the satisfaction of the Minister of Railways and Canals, for free vehicular and foot passenger traffic, the same as upon a public highway, in addition to the \$112,500 already granted,—and, notwithstanding anything in the said Act, the subsidy hereby granted, together with the grant of \$112,500 under chapter 4 of 1897, shall be paid upon the completion of the bridge and its approaches, upon the Chief Engineer's report of such completion, and the recommendation of the Minister,—a sum not exceeding \$100,000.
- 493.** To the Canadian Northern Railway Company, in further extension of their railway north of Swan River towards Prince Albert, North-west Territories, in addition to the grant by chapter 7 of 1899, a further mileage not exceeding 100 miles.
- 494.** For a railway from the westerly end of the Waskada branch of the Canadian Pacific Railway, Manitoba, further westward, not exceeding 20 miles.
- 495.** For a railway from a point on the Alberta Railway and Coal Company's Railway towards Cardston, Alberta, N.W.T., for 30 miles of railway at \$2,500 per mile.
- 496.** To the Kaslo and Lardo-Duncan Railway Company, for a railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, not exceeding 30 miles.
- 497.** To the Restigouche and Western Railway Company, for the company's railway, in addition to the 15 miles subsidized by chapter 7 of 1899, on the easterly section of the line, and in continuation from the westerly end of the said 15 miles, a further distance of 15 miles towards the St. John River; and for the said railway, in addition to the 12 miles subsidized by the said chapter on the westerly section of the said line, a further distance from the easterly end thereof of 15 miles, towards Campbellton, N.B., not exceeding 30 miles.
- 498.** For a line of railway from St. Charles Junction on the Intercolonial Railway towards the St. Francis branch of the Temiscouata Railway, Quebec, not exceeding 45 miles, and from the mouth of the St. Francis River, N.B., westerly towards St. Charles Junction, 15 miles, in all not exceeding 60 miles.
- 499.** For a line of railway from Bristol, in the county of Carleton, New Brunswick, on the Canadian Pacific Railway, easterly, a distance not exceeding 17 miles.

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- 500.** For a line of railway from Shediac, county of Westmorland, New Brunswick, to Shemogue, and towards Cape Tormentine, in the said county, a distance not exceeding 38 miles.
- 501.** For a railway from Lockeport, Nova Scotia, to Sable River, or other convenient point of railway connection, not exceeding 20 miles.
- 502.** To the Inverness and Richmond Railway Company, for a railway in extension of the company's line northward from Broad Cove to Cheticamp, C.B., Nova Scotia, not exceeding 40 miles.
- 503.** For a railway from Bridgetown to Victoria Beach, Nova Scotia, not exceeding 30 miles.
- 504.** For a railway from a point on the Intercolonial Railway, Pictou branch, to Kempt Town, county of Colchester, Nova Scotia, not exceeding $4\frac{1}{2}$ miles.
- 505.** For a railway from Brazil Lake, on the Dominion Atlantic Railway, to Kemptville, Nova Scotia, not exceeding 11 miles.
- 506.** To the Montfort and Gatineau Colonization Railway Company, to enable it to extend its railway from Arundel to a point in the municipality of the united townships of Preston and Hartwell, province of Quebec, not exceeding 30 miles.
- 507.** To the Chateauguay and Northern Railway Company, for a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway, in or near the town of Joliette, passing near the town of L'Assomption, Quebec, together with a spur into the said town, not exceeding 42 miles.
- 508.** To the Chateauguay and Northern Railway Company, for a single-track standard railway bridge, with two roadways 10 feet wide, for free vehicular and foot passenger traffic, the same as upon a public highway, from Bout L'Isle to Charlemagne, at the junction of the Ottawa and St. Lawrence rivers, \$150,000.
- 509.** To the Chateauguay and Northern Railway Company, towards the construction of a bridge across the Lac Ouareau River, \$15,000.
- 510.** To the Arthabaska Railway Company, for a railway from Victoriaville to West Chester, province of Quebec, a distance not exceeding 12 miles.
- 511.** To the Great Northern Railway Company, for a branch line from the town or from near the town of Joliette towards Ste. Emélie, touching the parishes of Ste. Beatrix and Ste. Jean de Matha, not exceeding 20 miles.
- 512.** For a railway from Farnham, province of Quebec, to Frelighsburg and the International Boundary Line, not exceeding 21 miles.
- 513.** Towards the construction of a railway bridge over the St. Francis River, in lieu of the grant under chapter 7 of 1899, at St. François du Lac, on the condition that the bridge, with approaches, be built so as to allow the municipalities to make use thereof, to establish and maintain a suitable roadway for the free passage of foot passengers, vehicles and animals, to be approved by the Minister of Railways and Canals, \$50,000.
- 514.** Towards the construction of a railway bridge over the Nicolet River at Nicolet, in lieu of the grant under chapter 7 of 1899, \$15,000.
- 515.** For a line of railway from Halifax towards a point on the Central Railway of Nova Scotia, in the county of Lunenburg, in addition to and in extension of the 20 miles subsidized by chapter 7 of 1899, not exceeding 20 miles.

3. The subsidies hereby granted and any subsidies heretofore granted under any Act of the Parliament of Canada, still in force, but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless in this Act otherwise expressly provided, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :

- (a) upon the completion of the work subsidized ; or
- (b.) by instalments on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

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(c.) upon progress estimates on the certificate of the Chief Engineer of Railways and Canals, that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars; or

(d.) with respect to (b) and (c), part one way, part the other.

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, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

6. The Governor in Council may make it a condition of the subsidies hereby granted, or of any heretofore granted by any Act of Parliament as to which a contract has not yet been entered into between Her Majesty and the company for the construction of the railway, that the company shall lay its road with new steel rails made in Canada, if such rails are procurable in Canada of suitable quality upon terms as favourable as other rails can be obtained upon, of which the Minister of Railways and Canals shall be the judge.

7. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the minister of the department of the government for which such service is being performed and the company performing it, and in case of disagreement then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

8. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

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9. Paragraph 20 of section 2 of chapter 7 of the statutes of 1899 is amended by inserting after the word 'railway,' in the third line, the words 'or to connect the said lines.'

10. The subsidy provided for by chapter 7 of the statutes of 1899 towards the construction of a railway bridge over the St. Lawrence River at Chaudière Basin, near Quebec, shall be deemed to be applicable, as to one-third thereof, to the substructure and approaches, and as to two-thirds thereof to the superstructure, and the said subsidy may be paid upon that basis by authority of the Governor in Council, upon progress estimates to be furnished from time to time by the Chief Engineer of Government Railways and Canals, so that one-third of such subsidy, and no more, may be paid in respect of and upon completion of the masonry of the substructure and approaches of the said bridge, one-third, and no more, upon the work and material of one-half of the superstructure being done and supplied, in respect of such work and material, and the remaining one-third upon the completion of the whole work.

By the Act 1st Edward VII., chapter 7 (*Assented to May 23, 1901.*)

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of 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;—

516. For a line of railway from a point on the Intercolonial Railway at or near New Glasgow to Country Harbour, Nova Scotia, and from a point at or near Country Harbour Cross Roads to Guysborough, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 34, not exceeding 80 miles.

517. To the Quebec and New Brunswick Railway Company, for a line of railway from a point at or near St. Charles or at or near Chaudière Junction or a point on the Quebec Central Railway, near St. Anselme, Quebec, towards the present terminus of the St. Francis Branch of the Témiscouata Railway, New Brunswick, not exceeding 45 miles, and for a line of railway from the mouth of the St. Francis River, New Brunswick, westerly towards Chaudière Junction, not exceeding 15 miles, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 23; also for a line of railway in extension of the St. Francis Branch of the Témiscouata Railway to the mouth of the St. Francis River, New Brunswick, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 43, not exceeding 3 miles; in all not exceeding 63 miles.

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- 518.** To the Montreal and Province Line Railway Company, for a line of railway from Farnham, Quebec, to Frelighsburg, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 37, not exceeding 19 miles.
- 519.** For a line of railway from a point on the Intercolonial Railway at or near Windsor Junction to Upper Musquodoboit, in lieu of 1897, cap. 4, sec. 2, paragraph 23, not exceeding 40 miles.
- 520.** For a line of railway from Pubnico, Nova Scotia, to Port Clyde or Clyde River, in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 2, paragraph 29, not exceeding 31 miles.
- 521.** To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from the western terminus of the 20 miles subsidized by 1899, cap. 7, sec. 2, paragraph 47, westerly towards Bancroft, not exceeding 20 miles, in lieu of the subsidy granted by 1900, cap. 8, sec. 2 paragraph 3; also from the terminus of previously subsidized lines at a point about 40 miles west of Golden Lake, westerly to Bancroft, not exceeding 11 miles; in all not exceeding 31 miles.
- 522.** For a line of railway from Chipman Station, New Brunswick, to Gibson, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 31, not exceeding 45 miles.
- 523.** To the Inverness and Richmond Railway Company, for a line of railway from a point at or near Point Tupper on the Intercolonial Railway, to Broad Cove and Cheticamp, Nova Scotia, in lieu of the subsidies granted by 1897, cap. 4, 1899, cap. 7, sec. 2, paragraph 29, and 1900, cap. 8, sec. 2, paragraph 27, not exceeding 98 miles.
- 524.** For a line of railway from Caplin to Paspébiac, Quebec, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 15, the subsidy contract to be entered into with the trustees or receivers under mortgage from the Atlantic and Lake Superior Railway Company, and to contain the conditions that the subsidy when earned shall be paid in the following manner :—
- 1st. To the Hamilton Bridge Works Company in payment for bridge superstructures on the said section of railway, when furnished and erected by that company, not to exceed \$35,000;
 - 2nd. For the completion of the road-bed and works incidental thereto;
 - 3rd. Towards payment of overdue balances, pro rata, in settlement of claims for labour, boarding-house claims, and material and supplies furnished in connection with the construction of the said section of railway; in all not exceeding 30 miles.
- 525.** To the Schomberg and Aurora Railway Company, for a line of railway from a point on the Grand Trunk Railway between King and Newmarket, Ontario, to Schomberg, in lieu of the subsidy granted by 1897, cap. 4, not exceeding 15 miles.
- 526.** To the Ottawa and Gatineau Railway Company, for a line of railway from the end of the 62nd mile subsidized, towards Désert, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 5, not exceeding 20 miles.
- 527.** To the Restigouche and Western Railway Company, for its line of railway from Campbellton on the Intercolonial Railway, New Brunswick, towards Grand Falls, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 10, not exceeding 20 miles.
- 528.** To the Pontiac Pacific Junction Railway Company, for 36 miles of its railway from a point at or near Shawville, crossing the Ottawa River via Calumet Island to Pembroke, including the bridging of both channels of the Ottawa River at Calumet Island, 14 miles of which shall be in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 3, paragraph 2, not exceeding \$115,200.
- 529.** To the Manitouslin and North Shore Railway Company, for its line of railway, from a point on its line of railway between Sudbury and Little Current to its junction with the line of the Algoma Central and Hudson Bay Railway, at or

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near Goulais River, in addition to and in further extension of its railway subsidized by 1900, cap. 8, sec. 2, paragraph 6, an additional mileage not exceeding 130 miles.

- 530.** For a line of railway from Grandique Ferry, Nova Scotia, to Arichat, not exceeding 8 miles.
- 531.** To the Central Ontario Railway Company, for a further extension of its line of railway, subsidized by 1900, cap. 8, sec. 2, paragraph 5, northward, to a junction with the Canada Atlantic Railway, at or near Whitney, Ontario, not exceeding 20 miles.
- 532.** To the Kingston and Pembroke Railway Company, for a line of railway from a point at or near Sharbot Lake, Ontario, via Lanark, to Carleton Place, not exceeding 41 miles.
- 533.** To the Norwood and Apsley Railway Company, for a line of railway from Norwood, Ontario, to the village of Apsley, not exceeding 30 miles.
- 534.** For a line of railway from a point on the Dominion Atlantic Railway at or near Wolfville, Nova Scotia, to the Government pier on the Basin of Minas, not exceeding one mile.
- 535.** To the Algoma Central and Hudson Bay Railway Company, for a line of railway from Sault Ste. Marie to a point on the Canadian Pacific Railway at or near White River, in the district of Algoma, in extension of the subsidy granted to the Algoma Central Railway by 1899, cap. 8, sec. 2, paragraph 23, and by 1900, cap. 8, sec. 2, paragraph 4, a further and additional mileage not exceeding 135 miles.
- 536.** For a line of railway from Bridgetown, Nova Scotia, to Middleton, in extension of the line subsidized by 1900, cap. 8, sec. 2, paragraph 28, not exceeding 11 miles.
- 537.** For a line of railway from a point on the Grand Trunk Railway at or near Burk's Falls, Ontario, to the Maganetawan River, not exceeding two miles.
- 538.** For a line of railway between Halifax and the Central Railway, Nova Scotia, from the end of the 40th mile from Halifax, subsidized by 1900, cap. 8, sec. 2, paragraph 40, to a junction with the Central Railway, Nova Scotia, not exceeding 30 miles.
- 539.** For a line of railway from a point on the Algoma branch of the Canadian Pacific Railway at or near Bruce Lake Station, northerly to a point at or near Rock Lake, in the district of Algoma, not exceeding 9 miles.
- 540.** For a line of railway from Roberval, Quebec, westward towards James Bay, not exceeding 60 miles.
- 541.** For a line of railway from a point upon the Stonewall branch or the Selkirk branch of the Canadian Pacific Railway to Icelandic River by way of Gimli, not exceeding 35 miles.
- 542.** To the Restigouche and Western Railway Company, for an extension of its line of railway from the 50th mile from Campbellton already subsidized, westward, to effect a junction with its line of railway subsidized 27 miles east from the St. John River, not exceeding 33 miles.
- 543.** For a line of railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 21, not exceeding 30 miles.

3. The Governor in Council may grant to the Ottawa and Gatineau Railway, for its unearned balance of subsidy upon the 62 miles of its line of railway from Hull towards Désert, granted by 1897, chap. 4, sec. 3, paragraph 3, a sum not exceeding \$35,872.

4. The subsidies hereby authorized, and any subsidies heretofore authorized under any Act of Parliament of Canada still in force but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the

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Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

- (a.) upon the completion of the work subsidized ; or
- (b.) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or
- (c.) upon progress estimates on the certificate of the Chief Engineer of Government Railways, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars ; or
- (d.) with respect to (b.) and (c.), part one way, part the other.

5. The subsidy of 66 miles granted to the Manitoulin and North Shore Railway Company for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, by paragraph 6 of section 2 of chapter 8 of the statutes of 1900, may be contracted for with the company and paid, and the work may be begun and prosecuted in two sections, the first beginning at or near Victoria Mines, in the township of Denison, and extending to Sudbury, and thence north-easterly towards Lake Wahnapiatae, not exceeding 33 miles ; the second section beginning at Little Current and extending to and connecting with the Canadian Pacific Railway at or near Stanley, in the township of Baldwin, on the Canadian Pacific Railway, not exceeding 31 miles ; subject, however, to the company carrying out the undertakings contained in paragraph 6 of section 2 of chapter 8 of the statutes of 1900.

6. The subsidies hereinbefore authorized to be granted to companies named, shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways 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, 1901, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed upon a location, and according to descriptions, conditions, and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make.

7. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements, and other rights, as will afford to all railways connecting with those so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the Governor in Council shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service ; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Governor in Council ; and in or towards payment for such charges the Government of Canada shall

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be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

LAND SUBSIDIES.

By 47 Vic., chap. 25, clause 7, 1884 (*Assented to April 19, 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 July 20, 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 June 2, 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 com-

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pany'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 June 23, 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 June 23, 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,

*Lapsed except for the subsidy earned for the 50 miles constructed.

†The subsidies in land grants for the Wood Mountain and Qu'Appelle, the Alberta and Athabasca and the Medicine Hat railways have lapsed.

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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 May 2, 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 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.'

*The North-western Railway of Canada land grant subsidy has lapsed.

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By the Act 53 Vic., cap. 4, 1890 (*Assented to May 16, 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 land grant subsidy to the Brandon and South-western, the Lac Seul and North-western Coal and Navigation railways has lapsed.

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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 March 26, 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 September 30, 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.

By 54-55 Vic., cap. 10, 1891 (*Assented to September 30, 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 July 23, 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.

*The land grant subsidy to the Rocky Mountain Railway and Coal Company has lapsed.

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- 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 and property of the said company created before the passing of this Act.

*The land grant subsidy to the Brandon and South-western Railway Company has lapsed.

PART IV

MISCELLANEOUS STATEMENTS

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No.

SUBSIDY Agreements for the Construction of Railways

Number of Contract.	Date of Signature.	Name of Railway.	Line of Railway to be Constructed.	Acts of Canada granting Subsidies.
13947	Aug. 29, 1900.	Central Ontario Ry. Co..	From Coe Hill or Rathbun Station to Bancroft.	62-63 V., c. 7
13948	Sept. 15, 1900.	Cape Breton Ry. and Extension Co.	From Port Hawkesbury to St. Peter's, N.S.	62-63 V., c. 7
14115	Jan. 19, 1901.	Chateauguay and Northern Ry. Co.	Bridge over E. and W. Channels of Riviere des Prairies.	63-64 V., c. 8
14116	" 19, 1901.	" "	From Hochelaga Ward, Montreal, to point on Great Northern Ry., near Joliette.	63-64 V., c. 8
14117	" 19, 1901.	" "	Bridge over Lac Ouareau	63-64 V., c. 8
13874	July 4, 1900.	Great Northern Ry. Co..	Branch from main line to Shawinigan Falls.	62-63 V., c. 7
13910	" 26, 1900.	" "	Between Montcalm and St. Tite Junction on Lower Laurentian Ry.	62-63 V., c. 7
14090	Oct. 1, 1900.	Grand Trunk Ry. Co....	Victoria Bridge. Supplementary subsidy..	63-64 V., c. 8
13973	" 10, 1900.	Ottawa and New York Ry. Co.	Bridge over St. Lawrence River at Cornwall.	63-64 V., c. 8
14018	Nov. 26, 1900.	Pontiac Pacific Junction Ry. Co. and Ottawa and Gauean Ry. Co.	Interprovincial Bridge, Ottawa River	63-64 V., c. 8
13988	" 12, 1900.	Quebec Bridge Co.	Bridge over St. Lawrence River at Chaudière Basin, near Quebec.	62-63 V., c. 7 and 63-64 V., c. 8
13956	Sept. 10, 1900.	St. Mary River Ry. Co..	From a point on the Alberta Ry. and Coal Co's. Ry. towards Cardston, N.W.T.	63-64 V., c. 8
14221	June 29, 1901.	South Shore Ry. Co.....	Bridge over St. Francois River.....	63-64 V., c. 8
14142	Mar. 15, 1901.	Thousand Islands Ry. Co.	Extension from present northerly terminus to a point easterly.	63-64 V., c. 8

OTTAWA, Sept. 5, 1901.

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1.

entered into during the Fiscal Year ended June 30, 1901.

AMOUNT OF SUBSIDY.		Number of Miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curvature not less than.	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs., per Lineal Yard.	Date for Completion.
Per Mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400 p. mile	21	80	717	50	20	15	56	Sept. 1, 1901.
3,200	6,400 "	30	80	819	50	20	15	56	Dec. 1, 1902.
.....	150,000	.....	.....	.....	.....	.....	.....	.....	Jan. 1, 1903.
3,200	6,400 p. mile	42	53	1,433	50	20	15	56	" 1, 1903.
.....	15,000	.....	.....	.....	.....	.....	.....	.....	" 1, 1903.
3,200	6,400 p. mile	6 $\frac{1}{2}$	68.7	403	50	20	15	56	Sept. 20, 1900.
3,200	6,400 "	53 $\frac{1}{2}$	53	1,433	50	20	15	56	Aug. 31, 1901.
.....	230,000	.....	.....	.....	.....	.....	.....	.....	" 1, 1902.
.....	90,000	.....	.....	.....	.....	.....	.....	.....	Dec. 31, 1900.
.....	100,000	.....	.....	.....	.....	.....	.....	.....	Aug. 1, 1901.
.....	1,000,000	.....	.....	.....	.....	.....	.....	.....	Jan. 1, 1903.
2,500		30	79.2	3,831	50	12	8	28	Dec. 13, 1900.
.....	50,000	May 1, 1903.
3,200	6,400 p. mile	2	43	3,274	50	20	15	56	Feb. 1, 1902.

GERARD RUEI,
Law Clerk.

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No. 2.

CONTRACTS entered into during the Fiscal Year ended June 30, 1901.

1. INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractor.	General Description.
13878	July 24, 1900	Henry White.....	Paint buildings and bridges between Campbellton and Newcastle.
13879	" 21, 1900	W. McD. Metzler.....	Paint some stations between Campbellton and Newcastle.
13880	" 6, 1900	John Culligan.....	Improve Jacquet River Station.
13904	" 6, 1900	J. A. Boulay.....	Remodel Flatlands Station and build platform.
*13905	August 4, 1893	Town of Sydney.....	Supply water at Sydney.
13906	July 21, 1900	Wilson Estabrooks.....	Handling of coal at Moncton.
13907	" 19, 1900	Peter Campbell.....	Construct station and freight shed at Passekeag, N.B.
*13912	" 30, 1899	Intercolonial Coal Mining Co.	Supply 30,000 tons of coal.
13913	" 24, 1900	H. & H. M. Copp.....	Construct station and freight shed at Plumweseep, N.B.
13917	" 13, 1900	Lowe, McManus & Horne....	Grading and tracklaying at Sydney and North Sydney Junction.
13927	" 21, 1900	A. Caron & L. Vaillancourt..	Paint buildings and bridges between Chaudière and Rivière du Loup.
13933	Aug. 17, 1900	Dussault & Lemieux.....	Construct a quay wall at Lévis.
13939	Sept. 6, 1900	Sir W. G. Armstrong, Whitworth & Co., Ltd.....	Construct railway ferry steamer.
13946	July 19, 1900	Emile Dube.....	Construct building for baggage, &c., at Rivière du Loup.
13951	Aug. 28, 1900	Rhodes, Curry & Co., Ltd....	Remodel and enlarge engine house at Campbellton, N.B.
13952	Sept. 24, 1900	The Dickson Mfg. Co.....	Supply 6 locomotives.
13961	" 14, 1900	George A. Appleby.....	Erect 2 covered platforms at St. John, N.B.
13962	" 4, 1900	Beazley Bros.....	Submarine rock blasting and dredging at Halifax, N.S.
13964	" 15, 1900	Doninion Bridge Co., Ltd....	Erect bridge over Etchemin River, 1½ mile off Hadlow Station.
13995	Oct. 22, 1900	E. F. Munro.....	Erect station at Westville, N.S.
13997	" 25, 1900	John Culligan.....	Erect stations and freight sheds at Beresford, Green Point and Nigadoo.
13998	" 30, 1900	Napoleon Degagne.....	Erect station and freight shed at Dessaint, Que.
13999	" 30, 1900	Joseph Danjou.....	Erect station and freight shed at Gagnon, Que.
14000	" 30, 1900	O. Rousseau.....	Erect station and freight shed at Ste. Perpétue, Que.
14001	" 31, 1900	Nathan E. Montgomery....	Erect dwelling house for agent at St. Nicholas, Que.
14002	" 31, 1900	" "	Erect station and freight shed at Rivière du Chêne, Que.
14003	" 31, 1900	Dussault & Lemieux.....	Filling of ponds and beaches at Lévis.
14004	" 22, 1900	Edmund Simpson.....	Extend freight house and platform at Petitcodiac, Que.
14007	" 8, 1900	Rhodes, Curry & Co., Ltd....	Construct a 6-stall engine house at Sydney, C.B.
14008	Sept. 28, 1900	" "	Construct an 18-stall engine house at Stellarton, N.S.
14009	Oct. 25, 1900	John McDougall & Co.....	Supply 300 33", 100 30", 50 26" and 25 24" car wheels.
14010	Nov. 16, 1900	" "	Supply 2,000 car wheels.
14015	" 26, 1900	The Dickson Mfg. Co.....	Supply 6 locomotives.
14021	" 5, 1900	John McDougall & Co.....	Supply 2,000 33" car wheels.
14023	Sept. 20, 1900	Willard Kitchen.....	Work to sidewalks and block-paving at Christie's Crossing Subway, Amherst.
14027	Oct. 31, 1900	Jules F. Esnouv.....	Erect station at St. Wenceslas, Que.
14028	" 31, 1900	" "	Erect station at Maddington Falls, Que.
14029	" 31, 1900	Honore Huard.....	Erect station at St. Romuald, Que.
14031	Dec. 8, 1900	Lachance & Fils.....	Remodel and enlarge Rivière du Loup Station.
14034	Nov. 30, 1900	J. B. McManus.....	Excavate, lay pipes, &c., re water supply at Grand Narrows, C.B.
14035	" 30, 1900	" "	Excavate, lay pipes, &c., re water supply at St. Charles Junction.

*Received too late for last year's report.

SESSIONAL PAPER No. 20

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1901.—*Con.*1. INTERCOLONIAL RAILWAY—*Continued.*

No. of Contract.	Date of Signature.	Contractor.	General Description.
14036	Dec. 1, 1900	Murdock G. Mann.....	Erect station and dwelling at Moffat's, N.B.
14037	" 1, 1900	" "	Erect station, dwelling and freight shed at St. Alexis, Que.
14039	Nov. 5, 1900	Montreal Car Wheel Co.	Supply 2,000 33" car wheels.
14042	Dec. 19, 1900	Manchester Locomotive Works Co.	Supply 10 locomotives.
14051	" 21, 1900	Barney Smith Car Co.	Supply 6 first class passenger, 3 dining and 4 sleeping cars.
14053	" 7, 1900	W. T. Chapman.....	Erect station at Barnaby River.
14054	" 6, 1900	J. McKenna & H. White.....	Erect baggage room at Bathurst.
14055	" 1, 1900	Rhodes, Curry & Co., Ltd....	Erect addition to station at Nappan.
14056	" 3, 1900	C. J. Sillicker.	Erect addition to baggage room at Amherst, N.S.
14057	Dec. 6, 1900	Chas. W. Hattie	Erect an ice house at Mulgrave, N.S.
14062	" 22, 1900	Wm. Harty et al.	Supply 20 locomotives.
14064	Nov. 15, 1900	L. P. Morin.....	Erect station at Bagot, Que.
14065	" 15, 1900	"	" St. Germain, Que.
14066	" 15, 1900	"	" St. Eugene, Que.
14067	" 15, 1900	"	" St. Cyrille, Que.
14068	" 15, 1900	J. C. Auger.....	" St. Apollinaire, Que.
14072	Dec. 15, 1900	Willard Kitchen	Remodel station and erect freight shed at College bridge.
14073	" 15, 1900	"	" station and erect freight shed, Meadowville.
14074	" 15, 1900	"	" station and erect freight shed at Nash's creek.
14075	" 15, 1900	"	" station and erect freight shed at East mines.
14076	" 15, 1900	"	Erect station at Red Pine.
14077	" 15, 1900	"	" Bartibogue.
14078	" 15, 1900	"	" baggage room at Dalhousie.
14079	" 15, 1900	"	Extend freight shed at Gloucester junction.
14080	" 15, 1900	"	Erect station and freight shed at Coal Branch.
14081	" 12, 1900	Hugh McDonald	Construct crib-work sea walls on the Sydney and Pt. Tupper and Oxford and New Glasgow Divisions
*14086	Aug. 28, 1899	Rhodes, Curry & Co., Ltd.	Supply 200 box freight cars.
*14087	" 31, 1899	"	" 200 platform cars.
14094	Dec. 19, 1900	Hamilton Bridge Works Co., Ltd.	Erect bridge at Jacquet River, N.B.
14095	" 19, 1900	Dominion Bridge Co., Ltd....	" Millstream, Causapsca and Amqui.
14098	Jan. 16, 1901	T. M. Leblanc	Construct boiler and pump house at Moncton, N.B.
14099	" 11, 1901	Andrew Myles.	Erect station and freight shed at Torryburn, N.B.
14101	" 16, 1901	Dominion Bridge Co. Ltd....	Deliver steel bridge at St. John, N.B.
14102	" 16, 1901	"	" Truro, Grenville and St. Charles junction.
14113	Dec. 31, 1900	Rhodes, Curry & Co., Ltd....	Construct 17 refrigerator cars.
14114	Jan. 21, 1901	Joseph Treen.....	" a 50,000 gallon water tank at Grand Narrows, C.B.
14125	Feb. 14, 1901	Dominion Bridge Co., Ltd....	Erect bridge at Rocky Lake, N.S.
14126	" 14, 1901	John Kelly.....	Divert highway at Rocky Lake and Lily Lake, N.S.
14156	April 17, 1901	Crossen Car Mfg. Co.	Supply 150 box and 200 flat cars.
14160	Mch. 1, 1901	"	" 5 baggage cars.
14161	" 1, 1901	"	" 5 postal and baggage cars.
14162	" 1, 1901	"	" 6 2nd class sleeping cars.
14163	Nov. 5, 1900	Rhodes, Curry & Co., Ltd....	" 1,000 box cars.
14166	" 5, 1900	"	" 20 stock cars.
14170	April 30, 1901	Dominion Bridge Co., Ltd.	Erect two transfer bridges at Strait of Canso.
14171	" 11, 1901	Joseph Treen.....	" baggage room and extend freight shed at North Sydney, C.B.
14177	" 18, 1901	James Fleming	Deliver a 7-ton crane.
14178	Jan. 30, 1901	Manchester Locomotive Works	" 8 locomotives.
14189	May 14, 1901	E. F. Monro.	Addition to engine house at Pt. Tupper, N.S.
14212	Feb. 1, 1901	Richmond Locomotive and Machine Works.....	Deliver 10 locomotives.

*Received too late for last year's report.

1-2 EDWARD VII., A. 1902

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1901.—*Con.*1. INTERCOLONIAL RAILWAY.—*Continued.*

No. of Contract.	Date of Signature.	Contractor.	General Description.
14213	Mar. 25 1901.	The Rathbun Co	Deliver 125 box freight cars.
14215	June 24, 1901.	Chas. Cammel & Co., Ltd...	" 5,000 tons first quality steel rails.
14217	May 29, 1901.	John Johnston	Paint grain elevator at St. John, N.B.
14218	June 7, 1901.	Thos. A. Barnhill	Erect building for baggage and express rooms, &c., at Truro, N.S.
14247	" 3, 1901.	Joseph Treen.	Erect a 50,000 gallon water tank at Stellarton, N.S.

2. PRINCE EDWARD ISLAND RAILWAY.

13965	Oct. 8, 1900.	Michael J. Hanev... ..	Construct substructure of bridge across Hillsborough River.
14107	Feb. 13, 1901.	Wm. Harty et al.....	Deliver two locomotives.
14118	July 2, 1900..	Willard Kitchen.....	Construct section No. 2, Mutch's Point to Village Green, 11½ miles.
14127	Dec. 26, 1900.	Robert Ellis.....	Supply ties, lumber and piles.
14128	" 26, 1900.	T. Crockett.....	" 26,000 cedar ties.
14129	" 26, 1900.	N. H. Roy.	" cedar fence posts and braces.
14137	" 26, 1900.	J. & T. Jardine	" ties and lumber.

3. CARILLON CANAL.

14175	April 30, 1901.	O. Martineau & Fils & Frs. Lemoine.....	Rebuild guide pier at upper entrance.
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4. CORNWALL CANAL.

13975	Oct. 19, 1900..	Michael P. Davis	Supply 400 h. p. electric current and 250 electric lights.
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5. FARRAN'S POINT CANAL.

13945	Sept. 15, 1900.	Canadian Construction Co. Ltd	Enlarge canal.
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6. LACHINE CANAL.

14006	Nov. 12, 1900	W. McNally & Co....	Supply 12,500 barrels Portland cement.
14022	Nov. 26, 1900.	F. Hyde & Co..	" " " " " "
14174	May 11, 1901.	O. Martineau & Fils	Construct flume for proposed electric power house at Cote St. Paul Locks.
14211	June 18, 1901.	J. B. Gratton	Erect power house at Cote St. Paul.
14266	June 20, 1901.	Ahearn & Soper, Ltd.	Construct pole line.

7. RAPIDE PLAT C NAL.

13970	Oct. 16, 1900..	Philip H. Gilbert.....	Improve upper entrance.
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SESSIONAL PAPER No. 20

No. 2.—CONTRACTS entered into during the Fiscal Year ended June 30, 1901.—*Con.*

8. RIDEAU CANAL.

No. of Contract.	Date of Signature.	Contractor.	General Description.
14168	April 30, 1901.	Cameron & Co.	Supply timber.

9. SAULT STE. MARIE CANAL.

14005	Nov. 14, 1900.	J. & R. Miller.....	Construct one pair lock gates.
14173	May 13, 1901.	A. F. Bowman.....	Deepen channel way at lower entrance.

10. SOULANGES CANAL.

14032	Nov. 30, 1900.	Thomas Lawson	Supply iron railings, gates, &c.
14131	Feb. 18, 1901.	G. Monpetit.	Erect toll house at Coteau landing.
14159	April 23, 1901.	Canadian General Electric Co., Lt'd	Alter electrical equipment of locking gates, &c.

11. ST. OURS LOCK.

13971	Sept. 29, 1900.	Finn & Filion.. . . .	Repair dam at St. Ours.
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12. TRENT CANAL.

13908	July 6, 1900.	Edward Conroy.	Construct Glance Booms and Piers.
13928	" 6, 1900.	The Rathburn Co.	Supply 10,000 barrels Portland Cement.
13929	" 28, 1900.	Owen Sound Portland Cement Co., Ltd.	" 5,000 " "
13936	Sept. 6, 1900.	Brown & Aylmer	Construct Sec. No. 3, Simcoe & Balsam Lake Division.
13940	" 7, 1900.	Larkin & Sangster.....	" No. 2, " " "
14182	May 28, 1901.	Lakefield Portland Cement Co., Ltd.	Supply 3,000 barrels Portland Cement.
14187	" 30, 1901.	Canadian Portland Cement Co., Ltd.	" 15,000 " "
14214	June 19, 1901.	Owen Sound Portland Co., Ltd.	" 5,000 " "

13. WELLAND CANAL.

14033	Nov. 30, 1900.	Hamilton Bridge Works Co., Ltd.	Construct steel trestle to replace existing one on Bryant's Creek.
14133	March 8, 1901.	McCleary & McLean.....	Supply timber.
14135	" 14, 1901.	Cunningham & Cuthbert.....	Supply iron castings.
14141	" 15, 1901.	Dean Brothers.	Supply brass and phosphor bronze castings.
14143	" 20, 1901.	Joseph Battle.	Repair west retaining wall at head of lock 24.
14147	" 25, 1901.	John & Thos. Riley	Work in connection with east docking at Port Dalhousie entrance.
14157	" 30, 1901.	Mason, Gordon & Co.	Supply timber.

OTTAWA, September 5, 1901.

GERARD RUEL,
Law Clerk

1-2 EDWARD VII., A. 1902

No.

WATER Power and other Public Property leased by the Department of

1.—INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Property Leased.	Area.
	1900.			
13881	July 21	George Lovett	Land at Deep Water Terrinus, Halifax....	492 sq. ft....
13882	" 21	H. Boulay	Lot at Boulay's Siding, Rimouski County.....	120 sq. ft....
13966	Oct. 10	M. J. Haney	Two locomotives and 45 flat cars.....	.....
13977	" 17	Jas. P. Sherry	Land at College Bridge, N.B.....	2,250 sq. ft...
14063	Nov. 1	J. A. Patterson	Land at Apohaqui, N.B.	88 sq. ft....
	1901.			
14092	Jan. 12	Jas. P. Sherry	Land at Memramcook Station.....	2,400 sq. ft...
14112	Feb. 13	Alp. Pineau	Land at St. Anaclet, Que.....	2,240 sq. ft...
14121	" 25	Octave Poirier	Land at Assametquaghan, Que.....	10,000 sq. ft..
	1900.			
14144	Oct. 12	The Imperial Oil Co., Ltd.	Right of way over Ry. lands at Sydney, N.S....	.....
14145	" 12	" "	Land at Sydney, N.S.....	0 76 acre....
	1901.			
14146	Mch. 22	A. McDonald.	Land at Sylvan Valley Mills.....	6,750 sq. ft...
14183	May 31	Can. Pacific Ry. Co. . . .	Land at New Glasgow, N.S.....	112 sq. ft....
14253	Feb. 5	The Herald Publishing Co., to His Majesty.	Premises on corner of St. James and St. François Xavier streets, Montreal....	.....

2.—BEAUHARNOIS

	1900.			
13884	July 9	Montreal Cotton Co....	Land at Valleyfield, Que.....	13,596 sq. ft..
13978	Sept. 29	Beaubien Produce and Milling Co., Ltd.	Hydraulic lot No. 1 and building lot No. 1, Valleyfield, Que., with surplus water.	28,000 } sq. ft.
14019	Nov. 1	S. A. Brodeur....	Land at Upper Entrance of canal.....	20 arp. 9 per.
14261	June 29	Geo. J. White	Pt. lot No. 1, N. side of canal, Valleyfield, Que.	$\frac{3}{4}$ acre.....

3.—CARILLON

	1901.			
14186	June 3	Jno. P. Mullarkey	Parts of the bed of the Ottawa River below Carillon Dam and parcel of land.	.....

4.—CHAMBLY

	1900.			
13926	July 30	Can. Pacific Ry. Co....	Privilege to operate a siding along canal reserve at St. John, Que.	.....

SESSIONAL PAPER No. 20

3.

Railways and Canals during the Fiscal Year ended June 30, 1901.

RAILWAY.

Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.			Purpose.
			Annual Rental.	Due each year.	First instalment due.	
		1899.	\$ cts.			
.....	During pleasure.	Nov. 1, 1899....	0 25	Nov. 1	Nov. 1, '99	Boat house site.
.....	"	Sept. 1, 1899....	1 00	Sept. 1	Sept. 1, '99	Warehouse site.
.....	Until completion of work.	From date of delivery of rolling stock.	Locom., \$5 per day, each; cars, 30c. per day, each.	.....	.....	Build approaches to Hillsborough Br'dge.
.....	During pleasure.	Dec. 23, 1899....	1 00	June 30	Dec. 23, '99	Storing of hay.
.....	"	Nov. 1, 1900....	1 00	Nov. 1	Nov. 1, '00	Erect milk house.
.....	"	" " " " " "	1 00	June 30	Nov. 1, '00	Storing of hay, etc.
.....	"	March 1, 1901....	1 00	" 30	Mch. 1, '01	Storing of shingles.
.....	"	" " " " " "	1 00	" 30	" "	Erect dwelling house.
.....	"	June 30, 1900....	1 00	" 30	Jun. 30, '00	
.....	99 years	July 1, 1900....	40 00	" 30	" "	Storing of oil.
.....	During pleasure.	March 1, 1901....	1 00	" 30	Mch. 1, '01	As a sluice way to mill.
.....	"	Sept. 1, 1900....	1 00	" 30	Sept. 1, '00	Erect a tool house.
.....	3 years and 3 months.	Feb. 1, 1901....	2,750 00	Month'y	.....	Office.

CANAL.

.....	During pleasure.	May 1, 1900....	133 00	May 1	May 1, '00	Extension to their dye house.
.....	21 years, renew.	Aug. 1, 1900....	120 00	Aug. 1	Aug. 1, '00	
.....	During pleasure.	Nov. 1, 1900....	25 00	Nov. 1	Nov. 1, '00	
.....	"	June 1, 1901....	30 00	June 1	June 1, '01	

CANAL.

5,000 h. p. with additional h. p. not exceeding 40,000.	21 years, renewable.	May 1, 1901....	\$1.00 per horse power.	May and Nov. 1	May 1, '01	Electricity and manufacturing purposes.
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CANAL.

.....	21 years, renewable.	July 1, 1900....	1 00	July 1	July 1, '00	
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1-2 EDWARD VII., A. 1902

No. 3.—WATER Power and other Public Property Leased by the

5.—CORNWALL

No. of Lease.	Date of Signature.	Lessee.	Property Leased.	Area.
	1901.			
14172	April 30	Cornwall Town.. .. .	Land between canal and St. Lawrence River, etc.	0.875 acre....
14216	June 24	W. Hodge	Land at Cornwall. Ont.	0.31 acre....

6.—LACHINE

	1900.			
13911	July 9	The Lachine Rapids Hydraulic and Land Co.	Privilege to erect a line of 14 poles.	
13918	July 26	The Colonial Bleaching and Printing Co., Ltd.	Privilege to lay an 18-inch tile pipe and take surplus water.	
13930	July 17	The Merchants Cotton Co.	Privilege to maintain 4 iron pipes and take surplus water.	
13943	Aug. 30	Montreal Stock Yds. Co.	Land at Pointe St. Charles, St. Anne's Ward, Montreal.	11.091 acre..
13944	Aug. 13	J. P. Laplante & Co.	Wharf lot on E. side of new St. Gabriel Basin No. 1, Montreal.	1,750 sq. ft.
13954	Sept. 10	Geo. T. Harct	Lots 16 & 17 between St. Gabriel Basins Nos. 2 and 3, Montreal.	33,824 sq. ft.
13957	Aug. 20	Canada Paper Co., Ltd.	Land at Wellington Basin, Montreal	16,250 sq. ft.
13996	" 24	Grand Trunk Ry. Co. of Canada.	Privilege to lay a single track line of railway along the north bank of canal.	
	1901.			
14111	Feb. 13	The Electric Fireproofing Co. of Canada, Ltd.	Privilege to lay 8-inch pipe to draw water from canal.	
14132	Mch. 5	F. Tremblay.	Storage lot No. 3, N.E. side of St. Gabriel Basin No. 4, Montreal.	9,444 sq. ft.
14153	April 1	The Alaska Feather and Down Co., Ltd.	Privilege to draw water through a 4-inch pipe.	
14206	June 18	Wm. E. Muir	Pt. lot No. 324, W. side of Wellington Basin, Montreal.	6267 acre..
14259	" 29	The James Cooper Mfg. Co., Ltd.	Privilege to lay a 12-inch water pipe.	

7.—RIDEAU

	1900.			
13909	July 25	Thos. Birkett.	Wharf lots 9 and 10, W. side of canal, near basin, Ottawa.	6,000 sq. ft.
13934	Aug. 17	Hannah Patterson	Pt. of the S $\frac{1}{2}$ of lot letter 'G,' con. 'C,' Tp. of Nepean.	2 acres....
13938	July 10	Alex. McLean	Pt. lot 21 in the Gore of Gloucester, water power, &c.	1.84 acres....
13953	Aug. 30	Ottawa & New York Ry. Co.	Parcel No. 4 at S.E. end of Deep Cut, Ottawa.	1.50 acres....
14011	Oct. 23	The Rideau Lakes Nav. Co., Ltd.	Land at Combined Locks, Smiths Falls.	1,225 sq. ft.
14058	Nov. 30	A. G. McCormick.	Wharf lots Nos. 7 and 8 W. side of Canal Basin, Ottawa.	6,000 sq. ft.
	1901.			
14188	May 31	The Ottawa Forwarding Co. Ltd.	Privilege to erect a temporary shed on wharf in Canal Basin at Ottawa.	
14208	June 18	Samuel Daniels.	Privilege to place a Yacht House at Stewarton Bridge.	

SESSIONAL PAPER No. 20

Department of Railways and Canals, &c.—Continued.

CANAL.

Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.			Purpose.
			Annual rental.	Due each Year.	First instalmen due.	
			\$ cts.			
25 h. p. with privilege to develop 25 h. p. additionally.	21 years, renewable.	April 1, 1901....	\$10 land, etc.; \$2 per h. p.	April 1	April 1, '01	Site for a pumping station.
	21 years, renewable.	Oct. 1, 1900....	1 00	Oct. 1	Oct. 1, '00	

CANAL.

	During pleasure.	July 1, 1900....	1 00	July 1	July 1, '00	Transmit elect. power.
	"	May 1, 1900....	180 00	May 1	May 1, '00	Generate steam and bleaching purposes.
	"		340 00	Jan. and July 1	July 17, '00	Condensing purposes and fire protection.
	30 years	March 1, 1900....	500 00	March 1	Mch. 1, '00	Abattoirs.
	During pleasure.	Aug. 1, 1900....	26 00	Aug. 1.	Aug. 1, '00	Store sand.
	"	Sept. 1, 1900....	422 80	Sept. 1.	Sept. 1, '00	Store coal.
	"	Aug. 1, 1900....	195 00	Aug. 1.	Aug. 1, '00	Storehouse.
	21 years	" 1, 1900....	500 00	" 1.	" 1, '00	
	During pleasure.	Jan. 1, 1901....	80 00	Jan. 1..	Jan. 1, '01	Boilers and tanks.
	"	Mch. 1, 1901....	188 88	Mch. 1.	Mch. 1, '01	Store lumber.
	"	May 1, 1900....	40 00	May 1..	May 1, '00	Boilers, &c.
	13 years	" 1, 1901....	450 00	" 1..	" 1, '01	Store coal.
	During pleasure.	July 1, 1901....	120 00	July 1..	July 1, '01	Boilers, &c.

CANAL.

	21 years	Aug. 1, 1900....	230 00	Aug. & Feb. 1	Aug. 1, '00	Warehouse.
	During pleasure.	" 1, 1900....	7 00	Aug. 1.	Aug. 1, '00	Farming.
	21 years renewable.	May 1, 1900....	300 00	May 1..	May 1, '00	Mfg. or electrical purposes.
	During pleasure.	Sept. 1, 1900....	100 00	Sept. 1.	Sept. 1, '00	
	"	Nov. 1, 1900....	7 50	Nov. 1..	Nov. 1, '00	To erect a w room.
	21 years	Dec. 1, 1900....	100 00	Dec. 1.	Dec. 1, '00	
	During pleasure.	May 1, 1901....	1 00	May 1.	May 1, '01	Protection of goods
	"	" 1, 1901....	2 00	" 1.	" 1, '01	Yacht house.

1-2 EDWARD VII., A. 1902

No. 3.—WATER Power and other Public Property Leased by the

8.—SAULT STE.

No. of Lease.	Date of Signature.	Lessee.	Property Leased.	Area.
	1900.			
13994	Sept. 29	Queen City Oil Co., Ltd.	Land in Sault Ste. Marie, Ont.....	6,000 sq. ft.

9.—SOULANGES

	1901.			
14164	May 2	M. P. Davis.....	All surplus water from summit level.....	

10.—ST. OURS

14985	Jan. 9	Jos. Archambault to Her Majesty.	Privilege to place timber on his land.....	
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11.—TRENT

14123	Jan. 31	Johnson Ellis.....	Pt. lot, 48, con. 8, Tp. of Carden, Co. of Victoria, Ont.	1½ acre....
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12.—WELLAND

	1900.			
13883	July 7	Maple Leaf Rubber Co..	Privilege to lay 2 electric cables under Old Canal at Port Dalhousie.	
13935	Aug. 13	Dunnville Town.....	Land in Dunnville, Ont.....	
13987	Oct. 31	Calvin Tupper.....	Pt. lots 'Church of England Parsonage' and 'Jeffrey,' E. side of Chippawa St., Welland, Ont	1½ acre....
14017	" 24	Niagara, St. Catharines and Toronto Ry. Co.	Privilege to lay 3 electric cables across bottom of canal.	
14059	Nov. 30	"	Privilege to construct a railway by means of embankments and trestles over canal.	
14060	Oct. 24	"	Privilege to erect a ry. bridge over canal near Carleton St. St. Catharines, Ont.	
	1901.			
14082	Jan. 8	St. Catharines City et al.	Privilege to lay water mains under Old Canal..	
	1900.			
14091	July 6	St. Catharines City. ...	Privilege to lay 2 water pipes from canal to cemetery.	
	1901.			
14139	Jan. 21	Port Dalhousie Hockey Club.	Land west of west pier at Port Dalhousie, Ont.	206 acre ...
14184	May 30	Niagara, St. Catharines and Toronto Ry. Co.	Privilege to operate track line of railway at Port Dalhousie, Ont.	

OTTAWA, September 5, 1901.

SESSIONAL PAPER No. 20

Department of Railway and Canals, &c.—*Concluded.*

MARIE CANAL.

Amount of Water Power.	Term.	Commencement of Term.	TERMS OF PAYMENT.			Purpose.
			Annual rental.	Due each Year.	First instal- ment due.	
			\$ cts.			
.....	During pleasure.	Oct. 1, 1900.....	10 00	Oct. 1..	Oct. 1, '00	To erect a warehouse.

CANAL.

.....	21 years renew- able.	May 1, 1901.....	3,000 00	May and Nov. 1	May 1, '00	Development of power.
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LOCK.

.....	During winter of 1901.	To repair St. Ours Dam.
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CANAL.

.....	During pleasure.	Jan. 1, 1901.....	10 00	Jan. 1..	Jan. 1, '01	Lime burning industry
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CANAL.

.....	During pleasure.	July 1, 1900	10 00	July 1..	July 1, '00	Power.
.....	"	Aug. 1, 190	1 00	Aug. 1..	Aug. 1, '00	Sidewalk.
.....	5 years	Nov. 1, 190	2 00	Nov. 1..	Nov. 1, '00	
.....	During pleasure.	" 1, 1900	5 00	" 1..	" 1, '00	To transmit power.
.....	21 years renew- able.	Dec. 1, 1900	1 00	Dec. 1..	Dec. 1, '00	
.....	"	Nov. 1, 1900....	1 00	Nov. 1..	Nov. 1, '00	
.. ..	During pleasure.	May 1, 1899 ...	10 00	May 1..	May 1, '99	
.....	"	July 1, 1900	10 00	July 1..	July 1, '00	
.....	"	Dec. 1, 1900	4 00	Dec. 1..	Dec. 1, '00	Rink.
.....	10 years	May 1, 1901	40 00	May 1..	May 1, '01	

GERARD RUEL,
Law Clerk.

1-2 EDWARD VII., A. 1902

No.

PROPERTY Conveyed and Damages Released to the Department of

1.—CANADIAN

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
14176	Feb. 28, '93	Joseph Deroche.....	Pt. No. 7, Group III., Tp. 21	New Westminster.....
14246	" 14, '01	C. V. Cooper.....	Pts. Nos. 31, 32, 25, 26 & 27, and Nos. 13, 15, 17, 19, 33, 34 & 35, Block 1, being sub-division of No. 203, Group I., and pt. No. 203.	"

2.—INTERCOLONIAL

14119	June 25, '98	Elizabeth Wood	3 parcels of land in.....	Oxford.....
14134	Feb. 23, '01	Adelbert Wood.....	" "	"
14167	April 8, '01	Nova Scotia Govt.	Lands covered with water at Mughah's Creek.	Sydney.....
13915	May 31, '99	R. Tufts, <i>et al</i> .....	.....	.....
13916	April 8, '99	C. Gay, <i>et al</i> .....	.....	.....
13969	Aug. 10, '00	Drummond County Ry. Co.	.....	.....
14049	Dec. 13, '00	H. Cameron, <i>et ux</i> .....	.....	.....
14050	" 11, '00	C. F. McMillan.....	.....	.....
14179	Mar. 11, '01	Jeremie Paulin.....	.....	.....
14223	June 27, '01	G. S. Mayes .....	.....	.....

3.—CORNWALL

13921	July 21, '00	P. Cass, <i>et ux</i>	Pt. of front pt. of E $\frac{1}{2}$ & W $\frac{1}{2}$ of No. 7.	Osnabruck
14106	Oct. 19, '00	D. B. MacLennan	Pts. Nos. 31 & 32, and E $\frac{1}{2}$ No. 33, Con. 1.	Cornwall
14169	Mar. 5, '01	A. Waldorf, <i>et al</i>	Pts. No. 7, Con. 1.	Osnabruck.....

4.—CULBUTE

13942	Sept. 13, '00	M. Worrill, <i>et al</i>	N. pt. of the E. pt. of No. 1, 1st Range of Calumet.	Grand Calumet.....
14043	Dec. 14, '00	B. Smith, <i>et al</i>	Nos. 1, 2, 3 & 4, Range 1.	Waltham
14044	Oct. 12, '00	Jas. McGuire.....	No. 55, Range 2.	Mansfield.....
			No. 2, Range 7	Litchfield.

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4.

Railways and Canals during the Fiscal Year ended June 30, 1901.

PACIFIC RAILWAY.

County.	Area.	Amount.	Remarks.
		\$ cts.	
.....	12.80 acres.....	{ Principal 600 00 Interest 382 00 Principal 4,000 00 Interest 4,487 00 Costs 491 87	} Too late for last year's report.

RAILWAY.

Cumberland.....	19.17 acres..	165 97	Too late for last year's report.
"	19.17 " ..	185 63	
Cape Breton.....			Letters patent.
.....		233 32	Release, damages. (Too late for last year's report.)
.....		116 67	" " "
.....		20,000 00	Release for security held.
.....		{ Principal 375 00 Costs 80 46	} Release, damages claimed for the death of M. A. Cameron.
.....		{ Principal 1,600 00 Costs 80 46	} Release, damages for injuries sustained.
.....		100 00	Release, damages caused by the loss of a valise and contents.
.....		8,939 39	Release, damages caused by neglecting to appoint an inspector of creosoting.

CANAL.

Stormont.....	0.34 acres.....	125 00	
"	5 " ..	540 00	
"	0.42 " ..	425 00	

CANAL.

Pontiac.....		200 00	Release, damages by flooding.
"		180 00	" "
"		50 00	" "

1-2 EDWARD VII., A. 1902

No. 4.—PROPERTY Conveyed and Damages Released to the Department of

4.—CULBUTE

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
14045	Sept. 27, '00	William Flood.....	No. 2, Range 2.....	Litchfield.....
14046	Oct. 8, '00	B. E. Hennessy.....	No. 23, Range 1.....	Waltham.....
14047	" 12, '00	J. & T. St. Denis.....	No. 1, Range 'B'.....	Mansfield.....
14048	" 12, '00	D. T. Bertrand, <i>et al.</i>	No. 7, Range 'A'.....	".....
14093	Jan. 12, '01	John Flood.....	No. 2, Range 'A'.....	Waltham.....
14096	" 16, '01	Joseph Bonin.....	Nos. 43 and 44, Range 2.....	Mansfield.....
14209	Dec. 24, '85	L. Lacroix, <i>et al.</i>	No. 12, Con. 'N,' front 'D' and No. 17, Con. 'E,' front 'C'.....	Westmeath.....
14210	May 30, '01	John Flood.....	No. 1 and letter 'B,' Range 'A'.....	Waltham.....

5.—GALOPS

13922	July 7, '00	W. A. Feader, <i>et ux.</i>	Pt. E. $\frac{1}{2}$ No. 28.....	Matilda.....
13941	Aug. 11, '00	B. Larabee, <i>et al.</i>	Pt. W. $\frac{1}{2}$ No. 34.....	".....
14024	Oct. 12, '00	Jas. Hodge, <i>et ux.</i>	Pt. Lot 'M,' N. side of Dundas St.	Village of Cardinal.....
14070	" 3, '00	H. Redmond, <i>et ux.</i>	Pt. W. $\frac{1}{2}$ of No. 28, Con 1.....	Matilda.....
14180	May 8, '01	M. Stamp, <i>et ux.</i>	No. 45, Block 'X'.....	Village of Iroquois.....
14181	" 16, '01	J. D. McLaughlin, <i>et ux.</i>	Pt. W. $\frac{1}{4}$ of No. 11 and pt. E $\frac{1}{2}$ No. 12	Edwardsburg.....
14191	" 10, '01	G. F. Benson, <i>et ux.</i>	Pt. No. 1, E. side of Waddell St.	Village of Cardinal.....
14193	" 11, '01	G. Serviss, <i>et al.</i>	Pt. No. 14, N. side of Dundas St.	".....
14255	Nov. 1, '00	William Dillon (executor of Jno. Feeney).	Pt. No. 20, E. side of Waddell St.	".....
13950	Aug. 11, '00	H. Serviss.....	No. 2, N. of Water and W. of John St.	Village of Iroquois.....
14084	Dec. 25, '00	W. R. Peacock.....	No. 7, W. of Waller St.	Village of Cardinal.....
13919	July 10, '00	Hon. G. W. Stephens.....	Nos. 1703, 1704 and 3413 in parish of Montreal.	.....
14052	Dec. 17, '00	Alex. Aubertin.....	No. 3614 in parish of Montreal	.....

7.—RAPIDE PLAT

13967	Oct. 4, '00	A. & M. G. C. Dill.....	Pt. Nos. 9 and 10, Range 6th, and pt. Nos. 9, 10, 11 and 12, Range 5th, &c., Mariatown.	Williamsburg.....
13972	" 4, '00	J. Duvall, <i>et ux.</i>	Pt. Nos. 7 and 8, Range 6th, Mariatown.	".....
13974	" 4, '00	J. H. Meikle, <i>et al.</i>	Pt. Nos. 5 and 6, Range, 6th Mariatown.	".....
14012	" 19, '00	J. D. Anderson, jr., <i>et al.</i> (Heirs of M. E. Anderson).	Pt. W $\frac{1}{2}$ No. 35, Con. 1.....	".....
14013	" 4, '00	L. Flagg, <i>et al.</i> (trustees Fairview Cemetery).	" ".....	".....

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Railways and Canals during the Fiscal Year ended June 30, 1901—*Continued.*CANAL—*Continued.*

County.	Area.	Amount.	Remarks.
		\$ cts.	
Pontiac.....		450 00	Release, damages by flooding
"		100 00	" "
"		20 00	" "
"		150 00	" "
"		150 00	" "
"		75 00	" "
Renfrew.....		40 00	" "
Pontiac.....		325 00	Too late for last year's Report. Release, damages by flooding.

CANAL.

Dundas.....	3.88 acres.....	1,600 00	
		With interest from	
		Apl. 1, 1898, at 6	
		per cent.....	
"	0.25 "	250 00	
Grenville.....	0.049 "	600 00	
Dundas.....	0.16 "	2,850 00	
"	0.22 "	875 00	
		With interest at 6	
		per cent from	
		Apl. 14, 1899....	
Grenville.	3.25 "	1,000 00	
"	0.029 "	25 00	
"	0.167 "	1,400 00	
		With interest from	
		Sept. 18, 1899....	
"	0.073 "	115 00	
Dundas.....		300 00	Release, damages
Grenville.		20 00	Release, damages caused by the retention
			of possession of house on said lot.
		525 25	Release, damages caused through the
			deepening of River St. Pierre.
		150 00	Release, damages by flooding.

CANAL.

Dundas	0.81 acres	250 00	
"	0.5 "	185 00	
"	0.5 "	200 00	
"	0.10 "	50 00	
"	0.10 "	275 00	

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No. 4.—PROPERTY conveyed and damages released to the Department

8.—SOULANGES

No. of Deed.	Date of Signature.	Grantor.	Lot.	District.
13920	July 27, '00	Jos. Lecompte	Pt. No. 2A.....	Coteau Landing Village.
14016	Nov. 14, '00	P. A. Q. V. S. de Beaujeu	Pt. Nos. 6, 7, 10, 11, 13 and 14....	St. Ignace du Coteau du Lac.
14069	Dec. 15, '00	Ant. Legros	Pt. No. 15	" "
14158	Mar. 31, '01	H. P. Grange	Pt. No. 1	Coteau Landing Village.
13979	Oct. 29, '00	Honore Leroux .....	.....	.....
13980	" 29, '00	A. Leroux .....	.....	.....
13981	" 29, '00	E. Leroux .....	.....	.....
13982	" 29, '00	X. Beriault .....	.....	.....
13983	" 29, '00	I. Bissonnette
13993	Nov. 15, '00	F. X. St. Merseil..

9.—STE. ANNE'S

14124	Feb. 26, '01	H. Pashby
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10.—TRENT

14148	Mar. 16, '01	Canadian Bank of Com- merce.	Pt. No. 5, Con. 11th.....	Douro
14190	May 11, '01	J. H. McWilliams	No. 4	Village of Lakefield.....
14260	June 10, '01	J. Rummerfield.....

11.—WELLAND

13963	Sept. 27, '01	John Nihan
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OTTAWA, September 5, 1901.

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of Railways and Canals during the Fiscal Year ended June 30, 1901—*Concluded.*

CANAL.

County.	Area.	Amount.	R marks.
		\$ cts.	
Soulanges	91 sq. ft.....	125 00	
"	4.69 acres	1,000 00	
"	0.67 "	166 00	
"		1,500 00	
		(Pr. 571 85	
		(Int. 150 00	Release, damages by flooding.
		120 00	" "
		140 00	" "
		165 00	" "
		165 00	" "
		1,000 00	Release, damages for injuries sustained.

LOCK.

		30 00	Release, damages caused to boat 'Z. B. Danforth.'
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CANAL.

Peterborough	21.61 acres	1 00	Rectifies an error made in deed No. 13736 Feb. 7, 1900.
"		300 00	Release, damages caused by raising high way.
		50 00	Release, damages caused by the loss of a horse whilst crossing bridge at Victoria Road.

CANAL.

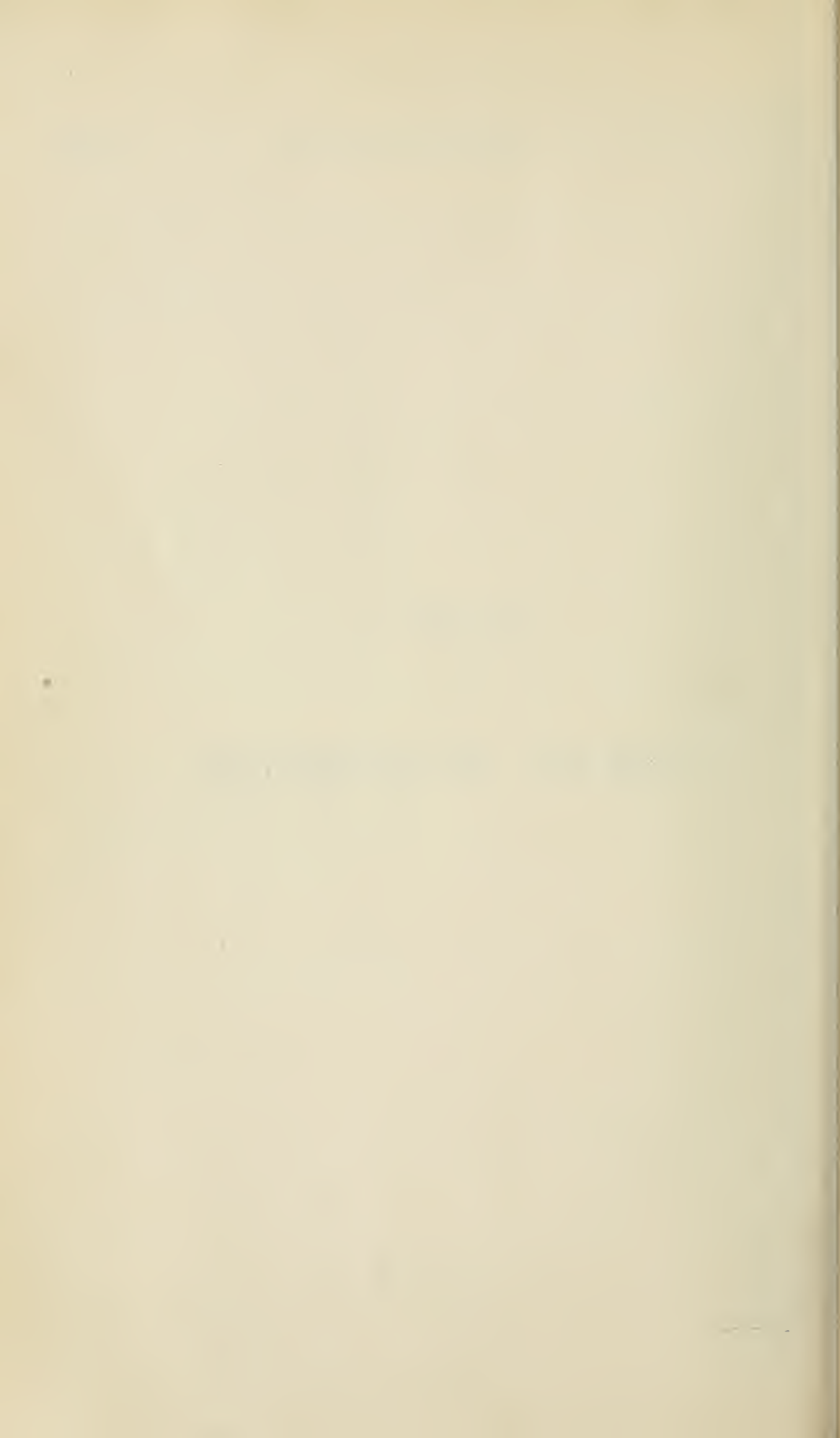
		297 00	Release, damages by water to his crops and farm.
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GERARD RUEL,
Law Clerk.



PART V

CANAL STATISTICS



CANAL STATISTICS

FOR

SEASON OF NAVIGATION 1900

REVENUE.

The total revenue, exclusive of hydraulic rents for two years, is as follows :—

For 1899.....	\$291,652 37
For 1900.....	269,116 25

By comparing the statistics of 1899 with 1900, it will be seen that the gross revenue has decreased \$22,539.97.

The increases and decreases are as follows :—

	Increase.	Decrease.
On the Welland Canal.....		\$ 13,816 33
“ St. Lawrence Canals.....	\$ 2,442 64	.....
“ Chambly Canal.....	.....	1,779 75
“ Ottawa Canals.....	.....	9,758 12
“ Rideau Canal.....	388 23	.....
“ St. Peters Canal.....	.....	95 68
“ Trent Valley Canals.....	.....	88 93
“ Murray Canal.....	115 31	.....
“ Sault Ste. Marie Canal.....	56 51	.....
Total.....	\$ 3,002 69	\$ 25,538 81
Total decrease.....	.....	\$ 22,536 12

STATEMENT of the Revenue, together with the increases and decreases of all the Canals for the seasons of Navigation from 1899 to 1900, inclusive.

Years.	Revenue.	Increase.	Decrease.
1891.....	\$ 350,351 97	\$ 2,292 46	.....
1892.....	358,711 04	8,359 07	.....
1893.....	348,012 00	.....	\$ 10,699 04
1894.....	307,824 67	.....	40,187 33
1895.....	283,211 41	.....	24,613 26
1896.....	350,061 03	66,849 62	.....
1897.....	346,758 87	.....	3,302 16
1898.....	341,679 23	.....	5,079 64
1899.....	291,652 37	.....	50,026 86
1900.....	269,116 25	.....	22,536 12

In compliance with the renewed request of forwarders and shippers of Montreal and the management of the Canada Atlantic Railway Co., for a reduction of tolls on certain agricultural products, His Excellency the Governor General in Council on February 20, 1900, authorized a reduction of canal tolls, as follows :—

For the season of 1900 the canal tolls for the passage of the following food products, wheat, indian corn, pease, barley, rye, oats, flax-seed and buckwheat for through passage

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eastward through the Welland Canal, shall be 10 cents per ton, and for through passage eastward through the St. Lawrence Canals, only 10 cents per ton, payment of the said tolls of 10 cents per ton for passage through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals, or any portion thereof; further, in the case of any of the above named products brought down from Parry Sound over the line of the Canada Atlantic Railway Company to their elevator at Coteau Landing, the through rate thereon from that point to Montreal, to be $2\frac{1}{2}$ cents per ton.

In consequence of the reduced rate of tolls, as above, being applicable to the said food products, irrespective of their destination, the reduced rate of 10 and 5 cents a ton respectively only was collected, and therefore no refunds were made on these articles for 1900.

It may be observed, however, that the reduction of tolls from 20 to 10 cents per ton on the articles referred to, for passage through the Welland Canal, amounts to \$52,555.20.

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 nineteen 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	292,710
1892.....	261,954	8,942	261,540
1893.....	501,806	25,555	222,958
1894.....	273,651	16,699	203,979
1895.....	* 231,491	32,096	133,823
1896.....	461,049	73,886	160,372
1897.....	560,254	53,257	157,756
1898.....	519,532	31,279	144,612
1899.....	332,746	40,197	68,011
1900.....	244,661	17,525	84,589

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 February 13, the tolls were reduced to 10 cents a ton on grain passing eastward through the Welland Canal, irrespective of its destination, and the same rate of tolls for 1894 were allowed by O.C., April 16, 1894.

For the year 1895 (O.C., April 1, 1895,) the same rate of tolls was allowed as was granted for the year 1894.

* Of the quantity of grain passed down to Montreal there were transhipped at Ogdensburg in 1891, 17,817 tons; in 1892, 4,341 tons; in 1893, 71,445 tons; in 1894, 23,030 tons; in 1895, 18,987 tons; in 1896, 77,355 tons; in 1897, 89,659 tons; in 1898, 40,257, tons in 1899, 48,828 tons, and in 1900, 38,403 tons.

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For the year 1896 (O.C., April 23, 1896,) the same rate of tolls was allowed as was granted for the year 1895.

For the year 1897 (O.C., April 17, 1897,) the same rate of tolls was allowed as was granted for the year 1896.

For the year 1898 (O.C., June 1, 1898,) the same rate of tolls was allowed as was granted for the year 1897.

For the year 1899 (O.C., April 10, 1899,) the same rate of tolls was allowed as was granted for the year 1898.

For the year 1900 (O.C., February 20, 1900,) the same rate of tolls was allowed as was granted for the year 1899.

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 decreased from 295,509 tons in 1891 to 244,661 tons in 1900; and the quantity passed down the Welland Canal from United States ports to United States, has decreased from 202,710 to 84,589 tons for the same years.

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 13 years, is reported as follows :—

	Tons.
For 1888	113,794
1889.....	94,943
1890.....	119,208
1891.....	184,410
1892.....	291,680
1893	147,610
1894.....	60,666
1895.....	51,114
1896.....	153,717
1897.....	228,611
1898.....	293,391
1899.....	209,170
1900.....	229,624

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 1888.....	166,191
1889.....	275,414
1890.....	242,571
1891.....	320,434
1892.....	302,899
1893.....	532,084
1894.....	288,015
1895.....	247,550
1896.....	495,898
1897.....	604,200
1898.....	575,097
1899.....	372,291
1900	295,928

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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 1899.....	372,291
1900.....	295,928
Showing a decrease of.	<u>76,363</u>

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways, is reported as follows :—

	Tons.
For 1899.....	209,170
1900.....	229,624
Showing an increase of.....	<u>20,454</u>

The quantity of grain arrived at tide-water by New York Canals, is reported as follows :—

	Tons.
For 1899.....	416,700
1900.....	308,945
Showing a decrease of....	<u>107,755</u>

The quantity of grain carried to tide-water by the New York railways, is reported as follows :—

	Tons.
For 1899.....	4,642,952
1900.....	4,396,441
Showing a decrease of.....	<u>246,511</u>

The increases and decreases for 1900 as compared with 1899 on the several routes, competing for the carrying trade to the seaboard, are as follows :—

	Increase.	Decrease.	Increase. per cent.	Decrease.
On the St. Lawrence Canals.....		76,363		22.43
do Canadian Pacific and Grand Trunk Railway.	20,454		9.8	
do New York Canals.....		107,795		34.89
do do Railways.....		246,511		5.61

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 decreased from 313,574 tons in 1889 to 177,876 tons in 1900, and the quantity to Ontario ports, between Port Dalhousie and Cornwall, and decreased from 130,584 tons in 1889 to 113,205 tons in 1900. The quantity passed down to Montreal shows a decrease from 292,827 tons in 1889 to 288,231 tons in 1900.

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TRANSHIPMENT OF GRAIN.

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston and Prescott for fifteen years, is as follows :—

In Canadian vessels there were in—

				Tons.
1886,	244	Cargoes, with an aggregate quantity of.		143,330
1887,	284	do do		178,233
1888,	182	do do		143,025
1889,	208	do do		165,117
1890,	203	do do		184,275
1891,	209	do do		190,664
1892,	158	do do		159,018
1893,	146	do do		148,962
1894,	125	do do		159,145
1895,	123	do do		136,617
1896,	196	do do		227,912
1897,	180	do do		229,265
1898,	166	do do		224,021
1899,	162	do do		221,306
1900,	325	do do		183,200

In United States vessels there were in—

				Tons.
1886,	97	Cargoes, with an aggregate quantity of.		62,222
1887,	19	do do		12,477
1888,	60	do do		43,667
1889,	114	do do		108,358
1890,	35	do do		35,560
1891,	77	do do		90,153
1892,	89	do do		109,812
1893,	257	do do		328,269
1894,	84	do do		106,236
1895,	56	do do		73,987
1896,	158	do do		217,978
1897,	197	do do		285,847
1898,	339	do do		464,852
1899,	167	do do		205,571
1900,	259	do do		163,575

Fifteen vessels took cargoes of 7,924 tons through to Montreal intact in 1900, 2 of 558 tons in 1899, seven of 2,426 in 1898, seven of 2,324 in 1897, three of 1,176 in 1896, four of 1,344 tons in 1895, two cargoes of 810 tons in 1894, none in 1893, two in 1892, of 924 tons, and three in 1891 of 1,441 tons. Nine vessels lightened a portion of their cargoes in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 473 vessels discharged the whole of their cargoes at Kingston in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1900 and the four previous years is given below.

The total number of grain laden vessels lightened at this port in 1900 was 68, against 86 the previous year.

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The quantity of grain lightened was as follows :—

Articles.	1896.	1897.	1898.	1899.	1900.
	Bush.	Bush.	Bush.	Bush.	Bush.
Wheat.....	660,190	642,927	239,518	390,162	272,609
Corn.....	908,833	697,508	313,689	638,143	448,256
Rye.....	8,197	Nil	37,380	7,065	Nil
Oats.....	79,585	12,527	Nil	Nil	Nil
Barley.....	6,377	5,119	5,669	Nil	Nil

WELLAND CANAL.

The total quantity of freight passed on the Welland Canal during the season of 1900 was 719,360 tons; of this quantity 30,803 tons were way or local freight.

There were 601,130 tons of freight passed eastwards, and 118,230 tons passed westwards.

East and west bound through freight.

The total quantity of through freight passed through the whole length of the Welland Canal during the season of 1900 was 688,557 tons.

Of this quantity 579,312 tons were east bound and 109,245 west bound freight.

Of the east bound through freight Canadian vessels carried 307,373 tons and United States vessels carried 271,939 tons; and of the west bound through freight Canadian vessels carried 12,124 tons, and United States vessels carried 97,121 tons, or a total of 319,497 tons for Canadian and 369,060 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1900 was 1,309,066 tons, of this quantity 1,115,171 tons passed eastward and 193,895 past westward.

East and west bound through freight.

The total quantity of through freight was 667,584 tons; of this quantity 637,605 tons were east bound and 29,979 tons were west bound.

Way freight.

Of the total quantity of (way) or local freight 477,566 tons were east bound and 163,916 tons west bound freight.

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THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward 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
1886.....	244,514	16,801
1887.....	213,834	14,075
1888.....	183,899	19,310
1889.....	298,197	25,370
1890.....	231,746	13,951
1891.....	309,593	14,060
1892.....	263,144	9,452
1893.....	508,016	16,545
1894.....	292,191	9,439
1895.....	266,659	10,555
1896.....	480,077	10,050
1897.....	584,246	4,542
1898.....	538,108	4,436
1899.....	354,933	5,991
1900.....	288,251	6,217

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 fifteen years, is as follows :—

	Eastward. Tons.	Westward. Tons.	Total. Tons.
1886.....	224,916	239,562	464,478
1887.....	189,427	151,074	340,501
1888.....	221,062	213,689	434,751
1889.....	297,353	266,231	563,584
1890.....	318,259	215,698	533,957
1891.....	306,257	247,543	553,800
1892.....	300,733	240,332	541,065
1893.....	384,559	247,108	631,667
1894.....	361,319	230,948	592,267
1895.....	255,259	214,520	469,779
1896.....	385,695	267,518	653,213
1897.....	353,863	210,831	564,694
1898.....	277,023	210,516	487,539
1899.....	225,491	135,038	360,529
1900.....	99,560	218,969	318,529

— The total quantity of freight passed through the Welland Canal from United States ports to United States ports shows a decrease of 42,000 tons, as compared with the previous year; and a decrease of 145,949 tons, as compared with 1886.

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The following statement shows the aggregate number of vessels, and the total quantity of freight passed through the Welland Canal, and the quantity passed between United States ports during the years 1867 to 1900, 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	748,537
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	533,584
1890	2,883	1,016,165	533,957
1891	2,594	975,013	533,800
1892	2,615	955,554	541,065
1893	2,843	1,294,823	631,667
1894	2,412	1,008,221	592,267
1895	2,222	869,595	469,779
1896	2,766	1,279,987	653,213
1897	2,725	1,274,292	564,694
1898	2,384	1,140,077	487,539
1899	2,202	789,770	360,529
1900	2,399	719,360	318,529

The total quantity of freight passed through the several divisions of the canals during the season of 1900 is as follows :—

	Farm Stock.	Forest Produce of Wood.	Manufac- tures.	Merchan- dise.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland	60	115,217	59,691	164,734	379,658	719,360
St. Lawrence	990	95,518	74,739	437,423	693,734	1,309,066
Chambly	267	205,160	9,832	109,039	24,263	348,561
Ottawa	991	378,801	836	2,928	5,589	389,145
Rideau	11	37,925	4,900	28,887	3,709	75,432
St. Peters	77	17,524	3,835	42,548	9,829	73,813
Murray	33	4,496	2,447	8,811	3,280	19,067
Trent Valley	209	42,292	133	311	627	43,572
Sault Ste. Marie	220	37,008	27,743	1,588,456	382,250	2,085,667

The total quantity of freight moved on the Welland Canal was 719,360 tons, of which 379,658 tons were agricultural products.

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On the St. Lawrence Canals the total quantity of freight moved was 1,309,066 tons, of which 693,834 were agricultural products, and 437,423 tons were merchandise.

On the Ottawa Canals the total quantity of freight moved was 389,145 tons, of this quantity 378,801 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 Canada was 472,857 tons in 1900, 577,486 in 1899, 653,027 in 1898, 744,575 in 1897, 957,182 in 1896, 606,505 in 1895, 1,400,129 in 1894, 1,450,116 in 1893, 937,999 in 1892, and 1,092,385 in 1891.

The quantities of vegetable food carried by the New York Central, Erie and New York, West Shore and Buffalo Railway* being:—

	Tons.		Tons.
In 1900	6,053,005	In 1887	*3,847,766
1899.....	6,211,827	1886	*3,802,262
1898.....	7,060,542	1885	4,105,594
1897.....	5,673,638	1884.....	3,639,805
1896.....	5,183,540	1883.....	4,422,461
1895.....	3,798,574	1882.....	3,885,557
1894.....	4,281,056	1880.....	4,732,385
1893.....*	5,107,426	1869.....	1,087,809
1892.....	5,913,013		
1891.....	3,565,381		
1890.....	4,336,199		
1889.....	3,654,984		
1888.....	3,197,734		

* Flour and grain only.

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The following figures are an abstract of the quantities of vegetable food carried to tide-water by the canals and railways of the state of New York during thirty-two years:—

	Canals.	Railways.	Total.	Proportions by canals.
	Tons.	Tons.	Tons.	Tons.
1869.	1,302,613	1,087,809	2,390,342	545
1870.	1,295,010	1,766,457	3,061,467	423
1871.	1,850,198	2,205,589	4,055,787	456
1872.	1,674,320	1,870,614	3,544,934	472
1873.	1,745,171	2,036,992	3,782,163	461
1874.	1,767,598	2,791,517	4,559,115	387
1875.	1,305,550	2,343,241	3,648,791	357
1876.	1,064,293	2,875,803	3,940,096	270
1877.	1,498,984	2,493,683	3,992,667	375
1878.	1,912,734	3,695,764	5,608,498	341
1879.	1,833,399	4,353,617	6,187,016	296
1880.	2,371,090	4,732,385	7,103,475	333
1881.	1,116,561	4,983,722	6,100,283	183
1882.	1,118,776	3,885,557	5,004,333	223
1883.	1,379,000	4,422,461	5,801,461	237
1884.	1,236,986	3,639,805	4,876,791	263
1885.	1,063,310	4,105,594	5,168,904	205
1886.	1,489,886	3,802,262	5,292,148	281
1887.	1,539,403	3,847,766	5,387,169	285
1888.	1,166,958	3,197,734	4,364,692	267
1889.	1,296,896	3,654,984	4,951,880	262
1890.	1,167,901	4,336,199	5,504,100	212
1891.	1,092,355	3,565,381	4,657,736	234
1892.	937,999	5,913,013	6,851,012	137
1893.	1,452,563	5,107,426	6,599,989	284
1894.	1,400,129	4,281,056	5,681,185	327
1895.	602,505	3,798,574	4,401,079	159
1896.	957,182	5,183,540	6,140,722	156
1897.	744,575	5,673,638	6,418,213	116
1898.	653,027	7,060,542	7,713,569	085
1899.	577,486	6,211,827	6,789,313	086
1900.	472,857	6,053,005	6,525,862	073

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 1885.	17·1
1869.	47·0	1886.	16·9
1879.	38·9	1887.	16·3
1871.	38·9	1888.	18·8
1872.	40·1	1889.	15·1
1873.	34·9	1890.	13·9
1874.	31·7	1891.	13·4
1875.	28·4	1892.	9·8
1876.	24·6	1893.	10·1
1877.	28·3	1894.	10·2
1878.	27·1	1895.	9·7
1879.	23·7	1896.	8·5
1880.	25·1	1897.	8·3
1881.	18·5	1898.	6·9
1882.	19·0	1899.	7·2
1883.	18·7	1900.	5·2
1884.	19·0		

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The quantity of freight carried by the canals and railways was greater in 1900 by 13,730,780 tons than the quantity carried in 1899, and an increase of 52,980,367 tons over 1869.

The quantities carried were as follows:—

	Total Tonnage.	Proportion by canals.
In 1859	5,485,076	·6890
1869	12,453,174	·4705
1870	15,148,274	·3895
1871	15,844,152	·3896
1872	16,631,609	·4012
1873	18,200,208	·3497
1874	18,283,547	·3174
1875	17,101,758	·2841
1876	16,948,627	·2462
1877	17,489,770	·2833
1878	19,017,301	·2719
1879	22,590,766	·2373
1880	25,706,586	·2512
1881	27,857,394	·1859
1882	28,693,054	·1905
1883	30,167,119	·1877
1884	26,293,844	·1905
1885	27,543,948	·1718
1886	31,168,744	·1698
1887	34,029,791	·1632
1888	26,244,610	·1883
1889	35,466,042	·1514
1890	37,624,199	·1394
1891	38,524,179	·1343
1892	43,618,569	·0982
1893	42,953,233	·1009
1894	37,916,412	·1024
1895	36,170,339	·0967
1896	43,756,051	·0849
1897	43,711,512	·0828
1898	49,311,030	·0682
1899	51,702,761	·0713
1900	65,433,541	·0512

Average freight rates, grain, Chicago to Buffalo :—(as reported by the Secretary Merchants' Exchange, Buffalo).

Year.	Wheat.	Year	Wheat.
1880.	5·7	1892.	2·2
1881.	3·2	1893.	1·6
1882.	2·5	1894.	1·2
1883.	3·5	1895.	1·9
1884.	2·1	1896.	1·7
1885.	2·0	1897.	1·5
1886.	3·6	1898.	1·5
1887.	4·1	1899.	2·5
1888.	2·7	1900.	1·8
1889.	2·5		
1890.	1·9		
1891.	2·5		
		Average twenty years ...	2·5

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COMPARATIVE STATEMENT of the Commerce through the United States, St. Mary's Falls Canal and Canadian Sault Ste. Marie Canal, for the Seasons, of 1899 and 1900.

	TRAFFIC FOR 1900.		TOTAL TRAFFIC FOR		INCREASE.	DECREASE.
	United States Canal.	Canadian Canal.	Season of 1900.	Season of 1899.	Amount.	Amount.
Vessels	16,369	3,081	19,450	20,249	.....	799
Lockages	8,479	2,205	10,684	10,999	.....	315
Tonnage registered	20,136,782	2,194,748	22,331,530	21,969,498	.....	637,968
" freight	23,607,254	2,033,677	25,643,031	25,238,803	385,228	.....
Passengers	36,313	22,280	58,593	49,361	9,232	.....
Coal (hard)	476,131	36,444	512,575	842,481	.....	329,906
" (soft)	3,488,558	493,854	3,982,412	3,097,252	885,160	.....
Flour	6,123,458	647,944	6,771,402	7,191,681	.....	420,289
Wheat	31,325,693	9,291,114	40,616,807	58,301,682	.....	17,684,875
Grain (excluding wheat)	15,062,245	1,113,414	16,181,659	30,073,806	.....	13,898,147
Manufactured and pig iron	117,086	23,575	140,661	217,556	.....	76,895
Salt	318,358	12,600	330,958	319,306	.....	.....
Copper	126,671	12,435	139,106	120,746	11,652	.....
Iron ore	999,591	5,435	1,005,026	15,333,289	.....	.....
Lumber	15,439,617	999,591	16,439,208	1,032,602,000	1,105,919	.....
Silver ore	898,993,000	7,435,806	905,528,806	.....	.....	127,073,194
Net tons	110	.....	110	487	.....	377
Building stone	43,912	3,476	47,388	40,132	.....	.....
Unclassified freight	460,760	80,512	541,272	590,658	7,256	49,386

* Included in unclassified freight for

1899. Wool 228 Tons.

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The United States canal was open to navigation during the season of—

1889	234 days.
1890	228 "
1891	225 "
1892	233 "
1893	219 "
1894	234 "
1895	231 "
1896	232 "
1897	234 "
1898	241 "
1899	231 "
1900	238 "

The Canadian canal was open to navigation during the season of—

1895	87 days.
1896	218 "
1897	238 "
1898	243 "
1899	239 "
1900	238 "

The average number of vessels passing per day through the two canals for the season of 1900 was eighty-two.

R. DEVLIN,

Compiler of Canal Statistics.

OTTAWA.

GRAIN SHIPMENTS, 1900.

Coastwise, in transit through Canada and export by Lake.

(From Report Board of Trade, Chicago.)

Grain.	Depot Harbour.	Goderich	Kingston.	Midland.	Owen Sound.	Prescott	Sarnia.	Totals.
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Barley	16,562					43,600		60,162
Corn	6,531,632	183,843	2,032,589	2,144,972	78,144	210,610	40,000	11,221,790
Flaxseed	143,932							143,932
Oats	991,119		54,812	227,285			2,501,536	3,774,752
Rye	180,485		21,304					201,789
Wheat	3,170,232	419,600	526,516	1,874,900		152,934		6,144,182
Totals	11,033,962	603,443	2,635,221	4,247,157	78,144	407,144	2,541,536	21,546,607

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EXPORTS by Lake from Chicago to Canada, during the Season of Navigation in 1900.

(From Report of Board of Trade, Chicago.)

Commodities.		Quantity.	Value.
			\$ cts.
Corn.....	Bush.	506,660	3,478,292 00
Barley.....	"	60,162	24,989 00
Flaxseed.....	"	135,532	223,676 00
Oats.....	"	1,024,216	261,161 00
Rye.....	"	201,789	114,471 00
Wheat.....	"	4,928,832	3,553,052 00
Flour.....	Barrels.	20,860	80,757 00
Starch.....	"	4,075	19,052 00
Pork.....	"	3,175	38,285 00
Lard.....	"	8,000	191,800 00
Tallow.....	"	1,726	31,967 00
Nails.....	Kegs.	7,040	33,825 00
Machinery.....	Tons.	121	58,761 00
Steel Rails.....	"	8,837	214,143 00
Lumber.....	ft. B.M.	569	12,821 00
Glucose.....	Barrels.	100	908 00
Oils.....	"	12,775	29,893 00
Oil Cake.....	Sacks.	884	1,250 00
Unclassified.....	Packages.	3,135	13,353 00
Total value.....			8,382,456 00

GRAIN FREIGHTS BY LAKE, SEASON OF 1900.

The following were the current rates on Wheat and Corn, from Chicago to Kingston, Prescott and Depot Harbour ; also from Buffalo to New York by Erie Canal, for each week during the Season of Navigation.

1900.	To OGDENSBURG.		To KINGSTON.		To PRESCOTT.		To DEPOT HARBOUR.		ERIE CANAL, BUFFALO TO NEW YORK.	
	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.	Wheat per bushel.	Corn per bushel.
April 21	cts.	cts. 4½	cts.	cts. 3½	cts. 4	cts.	cts.	cts.	cts.	cts.
" 28										
May 4		4½		3½						
" 11		3½								
" 18		3½								
" 25		2½								
June 2										
" 9										
" 16										
" 23										
" 30										
July 7										
" 14										
" 21										
" 28										
Aug. 4										
" 11				3½						
" 18				3½ to 3¼						
" 25		2½								
Sept. 1										
" 8										
" 15										
" 22		2½								
" 29										
Oct. 6										
" 13										
" 20										
" 27				2½						
Nov. 3										
" 10										
" 17										
" 24										
Dec. 1										
" 8										

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LAKE FREIGHTS FROM CHICAGO TO BUFFALO ON WHEAT AND CORN.

STATEMENT showing the dates of the changes of the ruling rates of Lake freights on Wheat and Corn from Chicago to Buffalo, during 1900 (as reported by the Secretary of the Merchants' Exchange, Buffalo).

1900.	Wheat, Bushels.	Corn, Bushels.	1900.	Wheat, Bushels.	Corn, Bushels.
Opening.	Cts.	Cts.	Opening.	Cts.	Cts.
March 29.....		3	Aug. 29.....	$1\frac{1}{2}$	$1\frac{1}{2}$
April 4.....		$2\frac{3}{4}$	" 30.....	$1\frac{1}{4}$ to $1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 7.....		$2\frac{1}{2}$ to 3	" 31.....		$1\frac{1}{2}$ to $1\frac{1}{4}$
" 14.....		$2\frac{1}{2}$	Sept. 1.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 20.....		$2\frac{1}{2}$	" 4.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 21.....	$2\frac{1}{2}$	$2\frac{1}{2}$	" 6.....		$1\frac{1}{2}$ to $1\frac{1}{4}$
" 23.....		$2\frac{1}{2}$	" 7.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 23.....		$2\frac{1}{2}$	" 8.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 30.....	$2\frac{1}{2}$	$2\frac{1}{2}$	" 10.....	$2\frac{1}{2}$	$2\frac{1}{2}$
May 2.....	$2\frac{1}{2}$	2	" 11.....	$2\frac{1}{2}$	$1\frac{1}{2}$ to 2
" 3.....		2 to $2\frac{1}{2}$	" 12.....	$2\frac{1}{2}$	
" 4.....	$2\frac{1}{2}$	2 to $2\frac{1}{2}$	" 20.....	$1\frac{1}{2}$ to 2	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 5.....		2	" 21.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 11.....		$1\frac{1}{2}$ to 2	" 22.....	$1\frac{1}{2}$ to 2	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 12.....		$1\frac{1}{2}$	" 24.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 15.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 25.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 19.....		$1\frac{1}{2}$	" 26.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 21.....	$1\frac{1}{2}$	$1\frac{1}{2}$	Oct. 8.....		$1\frac{1}{2}$
" 22.....		$1\frac{1}{2}$	" 9.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 23.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 16.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 24.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 17.....	$1\frac{1}{2}$ to $1\frac{1}{4}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 26.....		$1\frac{1}{2}$	" 18.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 28.....		$1\frac{1}{2}$ to $1\frac{1}{4}$	" 26.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 29.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 29.....		$1\frac{1}{2}$
" 31.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$	Nov. 1.....		$1\frac{1}{2}$
June 1.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$	" 2.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 3.....		$1\frac{1}{2}$	" 9.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 6.....		$1\frac{1}{2}$	" 12.....	$1\frac{1}{2}$ to $1\frac{1}{4}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 7.....		$1\frac{1}{2}$ to 2	" 13.....	$2\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 8.....		2	" 14.....	$1\frac{1}{2}$ to 2	$1\frac{1}{2}$ to $1\frac{1}{4}$
July 3.....	$2\frac{1}{2}$	2	" 15.....	$1\frac{1}{2}$	$1\frac{1}{2}$
Aug. 7.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 16.....	$1\frac{1}{2}$ to $1\frac{1}{4}$	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 8.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 17.....	$1\frac{1}{2}$	$1\frac{1}{2}$
" 10.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 19.....	$1\frac{1}{2}$ to 2	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 11.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 20.....	2	$1\frac{1}{2}$ to $1\frac{1}{4}$
" 13.....	$1\frac{1}{2}$	$1\frac{1}{2}$ to $1\frac{1}{4}$	" 21.....	$2\frac{1}{2}$	2 to $2\frac{1}{4}$
" 14.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 22.....	$2\frac{1}{2}$	$2\frac{1}{2}$
" 15.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 27.....	3	$2\frac{1}{2}$
" 18.....	$1\frac{1}{2}$	$1\frac{1}{2}$	Dec. 1.....		$2\frac{1}{2}$
" 20.....	$1\frac{1}{2}$	$1\frac{1}{2}$	" 3 to close.....	$3\frac{1}{4}$	3
" 23.....	$1\frac{1}{2}$	$1\frac{1}{2}$			

Rates from Milwaukee, about the same, as from Chicago.

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AVERAGE LAKE FREIGHTS.

The following statement shows the average rates of lake freights on wheat and corn between Chicago and Buffalo during each month in the past ten years, the highest and lowest rate on wheat in each year, and the average rate on wheat each year in cents, per bushel :—

(Per Report of the Secretary of Merchants' Exchange, Buffalo.)

Grain, bushel.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1891 { Wheat.....	1.4	1.2	2.1	2.7	3.3	2.2	4.1
1891 { Corn.....	1.2	1.1	2.0	2.5	3.0	2.1	3.8
Highest rate, wheat, 1891, 5½c. ; lowest, 1c. ; average for the season, 2.4c.							
1892 { Wheat.....	1.9	1.8	2.0	2.3	2.3	2.3	2.6
1892 { 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
1893 { 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
1894 { Corn.....	1.2	1.1	0.9	0.9	1.3	1.0	1.3
Highest rate, wheat, 1894, 3c. ; lowest, ½c. ; average for the season, 1.2c.							
1895 { Wheat.....	1.2	1.2	1.1	1.6	2.1	3.0	3.0
1895 { 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
1896 { 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.							
1897 { Wheat.....	1.3	1.2	1.3	1.5	2.0	1.8	1.5
1897 { Corn.....	1.2	1.1	1.2	1.4	1.8	1.7	1.4
Highest rate, wheat, 1897, 2½c. ; lowest, 1c. ; average for the season, 1.5c.							
1898 { Wheat.....	1.3	0.1	0.9	1.2	1.4	2.5	2.3
1898 { Corn.....	1.2	0.8	0.8	1.1	1.3	2.3	2.1
Highest rate, wheat, 1898, 3¼c. ; lowest, 1¼c. ; average for the season, 1.5c.							
1899 { Wheat.....	2.0	2.0	2.2	2.5	3.1	3.5	2.5
1899 { Corn.....	1.8	1.9	2.0	2.3	3.2	3.4	2.3
Highest rate, wheat, 1899, 3¾c. ; lowest, 1¾c. ; average for the season, 2.5c.							
1900 { Wheat.....	1.8	1.9	2.1	1.6	1.7	1.7	2.0
1900 { Corn.....	1.6	1.7	2.0	1.5	1.6	1.5	1.8
Highest rate, wheat, 1900, 3c. ; lowest, 1¼c. ; average for the season, 1.8c.							

1-2 EDWARD VII., A. 1902

LAKE FREIGHTS FROM DULUTH TO BUFFALO ON WHEAT (AS REPORTED BY THE SEC. OF THE MERCHANTS EXCHANGE, BUFFALO, N.Y.).

The following statement shows the Lake Freight rates on Wheat from Duluth to Buffalo, during the season of 1900:—

1900.		Wheat Bushels.	1901.		Wheat Bushels.
		Cts.			Cts.
April	24.	33	July	16.	21
"	25.	31	"	18.	2
"	27.	33	"	28.	13
May	5.	3	Aug.	3.	13
"	9.	23	"	27.	13
"	11.	21	Sept.	5.	14
"	23.	21	"	7.	2
"	25.	2	"	13.	13
"	29.	21	"	14.	13
"	31.	23	"	26.	13
June	6.	23	Oct.	15.	15
"	9.	23	"	17.	14
"	14.	21	Nov.	13.	13
"	18.	21	"	16.	2
"	29.	23	"	24.	23
July	9.	21	"	26.	23
"	13.	23	"	27.	3
"	14.	21	"	28 to end of season.	31

In 1885, the range of freights on wheat, Duluth to Buffalo, was $1\frac{1}{2}$ to 5c.; in 1886, $3\frac{1}{4}$ to 8c.; in 1887, 5 to 8c.; in 1888, 2 to 5c.; in 1889, 2 to 5c.; in 1890, 2 to 5c.; in 1891, $1\frac{1}{4}$ to $9\frac{1}{2}$ c.; in 1892, $2\frac{1}{4}$ to 4c.; in 1893, $1\frac{1}{4}$ to $3\frac{1}{2}$ c.; in 1894, $1\frac{1}{4}$ to 3c.; in 1895, 2 to 6c.; in 1896, $1\frac{1}{4}$ to 3c.; in 1897, 1 to $2\frac{1}{2}$ c.; in 1898, 1 to $3\frac{1}{2}$ c.; in 1899, $2\frac{1}{2}$ to 6c.; and in 1900, $1\frac{1}{2}$ to $3\frac{3}{4}$ c. per bushel.

The first departure by lake, at Duluth, in 1900, was on April 22; in 1899, on April 29; in 1898, was on April 16; in 1896, on April 22, and in 1895, on April 21. In 1894, season opened on April 19; in 1893, on May 8; in 1892, on April 21; in 1891, on April 30; in 1890, on March 26; in 1889, on April 20; in 1888, on May 12; in 1887, on May 4; in 1886, on May 7.

Wheat was shipped at Kingston, Canada, per bushel, during the season of 1887, at $6\frac{1}{4}$ to $7\frac{3}{4}$ c.; in 1888, at 4 to 5c.; in 1889, at —, in 1890, $5\frac{3}{4}$, $5\frac{1}{2}$, $4\frac{1}{2}$, $4\frac{1}{4}$, 4c.; in 1891, during May, $3\frac{3}{4}$, $3\frac{1}{2}$, $2\frac{1}{2}$ c.; during June, 3c.; and on July 25, $2\frac{1}{2}$ c.; in 1892, 5c. in April; 5 to $5\frac{1}{4}$ c. in May; 4c. in June, $4\frac{1}{2}$ c. in July; 3c. in August; 6 to $6\frac{1}{4}$ c. in October; in 1893, ranged from $5\frac{1}{2}$ to $4\frac{1}{2}$ c. in April; $4\frac{1}{2}$ to $4\frac{3}{4}$ c. in May; 4 to $3\frac{1}{2}$ c. in June; $2\frac{3}{4}$ to 3c. in July; $3\frac{1}{2}$ to $3\frac{3}{4}$ c. in September; no figures quoted after that date. In 1894, ranged from $3\frac{1}{4}$ to $3\frac{1}{2}$ c. in May; $3\frac{1}{2}$ c. in June; $2\frac{1}{2}$ c. in July; $2\frac{1}{2}$ c. to $3\frac{1}{4}$ c. in August; 4c. in September, and $4\frac{1}{4}$ c. in October. On August 25 and November 3, 1894, wheat to Ogdensburg, at $3\frac{1}{4}$ c. and $4\frac{1}{2}$ c. respectively. In 1895, wheat to Kingston from 3c. to 5c. In 1896, wheat to Kingston from 3c. to $5\frac{1}{2}$ c.; and in 1897, wheat to Kingston 3c. to $3\frac{1}{2}$ c, according to time of year; 1898 and 1899 not given.

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LAKE FREIGHTS FROM TOLEDO TO BUFFALO ON WHEAT.

The following statement shows the ruling rates of Lake Freights, on wheat from Toledo to Buffalo, during the season of 1900 on the dates specified, as reported by the Secretary Merchants Exchange Buffalo.

Date, 1900.	Wheat and Corn per Bushels.	Date, 1900.	Wheat Bushels.
	Cts.		Cts.
Opening to August 1.....	1½	August 1 to close of season.....	2

The range for 1886 was $1\frac{3}{4}$ to 3c.; for 1887, $2\frac{1}{4}$ to 3c.; for 1888, $1\frac{1}{2}$ to $2\frac{1}{8}$ c.; for 1889, $1\frac{3}{4}$ to 2c.; for 1890, $1\frac{1}{2}$ to 2c.; for 1891, 1 to 3c.; for 1892, $1\frac{1}{2}$ to $2\frac{1}{2}$ c.; for 1893, 1 to 2c.; for 1894, 1 to 2c.; for 1895, 1 to $2\frac{1}{4}$ c.; for 1896, $1\frac{1}{4}$ to $1\frac{3}{4}$ c.; for 1897, 1 to $1\frac{1}{4}$ c., and for 1898, 1 to $1\frac{1}{2}$ c.; for 1899, $1\frac{1}{2}$ to 2c., and for 1900, $1\frac{1}{2}$ to 2c. per bushel.

From Toledo to Ogdensburg, wheat and corn shipped, at 6 to 7 $\frac{1}{2}$ c. in 1887; at 4 $\frac{1}{2}$ to 6c. for wheat and 5c. for corn in 1888; and 5c. to 5 $\frac{1}{2}$ c. for wheat in 1889 per bushel. From Toledo, on October 8, 1887, corn shipped to Kingston at 3 $\frac{1}{2}$ c. and on November 12, at 4 $\frac{1}{2}$ c. per bushel. In 1888, corn Toledo to Kingston, 4 $\frac{1}{2}$ c. to 3c.; and wheat at 3 $\frac{1}{2}$ to 3c. per bushel. In 1889, wheat Toledo to Kingston, 3c.; and in 1891, rye Toledo to Kingston at 3c. per bushel. From Toledo, on June 2, 1887, wheat shipped to Montreal by propeller at 6 $\frac{1}{2}$ c.; on June 14, corn at same price; but on September 26, the rate on corn was only 5c. per bushel. In 1888, corn Toledo to Montreal, at 6 to 5 $\frac{1}{2}$ c. and wheat at 5 $\frac{1}{2}$ c. per bushel. From 1889 to 1899, no shipments to Montreal or other places in Canada reported.

CANAL FREIGHT FROM BUFFALO TO NEW YORK.

The following shows the changes in the ruling rates of freight to New York from Buffalo, on the days specified in 1900 (as reported by the Secretary, Merchants' Exchange, Buffalo).

Date, 1900.	Wheat. Bush.	Corn. Bush.	Date, 1900.	Wheat. Bush.	Corn. Bush.
	Cts.	Cts.		Cts.	Cts.
April 25.....	2½	2¼	October 1.....	2½	2¼
May 22.....	2½	2	" 5.....	2½	2¼
July 19.....	2½	2¼	" 31.....	3½	3½
Aug. 3.....	2½	1½	Nov. 15 to close.....	3½	3
" 17.....	2¼	2			

The freight on oats varied from $1\frac{1}{8}$ to $1\frac{5}{8}$ c. per bushel.

Pine lumber per 1,000 feet, was carried from Buffalo and Tonawanda to New York as follows: Opened at \$2.00; June \$2.00; July \$1.65; August \$1.50; October \$1.75 closed at \$2.00. Rates to Albany opened at \$1.50; July \$1.15; August \$1.00; October \$1.25; closed at \$1.50.

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AVERAGE CANAL FREIGHTS.

BUFFALO TO NEW YORK.

The following statement shows the average rates of canal freights on wheat and corn between Buffalo and New York during each month in the past ten years, and the highest and lowest rates on wheat and average rate on wheat in each:—

(Reported by Sec. Merchants' Exchange, Buffalo.)

Grain.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
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, 2½c.; average for the season, 3½c							
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, 3½c.							
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, 3½c.; average for the season, 4½c.							
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, 2½c.; average for the season, 3½c.							
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, 1½c.; average for the season, 2½c.							
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, 3½c.; average for the season, 3½c.							
1897 { Wheat.....	2·6	2·2	2·3	2·5	3·3	3·1	3·5
{ Corn.....	2·2	1·8	2·0	2·2	2·8	2·6	3·0
Highest rate, wheat, 1897, 3½c.; lowest, 2c.; average for the season, 2½c.							
1898 { Wheat.....	3·0	2·9	2·8	2·7	2·6	3·0	3·0
{ Corn.....	2·5	2·3	2·4	2·1	2·2	2·6	2·6
Highest rate, wheat, 1898, 3½c.; lowest, 2½c.; average for the season, 2½c.							
1899 { Wheat.....	2·5	2·7	2·4	2·5	2·5	3·6	4·2
{ Corn.....	2·3	2·3	2·1	2·1	2·2	3·0	3·5
Highest rate, wheat, 1899, 4½c.; lowest, 2½c.; average for the season, 3½c.							
1900 { Wheat.....	2·4	2·2	2·3	2·3	2·2	2·7	3·5
{ Corn.....	2·1	2·0	2·1	2·0	2·0	2·4	3·0
Highest rate, wheat, 1900, 3½c.; lowest, 2c.; average for the season, 2½c.							

NOTE.—Canal free of tolls since 1882.

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FREIGHT, TOLLS, ELEVATING AND STORAGE RATES COMPARED.

The following statement shows the receipts of grain and flax seed at Buffa'lo, 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	1
1882	51,501,503	5·4	1·0	1
1883	65,722,080	4·9	None.	1
1884*	58,011,800	4·2	do	1
1885*	52,671,090	3·8	do	1
1886*	75,570,850	5·0	do	1
1887*	87,073,570	4·6	do	1
1888*	73,977,390	3·4	do	1
1889*	92,290,550	4·8	do	1
1890*	91,994,680	3·8	do	1
1891*	135,315,510	3·5	do	1
1892*	138,872,560	3·5	do	1
1893*	140,796,410	4·6	do	1
1894*	105,435,577	3·2	do	1
1895*	121,225,497	2·2	do	1
1896*	172,474,664	3·7	do	1
1897*	204,964,103	2·8	do	1
1898*	221,383,945	2·8	do	1
1899*	153,393,184	3·0	do	1
1900*	157,655,968	2·5	do	1

NOTE—Prior to 1870 tolls 6·21 cents per bushel, and the elevating charge 2 cents per bushel.

* Including flax seed.

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AVERAGE FREIGHT CHARGES PER BUSHEL.

For the transportation of wheat and corn from Chicago to New York for a series of years.

(From Report of Board of Trade, Chicago.)

	CORN.			WHEAT.		
	By lake and canal.	By lake and rail.	By all rail.	By lake and canal.	By lake and rail.	By all rail.
1858	·127		·3619	·1550		·3861
1859	·1570		·3248	·1663		·3480
1860	a ·0833		·3248	a ·095		·3480
1861	a ·1062		·3881	a ·1210		·4158
1862	a ·0957		·4480	a ·1062		·4800
1863	a ·063		·4592	a ·072		·4920
1864	a ·09		·5600	a ·0952		·60
1865	a ·0864		·4188	a ·0894		·4488
1866	a ·1075		·4312	a ·1377		·4620
1867	a ·0511		·4176	a ·08		·4475
1868	a ·0604		·3532	a ·0802		·3784
1869	a ·0584	·2355	·3320	a ·0651	·2520	·3557
1870	a ·16	·2220	·28	a ·0677	·2250	·30
1871	a ·0754	·2372	·2968	a ·0687	·2542	·3180
1872	a ·1072	·2660	·3266	a ·1110	·2950	·3499
1873	a ·0816	·2298	·2893	a ·0917	·2461	·3102
1874	a ·0382	·1388	·2450	a ·0400	·1709	·2625
1875	a ·034	·1303	·2240	a ·0378	·1389	·2400
1876	b ·0875	·1079	·1574	b ·0982	·1136	·1686
1877	b ·0959	·1406	·1890	b ·1109	·1546	·2050
1878	b ·0883	·1053	·1652	b ·0996	·1209	·1770
1879	b ·1049	·1220	·1456	b ·1187	·1313	·1774
1880	b ·1341	·1443	·1748	b ·1313	·1580	·1980
1881	b ·0777	·0942	·1340	b ·0867	·1049	·1440
1882	b ·0672	·1028	·1350	b ·0723	·1091	·1447
1883	b ·0803	·11	·1512	b ·0901	·1163	·1620
1884	b ·0655	·085	·1232	b ·07	·10	·1320
1885	b ·063	·0801	·1232	b ·0654	·0902	·1320
1886	b ·0845	·1120	·14	b ·0910	·12	·1500
1887	b ·0850	·1120	·1470	b ·0950	·12	·1575
1888	b ·0671	·1026	·1354	b ·0705	·1114	·1450
1889	b ·0632	·0819	·126	b ·0692	·0897	·1500
1890	b ·0593	·0732	·1136	b ·0676	·0852	·1430
1891	b ·0632	·0753	·1400	b ·0695	·0857	·1500
1892	b ·0595	·0721	·1296	b ·0645	·0759	·1380
1893	b ·0718	·0797	·1365	b ·0766	·0848	·1463
1894	b ·0493	·0650	·1232	b ·0511	·0700	·1320
1895	b ·0450	·0640	·1029	b ·0486	·0696	·1189
1896	b ·0575	·0615	·1050	b ·0619	·0661	·1200
1897	b ·0453	·0692	·1143	b ·0522	·0742	·1250
1898	‡ ·0381	·0441	·0980	‡ ·0445	·0491	·1200
1899	‡ ·0508	·0583	·1008	‡ ·0581	·0663	·1160
1900			·0919			·0996

a To Buffalo only. b Including Buffalo charges and tolls. ‡ Exclusive of Buffalo charges.

SESSIONAL PAPER No. 20

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.	1900.	1899.	1898.	1897.	1896.
		\$		\$	\$	\$
Liverpool	Grain	2498	2972	3435	3360	3350
"	Sacked flour	2790	3012	3766	3681	3430
"	Provisions	4884	4050	4715	4440	4491
Glasgow	Grain	3098	3235	3600	3523	3422
"	Sacked flour	3156	3125	3906	3906	3650
"	Provisions	5531	4469	5250	5250	4997
London	Grain	3110	3060	3500	3400	3348
"	Sacked flour	3501	3350	3725	3612	3528
"	Provisions	5587	4414	4969	4814	4715
Antwerp	"	5109	4750	5250	5109	4969
Hamburg	"	5000	4600	5200	5100	5100
Amsterdam	"	5100	4700	5250	5200	5200
Rotterdam	"	5100	4700	5250	5200	5200
Copenhagen	"	5531	5172	5813	5728	5812
Stockholm	"	6450	6297	6925	6853	6937
Stettin	"	5531	5172	5813	5728	5812
Bordeaux	"	6412	5912	6575	6413	6413

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LAKE FREIGHTS ON COAL FROM BUFFALO TO CHICAGO AND OTHER PORTS.

The following statement shows the ruling rates on Coal, per net ton, in cents from Buffalo to the Ports named, during the season of 1900, for the week ending on the dates specified :—

Week ending.	Chicago.	Milwaukee.	Duluth and Superior.	Racine.	Waukegan.	Toledo.
1900.	cts.	cts.	cts.	cts.	cts.	cts.
April 7.	75	70	50	.....	.....	40
" 13.	75	70	50	.....	80	40
May 1.	75	70	50	.....	75	40
" 3.	75	70	50	75	75	40
June 16.	75	70	40	75	75	40
" 18.	65	60	40	65	65	40
July 13.	50	50	40	65	65	40
" 23.	40	40	40	65	65	40
" 27.	40	40	35	40	65	35
Aug. 11.	30	30	30	40	65	35
" 13.	30	30	30	40	35	35
" 20.	30	30	30	35	35	30
Oct. 12.	30	30	30	40	35	30
" 19.	30	30	30	50	35	30
" 22.	50	50	30	50	35	30
" 27.	75	75	30	50	35	30
Nov. 24.	75	75	30	70	35	30
" 28.	75	75	75	70	.....	.....
" 30.	75	75	75	100	.....	.....

SESSIONAL PAPER No. 20

TOTAL VALUES OF MERCHANDISE RECEIVED FROM BRITISH NORTH AMERICA FOR IMMEDIATE TRANSIT ACROSS UNITED STATES TERRITORY, FOR IMMEDIATE TRANSHIPMENT IN PORTS OF THE UNITED STATES TO BRITISH NORTH AMERICA, AND SO SHIPPED, DURING EACH YEAR FROM 1873 TO 1900 INCLUSIVE.

YEAR ENDING JUNE 30.	COUNTRIES FROM WHICH RECEIVED.					COUNTRIES TO WHICH SHIPPED.				
	British North America.					British North America.				
	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, On- tario, Mani- toba and the North- west Terri- tories.	British Columbia.	Newfound- land and Labrador.	Total.	Nova Scotia, New Brunswick, and Prince Edward Island.	Quebec, On- tario, Mani- toba and the North- west Terri- tories.	British Columbia.	Newfound- land 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	7,156,636	19,843,169	317,534	.....	27,310,739
1875	443,570	17,342,933	256,074	.....	18,042,577	8,999,596	20,283,639	517,060	.....	29,800,295
1876	261,443	22,134,275	195,047	1,137	22,591,902	9,162,600	14,658,358	658,836	94	24,419,888
1877	160,658	12,092,619	218,418	.....	12,471,695	2,879,422	15,551,238	544,018	2,475	18,977,153
1878	163,978	11,627,114	412,965	.....	12,204,058	951,268	11,436,470	524,013	934	12,912,685
1879	194,129	11,606,832	280,079	55	12,081,095	889,539	11,520,877	476,824	2,317	12,889,587
1880	215,131	16,782,315	137,271	.....	17,134,717	1,643,716	14,866,663	531,436	288	17,042,103
1881	171,383	16,758,108	72,555	.....	17,092,046	1,778,836	20,857,827	719,268	333	23,356,264
1882	164,990	28,265,083	413,018	87	28,543,178	2,732,665	34,005,845	855,784	1,190	37,545,484
1883	561,791	29,294,631	36,973	25	29,862,820	2,455,657	35,878,389	971,307	7,335	39,312,568
1884	656,233	12,574,953	188,011	.....	13,419,227	1,740,900	19,717,466	1,475,833	5,186	22,499,385
1885	423,806	12,280,483	308,691	633	13,523,613	1,635,442	16,448,942	1,615,293	781	19,700,498
1886	1,165,973	9,303,864	359,104	.....	10,861,020	2,040,298	16,369,429	1,825,178	6,174	20,241,079
1887	1,684,730	213,816	.....	32,079	11,501,721	1,621,748	18,450,169	635,841	70	22,187,955
1888	1,525,048	6,417,701	372,934	27,134	8,542,817	1,781,028	13,459,167	376,322	1,137	13,611,656
1889	2,596,233	8,355,178	294,359	89,853	11,336,123	2,484,787	18,993,467	665,527	2,704	22,146,975
1890	3,070,657	12,449,772	306,897	174,584	16,001,910	5,277,610	21,140,198	913,106	4,690	27,335,204
1891	3,859,079	15,310,915	422,806	187,640	19,780,470	5,665,614	21,695,992	547,141	34,273	27,883,023
1892	4,393,062	19,065,704	291,373	328,116	23,928,255	2,073,783	24,189,181	428,188	6,962	26,704,114
1893	16,094,425	89,565	381,986	381,986	17,885,573	2,652,357	20,232,400	409,055	26,289	22,790,111
1894	1,076,676	15,649,881	348,069	273,467	17,342,093	1,831,417	17,880,688	463,471	6,640	26,182,216
1895	1,199,782	17,774,108	411,557	236,415	19,621,862	1,884,745	19,329,714	558,901	7,844	21,732,294
1896	1,118,185	18,038,931	582,469	404,020	20,143,605	1,572,783	19,441,279	772,586	4,768	21,788,416
1897	22,497,151	.....	611,322	367,295	24,593,823	1,682,538	17,660,211	1,312,797	8,130	29,663,676
1898	35,396,639	.....	1,744,289	553,706	39,366,984	1,536,413	22,400,622	2,291,356	19,247	26,250,638
1899	1,618,399	37,083,928	561,129	553,031	41,127,899	1,245,518	27,452,333	4,685,559	27,147	25,555,013
1900	2,002,264	37,657,936	3,911,668	553,031	41,127,899	1,245,518	27,452,333	4,685,559	49,555	31,178,271

SESSIONAL PAPER No. 20

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 1900 inclusive, with the percentage carried in American vessels (colu 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.			IMPORTS AND EXPORTS.			Percentage carried in American vessels.
	In cars and other land vehicles.	In American vessels.	In Foreign vessels.	In cars and other land vehicles.	In American vessels.	In Foreign vessels.	In cars and other land vehicles.	In American vessels.	In Foreign vessels.	Total.
	¢	¢	¢	¢	¢	¢	¢	¢	¢	¢
1857		259,116,170	101,773,971		251,214,857	111,745,825		510,331,027	213,519,796	723,850,823
1858		293,700,016	78,913,134		243,491,288	81,153,133		447,191,304	160,066,267	607,257,571
1859		216,123,428	122,644,792		249,617,953	107,171,509		465,741,381	229,816,211	695,557,592
1860		228,164,895	134,001,399		279,082,902	121,639,391		597,247,757	255,040,793	762,288,550
1861		201,544,055	134,106,098		179,972,733	69,327,180		381,516,788	203,478,278	584,995,066
1862		92,274,100	113,497,629		125,421,318	104,517,667		241,635,118	218,013,296	459,648,414
1863		109,744,580	143,175,340		132,127,891	199,880,691		241,872,471	343,656,631	584,528,502
1864		81,212,077	248,350,818		102,849,409	237,442,730		184,061,486	485,743,548	669,805,034
1865		74,385,116	174,170,336		93,017,756	252,839,588		167,402,872	437,010,124	604,412,996
1866		112,040,395	333,471,763		183,671,466	351,711,861		325,711,861	685,226,691	1,010,938,552
1867		117,269,536	300,622,035		210,623,368	380,708,368		297,381,573	591,546,071	889,927,647
1868		122,905,225	248,659,583		175,106,348	301,886,491		289,956,772	586,492,012	876,448,784
1869		136,802,024	300,512,231		153,154,748	285,379,738		352,969,401	638,927,488	991,896,889
1870		153,285,777	309,140,510		190,378,324	329,801,982		353,664,172	735,822,576	1,132,476,258
1871	15,187,354	163,295,010	363,020,644	7,798,156	190,378,462	392,801,982	22,985,510	345,341,101	839,346,362	1,212,328,362
1872	17,635,681	177,286,302	445,416,783	10,015,089	168,044,799	393,929,579	27,650,770	345,341,101	839,346,362	1,212,328,362
1873	17,070,518	174,739,834	471,806,765	10,799,430	171,566,758	394,915,886	27,869,978	345,341,101	839,346,362	1,212,328,362
1874	14,513,335	176,027,778	405,329,135	8,509,205	174,424,216	333,885,971	23,022,540	345,341,101	839,346,362	1,212,328,362
1875	13,083,859	157,872,726	382,949,568	7,304,356	156,385,066	501,838,919	20,388,235	345,341,101	839,346,362	1,212,328,362
1876	12,148,667	143,389,704	321,139,500	6,321,487	197,686,467	492,215,487	18,473,151	345,341,101	839,346,362	1,212,328,362
1877	10,697,640	151,834,067	320,565,833	6,797,170	164,826,214	539,354,763	17,464,810	345,341,101	839,346,362	1,212,328,362
1878	12,963,999	146,499,282	307,407,565	7,511,365	166,551,624	569,583,564	20,477,364	345,341,101	839,346,362	1,212,328,362
1879	11,983,823	143,591,559	310,499,559	7,439,862	128,425,339	600,769,633	19,423,685	345,341,101	839,346,362	1,212,328,362
1880	15,142,465	149,317,368	503,494,913	5,838,928	109,023,209	720,770,321	20,381,393	345,341,101	839,346,362	1,212,328,362
1881	17,193,213	133,261,146	491,840,269	8,259,308	116,955,324	777,162,714	25,452,512	345,341,101	839,346,362	1,212,328,362
1882	22,854,946	130,266,826	571,517,892	12,118,371	96,962,919	641,469,967	34,973,817	345,341,101	839,346,362	1,212,328,362
1883	23,003,048	136,002,900	564,175,576	25,089,844	101,418,210	694,331,348	48,092,892	345,341,101	839,346,362	1,212,328,362
1884	20,140,294	135,046,207	512,511,192	26,573,774	98,652,828	615,287,007	45,332,775	345,341,101	839,346,362	1,212,328,362
1885	21,149,476	112,804,052	448,513,801	24,183,299	82,001,691	636,064,765	46,714,068	345,341,101	839,346,362	1,212,328,362
1886	24,555,683	118,942,817	491,957,636	19,144,667	78,406,680	581,973,477	43,700,350	345,341,101	839,346,362	1,212,328,362
1887	27,562,659	121,365,493	543,392,216	21,389,666	72,991,253	621,802,292	48,951,725	345,341,101	839,346,362	1,212,328,362

VALUE of the Imports and Exports of the United States carried respectively in cars and other land vehicles, &c.—*Concluded.*

Year ending June 30.	IMPORTS.			EXPORTS.			IMPORTS AND EXPORTS.			Percentage carried in American vessels.
	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	In cars and other land vehicles	In American vessels.	In Foreign vessels.	Total.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1888.....	32,200,459	123,525,298	568,222,357	22,147,368	67,332,175	606,474,964	54,356,827	190,857,473	1,174,097,321	1,419,911,621
1889.....	38,227,861	120,782,910	586,120,881	28,436,517	83,022,198	630,942,660	66,664,378	203,805,108	1,217,063,541	1,487,533,027
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	1,647,131,033
1891.....	40,952,755	127,471,678	676,511,763	31,923,439	78,968,047	773,589,324	72,856,194	206,439,725	1,450,101,087	1,729,397,006
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
1893.....	44,121,094	127,095,434	695,184,394	43,862,947	70,070,073	733,132,174	87,984,041	197,765,507	1,428,316,568	1,714,066,116
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
1895.....	33,201,988	108,229,615	590,538,362	49,902,754	62,277,581	695,357,830	83,101,742	170,507,196	1,285,896,192	1,589,508,130
1896.....	35,555,079	117,299,074	626,890,521	61,131,125	70,392,813	751,083,000	96,664,204	187,491,887	1,377,973,521	1,662,331,612
1897.....	35,812,620	109,133,454	619,784,338	63,082,905	79,441,823	905,969,428	100,894,925	189,075,277	1,525,753,766	1,815,723,968
1898.....	30,427,784	93,535,867	492,086,003	73,283,704	67,792,150	1,090,406,476	103,711,488	161,328,017	1,582,492,479	1,847,531,984
1899.....	33,424,821	82,050,118	581,673,550	83,870,907	78,562,088	1,064,590,307	117,295,728	160,612,206	1,646,263,857	1,924,171,791
1900.....	44,412,509	104,304,940	701,223,735	110,483,141	90,779,252	1,193,220,689	154,895,650	195,084,192	1,894,444,424	2,244,424,266

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.

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STATEMENT showing the Total Values of Foreign Merchandise transported in the In-Transit and Transshipment Trade of the United States with the British North American Possessions during each year from 1871 to 1900.

Year ending June 30.	Received for transit and transshipment from British North American Possessions.			Shipped in transit to or transshipment 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	19,337,342	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	35,389,318	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.....	8,593,344	1,267,676	10,861,020	19,428,867	812,212	20,241,079
1887.....	9,377,041	2,127,630	11,504,721	20,178,365	2,009,590	22,187,955
1888.....	6,309,024	2,033,793	8,342,817	13,347,876	2,063,780	15,611,656
1889.....	8,303,171	3,032,952	11,336,123	19,299,966	2,849,263	22,149,229
1890.....	13,524,298	2,477,612	16,001,910	24,788,152	2,547,052	27,335,201
1891.....	18,065,925	1,714,545	19,780,470	25,185,706	2,697,317	27,883,023
1892.....	21,346,413	2,581,842	23,928,255	23,989,746	2,714,368	26,704,114
1893.....	13,807,662	4,077,911	17,885,573	20,151,432	2,568,679	22,720,111
1894.....	13,501,664	3,840,429	17,342,093	17,974,332	2,207,884	20,182,216
1895.....	14,068,922	5,552,940	19,621,862	18,752,226	2,970,068	21,722,294
1896.....	13,408,578	6,735,027	20,143,605	18,335,373	3,453,043	21,788,416
1897.....	17,665,422	6,928,401	24,593,823	18,430,841	2,232,835	20,663,676
1898.....	27,277,049	12,059,935	39,336,984	22,792,971	3,457,667	26,250,638
1899.....	28,248,759	8,312,962	36,561,721	22,593,761	2,941,282	25,535,043
1900.....	33,346,150	10,781,749	44,127,899	27,996,981	3,481,290	31,478,271

NOTE.—This movement forms no part of the import and export trade.

1-2 EDWARD VII., A. 1902

C.—TABLE showing the Tonnage of the undermentioned Articles moved

Years.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Vegetable Food.*
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	71,051	670,534	256,475	99,012	92,309	13,489	99,743
1870	54,978	658,524	193,129	123,191	117,941	19,520	127,727
1871	41,211	748,549	672,057	113,992	129,891	34,563	109,935
1872	20,534	403,903	902,753	120,061	92,950	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	339,982	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
1897	3,206	180,035	312,776	100,337	50,345	66,387	31,489
1898	1,854	69,986	364,248	89,906	76,244	7,745	43,044
1899	1,247	282,422	92,670	78,627	93,733	5,931	22,856
1900	1,171	138,302	189,013	63,204	36,435	10,478	34,254

* Apples, meal, all kinds, pease, potatoes.

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on all Canals in the State of New York, during a series of thirty-two years.

HEAVY GOODS.						
Total.	Railway Iron	Other Iron.	Salt.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,302,613	137,677	79,652	263,333	1,324,408	183,992	1,989,062
1,295,010	135,930	89,708	266,740	1,558,185	238,802	2,289,365
1,850,198	178,269	100,310	248,709	1,194,037	289,952	2,011,277
1,674,320	161,667	96,996	248,558	1,462,590	377,592	2,347,403
1,745,171	53,363	62,581	216,706	1,625,859	415,968	2,374,477
1,767,598	24,511	82,955	173,590	1,413,162	232,544	1,926,762
1,305,550	36,603	95,305	186,785	1,217,091	283,219	1,819,003
1,064,293	11,691	69,450	114,070	1,036,698	173,530	1,405,439
1,498,984	10,341	58,828	156,918	1,286,881	250,573	1,763,541
1,912,734	8,385	65,642	139,927	889,873	210,078	1,313,905
1,833,399	27,634	99,568	136,021	971,074	314,411	1,548,708
2,371,090	93,613	139,993	144,487	959,342	370,884	1,709,319
1,116,561	78,650	205,005	113,756	1,092,003	337,873	1,827,287
1,118,776	58,921	122,786	108,040	1,228,435	364,361	1,882,543
1,379,000	46,553	47,412	190,392	1,152,849	293,892	1,731,098
1,236,986	28,513	54,471	161,788	954,288	210,610	1,400,670
1,063,310	12,215	38,726	161,272	1,025,941	195,750	1,433,904
1,489,886	10,878	152,030	112,002	857,884	269,914	1,402,708
1,552,764	21,368	224,979	124,054	905,424	243,578	1,539,403
1,166,958	2,596	43,881	106,344	1,219,680	259,269	1,631,770
1,296,896	3,278	78,135	112,100	1,094,897	234,948	1,523,358
1,167,901	5,800	26,804	93,181	830,154	202,072	1,157,291
1,092,335	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	33,309	682,167	89,998	931,693
744,575	5,080	71,117	66,879	646,803	76,311	866,190
653,027	6,288	101,216	85,525	626,616	73,199	892,844
577,486	2,725	69,106	91,068	777,743	205,234	1,145,876
472,857	833	49,036	88,635	809,187	103,514	1,051,205

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D.—TABLE showing the total Tonnage of the undermentioned Articles moved Up and

YEAR.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	45,674	313,825	120,599	20,951	.....	904	1,937
1872.....	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.....	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.....	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.....	13,964	253,835	103,749	35,751	3,383	917	6,337
1876.....	15,778	201,906	144,501	18,455	24,496	1,454	3,198
877.....	13,558	253,953	160,196	19,870	2,810	2,439	2,355
1878.....	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879.....	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.....	12,679	242,020	163,738	17,772	477	1,016	1,480
1881.....	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882.....	12,261	215,056	54,799	20,126	611	3,226	403
1883.....	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.....	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.....	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886.....	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.....	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890.....	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891.....	13,517	198,658	185,180	8,113	52,959	65,888	28,042
1892.....	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893.....	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894.....	33,628	270,993	169,233	28,353	27,962	567	60,673
1895.....	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896.....	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897.....	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898.....	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899.....	11,625	197,732	204,004	2,907	24,037	923	18,460
1900.....	10,968	137,800	163,509	4,035	41,055	3,538	14,815

* Fiscal.

† Apples, meal, all kinds, pease, potatoes.

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Down through the Welland Canal, during a period of thirty years, ended Dec. 31, 1900.

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	3,678
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
306,432	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315

1-2 EDWARD VII., A. 1902

E.—Table showing the tonnages of the undermentioned Articles Cleared at Buffalo and Tonawanda, for transit through the Erie Canal, for a series of thirty-two years.
VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.	5,609	490,904	219,874	1,978	63,728	2,150	2,193	786,436	.....	...
1870.	8,258	502,158	165,577	19,944	89,156	10,593	6,906	802,592	2·05	.....
1871.	5,607	570,849	579,709	19,810	106,391	27,622	5,705	1,315,693	67·59	.....
1872.		330,032	866,169	41,515	73,572	5,900	88	1,317,276	67·50	.....
1873.	6	737,167	611,675	8,636	51,615	22,441	634	1,432,174	82·10	.....
1874.		650,161	459,728	3,192	44,079	112	237	1,157,509	47·18	.....
1875.	5,859	695,315	273,006	1,156	36,609	2,242	3,372	1,017,559	29·38	.....
1876.	231	377,317	356,064	6,334	24,488	12,205	4,691	783,331	.....	0·39
1877.	1,710	398,416	709,723	26,351	52,559	27,365	4,976	1,223,100	55·52	...
1878.	987	775,953	718,714	21,665	69,256	51,064	6,662	1,644,301	109·08	.....
1879.	1,239	892,404	602,171	7,193	14,537	40,471	7,528	1,565,543	99·07	.....
1880.	2,743	897,603	131,857	434	16,154	12,137	4,256	2,065,184	162·06	.....
1881.	1,491	386,605	458,318	86	24,751	107	7,484	878,842	11·75	.....
1882.	1,123	586,019	241,406	1,858	9,046	19,158	6,216	864,826	9·96	.....
1883.	538	535,150	517,219	6,816	47,190	79,010	6,051	1,191,974	51·06	.....
1884.	520	767,784	194,368	4,910	47,060	57,856	4,411	1,078,909	37·18	...
1885.	323	540,533	356,737	3,317	5,610	6,405	5,427	918,352	14·36	.....
1886.	488	955,851	351,272	6,799	5,180	.....	4,001	1,353,591	72·11	.....
1887.	334	914,152	438,069	15,207	32,907	4,612	44,693	1,449,984	85·64	.....
1888.	534	469,965	494,110	6,589	68,922	10,997	1,717	1,052,834	33·87	.....
1889.	845	457,922	579,526	16,380	61,175	34,167	5,160	1,155,175	46·88	.....
1890.	195	329,531	498,641	58,563	45,202	16,903	4,362	953,597	21·23	.....
1891.	1,071	733,967	137,679	43,779	14,803	66,278	2,594	1,000,171	27·18	...
1892.	2,485	611,177	141,506	37,570	70,363	3,997	3,472	870,570	10·69	.....
1893.	424	1,086,834	240,767	38,986	21,981	6,156	243	1,395,391	77·43	.....
1894.	327	887,908	265,947	69,707	99,898	5,191	2,123	1,331,101	69·26	.....
1895.	98	271,957	83,611	71,185	85,507	205	15	508,596	.....	35·32
1896.	6,971	402,114	89,726	101,151	194,442	77,162	5,575	877,144	11·53	.....
1897.	1,665	168,870	303,761	88,293	48,591	65,490	11,965	688,635	.....	12·44
1898.		64,760	354,917	85,359	74,336	7,367	20,818	607,557	.....	22·74
1899.		271,848	84,370	72,892	92,919	5,839	.....	527,868	.....	13·12
1900.	620	129,683	184,996	58,472	33,564	10,478	25,621	438,434	20·39

* Apples, meals all kinds, pease, potatoes.

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STATEMENT to Table E showing the shipment at Oswego during the same period.
VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles *	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.....	7,361	141,360	28,585	66,794	1,113	8,569	14,033	267,815	..	.....
1870.....	11,440	115,732	10,120	77,906	3,953	7,402	11,628	238,181	...	11·06
1871.....	10,043	123,173	70,218	72,675	1,806	6,250	13,259	297,424	11·05	.....
1872.....	4,773	57,865	27,148	62,172	684	6,751	10,425	169,818	...	36·59
1873.....	4,061	53,361	10,578	46,337	670	6,019	10,739	131,765	.....	50·80
1874.....	.....	108,288	46,127	77,007	1,103	7,053	3,747	243,325	.....	9·14
1875.....	1,728	32,690	3,034	75,083	3,308	4,989	5,931	126,763	.....	52·67
1876.....	967	21,890	1,324	63,336	117	5,703	6,638	99,975	.....	62·67
1877.....	855	28,955	3,308	80,306	316	6,603	6,556	126,899	.....	52·61
1878.....	1,394	24,171	1,383	50,381	.....	10,598	5,222	93,149	.....	65·21
1879.....	734	25,740	9,268	71,693	.....	16,623	3,110	127,168	.....	52·51
1880.....	951	17,466	15,656	82,743	.....	12,598	5,996	135,410	.....	49·43
1881.....	758	25,352	8,064	62,793	200	14,444	4,027	115,638	.....	56·82
1882.....	813	20,274	4,401	70,862	416	22,265	7,773	126,804	.....	52·65
1883.....	432	22,634	535	32,557	.....	14,384	1,967	72,507	.....	73·00
1884.....	404	5,932	413	48,391	.....	12,173	2,819	70,132	.....	73·43
1885.....	519	6,484	22	45,264	.....	4,613	2,945	59,847	.....	77·62
1886.....	737	9,579	154	42,261	.....	1,671	4,814	59,216	..	77·88
1887.....	790	675	2	44,580	..	716	1,370	48,133	.....	82·02
1888.....	384	2,206	168	6,237	.....	.....	2,196	11,191	.....	95·82
1889.....	473	8,002	8,950	40,096	16	1,405	1,003	59,945	.....	77·61
1890.....	545	10,378	10,408	26,639	8	4,635	2,356	54,969	.....	79·47
1891.....	292	4,298	1,652	27,418	.....	2,130	3,620	39,410	...	85·28
1892.....	273	4,806	5,657	5,283	..	199	2,340	18,558	.....	93·07
1893.....	119	2,036	3,968	8,476	.....	237	2,784	17,620	.....	93·43
1894.....	8	10,293	10,514	17,160	.....	.....	2,609	40,584	.....	84·84
1895.....	66	3,073	7,352	1,900	1,816	.....	258	14,465	.....	94·23
1896.....	.....	1,825	7,778	7,552	.....	.....	2,468	19,623	..	93·01
1897.....	.....	6,588	5,550	7,349	498	219	245	20,449	.....	92·37
1898.....	160	2,111	5,886	1,450	16	.....	784	10,407	.....	96·12
1899.....	216	3,106	4,478	2,400	2,346	12,546	20·56
1900.....	214	485	1,404	2,400	403	4,906	64·22

* Apples, meal all kinds, potatoes.

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F.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland Canal, during a series of Thirty Years, ended December 31, 1900.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1873	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877	13,588	248,894	169,185	10,216	2,810	2,405	1,833	448,931
1878	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883	13,256	146,741	182,143	975	731	518	10,971	353,335
1884	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886	19,418	146,151	218,897	.....	4,891	.....	14,581	403,928
1887	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
1899	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322

* Fiscal. † Apples, meal all kinds, pease, potatoes.

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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 Thirty Years, ended December 31, 1900.

YEAR.	VEGETABLE FOOD.							HEAVY GOODS.						
	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.	
1869	211,085	91,149	2,942	.....	667	1,006	337,530	68,064	14,334	89,086	28,566	35,912	235,962
1872	124,695	89,761	1,391	7,400	.....	608	234,337	21,040	13,239	49,843	95,741	59,401	242,204
1873	10,865	101,329	1,920	1,188	3	392	243,365	4,659	13,826	40,507	170,242	62,100	292,176	
1874	229,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875	54,188	125,627	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451	
1876	96,247	58,138	.....	1,905	525	463	162,405	.....	5,531	29,395	167,110	25,808	227,844
1877	107,396	60,260	1,603	1,905	258	413	180,586	8,976	8,688	8,336	172,868	41,107	239,975	
1878	65,542	60,026	859	277	.....	341	128,361	2,405	3,648	3,892	150,583	13,535	178,723
1879	53,791	33,401	.....	.....	.....	11	87,825	4,743	3,515	6,318	118,573	17,797	148,741
1880	30,611	16,122	1,551	296	.....	.....	65,285	1,313	5,570	371	83,858	6,464	97,295
1881	34,320	30,031	924	.....	684	10	64,002	.....	4,076	.....	158,552	14,533	177,161
1882	30,227	32,433	537	.....	.....	14	132,496	1,209	6,901	8	196,462	24,891	229,471
1883	54,382	66,128	735	731	.....	8,579	114,422	698	599	.....	210,790	15,100	227,187
1884	40,956	53,707	.....	9,874	.....	8,170	118,203	.....	1,594	.....	198,416	15,029	215,639
1885	53,229	63,229	732	882	.....	1	172,888	156	5,328	1	89,964	11,364	206,813
1886	53,258	94,048	.....	4,790	.....	13,201	157,530	15	4,406	.....	82,780	627	87,828
1887	37,678	83,431	1,732	12,050	.....	10,859	189,825	63	1,601	56	173,259	2,309	177,288
1888	39,999	102,974	.....	26,510	179	11,598	236,208	.....	1,587	896	227,476	1,204	231,163
1889	39,527	147,045	.....	27,492	.....	17,225	275,619	.....	504	208	162,231	1,620	164,563
1890	31,527	180,812	6,519	27,030	.....	20,497	253,441	.....	292	705	186,572	1,773	189,342
1891	32,097	127,494	8,113	52,823	.....	26,115	244,550	.....	576	2	183,895	.....	184,473
1892	26,950	131,222	6,433	36,935	.....	31,992	231,389	.....	344	.....	206,827	.....	207,171
1893	28,187	198,777	16,751	23,870	864	36,352	311,389	.....	297	.....	188,521	.....	188,818
1894	53,846	10,539	28,095	27,621	.....	60,462	198,358	.....	246	.....	149,490	.....	149,917
1895	27,881	100,512	7,901	17,020	.....	46,316	209,802	181	216	.....	207,318	.....	207,494
1896	34,878	175,094	11,128	16,137	490	46,456	300,407	.....	146	.....	297,494	.....	297,994
1897	28,919	169,057	14,173	14,969	.....	41,887	276,242	965	15	.....	165,143	.....	166,123
1898	150,067	6,909	12,732	1,197	1,197	22,671	209,656	770	339	4	156,814	.....	157,927
1899	12,926	81,777	2,424	19,626	923	18,198	141,892	351	1,646	553	88,931	.....	91,481
1900	18,771	60,545	2,402	39,706	2,149	14,243	145,787	.....	953	.....	46,924	.....	46,977

Apples, meals all kinds, pease, potatoes.

1-2 EDWARD VII., A. 1902

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 Thirty years, ended December 31, 1900.

Year.	Total on New York Canals.	Total on Welland Canal.	Total on New York Central and Erie Railways.	Quantity charged at Buffalo and Tonawanda by Erie Canal.	Quantity cleared at Oswego by Canal.	Quantity cleared through the Welland Canal in transit between ports, in the United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	1,302,613	503,860	1,087,809	786,436	267,815	337,530
1872.....	1,674,320	538,147	1,870,614	1,317,276	169,818	234,337
1873.....	1,745,171	579,880	2,036,992	1,432,174	131,765	243,366
1874.....	1,767,598	647,397	2,791,517	1,557,509	243,325	374,226
1875.....	1,305,550	417,936	2,343,241	1,017,559	126,763	177,908
1876.....	1,064,293	409,788	2,875,803	783,331	99,975	162,405
1877.....	1,498,984	464,181	2,493,683	1,223,100	126,899	180,586
1878.....	1,912,734	403,403	3,695,764	1,644,301	93,149	128,361
1879.....	1,833,399	438,564	4,353,617	1,565,543	127,168	87,826
1880.....	2,371,090	442,182	4,732,385	2,065,184	135,410	48,580
1881.....	1,116,561	269,395	4,983,722	878,842	115,638	65,285
1882.....	1,118,776	306,482	3,885,557	864,826	126,804	64,002
1883.....	1,379,000	372,236	4,422,461	1,191,974	72,507	132,496
1884.....	1,236,986	305,734	3,639,805	1,078,909	70,132	114,422
1885.....	1,063,310	273,905	4,105,594	918,352	59,847	118,203
1886.....	1,489,886	414,812	3,802,262	1,353,591	59,216	172,888
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	953,337	54,969	275,619
1891.....	1,092,355	367,177	3,565,381	1,000,171	39,410	253,444
1892.....	937,999	527,426	5,913,013	870,570	18,558	244,550
1893.....	1,452,563	805,253	5,107,426	1,395,391	17,620	311,389
1894.....	1,400,129	591,409	4,281,056	1,331,101	40,584	293,148
1895.....	602,505	486,421	3,798,574	508,596	14,465	209,802
1896.....	957,182	788,974	5,183,540	877,144	19,623	300,407
1897.....	744,575	816,914	5,673,638	688,635	20,449	276,242
1898.....	653,027	720,183	7,060,542	607,557	10,407	209,656
1899.....	577,486	459,688	6,211,827	527,868	12,546	141,892
1900.....	472,837	375,720	6,053,005	438,434	4,906	145,787

* Fiscal.

see p. 11
 1869-1890 only

SESSIONAL PAPER No. 20

I.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels entering the Canal at Port Colborne during the season of Navigation in 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899 and 1900.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	317	106,048	427	118,071	208	172,873	268	92,442	1220	489,434
1889.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	38,127		28,054		1,679		46,767		114,627	
Corn.....	60,218		42,819		152,858		96,700		353,595	
Barley.....										
Oats.....	320				25,347		2,145		27,812	
Pease.....										
Rye.....	948		634		336				1,918	
Coal.....	3,976		21,148		712		1,664		27,500	
Miscellaneous merchandise..	6,339		5,749		25,082		3,030		40,200	
Shingles, woodenware, &c..			1				51		52	
Sawed lumber..... Ft. B.M.	5,789,226		11,632,330		11,792,850		21,026,211		50,240,617	
Square timber..... Cub. ft.	924,645		2,934,989						3,859,634	
Staves..... No.	35,700		174,649						220,349	
Firewood..... Cords.			46						46	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	342	110,056	443	117,400	202	204,542	142	50,622	1129	482,620
1890.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	43,308		35,633		7,514		32,239		118,694	
Corn.....	63,095		51,439		172,756		40,104		327,394	
Barley.....					3,304		3,215		6,519	
Oats.....	479		73		27,030				27,582	
Pease.....					14				14	
Rye.....	1,121								1,121	
Coal.....	1,049		21,732				615		23,396	
Miscellaneous merchandise..	3,146		5,683		32,194		2,510		43,533	
Shingles, woodenware, &c..	15		1,266		8				1,289	
Sawed lumber..... Ft. B.M.	5,921,240		5,167,201		10,274,335		14,290,800		35,653,576	
Square timber..... Cub. ft.	1,141,194		3,395,832						4,537,026	
Staves..... No.	12,255		19,947						32,202	
Firewood..... Cords.	15		566						581	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	256	107,575	173	68,061	241	241,317	130	50,063	800	467,016
1891.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	62,859		56,953		36,425		33,853		190,090	
Corn.....	20,510		9,550		137,852		17,039		184,951	
Barley.....					5,444		4,061		9,505	
Oats.....					50,212		1,076		51,288	
Pease.....	390								390	
Rye.....	29,581		11,296		16,361		7,343		64,581	
Coal.....	158		20,388				3,851		24,397	
Miscellaneous merchandise..	8,369		6,007		37,537		2,578		54,491	
Shingles, woodenware, &c..							4		4	
Sawed lumber..... Ft. B.M.	4,268,874		4,648,824		8,067,351		18,745,628		35,730,677	
Square timber..... Cub. ft.	449,406		566,109						1,015,515	
Staves..... No.	1,000								1,000	
Firewood..... Cords.										

1-2 EDWARD VII., A. 1902

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.
	239	100,324	186	73,140	245	248,837	134	52,087	804	474,388
1892.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	74,578		54,764		60,364		36,898		226,604	
Corn.....	17,477		7,369		146,080		21,631		192,548	
Barley.....					3,995		2,438		6,433	
Oats.....					36,935				36,935	
Pease.....	524								524	
Rye.....	5,066				3,718		608		9,392	
Coal.....	775		13,350				1,365		15,490	
Miscellaneous merchandise..	2,139		2,786		44,117				49,042	
Shingles, woodenware, &c. .	1				45		9		55	
Sawed lumber..... Ft. B.M.	6,278,253		7,504,256		10,494,692		26,832,564		51,109,765	
Square timber..... Cub. ft.	754,213		1,421,260		2,601		1,310		2,179,384	
Staves..... No.	46,800		32,838						79,638	
Firewood..... Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	193	100,107	143	58,652	390	375,682	236	122,326	962	656,767
1893.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	83,447		31,185		72,671		68,628		255,931	
Corn.....	23,817		12,946		313,246		91,083		441,092	
Barley.....	1,527		183		16,189		562		18,461	
Oats.....	223				27,903		3,038		31,164	
Pease.....										
Rye.....					3,216		455		3,671	
Coal.....	638		13,580				5,849		20,067	
Miscellaneous merchandise..	6,179		286		44,976		1,647		53,088	
Shingles, woodenware, &c. .			15		22				37	
Sawed lumber..... Ft. B.M.	13,750,267		2,748,941		17,359,573		41,863,852		75,722,633	
Square timber..... Cub. ft.	836,048		1,437,893		5,133				2,279,074	
Staves..... No.			18,484						18,484	
Firewood..... Cords.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	242	86,838	339	93,450	114	104,505	219	60,500	914	345,293
1894.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....	95,586		54,444		79,715		37,095		260,840	
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		279,830		11,719,664		31,891,456		52,313,745	
Square timber..... Cub. ft.	771,528		1,578,981						2,350,309	
Staves..... No.										
Firewood..... Cords.										

SESSIONAL PAPER No. 20

I.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	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		33,723		291,898	
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 lumber.....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		320,440	
Barley	240		.....		11,128		.....		11,368	
Oats	441		1,270		24,847		1,620		28,178	
Pease	1,403		1,354		.....		273		3,030	
Rye	5,035		644		2,837		454		8,970	
Coal	7		11,106		1,255		629		11,997	
Miscellaneous merchandise ..	29,820		1,452		82,319		4,374		117,965	
Shingles, woodenware, &c.	134		.....		22		.....		156	
Sawed lumber.....Ft. B.M.	2,123,213		.....		18,259,810		27,796,146		48,179,169	
Square timber.....Cub. ft.	942,923		1,649,145		.....		246,024		2,838,092	
Staves.....No.	.....		.....		.....		.....		.....
Firewood.....Cords	.....		.....		.....		55		55	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	225	131,907	163	76,760	388	382,231	144	86,675	920	677,573
1897.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	121,762		55,724		106,064		37,891		321,441	
Corn	33,694		15,244		274,855		66,822		390,615	
Barley .....	.....		.....		14,173		.....		14,173	
Oats	223		.....		23,515		1,168		24,906	
Pease	1,851		.....		.....		.....		1,851	
Rye	2,047		919		5,517		.....		8,483	
Coal	3,873		3,947		368		1,615		9,803	
Miscellaneous merchandise ..	15,739		3,290		70,968		4,174		94,071	
Shingles, woodenware, &c.	1,268		5		404		.....		1,677	
Sawed lumber.....Ft. B.M.	1,573,447		.....		20,284,446		20,673,202		42,531,095	
Square timber.....Cub. ft.	1,327,823		2,217,629		.....		616,093		4,161,545	
Staves.....No.	2,577,160		.....		.....		.....		2,577,160	
Firewood.....Cords	4		.....		.....		.....		4	

1-2 EDWARD VII., A. 1902

I.—STATEMENT showing the Quantity of Through Freight passed Down the Welland Canal in Canadian and United States Vessels, &c.—*Concluded.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail	
	No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.	
	216	126,398	104	59,532	354	355,702	195	108,720	869	650,352
1898.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	95,567		36,157		54,934		18,355		205,013	
Corn	56,538		30,455		284,059		66,761		437,813	
Barley					9,465		2,821		12,286	
Oats					17,329				17,329	
Pease	260				45				305	
Rye	3,564		1,480		9,135		1,948		16,127	
Coal	575		1,916		759		2,620		5,870	
Miscellaneous merchandise ..	19,385		4,104		47,271		8,758		79,518	
Shingles, woodenware, &c.	2		9						11	
Sawed lumber. Ft. B.M.	4,910,669		1,641,783		16,220,972		24,484,283		47,257,707	
Square timber. Cub. ft.	825,545		1,183,821				388,410		2,397,776	
Staves										
Firewood	Cords.									
	249								249	
	No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.	
	191	100,242	129	75,777	201	212,027	78	36,962	599	425,008
1899.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	91,901		80,928		16,250		7,244		196,323	
Corn	28,015		18,905		138,834		18,250		204,004	
Barley					2,424				2,424	
Oats	1,557				21,646				23,203	
Pease										
Rye					923				923	
Coal	435		6,736				3,398		10,569	
Miscellaneous merchandise ..	25,203		18,651		49,522		1,567		94,943	
Shingles, woodenware, &c.	485		916				100		1,501	
Sawed lumber. Ft. B.M.	2,077,748		772,739		14,855,338		19,949,079		37,654,904	
Square timber. Cub. ft.	322,138		585,780		20,802		325,806		1,257,526	
Firewood			9						9	
Staves										
	No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.		No. Tonnage.	
	216	114,885	109	67,475	168	182,444	71	30,309	564	395,113
1900.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat ..	67,694		43,157		23,066		2,130		136,047	
Corn	39,597		31,248		78,701		13,963		163,509	
Barley					2,402		1,047		3,449	
Oats					39,706		407		40,113	
Pease	115				4				119	
Rye	1,389				2,149				3,538	
Coal	723		637		433		559		2,352	
Miscellaneous merchandise ..	53,649		31,536		43,344		3,564		132,093	
Shingles, woodenware, &c.	1,078								1,078	
Sawed lumber. Ft. B.M.	6,847,279		5,344,258		14,984,483		18,770,405		45,946,425	
Square timber. Cub. ft.	439,827		355,951		11,583		198,420		1,005,781	
Firewood	126		255						381	
Staves									1,000	
	1,000									

SESSIONAL PAPER No. 20

STATEMENT showing the Quantity of THROUGH Freight passed up the Welland Canal in Canadian and United States Vessels during the Season of 1900.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam & Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	119,754	115	68,277	160	175,099	72	33,877	563	397,007
1900.	Tons.		Tons.		Tons.		Tons.		Tons.	
Class 3.										
Cement and Water-Lime....	1,935		.....		112		.....		2,047	
Fish	8		.....		342		.....		350	
Iron railway	74		.....		.....		.....		74	
" pig	3		.....		.....		.....		3	
" all other.	1,458		7		239		.....		1,704	
Salt.....	49		.....		.....		.....		49	
Steel.....	.....		.....		122		.....		122	
Articles not enumerated.....	649		1,215		1,192		.....		3,506	
Class 4.										
Crockery and earthenware...	16		.....		.....		.....		16	
Marble.....	.....		.....		863		.....		863	
Manilla.....	.....		.....		174		.....		174	
Nails.....	183		.....		.....		.....		183	
Paint.....	32		6		.....		.....		38	
Pitch and tar.....	23		.....		.....		.....		23	
Sugar.....	442		.....		13,175		.....		13,617	
Tin.....	117		.....		.....		.....		117	
Merchandise not enumerated.	2,127		4		38,192		.....		40,323	
Class 5.										
Produce of wood.....	1,348		12		86		.....		1,446	
Special Class.										
Coal.....	2,416		.....		24,244		18,380		45,040	
Unenumerated articles.....	.....		.....		.....		.....		.....
Total	10,880		1,244		78,741		18,380		109,245	

Canadian Steam Vessels carried	Tons.	10,880
" Sailing	"	1,244
United States Steam	"	78,741
" Sailing	"	18,380

1-2 EDWARD VII., A. 1902

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 1900, is as follows :—

Summary.	Tons.	Tons.
In Canadian steam vessels.....	10,880	
" sail ".....	1,244	
Total quantity in Canadian vessels.....		12,124
In United States steam vessels.....	78,741	
" sail ".....	18,380	
Total in United States vessels.....		97,121
Grand total freight passed up the Welland Canal in Canadian and United States vessels.....		109,245

STATEMENT of the Quantity of Through Freight passed Up and Down, on the Welland Canal during the Season of Navigation in 1900.

Summary.	Tons.	Tons.
In Canadian steam vessels up.....	10,880	
" " down.....	183,997	
Total in Canadian steam vessels.....		194,877
In Canadian sail vessels up.....	1,244	
" " down.....	123,376	
Total in Canadian sail vessels.....		124,620
Total quantity in Canadian vessels.....		319,497
In United States steam vessels up.....	78,741	
" " down.....	215,021	
Total in United States steam vessels.....		293,762
In United States sail vessels up.....	18,380	
" " down.....	56,918	
Total in United States sail vessels.....		75,298
Total quantity in United States vessels.....		369,060
Total in Canadian and United States vessels.....		688,557
	Down or East bound.	Up or West bound.
In Canadian vessels.....	307,373	12,124
In United States vessels.....	271,939	97,121
Total.....	579,312	109,245

J.—STATEMENT of Large Class of Vessels Lightened at the Welland Railway Elevator at Port Colborne, showing the Tonnage, Dimensions, Depth of Water, Number of Cargoes passed through the enlarged Welland Canal during the Season of Navigation in 1900.
CANADIAN STEAM VESSELS.

Date of Arrival	Name of Vessel	Registered Tonnage	Dimensions			Depth of Water at Arrival			Original Cargo to the Welland Canal										Lightenages at Welland Railway					Lightenages at Welland Railway in Tons					Gross Cargo and Bolling Freight to and from Welland Canal										Destination	Total of Lightenages per Vessel																																																																																																																																																																																																																																																																																																																																																																																																																																																	
			Length over all	Width of Beam	Depth of Hold	Forward	Aft	Wharf	Wharf	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons			Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons

SESSIONAL PAPER No. 20

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 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899 and 1900.

Articles.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Cement and water line.....									12	38	52	15	15
Clay, lime and sand.....							195	79	5			15	508
Iron, pig.....				371			1	1,766	2,020	7,564	6,217	5,063	4,292
" all other.....	418							394	542	375	1,351	3,000	5,420
Steel.....									200				
Stone for cutting.....					54			28	1,263				
Apples.....							50	258	959		3,960	596	1,288
Barley.....						600		258	240				
Corn.....	66,443	195,350	139,798	52,559	53,689	278,564	60,661	70,235	182,330	267,533	310,498	150,999	109,359
Flaxseed.....										3,293	5,687		
Flour.....	3,865	6,841	3,065	3,324	2,874	5,514	16,503	30,916	11,964	1,029	653	4,229	1,595
Meal, all kinds.....	100	148	222	67	16		4	65					
Oats.....		320	479				175	1,654					
Pease.....				390	524								
Rye.....		1,284	1,120	64,978	9,119	3,669			12,373	6,847	3,975	10,250	8,925
Salt.....									3,020	2,078	260		115
Seeds, all kinds.....	12	3	2	2	75				8,323	8,435	15,488	923	3,078
Tobacco, raw.....				1						216	144	200	
Wheat.....	93,915	70,815	75,515	159,785	194,281	209,212	212,557	158,643	255,198	278,498	184,154	169,978	121,896
All other, agricultural products, vegetable.....		798	3	2			29				56	32	
Hides, skins, horns and hoofs.....					20								
Horses.....	2	2	3	2	2	1	1	1	1	1	4	1	
Lard and lard oil.....	54			100									
Pork.....	265	1,220	221	201			717		1				
All other agricultural products, Animal.....	39	32	117		103								
Total, Class 3.....	165,113	276,813	220,545	281,762	260,757	507,321	201,151	264,740	477,541	576,008	532,499	345,469	256,491
<i>Class 4.</i>													
Agricultural Implements.....												3	
Ashes.....	85	107	70	40	17	23	19	34	94	133	73	55	25
Crockery.....									5				

1-2 EDWARD VII., A. 1902

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.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Furniture.....	2		1	2	1		2			1			1
Glass, all kinds.....	3		1	1						53	75	16	6
Molasses.....								100	167	9	56	159	
Nails.....													
Oil.....		4	6					6	23	112	1,141	7,143	15,647
Paint.....								2					
Pitch and tar.....													
Rags.....									4				
Sugar.....									1				
Stone, wrought.....													
Tobacco.....													
White lead.....	3	20	26	105	6			101		46	4	74	16
Whisky, beer, and other spirits.....	105	193	142	278	36	1	330	558	376	1,226	866	518	92
Merchandise, not enumerated.....						4							
Total, Class 4.....	198	324	246	426	60	28	351	801	679	1,580	2,215	8,065	15,778
<i>Class 5.</i>													
Barrels, empty.....	40				1							1	182
Hoops.....										257			
Sawed lumber.....	5,175	6,118	3,579	3,908	1,678	667	683	1,117	637	478	3,065	924	15,760
Staves, pipe and barrel.....	139									4,716			
" West India and pipe.....	1,623	270			200								
Timber, square, in vessels.....	11,586	9,302		5,680	400				1,200	1,207	329	26	
Woodenware " in rafts.....	25		1				6						
Total, Class 5.....	18,588	15,690	3,580	9,588	2,327	667	689	1,118	1,857	6,658	3,394	951	15,942
<i>Special Class.</i>													
Coal.....													
Grand total.....	183,899	292,827	224,371	291,776	263,144	508,016	242,191	266,659	480,077	584,246	538,108	354,485	288,231

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, during the Seasons of Navigation in 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899 and 1900.

Articles.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>													
Bricks	187	84	252	409	1,570	3,169	1	24	15	70	70	24	49
Cement and water lime	1,177	823	62	2,380	1,570	3,169	2,281	1,859	1,686	837	996	997	1,931
Clay, lime and sand	95	3	8	206	240	465	512	56	28	4	144	8	4
Fish	1	80	26	7	426	465	512	11	11	10	9	10	8
Gypsum	9,148	15,513	20,003	2,855	1,171	6,576	20	1,687	1,687	6	6	4	74
Iron, railway	573	250	20	112	74	25	114	56	28	559	699	1,318	3
" pig	237	290	584	595	387	543	843	1,831	727	25	35	1,428	48
" all other	3,599	4,216	7,440	4,391	2,034	995	248	932	822	19	19	18	18
Salt	3	3	1	1	269	426	248	528	4	62	62	62	62
Steel	3	3	1	1	145	145	145	145	145	145	145	145	145
Stones for cutting	12	12	12	12	145	145	145	145	145	145	145	145	145
Flour	48	48	48	48	145	145	145	145	145	145	145	145	145
Hay	31	31	31	31	145	145	145	145	145	145	145	145	145
Meals	31	31	31	31	145	145	145	145	145	145	145	145	145
Oats	31	31	31	31	145	145	145	145	145	145	145	145	145
Potatoes	31	31	31	31	145	145	145	145	145	145	145	145	145
Seeds, all kinds	24	215	100	100	145	145	145	145	145	145	145	145	145
Agricultural products not enumerated, vegetables	35	19	19	52	145	145	145	145	145	145	145	145	145
Hides and skins	2	2	2	2	145	145	145	145	145	145	145	145	145
Horses	72	72	72	72	145	145	145	145	145	145	145	145	145
Lard and lard oil	33	33	33	33	145	145	145	145	145	145	145	145	145
Pork	13	13	13	13	145	145	145	145	145	145	145	145	145
Wool	77	77	77	77	145	145	145	145	145	145	145	145	145
All other articles not enumerated	77	77	77	77	145	145	145	145	145	145	145	145	145
Total, class 3	15,247	21,498	28,675	11,071	6,345	12,202	4,335	5,432	5,080	1,698	2,031	2,500	3,764
<i>Class 4.</i>													
Ashes, pot and pearl	336	112	11	31	88	98	107	12	83	1	33	3	5
Crockery and earthenware	336	112	11	31	88	98	107	12	83	1	33	3	5
Dye woods, &c.	336	112	11	31	88	98	107	12	83	1	33	3	5
Furniture	1	1	1	1	3	3	3	3	3	2	2	2	1

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L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland Canal to Lake Erie, &c.—*Concluded.*

Articles.		1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 4—Con.														
Glass, all kinds		77	71	23	30	152	365	175	394	612	799	150	299	456
Manilla		1						11						
Molasses		7	56			32	43	42	20	1				
Nails		578	736	453	560	276	472	500	1,149	409	129	229	518	180
Oil, in barrels		22	9	11	64	2	41	8	31	33	12	15	21	74
Paint		59	49		61	15	70	8	75	49	20	35	2	12
Pitch and tar				13	22	15	26	152	67	60	20	37	6	21
Rags													14	
Resin				1									15	
Soda, ash		1,196	766	554	377	352	68	94	84	74	249	88	108	69
Stone, wrought							14			17	25	31		
Sugar		98	7	551	412	1,320	2,218	2,724	1,430	1,873	311	566	1,596	430
Tin		198	480	40	23	27	34	327	396	395	359	237	159	117
Turpentine		1	1	2										
White lead		2	4	19	3	6	35	2	7	10	5		1	4
Whiting			33	34	50	71	31	1	113	56	104	93	89	39
Whisky, beer, &c.		228	124	350	294	220	26	53	77	51	93	98	178	295
Merchandise, not enumerated.....		1,259	1,422	1,180	810	538	799	900	1,268	1,247	711	793	482	744
Total, class 4		4,063	3,870	3,276	2,989	3,125	4,343	5,104	5,123	4,970	2,844	2,405	3,491	2,447
Class 5.														
Barrels, empty														
Lumber, sawn, in vessels			2											
Woodenware														
Total, class 5			2											
Special Class.														
Coal														
Grand total		19,310	25,370	31,951	14,060	9,470	16,545	9,439	10,555	10,050	4,542	4,436	5,991	6,211

Articles.		1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 2.														
Bricks				4							845	300		18
Cement and water lime.		4												
Fish														
Iron, railway.					1		5	5						
" all other					10	1	102	181			965	770	1,008	714
Salt					494			214				324	549	
Steel	3													
Stone for cutting						1				498		2,951	13,522	3,110
Apples.														
Barley														
Corn	2			6,519	8,113	6,433	16,751	28,035	7,904	11,128	14,173	6,909	2,424	2,402
Floor.	102,974	147,045	180,812	127,494	131,222	131,222	198,777	105,329	100,512	175,094	163,057	150,667	81,777	60,545
Hay, pressed	8,563	5,017	9,204	6,802	11,018	6,588	6,588	17,795	10,169	16,224	7,237	4,212	6,118	7,966
Mead, all kinds											301			
Meal, all kinds														
Oil cake.		11,598	17,224	20,482	26,096	31,724	36,352	60,390	46,316	46,456	41,644	22,626	18,198	14,244
Oats								29						
Pease.		26,510	27,492	27,030	52,823	36,935	23,870	27,621	16,442	16,137	14,969	12,729	19,526	39,705
Potatoes												45		4
Rye.		179	1	1			864			490		1,197	923	2,149
Flax seed													200	
Seeds, all kinds.		48	151	135	256	50	16		14	78	299	44	11	
Wheat.		39,999	39,229	31,527	32,697	26,950	28,187	53,846	27,881	34,878	28,919	11,268	12,926	18,771
Agricultural products, vegetables.				14	42									6
Hides and skins, &c.		39							8	41	23			
Horses.				1	3		2	4		3	3	2		4
Lard and lard oil, &c.		19	32	30	10		1		6	1,348	1,444	3,671	864	1,588
Meats, other than pork		14	3	15	2	29			30					
Pork		19	21	88	73	1	52	56	87	390	243	1,271	343	117
Sheep														
Tallow.														
Wool.		18	452		1,237	70	80	1,484	1,536	900	197	359	201	631
												89	130	
Total, class 3		189,989	237,188	275,893	255,553	244,434	311,647	294,654	211,300	303,665	280,319	219,434	158,720	154,680
Class 4.														
Agricultural implements														
Crockery and earthenware.		1	1											
Furniture.	30	30	30	21	7		6		2				2	7

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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 1888 to 1900, inclusive—*Concluded*.

Articles.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 4—Con.</i>													
Glass, all kinds.....				1									
Molasses.....												8	
Nails.....							57					11	57
Oil, in barrels.....			3	1				30	1,005	198	119	367	17
Paint.....					44						3	2	36
Rags.....												1	
Soda, ash.....													
Stone, wrought.....		2											
Sugar.....								59	165	31			154
White lead.....			1										
Whisky, beer and all other spirits.....	151	190	228	167	46	83		15			34	168	1
Merchandise.....	1,433	1,679	1,822	1,865	1,331	1,693	2,976	7,656	3,990	3,591	3,828	6,219	7,889
Total, Class 4.....	1,635	1,902	2,075	2,041	1,421	1,782	3,033	7,762	5,160	3,820	3,986	6,783	8,161
<i>Class 5.</i>													
Empty barrels.....						9			10				5
Firewood in vessels.....									165				
Lumber, sawn, in vessels.....	28,333	55,074	38,030	45,504	54,173	68,985	62,905	41,974	75,515	68,280	52,844	57,695	55,128
Masts and spars, in vessels.....										403			
Hoops.....													
Railway ties, in vessels.....								446					
Shingles.....	6	51				13							
Staves, barrel.....	82												
Timber, square, in vessels.....								500		1,040			
Woodenware, &c.....	141	333	8	4	51				12	1			
Total, Class 5.....	28,502	55,458	38,038	45,508	54,227	69,007	62,905	42,920	75,702	69,724	52,844	57,695	55,133
<i>Special Class.</i>													
Coal.....													
Stone, not suitable for cutting.....	878	1,124	615	1,382	651	2,123	727	603	1,255		759	2,293	992
Kryolite.....		1,681	18										
			1,620	1,773									
Total, Special Class.....	878	2,805	2,253	3,155	651	2,123	727	603	1,255		759	2,293	992
Grand total.....	221,064	297,353	318,259	306,257	300,733	384,559	361,319	262,585	385,782	353,863	277,023	225,491	218,969

SESSIONAL PAPER No. 20

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 1900.

Name of Vessels.	Original quantity through the Welland Canal.	Quantity tranship- ped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal
	Tons.	Tons.	Tons.
Canadian Steamer Arabian.	1,199	517	682
" " "	1,204	263	941
" " Cuba	644	168	476
" " "	448	169	279
" " "	560		560
" " "	560		560
" " "	476		476
" " "	560		560
" " "	504		504
" " "	560		560
" " "	560		560
" " Melbourne.	653	173	480
" " "	560		560
" " "	476		476
" " "	476		476
" " "	560		560
" " "	560		560
" " "	560		560
" " "	392		392
" " "	560		560
" Schooner Dunmore	1,187	260	927
" " Selkirk	1,463	371	1,092
Total.	14,722	1,921	12,801

No. of cargoes of Corn	22
Quantity through Welland Canal to Kingston and Prescott.	14,722 tons.
" taken to Montreal in vessels in which it arrived at Kingston and	
" transhipped at Kingston and Prescott	1,921 "
Prescott.	12,801 "

1-2 EDWARD VII., A. 1902

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 1900.

Name of Vessels.	Original quantity through the Welland Canal.	Quantity transhipped at Kingston and Prescott.	Cargo through the St. Lawrence Canals to Montreal
	Tons.	Tons.	Tons.
Canadian Steamer Arabian.....	1,231	520	711
" " ".....	1,230	229	1,001
Total.....	2,461	749	1,712

No. of cargoes of Wheat	2
Quantity through Welland Canal to Kingston and Prescott.....	2,461 tons.
" transhipped at Kingston and Prescott.....	749 "
" taken to Montreal in vessels in which it arrived at Kingston and Prescott.....	1,712

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 Navigation in 1900.

	Number of Cargoes.	Total Number.
Wheat	2	
Corn.....	22	
Total.....		24
	Tons.	Tons.
Quantity of wheat through the Welland Canal, bound for Montreal.....	2,461	
" corn " " " "	14,722	
Total through Welland Canal.....		17,183
Quantity of the above, transhipped at Kingston and Prescott :—		
Wheat.....	749	
Corn.....	1,921	
Total transhipped.....		2,670
Quantity of the above Cargoes taken to Montreal in vessels in which it arrived at Kingston and Prescott :—		
Wheat.....	1,712	
Corn.....	12,801	
Total quantity to Montreal.....		14,513
Grand total.....		17,183

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O. STATEMENT showing the Quantity of Grain passed Down the Welland Canal to Kingston, Prescott, Ogdensburg and other Ports in Canadian and United States Vessels, entering the Canal at Port Colborne, during the Season of Navigation in 1900.

—	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	216	114,885	109	67,475	168	182,444	71	30,309	564	395,113
	Tons.		Tons.		Tons.		Tons.		Tons.	
Barley .....	.....		.....		2,402		1,047		3,449	
Corn	39,597		31,248		78,701		13,963		163,509	
Oats .....	.....		.....		39,706		407		40,113	
Pease	115		.....		4		.....		119	
Rye	1,389		.....		2,149		.....		3,538	
Wheat	67,694		43,157		23,066		2,130		136,047	
Total . .	108,795		74,405		146,028		17,547		346,775	

			Tons.
216	Cargoes in Canadian Vessels Steam, total quantity		108,795
109	" " " " Sail		74,405
168	" in United States Vessels, Steam, total quantity ...		146,028
71	" " " " Sail " ...		17,547

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P.—STATEMENT of the Quantity of Grain arrived at Kingston, Prescott and Ogdensburg in vessels which passed Down the Welland Canal during the season of navigation in 1900.

Summary.	Tons.	Tons.
Canadian steam vessels—216 cargoes of grain.....	108,795	
" sail " 109 " 	74,405	
Total in Canadian vessels		183,200
United States steam vessels—168 cargoes of grain. . .	146,028	
" sail " 71 " 	17,547	
Total in United States vessels..		163,575
Total in Canadian and United States vessels.....		346,775
Distributed as follows:—		
24 Canadian vessels arrived at Kingston and Prescott, and discharged part of their cargoes, taking the balance to Montreal.....		14,513
540 vessels arrived at Kingston, Prescott, Ogdensburg and ports, and discharged all their cargoes as follows:—		
301 cargoes in Canadian vessels.....	166,017	
239 " United States vessels.....	163,575	
Quantity discharged by the 24 Canadian vessels, which took the balance to Montreal.....	2,670	
Total quantity discharged.....	332,262	
Total quantity of above transhipped from Kingston, Prescott and Ogdensburg to Montreal		*217,735
Total quantity transhipped from Kingston, Prescott and Ogdensburg to Cardinal...		3,368
" remaining at Kingston, Prescott, Ogdensburg and other ports.....		111,159
Total.....		346,775

*Of this quantity 38,403 tons were transhipped from Ogdensburg to Montreal.

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Q.—COMPARATIVE STATEMENT of the Quantity of Grain passed Down the Welland Canal to Kingston, Prescott and Ogdensburg, for the seasons of navigation in 1899 and 1900.

	1899.		1900.	
	No. of Cargoes.	Tons.	No. of Cargoes.	Tons.
Quantity arrived at Kingston and Prescott in Canadian vessels.	162	221,306	325	183,200
Quantity arrived at Kingston, Prescott and Ogdensburg in United States vessels.	167	205,571	239	163,575
Total	329	426,877	564	346,775
Quantity transhipped at Kingston, Prescott and Ogdensburg in Canadian vessels for Montreal ...				
Quantity taken to Montreal in vessels in which it arrived at Kingston and Prescott.		313,497	.....	217,735
Quantity remaining at Kingston, Prescott, Ogdensburg and Cardinal.		5,359	.....	14,513
		*108,021	.....	114,527
Total		426,877	.....	346,775

*Of this quantity 12,413 tons were transhipped to Montreal in 1900.

15 vessels took their cargoes through to Montreal intact in 1900, against 2 in 1899; 7 vessels discharged part of their cargo in 1900 against 11 in 1899; 542 vessels discharged all of their cargoes in 1900 against 316 in 1899.

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 1900.

DESTINATION.	No. of Sections.	No. of Vessels.	Tonnage of Vessels.	No. of Passengers.	Class Three.	Class Four.	Class Five.	Special Class.	Tolls.
			Tons.		Tons.	Tons.	Tons.	Tons.	\$ cts.
Prescott to Montreal.	4	118	64,928	14,458	86	1,468	...	.....	2,243 47
" Lachine.	3	33	17,546	1,826	1,521	411	.....	.....	468 83
Dickinson's Landing to Montreal.	3	8	5,184	981	.....	48	.....	.....	109 99
Valleyfield to Montreal.	2	5	783	60	.....	.....	.....	.....	5 94
" Lachine.	1	201	25,718	3,889	972	343	10	.....	202 26
Lachine to Montreal.	1	300	59,967	14,296	891	177	472 31
Total	665	174,126	35,510	3,470	2,447	10	3,502 80

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S.—The quantity of Coal passed through the Welland Canal during a series of years from 1885 to 1900, 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.		Rate 20 cents a ton.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
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	2,124	8,325	17,944	233,096	46,619 20
1894.....			187,794	727	1,269	13,947	203,737	40,789 93
1895.....	4		148,887	603	1,565	7,807	158,866	31,773 05
1896.....	20	210	206,093	1,255	4,127	11,740	223,445	44,668 20
1897.....		4	165,143	.....	1,277	9,799	176,223	35,244 60
1898.....			156,055	759	986	4,536	162,336	32,467 20
1899.....			86,638	2,293	525	8,276	97,732	19,546 40
1900.....	8		45,032	992	.....	1,360	47,392	9,478 40

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, 1896, 1897, 1898, 1899 and 1900 being 20 cents a ton for passage either eastward or westward.

T.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence Canals during the seasons of 1885 to 1900, inclusive.

Year.	Quantity passed up Free of Tolls.	Quantity passed down to Montreal.	Total Quantity passed up and down.	Amount of tolls on Quantity passed down to Montreal.
	Tons.	Tons.	Tons.	\$ cts.
1885.....	5,035	122,829	127,864	18,424 35
1886.....	3,301	118,802	122,103	17,820 70
1887.....	7,579	121,618	129,197	18,242 70
1888.....	8,341	123,050	131,391	18,423 90
1889.....	5,360	124,290	129,650	18,604 90
1890.....	6,538	135,168	141,706	20,275 20
1891.....	7,951	141,701	149,652	21,255 15
1892.....	7,543	157,134	164,677	23,570 10
1893.....	2,285	147,139	149,424	22,070 85
1894.....	16,213	169,552	185,765	25,432 80
1895.....	.....	165,151	165,151	24,772 65
1896.....	689	161,551	162,240	24,232 65
1897.....	40	164,963	165,003	24,722 37
1898.....	400	175,609	176,009	26,341 05
1899.....	448	201,546	201,994	30,231 80
1900.....	10	280,169	280,179	42,025 35

NOTE.—Coal is allowed to pass free up the St. Lawrence Canals.

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U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, showing the Quantity to Montreal, the Quantity to Canadian Ports between Port Dalhousie and Cornwall, and the Quantity to United States Ports, Oswego, Ogdensburg, &c., on the south side of Lake Ontario, for the years 1889 to 1900, 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.
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	
Fish.. ..		5	
Flour.. ..	6,841		5,017
Furniture.. ..		4	30
Horses.. ..	2		1
Iron, pig.. ..		613	
" all other.. ..			520
Lard and lard oil.. ..		5	19
Meal, all kinds.. ..	148		17,224
Meats, other than pork.. ..	32	2	3
Molasses.. ..			88
Oats.. ..	320		27,492
Oil, in barrels.. ..	4	2	
Oil cake.. ..	798		
Potatoes.. ..			1
Pork.. ..	1,220	114	21
Rye.. ..	1,284	634	
Salt.. ..		316	
Stone, for cutting.. ..		6,784	
" wrought.. ..		11	2
" not suitable for cutting.. ..		376	1,681
Seeds, all kinds.. ..	3		151
Spirits, beer, &c.. ..	20	8	190
Tallow.. ..			13
Wheat.. ..	70,815	7,241	39,229
Wool.. ..			452
Merchandise.. ..	193	129	1,591
Barrels, empty.. ..			173
Lumber, sawn.. ..	6,118	4,669	71,055
Masts, spars, &c.. ..		220	
Railway ties.. ..		852	
Saw logs.. ..			158
Staves and headings, barrel.. ..		4	
" " pipe.. ..	202	304	
" " West India.. ..	68	559	
Shingles.. ..			51
Split posts, &c.. ..		17	
Timber, square.. ..	9,302	70,579	240
Woodenware, &c.. ..			2
Total.. ..	202,827	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.

*See footnote p. 4 - amounts trans-shipped
at Ogdensburg.*

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1890.	Tons.	Tons.	Tons.
Ashes.....	70		
All other products, animal.....	14		
" vegetable.....	1		
Barley.....			6,519
Bricks.....			4
Coal.....		22,781	615
Corn.....	134,966	11,584	180,842
Fish.....	49		
Flour.....	3,065		9,204
Furniture.....	1	1	21
Glass, all kinds.....	1		
Horses.....	3		1
Iron, all other.....			1
Kryolite.....		1,280	1,620
Lard and lard oil.....		5	30
Meal.....	222		20,482
Meats.....			15
Oats.....	479	73	27,030
Oil, in barrels.....	6		
Oil cake.....	2		
Paint.....			3
Pease.....			14
Pork.....	221	19	88
Potatoes.....			1
Rye.....	1,120	1	
Salt.....		701	
Stone, for cutting.....		5,761	
" wrought.....		639	18
Seeds, all kinds.....	2		135
Spirits, &c.....	26		228
Tallow.....	54		
Wheat.....	75,515	5,241	31,527
White lead.....			1
Merchandise.....	142	32	1,822
Barrels, empty.....			7
Firewood, in vessels.....		1,398	
Lumber, sawn, in vessels.....	3,195	3,767	47,590
" rafts.....	384		
Staves and headings, pipe.....		187	
" " West Indies.....		36	
Shingles.....			14
Square timber, in vessels.....		73,112	
" rafts.....		17,683	
Woodenware.....	1		1
	219,539	144,301	327,833
Corn..... 16,033			
Oats..... 400			
	16,433		*16,433
Totals.....	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.

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U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed Down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian ports between Port Dalhousie and Cornwall.	Quantity passed down to United States ports.
1891.	Tons.	Tons.	Tons.
Ashes	40		
Agricultural products	2		42
Barley			8,113
Corn	52,539	5,144	127,494
Coal		20,698	1,382
Flour	3,324		8,802
Fish			1
Furniture	2	2	7
Glass	1		1
Horses	2	2	3
Hay		21	
Iron, pig	371	128	
" all other		1,036	10
Lard and lard oil	100	16	10
Meal, all kinds	67		26 096
Meats, other than pork		1	2
Molasses		20	18
Oats			52,823
Oil			1
Pease	390		
Pork	201		73
Rags			60
Rye	64,978	969	
Seeds, all kinds	2		256
Salt		1,861	494
Stone for cutting		6,602	
" wrought		7	
Tobacco	1		
Tallow		9	8
Wheat	159,785	692	32,097
Staves, pipe		8	
Whisky and all other liquors	105	57	167
Wool			1,237
Merchandise	278	6	1,779
Kryolite		1,098	1,773
Lumber, in vessels	2,991	1,300	56,456
" in rafts	917		
Timber, square, in rafts	5,680	14,638	
Barrels			4
Corn	12,169	291,776	54,315
Wheat	5,648		317,209
		17,817	*17,817
Total	309,593	54,315	299,392

* This quantity of grain was transhipped at Ogdensburg and passed down the St. Lawrence Canals to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, on wheat, Indian corn, pease, barley, rye and (for export) oats, originally shipped for Montreal or some port east of Montreal, per Order in Council, March 25, 1891.

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian ports between Port Dalhousie and Cornwall.	Quantity passed down to United States ports.
1892.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	17	2	.....
Apples.....	54	.....	.....
Barley.....	.....	.....	6,433
Corn.....	53,689	7,637	131,222
Coal.....	.....	14,839	651
Flour.....	2,874	.....	11,018
Fish.....	9	.....	.....
Furniture.....	1	.....	7
Hides.....	20	.....	.....
Horses.....	2	.....	.....
Iron, railway.....	.....	100	.....
" all other.....	.....	765	1
Meal, all kinds.....	16	.....	31,724
Meats, other than pork.....	94	.....	29
Oats.....	.....	.....	36,935
Oil.....	.....	7	.....
Pease.....	524	.....	.....
Potatoes.....	.....	.....	1
Pork.....	.....	.....	44
Rye.....	9,119	273	.....
Salt.....	.....	865	.....
Seeds, all kinds.....	75	.....	50
Steel.....	.....	.....	1
Stone for cutting.....	.....	1,204	.....
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	.....
" " West India.....	200	76	.....
Shingles.....	.....	.....	25
Total.....	263,144	74,227	330,403
* Wheat.....	+ 4,341	—4,341	.....
Total.....	267,485	69,886	330,403

* This quantity of wheat was taken from Kingston to Ogdensburg and stored in elevators, and subsequently transhipped to Montreal.

A refund of 18 cents a ton, Welland Canal tolls, was allowed on wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat which passed down the whole length of the Welland and St. Lawrence Canals, to Montreal, or any port east of Montreal, and such products exported out of the country, and in such cases only.

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U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canals, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1893.	Tons.	Tons.	Tons.
Ashes, pot and pearl.	23		
Barley.	600	1,110	16,751
Bricks.		1,251	
Corn.	278,564	5,752	156,776
Coal.		17,944	2,123
Flour.	5,514		6,588
Fish.			5
Furniture.			6
Horses.	1	1	2
Iron, pig.			100
" all other.			2
Meal, all kinds.		1,025	36,352
Meats, other than pork.			1
Oats.	9,761	1,090	20,313
Pork.			52
Rye.	3,669	1	1
Salt.		286	
Seeds, all kinds.			16
Wheat.	209,212	17,602	29,117
Whisky, beer, &c.	1		83
Wool.			80
Merchandise not enumerated.	4	2	1,693
Barrels empty.			9
Firewood (in rafts).		15	
Lumber, sawn, in vessels.	667	1,981	123,665
Shingles.			13
Square timber.		45,605	
Staves and headings, barrel.		12	
" pipe.		7	
" West India.		53	
Total.	508,016	93,737	393,748

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1893.

The tolls were, however, reduced by Order in Council of 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."

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1894	Tons.	Tons.	Tons.
Apples.....	50		
Ashes.....	19		
Barley.....	258		28,095
Bricks.....		552	
Coal.....		13,818	727
Corn.....	60,661	3,243	105,329
Dye woods and dye stuffs.....		4	2
Fish.....			5
Flour.....	16,503	41	16,880
Furniture.....	2	3	
Horses.....	1	2	4
Iron, pig.....	195	2,170	
" all other.....	1	183	
Meals.....	4		60,390
Nails.....			57
Oats.....	175	107	27,621
Oil cake.....	29		
" in barrels.....		27	
Pork.....	717		56
Salt.....		133	
Spirits, beer, &c.....		3	
Sugar.....			52
Wheat.....	212,557	13,349	42,934
White lead.....	16		
Wool.....			1,484
Merchandise not enumerated.....	314		2,889
Barrels, empty.....		16	
Sawn lumber, in vessels.....	683		86,545
Square timber.....		47,030	
Woodenware.....	6		
Total.....	292,191	80,681	373,070

There was no rebate allowed of the Welland Canal toll on grain passed down to Montreal during the season of navigation in 1894.

The tolls were, however, reduced by Order in Council of 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, 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.

SESSIONAL PAPER No. 20

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1895.	Tons.	Tons.	Tons.
Apples.....	28		
Ashes.....	34	15	
Barley.....	959		7,730
Bricks.....		651	
Coal.....		7,809	603
Corn.....	70,235	2,912	91,743
Flour.....	30,916	1,824	10,265
Furniture.....		12	2
Glass.....		1	
Horses.....	1	1	
Hides, skins, &c.....			8
Iron, railway.....			181
" pig.....	79	1,994	
" all other.....	1,766	1,408	214
Lard and lard oil.....			6
Meal, all kinds.....	65		46,316
Meats other than pork.....			30
Molasses.....	100		
Oats.....	1,654	123	16,442
Oil, in barrels.....	6	41	30
Pork.....			87
Paint.....	2		
Salt.....		36	
Stone, for cutting.....		430	
Seeds, all kinds.....			14
Steel.....	394		462
Sugar.....			59
Spirits, beer, &c.....	101	84	15
Tobacco.....		16	
Wheat.....	*158,643	29,061	17,908
Wool.....			1,536
Merchandise not enumerated.....	558	1,302	7,656
Barrels, empty.....	1		
Sawn lumber in vessels.....	1,117	492	43,286
Railway ties.....			1,942
Shingles.....		19	
Square timber in vessels.....		63,715	500
Total.....	266,659	111,946	247,035

* Of this amount 3,469 tons came down to Kingston in 1894, were 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.

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continue*!

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, were stored there, and transhipped to Montreal in 1896.

SESSIONAL PAPER No. 20

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1897.	Tons.	Tons.	Tons.
Agricultural products, vegetable..			32
Ashes.....	133		
Barley.....			14,173
Bricks.....		739	845
Clay, lime and sand.....	38	430	
Coal.....		9,803	
Corn.....	*264,396	11,103	115,689
Flax seed.....	3,293	169	
Flour.....	1,029	211	7,237
Furniture	1	5	
Glass.....	53	9	
Hay, pressed.....			301
Horses.....	1	1	3
Hides and skins, &c.....			23
Iron, railway.....		6,241	965
" pig.....		2,828	
" all other.....	7,564	6,143	
Lard and lard oil			1,444
Meal, all kinds.....		699	41,644
Molasses.....	9		
Oats.....	*6,847	3,046	15,233
Oil, in barrels.....	112	51	198
Pease.....	*2,078	3	
Pork.....			243
Rye.....	8,435	48	
Salt.....	216		
Stone for cutting.....		330	
Seeds, all kinds.....			299
Steel	375	4,680	
Sugar.....			31
Spirits, beer, &c.....	46		
Tobacco.....	51		
Wheat.....	*278,498	†39,057	12,661
Wool.....			197
Merchandise not enumerated..	1,214	347	3,591
Firewood, in vessels.....		12	
Hoops.....	257	8	
Lumber, sawn, in vessels.....	478	1,158	69,710
Masts			403
"			
" rafts.....		5	
Railway ties, in vessels.....		999	
Split posts		4	
Timber, square	1,207	81,117	1,040
Staves and headings, salt barrel.....	4,716		
Woodenware.....			1
Total.....	581,047	169,246	285,963

* Of this quantity of corn 573 tons came down to Ogdensburg and Prescott in 1896, were stored there and transhipped to Montreal in 1897.

* Of this quantity of oats 50 tons came down to Prescott in 1896 and passed down to Montreal in 1897, and 170 tons passed through on St. Catharines Reports; 136 tons of which passed down to Montreal.

* Of this quantity of pease 230 tons were transhipped and passed through on St. Catharines Reports.

† Of this quantity of wheat 624 tons were transhipped and passed through on St. Catharines Reports, and 7,072 tons came down to Kingston and Prescott in 1896 and passed down to Montreal in 1897.

† Of this quantity, 1,079 tons were transhipped and passed through on St. Catharines Reports.

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1898.	Tons.	Tons.	Tons.
Agricultural products, vegetable.....	56		
Ashes.....	73		
Barley.....	3,960	1,417	6,909
Cement and water line.....			300
Clay, lime and sand.....	52	1	
Coal.....		4,536	759
Corn.....	*310,498	13,338	116,317
Flax seed.....	5,687	9	
Flour.....	653		4,212
Furniture.....			2
Glass.....	75		
Horses.....	4		
Iron, railway.....		674	770
" pig.....		4,187	
" all other.....	6,217	257	324
" ore.....		13,433	
Lard and lard oil.....			3,671
Meal, all kinds.....			22,626
Molasses.....	56		
Oats.....	3,975	625	12,729
Oil, in barrels.....	1,141	15	119
Paint.....			3
Pease.....	260		45
Pork.....			1,271
Rye.....	*16,133	39	
Salt.....	144	644	
Seeds, all kinds.....			44
Spirits, beer, &c.....	4		34
Steel.....	1,351	3,122	2,951
Stone for cutting.....		554	
Tallow.....			359
Wheat.....	*184,706	15,860	8,612
Wool.....			89
Merchandise, not enumerated.....	866	25	3,828
Firewood, in vessels.....		747	
Lumber, sawn, in vessels.....	3,065	2,840	72,897
Railway ties.....		190	
Shingles.....		11	
Square timber.....	329	48,369	
Total.....	539,305	110,893	258,871

* Of this quantity of corn 2,340 tons came down to Ogdensburg and Prescott in 1897, were stored there and transhipped to Montreal in 1898.

* Of this quantity of rye 45 tons came down to Prescott in 1897, were stored there and transhipped to Montreal in 1898.

* Of this quantity of wheat 4,165 tons came down to Kingston in 1897, were stored there and transhipped to Montreal in 1898.

SESSIONAL PAPER No. 20

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1899.	Tons.	Tons.	Tons.
Agricultural products, vegetable	32		
Ashes	58		
Barley	596		1,828
Clay, lime and sand	15		
Coal		8,276	2,293
Corn	*150,999	16,594	43,854
Flax seed	200		
Flour	4,229	1,889	4,404
Furniture		2	7
Glass	16		
Horses	1		
Iron, all other	5,063		294
Iron ore		26,125	
Lard and lard oil		3	864
Meal, all kinds			18,198
Molasses	159		8
Nails	1	1	11
Oats	*10,250	1	13,139
Oil, in barrels	7,143	2	254
Paint			2
Pork			343
Rags			1
Rye	923		
Salt	183	479	549
Seeds, all kinds			11
Spirits, beer, &c.	74	71	168
Steel	3,000	1,562	11,802
Stone for cutting		429	
Tallow			201
Tobacco	96		
Wheat	*169,978	23,602	9,190
Wool			130
Merchandise, not enumerated	518	126	6,219
Barrels, empty	1		
Firewood in vessels		27	
Hop poles		100	
Lumber, sawn, in vessels	924	4,583	57,695
Masts and spars		3	
Railway ties		74	1,273
Shingles		50	
Square timber, in vessels	26	24,959	
Total	354,485	108,958	172,738

*Of this quantity of corn 7,443 tons came down to Ogdensburg and Prescott in 1898, were stored there and transhipped to Montreal in 1899.

*Of this quantity of oats 187 tons passed down on Dunnville pass to Montreal.

*Of this quantity of wheat 6,447 tons passed down to Kingston in 1898, were stored there and transhipped to Montreal in 1899.

1-2 EDWARD VII., A. 1902

U.—COMPARATIVE STATEMENT of the Quantity of Through Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port-Dalhousie and Cornwall.	Quantity. passed down to United States Ports.
1900.	Tons.	Tons.	Tons.
Agricultural products, vegetable		1	6
Ashes	25	15	
Barley	1,288	563	1,598
Cement and water lime			18
Clay, lime and sand	15		
Coal		1,360	992
Corn	*109,359	9,844	44,806
Flour	1,595	990	6,371
Furniture	1		
Glass, all kinds	6	4	
Horses			4
Iron, pig	508	1,284	
" all other	4,292	1,044	714
" ore		58,400	
Lard and lard oil			1,588
Meal (all kinds)			14,244
Molasses		21	57
Oats	*8,925	348	30,840
Oil, in barrels	15,647	4,288	17
Oil-cake			2,705
Paint		2	36
Pease	115		4
Pitch and tar		24	
Pork			117
Rye	3,078	160	300
Salt		467	
Soda, ash		15	
Steel	5,420		2,601
Sugar			154
Tallow			631
Wheat	*121,896	6,610	7,541
White lead	16		
Merchandise not enumerated	103	154	7,899
Barrels, empty	182	407	5
Firewood, in vessels		1,143	
Lumber, sawn, in vessels	15,760	5,701	55,128
Shingles		90	
Square timber, in vessels		20,267	
Staves		3	
Total	288,231	113,205	177,876

*Of this quantity of corn 751 tons came to Ogdensburg, Kingston and Prescott in 1899, were stored there and transhipped to Montreal in 1900.

*Of this quantity of oats 585 tons came down to Ogdensburg, Kingston and Prescott in 1899, were stored there and transhipped to Montreal in 1900.

*Of this quantity of wheat 10,835 tons came down to Ogdensburg, Kingston and Prescott in 1900, were stored there and transhipped to Montreal in 1900.

SESSIONAL PAPER No. 20

U.—STATEMENT showing the quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1889.	Tons.	Tons.	Tons.
Barley			
Corn.....	195,350	11,200	147,945
*Oats.....	320		27,492
Peas			
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
Peas			14
Rye.....	1,120	1	
Wheat.....	75,515	5,241	31,527
Total grain.....	228,513	16,899	245,932
Other articles	7,459	127,502	81,901
Total	235,972	144,301	327,833
1891.			
Barley.....			8,113
Corn.....	52,589	5,144	127,494
Oats.....			52,823
Peas	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
Total	309,593	54,315	299,392
1892.			
Barley.....			6,433
Corn.....	53,689	7,637	131,222
Oats.....			36,935
Peas	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.

** This quantity of wheat was taken from Kingston to Ogdensburg, stored in elevators and subsequently transhipped to Montreal.

‡ Of this quantity of grain 16,433 tons were transhipped at Ogdensburg to Montreal.

1-2 EDWARD VII., A. 1902

U.—STATEMENT showing the quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
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	179,790
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.

SESSIONAL PAPER No. 20

U.—STATEMENT showing the quantity of Through Freight passed down the Welland Canal to Canadian Ports, &c.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1897.	Tons.	Tons.	Tons.
Barley.....			14,173
Corn.....	264,396	11,103	115,689
Oats.....	6,847	3,046	15,233
Pease.....	2,078	3	
Rye.....	8,435	48	
Wheat.....	278,498	39,057	12,661
Total grain.....	*560,254	53,257	157,756
Other articles.....	20,793	115,989	128,297
Total.....	581,047	169,246	285,963
1898.			
Barley.....	3,960	1,417	6,909
Corn.....	310,498	13,338	116,317
Oats.....	3,975	625	12,729
Pease.....	260		45
Rye.....	16,133	39	
Wheat.....	184,706	15,860	8,612
Total grain.....	**519,532	31,279	144,612
Other articles.....	19,773	79,614	114,259
Total.....	539,305	110,893	258,871
1899.			
Barley.....	596		1,828
Corn.....	150,999	16,594	43,854
Oats.....	10,250	1	13,139
Pease.....			
Rye.....	923		
Wheat.....	169,978	23,602	9,190
Total grain.....	***332,746	40,197	68,011
Other articles.....	* 21,739	68,761	104,727
Total.....	354,485	108,958	172,732
1900.			
Barley.....	1,288	563	1,598
Corn.....	109,359	9,844	44,306
Oats.....	8,925	348	30,840
Pease.....	115		4
Rye.....	3,078	160	300
Wheat.....	121,896	6,616	7,541
Total grain.....	+ 244,661	17,525	84,589
Other articles.....	43,570	95,680	93,287
Total.....	288,231	113,205	177,876

* Of this quantity, 7,695 tons came down in 1896 and were transhipped to Montreal in 1897.

** Of this quantity, 6,550 tons came down in 1897 and were transhipped to Montreal in 1898.

*** Of this quantity, 14,077 tons came down in 1898 and were transhipped to Montreal in 1899.

+ Of this quantity, 12,171 tons came down in 1899 and were transhipped to Montreal in 1900.

1-2 EDWARD VII., A. 1902

COMPARATIVE STATEMENT showing the quantity of Vegetable Food and Lumber passed through the Canals during the years ended December 31, 1899 and 1900.

	VEGETABLE FOOD.										Lumber.		Total.
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Buck-wheat.	All other.			Tons.	Tons.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.			Tons.	Tons.	
Welland Canal, 1899	11,625	197,732	204,004	2,907	24,037	923	4	18,460			67,850	527,542	
"	10,968	137,800	163,509	4,035	41,055	3,538		14,815			77,470	453,190	
Increase	657	59,932	40,495	1,128	17,018	2,615	4	3,645			9,620	74,352	
Decrease													
St. Lawrence Canals, 1899	27,833	299,567	350,110	25,230	43,068	6,522	1,296	17,020			26,648	799,294	
"	13,277	276,229	288,169	21,096	52,983	12,544	1,159	16,432			59,543	741,432	
Increase	14,556	23,338	61,941	4,134	9,915	6,022	137	388			30,895	57,862	
Decrease													
Chambly Canal, 1899	409			30	4,342			274			56,833	61,888	
"	524			48	3,807			576			39,605	44,620	
Increase	115			18				302					
Decrease					475						17,228	17,268	
Ottawa Canals, 1899	125				1,441	10	40	508			406,378	408,502	
"	11			2	1,752	3	117	242			302,132	304,559	
Increase	114			2	311		77	266			104,246	104,243	
Decrease						7							
Rideau Canal, 1899	788	213	110		823	7	33	336			28,534	30,844	
"	470	313	147		670	28	63	287			29,728	31,706	

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Increase.....	318	100	37	153	21	30	1,194	862
Decrease.....	49
St. Peter's Canal, 1899	2,460	21	7	2,010	3,190	9,208	16,896
1900.....	1,851	.....	8	9	2,257	.....	.....	3,459	15,261	23,345
Increase.....	609	.....	13	2	247	.....	.....	769	6,053	6,449
Decrease.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trent Valley Canals, 1899	.....	437	.....	13	16	.....	.....	26	2,697	3,189
1900.....	.....	627	.....	.....	.....	.....	.....	.....	1,948	2,575
Increase.....	.....	190	.....	13	16	.....	.....	26	749	614
Decrease.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Murray Canal, 1899	7	1,115	56	762	8	392	79	667	311	3,397
1900.....	10	1,240	.....	332	.....	664	128	721	372	3,467
Increase.....	3	125	.....	430	.....	272	49	54	61	70
Decrease.....	.....	.....	56	.....	.....	.....	.....	.....	.....	.....
Sault Ste. Marie Canal, 1899	119,888	382,789	20,842	2,040	3,196	3,528	.....	16,014	13,271	561,568
1900.....	72,029	278,761	9,975	2,529	2,403	1,148	.....	1,726	12,408	380,970
Increase.....	47,859	104,028	10,867	480	743	2,380	.....	14,288	863	180,598
Decrease.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, increase	63,995	180,883	113,335	2,947	26,046	6,543	15	17,737	75,263	427,556
Total, decrease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for year 1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,413,120
" 1900	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,985,556

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

1-2 EDWARD VI., A. 1902

CANAL

COMPARATIVE STATEMENT for years

	January.	February.	March.	April.	May.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland Canal, 1899.....			2 31	3,731 14	24,339 23
" 1900.....				4,958 86	17,311 23
Increase.....				1,227 72	
Decrease.....			2 31		7,028 00
St. Lawrence Canals, 1899....				712 35	15,762 82
" 1900.....				1,001 53	14,417 71
Increase.....				289 18	
Decrease.....					1,345 11
Chambly Canal, 1899.....				9 25	3,932 67
" 1900.....				8 91	3,946 01
Increase.....					13 34
Decrease.....				0 34	
Ottawa Canals, 1899.....				37 22	6,264 76
" 1900.....				4 37	3,569 35
Increase.....					
Decrease.....				32 85	2,695 41
Rideau Canal, 1899.....				45 00	1,118 65
" 1900.....					979 24
Increase.....					
Decrease.....				45 00	139 41
St. Peter's Canal, 1899.....	12 30			35 59	271 86
" 1900.....	27 55			96 61	303 92
Increase.....	15 25			61 02	32 06
Decrease.....					
Trent Valley Canals, 1899....				4 33	107 03
" 1900.....				33 44	49 66
Increase.....				29 11	
Decrease.....					57 37
Murray Canal, 1899.....				13 06	58 56
" 1900.....				8 65	68 69
Increase.....					10 13
Decrease.....				4 41	
Saut Ste. Marie Canal, 1899 ..					
" 1900.....			56 51		
Increase.....			56 51		
Decrease.....					
Total, increase.....	15 25		54 20	1,524 43	
Total, decrease.....					11,209 77

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

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REVENUE.

ended 31st December, 1899-1900.

June.	July.	August.	September.	October.	November.	December.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
20,275 62	15,833 28	14,186 32	12,931 99	12,642 00	11,820 31	2,297 93	118,110 13
14,810 17	13,610 07	15,851 41	14,518 43	10,840 60	10,145 40	2,247 63	104,293 80
		1,665 09	1,586 44				
5,465 45	2,273 21			1,801 40	1,674 91	50 30	13,816 33
15,512 62	16,118 20	15,882 03	11,689 43	12,500 32	12,606 37	146 06	100,930 20
14,226 39	16,756 62	17,305 50	14,064 77	13,185 51	12,225 70	189 11	103,572 84
	638 42	1,423 47	2,375 34	685 19		43 05	2,442 64
1,286 23					380 67		
3,924 05	4,247 11	4,343 85	2,953 27	4,144 51	2,436 45	8 94	26,000 10
3,434 92	4,121 12	4,344 89	3,324 84	3,073 19	1,954 10	12 37	24,220 35
		1 04	371 57			3 43	
489 13	125 99			1,071 32	482 35		1,779 75
5,549 08	5,605 08	5,257 66	4,598 24	5,238 43	2,832 93		35,383 40
3,411 47	3,900 07	4,446 61	3,837 16	4,128 26	2,327 99		25,625 28
2,137 61	1,705 01	811 05	761 08	1,110 17	504 94		9,758 12
736 75	1,104 92	1,124 50	754 58	758 14	400 03	7 41	6,049 98
1,344 90	1,340 91	912 19	750 75	592 92	509 96	7 34	6,438 21
608 15	235 99				109 93		388 23
		212 31	3 83	165 22		0 07	
308 92	423 14	516 46	518 30	396 46	380 69	287 61	3,151 33
389 55	517 69	511 26	301 68	332 84	337 81	236 74	3,055 65
80 63	94 55						
		5 20	216 62	63 62	42 88	50 87	95 68
150 63	218 18	241 49	247 37	185 82	157 64	0 25	1,312 74
169 18	218 96	256 80	192 10	187 53	115 14	1 00	1,223 81
18 55		15 31		1 71		0 75	
	0 78		55 27		42 50		88 93
95 91	142 98	132 40	120 78	89 05	61 25	0 50	714 49
86 82	149 10	197 53	130 77	118 69	69 55		829 80
	6 12	65 13	9 99	29 64	8 30		115 31
9 09						0 50	
							56 51
							56 51
8,680 18	3,128 35	2,141 48	3,306 54	3,495 19	3,010 02	54 51	22,536 12

Total for year 1899.....\$291,652 37
 Total for year 1900.....269,116 25

RICHARD DEVLIN, *Compiler of Canal Statistics.*

1-2 EDWARD VII., A. 1902

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 1900.

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.		cts.	%	cts.	%	cts.
Ashes, pot and pearl		12						40	40				8 00	8 00
Apples	8	438				28	13	438	451	1 95		10 96	12 91	12 91
Agricultural products not enumerated, vegetables.														
Agricultural products not enumerated, animal.														
Agricultural implements														
Barley														
Bricks	296	30						30	326	37 29		3 93	41 22	41 22
Bones														
Brinstone														
Cement and water lime	4		17	18			21	18	39	3 15		3 60	6 75	6 75
Clay, lime and Sand	298		95				383	2,615	3,008	23 61		198 01	221 62	221 62
Coal	8		45,032	992			45,040	2,352	47,392	9,008 00		470 40	9,478 40	9,478 40
Corn		618		60,545				163,509	163,509			16,350 90	16,350 90	16,350 90
Cattle														
Cotton (raw)														
Crockery and earthenware.	11						11		11	1 65			1 65	1 65
Dye wood and dye stuffs.														
Fish			342				342		342	51 30			51 30	51 30
Flax and hemp			470				470		470	70 50			70 50	70 50
Flour		2,012		7,966				10,968	10,968	4 65		1,877 55	1,877 55	1,877 55
Furniture		1	30				31	2	33			0 37	5 02	5 02
Gypsum														
Glass (all kinds)	20						20	10	30	3 00		2 00	5 00	5 00
Hay (pressed)		1						1	1			0 18	0 18	0 18
Hogs														
Horses														
Hides and skins, horns and hoofs	24	25	5	4			31	29	60	1 51		1 43	2 94	2 94
			51				51		51	7 65			7 65	7 65

SESSIONAL PAPER No. 20

[illegible]

1-2 EDWARD VII., A. 1902

No. (A) 1.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$ cts.	\$ cts.	\$ cts.
Fire wood, in vessels.	405	5,817	1,671						2,076	5,817	7,893	92 91	328 45	421 36
" " in rafts.														
Hoops.														
Hop poles.														
Lumber, sawn, in vessels.	72	14,758	4,141			55,128		3,362	72	77,392	77,464	11 54	13,871 17	13,882 71
" " rafts.		4								4	4		0 30	30
Masts, spars, and telegraph poles, in vessels.	9								9		9	1 80		1 80
Masts, spars, and telegraph poles, in rafts.	6								6		6	0 65		0 65
Railway ties, in vessels.	1,563								1,563		1,563	124 88		124 88
" " in rafts.														
Saw logs.	415	3,507	2,989	161					3,414	3,668	7,082	69 24	209 32	278 56
Staves and headings, barrel		741	39							780	780	37 41		37 41
" " pipe.														
" " West Indies														
" salt barrel.														
Shingles.		97								97	97	67 49		67 49
Split posts and fence rails, in vessels.														
Split posts and fence rails, in rafts.														
Timber, square, in vessels.	42	5,629			10			14,638	52	20,267	20,319	3 82	3,038 94	3,042 76
" " in rafts.									71					
Traverses.														
Woodenware and wood partly manufactured.	2				69							28 40		28 40
Total freight paying tolls.	6,925	146,034	5,310	4,344	99,560	218,969	231,783		111,795	601,130	712,925	17,908 09	71,129 87	89,037 96

*Articles having paid full
tolls on the St. Lawrence
Canals, free:—*

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DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

RICHARD DEVLIN,
Compiler of Canal Statistics.

1-2 EDWARD VII., A. 1902

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 1900.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.		Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$ cts.	\$ cts.		\$ cts.
Ashes, pot and pearl...		12									40				
Apples.....	8				5			28			13			8 00	8 00
Agricultural products not enumerated, vegetable...	1													1 95	1 95
Agricultural products not enumerated, animal.											7			1 20	1 35
Barley.....						2,402					586			87 90	432 80
Bricks.....	156		586				1,047			156				23 40	23 40
Bones.....															
Brimstone.....															
Buckwheat.....					17	18			21		39			3 15	6 75
Cement and water lime.	4				95				95		110			3 00	17 25
Clay, lime and sand.					45,032				45,040		2,352			470 40	9,478 40
Coal.....	8					992		1,360			47,392			9,008 00	16,350 90
Corn.....		618				60,515		102,346			163,509			16,350 90	
Cattle.....															
Cotton, raw.....															
Crockery and earthenware.	11								11		11			1 65	1 65
Dye wood and dye stuffs.															
Fish.....					342				342		342			51 30	51 30
Flax and Hemp.....					470				470		470			70 50	70 50
Floor.....						7,966		990			8,956			1,791 20	1,791 20
Furniture.....			1		30		1		31		32			4 65	4 85
Gypsum.....															
Glass (all kinds).	20							10		20	30			2 00	5 00
Hay, pressed.															
Hogs.....															
Horses.....			2												
Hides and skins, horns and hoofs.					51				51		51			7 65	7 56

1-2 EDWARD VII., A. 1902

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.				
Floates		1,143							1,296	1,143	2,439	86 40	76 20	162 60
Fire wood, in vessels.			1,256											
" " rafts.														
Hoops														
Hop Poles														
Lumber, sawn, in vessels.	50	13,955		4,144		55,128		3,362	50	76,589	76,639	9 00	13,780 95	13,789 95
" " rafts.														
Masts, spars, and telegraph poles, in vessels.														
Masts, spars, and telegraph poles, in rafts.														
Railway ties, in vessels.														
" " rafts.														
Saw logs.		3								3	3		0 40	0 40
Staves and headings, barrel														
" " pipe.														
" " West India														
Staves, salt barrel.		90								90	90		64 68	64 68
Shingles														
Split posts and fence rails, in vessels.														
Split posts and fence rails, in rafts.	12	5,629			10			11,638	22	20,267	20,289	3 25	3,038 94	3,042 19
Timber, square, in vessels.														
" " rafts.														
Traverses.														
Woodenware and wood partly manufactured.	2				69				71		71	28 40		28 40
Total freight paying tolls	1,527	129,497	1,947	4,144	99,560	218,969	226,702		103,634	579,312	682,346	17,618 55	69,767 29	87,385 84

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<i>Articles having paid full tolls on the St. Lawrence Canals, free:—</i>									
Bricks.....	20	29	49	49
Cement and water lime.....	759	1,172	.....	.....	1,431	.....	1,431	.....	.....
Clay, lime and sand.....	2	2	.....	.....	4	.....	4	.....	.....
Crockery and earthenware.....	5	.....	.....	.....	5	.....	5	.....	.....
Fish.....	.....	8	.....	.....	8	.....	8	.....	.....
Furniture.....	.....	1	.....	.....	1	.....	1	.....	.....
Glass.....	14	442	.....	.....	456	.....	456	.....	.....
Iron, railway.....	.....	74	.....	.....	74	.....	74	.....	.....
Iron, pig.....	.....	3	.....	.....	3	.....	3	.....	.....
Iron, all other.....	237	1,191	.....	.....	1,428	.....	1,428	.....	.....
Nails.....	70	110	.....	.....	180	.....	180	.....	.....
Oils.....	1	73	.....	.....	74	.....	74	.....	.....
Paint.....	6	6	.....	.....	12	.....	12	.....	.....
Pitch and tar.....	21	.....	.....	.....	21	.....	21	.....	.....
Pork.....	1	.....	.....	.....	1	.....	1	.....	.....
Salt.....	.....	48	.....	.....	48	.....	48	.....	.....
Seed.....	5	213	.....	.....	218	.....	218	.....	.....
Soda ash.....	.....	69	.....	.....	69	.....	69	.....	.....
Sugar.....	130	300	.....	.....	430	.....	430	.....	.....
Tin.....	.....	117	.....	.....	117	.....	117	.....	.....
White lead.....	2	2	.....	.....	4	.....	4	.....	.....
Whiting.....	2	34	.....	.....	39	.....	39	.....	.....
Whisky.....	8	287	.....	.....	295	.....	295	.....	.....
Merchandise.....	198	546	.....	.....	744	.....	744	.....	.....
Grand total through freight	3,011	129,497	.....	.....	226,702	.....	109,245	.....	.....
		4,144	99,560	218,963	579,312	688,537			
Total through tolls on vessels.....									
passengers.....									
free goods.....									
							6,816 66	6,875 82	13,692 48
							50 00	53 55	103 55
							24,483 21	76,696 66	101,181 87

RICHARD DEVLIN,
Compiler of Canal Statistics

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, September 9, 1901.

1-2 EDWARD VII., A. 1902

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 1900.

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.				
Ashes, pot and pearl											438			
Apples.....		438											10 96	10 96
Agricultural products not enumerated, vegetables.....														
Agricultural products not enumerated, animal.....														
Agricultural implements.....														
Barley.....	110	30							140	30	170	13 89	3 93	17 82
Bricks.....														
Bones.....														
Brimstone.....														
Buckwheat.....														
Cement and water lime.....														
Clay, lime and sand.....	298								298	2,600	2,898	9 36	195 01	204 37
Coal.....														
Corn.....														
Cattle.....														
Cotton (raw).....														
Crockery and earthenware.....														
Dye wood and dye stuffs.....														
Fish.....														
Flax and hemp.....														
Flour.....		2,012								2,012	2,012		86 35	86 35
Furniture.....		1								1	1		0 17	0 17
Gypsum.....														
Glass (all kinds).....														
Hay (pressed).....		1								1	1		0 18	0 18
Hogs.....														
Horses.....	24	25							24	25	49	0 46	0 63	1 09

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Hides and skins, horns and hoofs.	12	60	12	60	72	0 23	1 50	1 73
Ice								
Iron, railway.								
" Lig.	12	60						
Iron, all other								
Iron ore								
Kryolite chemical ore and other ore, except iron.								
Lard and lard oil								
Meat, all kinds.								
Meat, other than pork.								
Marble.								
Manilla.								
Molasses.								
Nails	8				8	0 15		0 15
Oats		143			143			21 63
Oil (in barrels)	2				2	0 04		0 04
Oil Cake								
Pease.								
Potatoes.	1							
Pork.								
Paint.								
Pitch and tar.	9				1		0 17	0 17
Rags.	70							
Rye.					9	0 17		0 17
Flax Seed.					70	1 32		1 32
Rosin.	14							
Salt			65		14	0 27		0 27
Stone intended for cutting.					65		4 88	4 88
" wrought.								
Stone, not suitable for cutting, unwrought.	271				271	16 84		16 84
Seeds, all kinds.								
Sheep								
Soda ash	9				9	0 17		0 17
Steel	60				60	1 15		1 15
Sugar.	35				35	0 66		0 66
Spirits, beer, &c.								
Tobacco (raw).								
Tallow								
Tin								
Turpentine								
Wheat		1,753			1,753		204 51	204 51
White Lead.								
Whiting								
Wood								
All other goods and merchandise not enumerated.	1,955	2,310	2,400	1,955	4,710	37 89	238 40	276 29
Bark.								

[illegible]

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

1-2 EDWARD VII., A. 1902

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 1900.

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.				
Ashes, pot and pearl	80	31							80	34	114	16 00	6 80	22 80
Apples.....	7	4,632							7	4,632	4,639	0 70	675 21	675 91
Agricultural products not enumerated, vegetables.....														
" " animal.....	202	1,387							257	1,387	1,644	31 49	206 73	238 22
Agricultural implements.....	1,290	1,780							1,290	1,780	3,070	72 34	242 53	314 87
Barley.....	55	12							55	12	67	7 49	0 90	8 39
Bricks.....	210	19,598							210	19,598	19,808	5 63	1,324 89	1,330 58
Bones.....	12,654	403					45		12,758	403	13,161	853 38	15 13	868 51
Brimstone.....	622	357							753	357	357		47 82	47 82
Buckwheat.....	131	1,028							131	1,028	1,159	3 28	58 86	62 14
Cement and water lime.....	5,714	352					190		6,555	352	6,907	802 30	25 91	828 21
Clay, lime and sand.....	11,753	20,548					2,451		14,213	20,548	34,761	591 37	928 86	1,520 23
Coal.....	127,310	9					672		307,397	9	307,397	6 08	4,566 91	43,941 82
Corn.....	240	172,923					1,691		240	174,614	174,854	1 74	20 03	4,572 99
Cattle.....	22	264							22	264	286			21 77
Cotton (raw).....	73	12							73	12	85	12 34	2 40	14 74
Crockery and earthenware.....	4						14		18		18	1 40		1 40
Dye wood and dye stuffs.....	50	1							58	1	59	7 72	0 15	7 87
Fish.....		941								941	941		23 53	23 53
Flax and hemp.....														
Flour.....	576	11,106							576	11,106	11,682	35 62	771 90	807 52
Furniture.....	457	1,126							458	1,126	1,584	83 43	194 35	277 78
Gypsum.....	1,414								1,414		1,414	17 69		17 69
Glass (all kinds).....	493	72							942	72	1,014	12 70		12 70
Hay (pressed).....	825	466							825	466	1,291	31 63	114 61	145 64
Hogs.....	1	41							1	41	42	0 08	3 19	3 27
Horses.....	195	362							195	362	557	10 41	23 58	33 99
Hides and skins, horns and hoofs.....	26	18							26	18	44	2 93	0 80	3 73

1-2 EDWARD VII., A. 1902

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 of 1900.—*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.
Boat knees.....														
Floats.....	45	4							45		4	0 79	0 86	0 86
Fire wood, in vessels.....	3,336	5,322							3,336		8,737	55 60	109 95	165 55
" " rafts.....														
Hoops.....	1	1							1		2	0 10	0 15	0 25
Hop poles.....		81								84	84		0 50	50
Lumber, sawn, in vessels.....	33,395	6,211							36,222	6,582	42,804	1,543 73	211 76	1,755 49
" " rafts.....	17	902							17	932	979	0 75	42 05	42 80
Masts, spars, and telegraph poles, in vessels.....	51								5		5	0 13		0 13
Masts, spars, and telegraph poles, in rafts.....														
Railway ties, in vessels.....	126	44							126	44	20,487	5 00	512 30	512 33
" " rafts.....											170		0 88	5 88
Saw logs.....	9	566							9	566	575	0 25	12 86	13 11
Staves and headings, barrel " " West India.....														
Staves, salt barrel.....														
Shingles.....														
Split posts and fence rails, in vessels.....		25								25	25		4 50	4 50
Split posts and fence rails, in rafts.....		1							2	1	3	0 20	0 10	0 30
Timber, square, in vessels.....	10	488							10	638	648	0 13	8 91	9 07
" " rafts.....	700	4,394							700	4,394	5,094	17 50	110 05	127 55
Traverses.....		100								100	100		1 25	1 25
Woodenware and wood partly manufactured.....	51	9							51	9	60	16 00	1 80	17 80
Total freight paying tolls.	100,168	635,356			290	1,177	8,335	184,342	126,740	821,580	948,320	9,764 32	64,116 48	73,880 80

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<i>Free Articles, having paid full tolls on the Welland Canal:</i>	
Ashes.....	15
Barley.....	1,084
Barrels.....	182
Clay, lime and sand.....	15
Corn.....	92,211
Flour.....	605
Furniture.....	508
Glass.....	50
Iron (pig).....	15,073
" (all other).....	16
Kryolite.....	1,020
Lumber, sawn, in vessels.....	15,330
Merchandise.....	115
Oats.....	881
Oils.....	880
Pease.....	112,226
Rye.....	
Steel.....	
Wheat.....	
White head.....	
Coal, free, per Order in Council.....	57,714
<i>Free articles for canal construction, O.C., 1884:</i>	
Coal.....	

Grand total, freight...

168,182	875,502	7,587	705	290	1,177	17,836	237,787	193,845	1,115,171	687	687	10,990 46	8,396 51	19,387 00
												1,106 42	2,532 36	3,638 78
												21,861 20	75,045 38	96,906 58
														34 00
														1,420 52
														5,011 71
														103,372 84

*Amount of damages not included in above, \$115.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.RICHARD DEVLIN,
Compiler of Canal Statistics.

1-2 EDWARD VII., A. 1902

APPENDIX A—Continued.

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Through Article transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation of 1900.

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.		Amount of Tolls, Up.		Amount of Tolls, Down.		Total Amount of Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	\$	cts.	\$	cts.	\$	cts.
Ashes, pot and pearl	80	34							89	34	16	00	6	80	22	80
Apples		4,451								4,451			667	65	667	65
Agricultural products not enumerated, vegetables	114	1,375	55						169	1,375	25	35	206	25	231	60
Agricultural products not enumerated, animal	56	1,487							56	1,487	8	40	223	05	231	45
Agricultural implements	1	1							1	1	0	20	1,113	00	1,113	00
Barley		11,130							2,453	11,130	367	95			367	95
Bricks	2,394		59						14				2	10		
Bones		14							158		23	70			23	70
Brimstone	27		131						434				43	40		
Buckwheat		434											2	10		
Cement and water lime	3,124	14	651						3,775	14	566	25	129	75	568	35
Clay, lime and sand	380	865	9						389	865	58	35	42,025	35	188	10
Coal		117,222								280,169					42,025	35
Corn		976							2,667		0	45	266	70	266	70
Cattle	3								3						0	45
Cotton (raw)																
Crockery and earthenware	36	12							36	12	7	20	2	40	9	60
Dye wood and dye stuffs	3								3						0	60
Fish	32	1	8						40	1	6	00	0	15	6	15
Flax and Hemp																
Floor	7	2,220							7	2,220	1	05	333	00	333	05
Furniture	329	875	1						330	875	66	00	175	00	241	00
Gypsum																
Glass (all kinds)	294	55	449						743	55	148	60	11	00	159	60
Hay (pressed)		1							1						0	15
Hogs																
Horses		67								57					8	55

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	12	1						1	13	1 80	0 15	1 95
Hides and skins, horns [and hoofs.....												
Ice.....	5								79	11 85		11 85
Iron, railway.....	140	701						701	844	21 45	105 15	126 60
" pig.....	2,511	647						647	4,137	523 50	97 65	620 35
" all other.....												
Iron Ore.....												
Kryolite chemical ore and other ore, except iron												
Lard and lard oil.....	36	258						258	294	5 40	38 75	41 15
Meal, all kinds.....	6	70						70	76	0 10	10 50	11 40
Meats, other than pork.....		6						6	6		0 90	0 90
Marble.....												
Manilla.....	27									5 40		5 40
Molasses.....	14									2 80		2 80
Nails.....	327	35						35	445	82 00	7 00	89 00
Oats.....	405	108						108	6,367	636 70	636 70	636 70
Oil (in barrels)									684	103 20	33 60	136 80
Oil cake.....												
Peanse.....		10,222						10,222	10,222		1,022 20	1,022 20
Potatoes.....												
Pork.....	1	67						67	68	0 15	10 05	10 20
Paint.....	195	41						41	243	40 40	8 20	48 60
Pitch and tar.....	97	94						94	191	19 40	18 80	38 20
Rags.....	46	29						29	75	9 20	5 80	15 00
Rye.....		5,076						5,457	5,457		545 70	545 70
Flax seed.....												
Rosin.....												
Salt.....	980							1,099	1,099	164 85		164 85
Stone intended for cutting.....												
Stone wrought.....		250						250	250		50 00	50 00
" not suitable for cut- ting, unwrought.....		322						322	322		22 65	22 65
Seeds, all kinds.....	187	24						24	351	4 05	3 60	52 65
Sheep.....												
Soda ash.....	359											
Steel.....	327	9						9	493	98 60		98 60
Sugar.....	2,740	14						14	336	49 05	1 35	50 40
Spirits, beer, &c.....	83	132						132	3,123	624 60	2 80	627 40
Tobacco (raw).....									496	72 80	26 40	99 20
Tallow.....	5	1						1	6	0 75	0 15	0 90
Tin.....	1,028	2						2	1,190	237 60	0 40	238 00
Turpentine.....	1									0 20		0 20
Wheat.....	12,768							14,990	14,990	1,499 00		1,499 00
White Lead.....	43								43	8 60		8 60
Whiting.....	669								703	140 60		140 60
Wool.....		2						2			0 30	0 30
All other goods and mer- chandise not enumerated												
Blank.....	4,915	2,996						3,001	8,787	1,157 20	600 20	1,757 40

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No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Through Article transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation in 1900.—*Continued.*

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.	
Barrels, empty.....	123								123		123	23 32		23 32
Boat knees.....														
Boats.....														
Fire wood, in vessels.....														
" " rafts.....														
Hoops.....														
Hop Poles.....	21	231	2,827						3,057	601	3,638	273 30	51 00	327 30
Lumber, sawn, in vessels.....														
" " rafts.....														
Masts, spars, and telegraph poles, in vessels.....														
Masts, spars, and telegraph poles, in rafts.....														
Railway ties, in vessels.....														
" " rafts.....														
Saw logs.....														
Staves and headings, barrel.....														
" " pipe.....														
" " West India.....														
Staves, salt barrel.....														
Shingles.....														
Split posts and fence rails, in vessels.....														
Split posts and fence rails, in rafts.....														
Timber, square, in vessels.....														
" " rafts.....														
Traverses.....														
Woodenware and wood partly manufactured.....	28								28		28			11 20
Total freight paying tolls..	22,400	181,761	7,539				167,613		29,969	349,374	379,343	5,035 27	50,018 33	55,053 60

Hides and skins, horns and hoofs.....	14	17	.....	.....	.....	14	17	31	1 13	0 65	1 78
Ice.....	137	233	.....	54	.....	191	233	424	8 18	9 46	17 64
Iron, railway.....	117	151	.....	681	.....	798	151	949	34 68	5 67	40 35
Iron, pig.....	1,946	619	.....	548	.....	2,494	619	3,113	120 85	26 35	147 20
Iron, all other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron ore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kryolite chemical ore and other ore, except iron.....	63	307	.....	.....	.....	63	307	307	.....	34 54	34 54
Lard and lard oil.....	86	1,746	.....	.....	.....	86	1,746	1,809	6 22	86 72	92 94
Meal, all kinds.....	5	438	.....	.....	.....	5	438	524	4 92	21 29	26 21
Meats, other than pork.....	.....	.....	.....	.....	.....	.....	.....	5	0 50	0 50	0 50
Marble.....	6	.....	.....	.....	.....	6	.....	.....	1 14	.....	1 14
Manilla.....	298	174	.....	.....	.....	298	174	472	46 85	8 70	55 35
Molluscs.....	257	.....	.....	.....	.....	219	.....	456	34 74	11 85	46 59
Nails.....	1,315	36,376	.....	.....	.....	1,315	36,376	37,691	33 89	94 88	978 77
Oats.....	1,729	87	.....	76	.....	1,805	87	1,892	110 31	4 35	114 66
Oil, in barrels.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oil cake.....	7	877	.....	.....	.....	7	877	884	0 18	22 90	23 08
Pease.....	69	18	.....	.....	.....	69	18	87	2 71	1 32	4 03
Potatoes.....	204	422	.....	.....	.....	204	422	626	19 73	21 10	40 83
Pork.....	56	61	.....	34	.....	61	61	151	10 45	3 10	13 55
Paint.....	66	25	.....	196	.....	262	25	287	21 35	1 25	22 60
Pitch and tar.....	115	.....	.....	.....	.....	407	.....	522	59 40	10 90	70 30
Rags.....	409	4,009	.....	.....	.....	409	4,009	4,009	.....	100 25	100 25
Rye.....	.....	3,779	.....	.....	.....	.....	3,779	3,779	.....	94 96	94 96
Flax seed.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rosin.....	27	18	.....	1,065	.....	1,692	18	1,710	86 13	0 90	87 03
Salt.....	1,923	92	.....	765	.....	1,923	92	2,015	193 62	3 50	197 02
Stone intended for cutting.....	278	22	.....	.....	.....	1,043	22	1,065	39 82	0 84	40 66
Stone, wrought.....	4	15	.....	.....	.....	4	15	19	0 40	0 57	0 97
Stone not suitable for cutting, unwrought.....	30	2,090	.....	.....	.....	30	2,090	2,129	0 60	41 55	42 15
Seeds, all kinds.....	2,806	29	.....	.....	.....	2,806	29	2,835	107 31	1 43	108 74
Sheep.....	105	.....	.....	.....	.....	105	.....	105	8 10	8 10	8 10
Soda ash.....	25	8	.....	32	.....	57	8	57	4 55	0 31	6 17
Steel.....	92	40	.....	561	.....	92	40	100	5 86	.....	170 15
Sugar.....	987	24	.....	.....	.....	1,548	24	1,588	168 15	2 00	170 15
Spirits, beer, &c.....	196	.....	.....	.....	.....	196	.....	229	30 49	1 30	31 79
Tobacco, raw.....	21	134	.....	.....	.....	21	134	135	2 10	10 03	12 15
Tallow.....	54	373	.....	.....	.....	54	373	373	.....	18 65	18 65
Th.....	.....	.....	.....	.....	.....	.....	.....	.....	8 10	.....	8 10
Turpentine.....	2	.....	.....	273	.....	273	.....	275	13 65	0 10	13 75
Wheat.....	2,360	136,308	.....	.....	.....	2,360	136,308	138,668	109 32	3,408 04	3,517 36
White lead.....	19	17	.....	.....	.....	19	17	36	3 43	0 85	4 28
Whiting.....	88	3	.....	.....	.....	88	3	91	9 79	0 15	9 94
Wool.....	2	.....	.....	.....	.....	2	.....	2	0 08	.....	0 08
All other goods and merchandise not enumerated.....
Bank.....	4,294	2,498	18	810	505	36	3,039	8,449	501 32	225 50	726 82

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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 1900—*Continued*

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.....	473	132							473	132	605	26 09	9 03	35 12
Boat knees.....														
Boats.....	45	4							45	4	49	0 79	0 07	0 86
Fire wood, in vessels.....	3,336	5,922						75	3,336	5,397	8,733	55 60	109 95	165 55
" " rafts.....														
Hoops.....	1	1							1	1	2	0 10	0 15	0 25
Hop poles.....		84								84	84	0 50	0 50	0 50
Lumber, sawn, in vessels.....	33,185	5,977							33,185	5,981	39,166	1,270 43	157 76	1,428 19
Lumber, sawn, in rafts.....	17	962							17	962	979	0 75	42 05	42 80
Masts, spars and telegraph poles, in vessels.....	5								5		5	0 13		0 13
Masts, spars and telegraph poles, in rafts.....	126	44								20,187	20,187	512 30	512 30	512 30
Railway ties, in vessels.....	9	566							136	43	170	5 00	0 88	5 88
" " rafts.....														
Saw logs.....	9	566							9	566	575	0 25	12 86	13 11
Staves and headings, barrel pipe.....														
" " West India.....														
Staves, salt barrel.....		25								25	25		4 50	4 50
Split posts and fence rails, in vessels.....		1			2				2	1	3	0 20	0 10	0 30
Split posts and fence rails, in rafts.....														
Timber, square, in vessels.....	10	487						150	10	637	647	0 13	8 61	8 74
Timber, square, in rafts.....	700	4,394							700	4,394	5,094	17 50	116 05	127 55
Traverses.....		100								100	100		1 25	1 25
Woodenware and wood partly manufactured.....	23	9							23	9	32	4 80	1 80	6 60
Total freight paying tolls.....	88,068	453,595	18	705	290	1,177	8,395	16,720	96,771	472,206	568,977	4,729 05	11,098 15	15,827 20

Free articles having paid full tolls on the Welland Canal:									
Corn	3,956								3,956
Kyrolite									42
Wheat	675								675
Coal, free, per Order in Council	57,704			9,441				67,145	67,145
<i>Free articles for canal construction, O. C., 1884:</i>									
Coal.. .. .								687	687
Grand total way freight.. .. .	145,772	458,226	18	705	200	1,177	17,836	163,916	641,482
Total way tolls on vessels.....									
"									4,457 41
"									563 87
"									1,239 93
Total way tolls.....									
9,690 33									
27,011 52									

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, September 9, 1901.

RICHARD DEVLIN,
Compiler of Canal Statistics.

Compiler of Canal Statistics.

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Iron, railway	4	426	100	430	12 98
" pig	100	36	36	100	2 00
" all other				36	2 42
Iron ore					
Kryolite, chemical ore and other ore, except iron ..					
Lard and lard oil		4		4	0 08
Meal, all kinds		1		1	0 06
Meats, other than pork					
Marble					
Manilla		1		1	
Molasses		3		3	0 19
Nails					0 57
Oats		1,752		1,752	138 75
Oil (in barrels)		2		2	0 38
Oil cake		5		5	0 49
Pease		91		91	6 63
Potatoes		114		114	7 22
Pork		20		20	1 20
Peanut		4		4	0 76
Pitch and tar		33		33	6 27
Rags		41		41	7 52
Rye		3		3	0 30
Flax seed					
Resin					
Salt					
Stone intended for cutting					
" wrought					
" not suitable for cutting, unwrought					
Seeds, all kinds		4		4	0 40
Sheep		269		269	23 55
Soda Ash					
Steel					
Sugar					
Spirits, Beva, &c					
Tobacco (raw)					
Tallow		17		17	1 64
Tin		1		1	0 19
Turpentine					
Wheat					
White lead		1		1	
Whiting					
Wool					
All other goods and merchandise not enumerated ..	2	982		984	126 83
Bark					
Barrels, empty		56		56	6 43
Boat knees					
Floats		31,805		31,805	267 48
Firewood, in vessels		11,292		11,292	316 58
" rafts		440		440	10 31
Hoops		3		3	0 26

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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.		
Hop poles.....												\$ cts.
Lumber, sawn, in vessels.....												21,161 55
" " rafts.....											301,852	1 80
Masts, spars and telegraph poles, in vessels.....											230	
" " rafts.....												
Railway ties, in vessels.....											1,192	213 81
" " rafts.....												
Saw logs.....											3,859	89 88
Staves and heading, barrel.....												
" " paper.....												
" " West India.....												
Staves, salt barrel.....											30	17 78
Shingles.....												
Split posts and fence rails, in vessels.....												
" " rafts.....											1,244	15 32
Timber, square, in vessels.....											4,500	47 22
" " rafts.....												
Traverses.....												
Woodenware and wood partly manufactured.....												
Total freight paying tolls.....	239	325,384							239	306,552	306,591	22,851 55
<i>Free per Order in Council, June 27, 1890.</i>												
Floats.....											12,764	
Firewood, in rafts.....											600	
Lumber, sawn, in rafts.....	60								60		50	
Timber, square ".....											6,800	
Saw logs.....											2,080	
Freight, grand total.....	299	347,678							299	388,846	389,145	

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Total tolls on vessels.....	2,602 63
" passengers.....	171 10
" free goods.....	\$235 43
Total revenue exclusive of hydraulic rents	25,625 28

RICHARD DEVLIN,
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DEPARTMENT OF RAILWAYS AND CANALS,
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No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal, and the Amount of Revenue Collected, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber, sawn, in vessels.....		39		39,596					39,596	39	39,635	\$ 2,315 61
" " rafts.....												
Masts, spars, and telegraph poles, in vessels.....												
" " rafts.....												
Railway ties, in vessels.....				3,261					3,261		3,261	260 41
" " raft.....												
Saw logs.....												
Staves and headings, barrel.....												
" " pipe.....												
" " West India.....												
Staves, salt barrel.....												
Shingles.....												
Split posts and fence rails, in vessels.....												
" " rafts.....												
Timber, square, in vessels.....												
" " rafts.....												
Traverses.....												
Woodenware and wood partly manufactured.....												
Total freight paying tolls.....	4,350	8,468	222,011	68			25	113,639	226,386	122,175	348,561	21,045 31
Total tolls on vessels.....												3,128 63
" " passengers.....												32 41
" " fines.....												14 00
Total revenue exclusive of hydraulic rents.....												24,220 35

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Comptroller of Canal Statistics.

	17	2					17	2	19	1 68
Tin.....										
Turpentine.....										
Wheat.....	28	285					28	285	313	7 36
White lead.....	20						20		20	1 80
Whiting.....	7						7		7	0 63
Wool.....										
All other goods and merchandise not enumerated.....	793	533					793	533	1,326	127 89
Bark.....										
Barrels empty.....	10	29					10	29	39	3 32
Boat knees.....										
Floats.....	1,120	40					1,120	40	1,160	20 30
Firewood, in vessels.....	5,190	957					5,190	957	6,147	123 65
" rafts.....										
Hoops.....										
Hop poles.....	17						17		17	2 50
Lumber, sawn, in vessels.....	2,533	3,539					13,311	16,321	29,632	2,730 40
" " rafts.....	96						96		96	3 63
Masts, spars, and telegraph poles, in vessels.....										
" " rafts.....										
Railway ties, in vessels.....	28						28		28	1 11
" " rafts.....										
Saw logs.....										
Staves and headings, barrel.....										
" " pipe.....										
" " West India.....										
Staves, salt barrel.....										
Shingles.....	91	54					91	54	145	33 90
Split posts and fence rails, in vessels.....										
" " rafts.....										
Timber, square, in vessels.....										
" " rafts.....										
Traverses.....	700						700		700	4 44
Woodware and wood partly manufactured.....										
Total freight paying tolls.....	24,572	11,104	10,758	12,782			14,956	35,330	74,172	4,239 29
Coal, free, per Order in Council.....	1,260							1,260	1,260	
Grand total freight.....	25,832	11,104	10,758	12,782			14,956	36,590	75,432	
Total tolls on vessels.....										
" passengers.....										1,681 36
" free coal.....										158 19
Wharfage and winterage.....										216 46
Other receipts.....										143 00
Total revenue, exclusive of hydraulic rents.....										6,438 21

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Compiler of Canal Statistics.

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" pig.	85	188	85	85	0 85
" all other.	20	60	20	20	2 08
Iron ore.	60	31	60	60	0 31
Kryolite chemical ore and other ore, except iron.	4	693	4	4	0 04
Lead and hard oil.	83	83	83	83	6 93
Meal, all kinds.	3,033	16	3,033	16	0 16
Meats, other than pork.	211	583	211	211	2 11
Marble	583	2,257	583	583	5 83
Manilla	2,257	227	2,257	2,257	22 57
Molasses.	227	13	227	13	2 40
Nails.	3	3,194	3	3	0 03
Oats.	3	95	3	95	31 94
Oil (in barrels).	18	11	18	18	0 18
" cake.	10	10	10	10	0 10
Pease	3	3	3	3	0 03
Potatoes.	3,194	276	3,194	276	2 86
Pork.	95	446	95	446	4 46
Paint.	18	18	18	18	0 18
Pitch and tar.	11	11	11	11	0 11
Rags	10	10	10	10	0 10
Rye.	10	10	10	10	0 10
Flax seed.	3	3	3	3	0 03
Rosh.	3	3	3	3	0 03
Salt.	276	446	276	276	2 86
Stone intended for cutting.	446	80	446	446	4 46
" wrought.	80	2,744	80	2,744	28 24
" not suitable for cutting, unwrought.	2,744	5	2,744	5	0 05
Seeds, all kinds.	5	4	5	5	0 04
Sheep.	4	1	4	4	0 01
Soda ash.	1	1	1	1	0 01
Steel	117	117	117	117	1 17
Sugar.	122	122	122	122	1 22
Spirits, beer, &c.	7	7	7	7	0 07
Tobacco (raw).	1	1	1	1	0 01
Tallow.	1	1	1	1	0 01
Tin	47	47	47	47	0 49
Turpentine.	1	1	1	1	0 01
Wheat.	1	1	1	1	0 01
White lead.	1	1	1	1	0 01
Whiting	1	1	1	1	0 01
Wool	1,367	1,367	1,367	1,367	13 67
All other goods and merchandise not enumerated.	35	35	35	35	0 35
Bark.	6	6	6	6	0 25
Barrels, empty.	19	19	19	19	0 25
Boat knees	19	19	19	19	0 25
Boats	19	19	19	19	0 25
Floats	19	19	19	19	0 25
Fire wood, in vessels.	369	369	369	369	4 85
" rafts.	369	369	369	369	4 85
Hoops.	2	2	2	2	0 02
Hop poles	2	2	2	2	0 02

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No. (A) 10—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber, sawn, in vessels.....	15,261								15,261		15,261	\$ 132 61
" rafts.....												
Masts, spars and telegraph poles, in vessels.....	27								27		27	0 27
" rafts.....												
Railway ties in vessels.....	270								270		270	2 70
" rafts.....												
Saw logs.....												
Staves and headings, barrel.....												
" pipe.....												
" West India.....												
Staves, salt barrel.....												
Shingles.....	866								866		866	8 66
Split posts and fence rails, in vessels.....	47								47		47	0 47
" rafts.....												
Timber, square, in vessels.....	530	1							530	1	531	5 31
" rafts.....												
Traverses.....												
Woodenware and wood partly manufactured.....												
Total freight paying tolls.....	32,705	41,108							32,705	41,108	73,813	738 13
Total tolls on vessels.....												2,317 52
Other receipts.....												3,055 65
Total receipts.....												

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, September 9, 1901.

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 1900,

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												
Agricultural products not enumerated, vegetables												
" " animal												
Agricultural implements												
Barley												
Bricks	23	90							23	90	113	1 36
Bones												
Brimstone												
Buckwheat												
Cement and water lime												
Clay, lime and sand												
Coal												
Corn												
Cattle	34								34		34	
Cotton (raw)												
Crockery and earthenware												
Dye wood and dye stuffs												
Fish												
Flax and Hemp												
Flour												
Furniture												
Gypsum												
Glass (all kinds)												
Hay (pressed)	172								172		172	1 72
Hogs												
Horses	1								1		1	0 01
Hides and skins, horns and hoofs												
Ice												
Iron, railway												

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DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

RICHARD DEVLIN,
Compiler of Canal Statistics

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Iron, railway	74						74	1 39
" pig	246	535					781	14 75
" all other							1	0 05
" ore								
Kryolite chemical ore and other ore, except iron								
Lard and lard oil	8	2					10	0 19
Meal, all kinds		28					28	0 54
Meats, other than pork		8					8	0 16
Marble	5						5	0 13
Manilla								
Molasses	4						4	0 10
Nails	2						2	0 06
Oats								
Oil (in barrels)	36	136					36	4 30
" cake								
Pease		500					500	9 41
Potatoes								
Pork								
Point	52	23					52	1 92
Pitch and tar	29	38					29	1 69
Rags	16						16	0 41
Rye		654					654	12 50
Flax seed								
Rosin								
Salt	18						18	0 34
Stone intended for cutting								
" wrought								
" not suitable for cuttings, unwrought	2,117						2,117	21 17
Seeds, all kinds	27	9					36	0 70
Sheep								
Soda ash	88						88	2 21
Steel	41						41	0 78
Sugar	128	11					139	3 51
Spirits, beer, &c	56	50					106	2 68
Tobacco (raw)								
Tallow								
Tin	71	2					73	1 83
Turpentine								
Wheat		1,240					1,240	23 30
White lead	2						2	0 06
Whiting	219						219	5 50
Wool	2	1					3	0 06
All other goods and merchandise not enumerated	2,552	3,320					5,877	147 08
Bark								
Barrels, empty	9						9	0 18
Boat knees								
Boats								
Fire wood, in vessels	3,024						3,828	31 93
" rafts								
Hoops								

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No. (A) 12 - GENERAL STATEMENT showing the Quantity of each Article transported on the Murray Canal, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop poles.....												
Lumber, sawn, in vessels.....	60								372		372	4 18
" " rafts.....			312									
Masts, spars and telegraph poles, in vessels.....												
" " rafts.....			171						171		171	1 08
Railway ties, in vessels.....												
" " rafts.....			125						125		125	1 25
Saw logs.....												
Staves and headings, barrel.....												
" " pipe.....												
" " West India.....												
Staves, salt barrel.....												
Shingles.....												
Split posts and fence rails, in vessels.....												
" " rafts.....												
Timber, square, in vessels.....												
" " rafts.....												
Traverses.....												
Woodenware and wood partly manufactured.....												
Total freight paying tolls.....	9,765	7,413	1,423	70			395		11,119	7,878	19,067	339 75
Total tolls on vessels.....												263 34
" passengers.....												226 71
Total revenue exclusive of hydraulic rents.....												829 80

RICHARD DELVIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, September 9, 1901.

APPENDIX A—Continued.

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on Sault Ste. Marie Canal, during the Season of Navigation, 1900.

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	38										
Apples.....	8								38		39
Agricultural products not enumerated, vegetables.....	1		19				1		198		198
" " " animal									2		2
Agricultural implements.....											
Barley.....						2,520					2,520
Bricks	502						40		512		512
Bones											
Brinsdome.....											
Buckwheat.....											
Cement and water lime.....	425	652							425		1,097
Clay, lime and sand	2	5,560		3 40				20	2		5,860
Coal.....	977	20			4,465	6,950	67,700		523,328		530,298
Corn.....											
Cattle.....	28	2	11						39		41
Cotton (raw)											
Crockery and earthenware.....											
Dye wood and dye stuffs											
Fish.....		349		161							
Flax and hemp.....								191		701	701
Flour.....	30	15,366	75		515	33,903			620	71,409	72,029
Furniture.....	20		37						57	9	66
Gypsum.....											
Glass (all kinds).....	77										
Hay (pressed).....	1,733	10	56				31	1	77	1	78
Hogs.....	4		1						1,820	10	1,830
Horses.....											
Hides and skins, horns and hoofs	35	52	40	10				86	75	98	173
Iron.....		17						64		81	81

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Tobacco (raw).....							1		
Tallow.....									1
Tin.....	20							20	
Turpetine.....									
"Wheat.....		151,881		15,314		50,757	60,806		278,761
White lead.....	15							15	
Whiting	10							10	
Wool.....									
All other goods and merchandise not enumerated....	12,246	2,496	11,990	33	9,934	3,852	519	34,387	6,900
Bark.....			20					20	
Barrels empty.....									
Boat knees.....									
Floats.....									
Fire-wood, in vessels.....	239	3,701		5,450			1	239	9,256
" " rafts.....	1,350							1,350	
Hoops.....									
Hop poles.....									
Lumber, sawn, in vessels.....									
" " rafts.....									
Masts, spars, and telegraph poles, in vessels.....	3,461	982		812		2,297	3,632	4,685	7,723
" " rafts.....									
Railway ties, in vessels.....									
" " rafts.....	277	658					43	320	658
Saw logs.....	452	1,711	5,024	44	53	706	686	5,556	3,117
Staves and headings, barrel.....									
" " pipe.....									
" West India.....									
Serves, salt barrel.....									
Shingles.....									
Split posts and fence rails, in vessels.....	13	3				590		13	727
" " rafts.....									
Timber, square, in vessels.....	655						915	1,600	1,540
" " rafts.....	80	60						80	60
Traverses.....									
Woodenware and wood partly manufactured.....	1							1	
Total freight.....	30,548	183,922	18,217	22,577	468,347	1,119,769	87,294	601,406	1,431,271
							105,063		2,035,677

Other receipts.

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RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

1-2 EDWARD VII., A. 1902

APPENDIX

No. (A) 14.—STATEMENT of Traffic on the undermentioned Canals, and

Articles.	Welland Canal.		St. Lawrence Canals.		Chamby Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 1.</i>		\$ cts.		\$ cts.		\$ cts.
Canadian vessels, steam.	421,565	4,189 40	708,008	4,770 60	64,997	210 90
United States vessels, steam.	365,098	5,436 21	32,619	219 58	732	10 49
Canadian vessels, sail.	153,816	3,237 90	1,325,198	13,569 35	22,583	248 27
United States vessels, sail.	72,333	1,534 50	72,532	827 47	212,443	2,658 97
Total, Class No. 1.	1,012,812	14,398 01	2,138,357	19,387 00	300,755	3,128 63
<i>Class No. 2.</i>	No.		No.		No.	
Passengers.	63,104	680 99	71,901	3,638 78	2,192	32 41
<i>Class No. 3.</i>	Tons.		Tons.		Tons.	
Bricks.	326	41 22	13,161	868 51	827	80 91
Brimstone.			753	74 61		
Cement and water lime.	39	6 75	6,907	828 21	822	82 20
Clay, lime and sand.	3,008	221 62	34,761	1,520 23	4,781	511 31
Fish.	342	51 30	59	7 87		
Gypsum.			1,414	17 69		
Iron, railway.			503	29 49		
" pig.	1,792	358 40	1,793	166 95	861	86 10
" all other.	6,398	1,253 13	7,250	767 75	1,705	165 02
Steel.	8,203	1,623 65	436	56 57	157	15 70
Salt.	533	98 43	3,114	361 87	505	37 75
Stone, for cutting.	21	3 15	1,065	40 66		
Apples.	451	12 91	4,639	675 91	437	25 02
Barley.	4,035	432 80	19,808	1,330 58	48	1 61
Buckwheat.			1,159	62 14		
Corn.	163,509	16,350 90	174,854	4,572 99		
Cotton, raw.						
Flax and hemp.	476	70 50	941	23 53		
Flour.	10,968	1,877 55	11,682	807 52	524	17 78
Hay, pressed.	1	0 18	1,992	145 64	19,207	1,495 82
Meals, all kinds.	14,244	2,848 80	600	37 61		
Oil cake.	2,705	541 00				
Oats.	41,055	4,152 78	44,058	1,615 47	3,867	129 07
Pease.	119	11 90	11,106	1,045 28	77	2 60
Potatoes.	1	0 17	87	4 03	62	2 17
Rye.	3,538	353 80	9,466	645 95		
Hax seed.			3,779	94 96		
Seeds, all kinds.	11	1 65	3,186	161 39	30	1 17
Tabacco, raw.			155	12 15		
Wheat.	137,800	13,809 21	153,658	5,016 36		
All other agricultural products, vegetable.	7	1 35	1,644	238 22		
Bones.			357	47 82		
Cattle.			286	21 77	91	3 24
Hogs.			42	3 27		
Hides and skins, horns and hoofs.	51	7 65	44	3 73		
Horses.	60	2 94	557	33 99	53	1 94
Lard and lard oil.	1,597	318 95	2,103	137 09	11	1 10
Meats (other than pork).			11	1 40		
Pork.	137	26 40	694	51 03		
Sheep.			105	8 10	123	4 24
Tallow.	1,271	222 20	379	19 55		
Wool.			4	0 38		
All other agricultural products, animal.			3,070	314 87		
Total, Class No. 3.	402,692	44,701 29	521,682	21,873 14	34,188	2,664 75

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A—Continued.

the Amount of Tolls collected during the Season of Navigation in 1900.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
200,514	211 04	137,016	642 50	141,065	885 62	43,696	873 93	60,308	402 72	498,082
10,469	42 28	444	11 23	854	14 89	287	5 74	40,662	162 40	1,335,736
1,660	5 52	113,032	1,500 34	37,391	548 68	71,620	1,434 25			7,228
536	4 50	19,624	448 56	12,205	232 17	180	3 60			281,702
213,179	263 34	270,116	2,602 63	191,515	1,681 36	115,783	2,317 52	100,970	565 12	2,194,748
No.		No.		No.		No.		No.		No.
18,678	226 71	11,964	171 10	7,447	158 19			19,470	128 23	22,280
Tons.		Tons.		Tons.		Tons.		Tons.		Tons.
41	0 77			1,681	39 52	1,652	16 52	113	1 36	542
131	2 50	133	7 29	1,185	28 98	324	3 24			1,097
44	0 83	1,900	47 01	7,579	177 01	302	3 02			5,862
15	0 30	3	0 18	11	0 28	1,456	14 56			701
				109	2 59	315	3 15			
74	1 39	430	12 98	5	0 24	50	0 50			20,426
		100	2 00	22	0 53	85	0 85			1,400
781	14 75	36	2 42	494	12 41	208	2 08			1,740
41	0 78			15	0 44					9
18	0 34			1,261	32 52	286	2 86			1,800
						446	4 46			900
193	3 66	36	2 40	159	3 86	69	0 69			198
332	6 24	2	0 12			9	0 09			2,520
128	2 41	117	11 44	63	2 70					
				147	3 51	8	0 08			9,975
						9	0 09			
10	0 19	11	1 09	470	11 83	1,851	18 51			72,029
70	1 32	1,170	108 99	404	9 76	1,324	13 24			1,830
28	0 54	1	0 06	123	3 02	693	6 93			1,486
		5	0 49							1
		1,752	133 75	670	25 23	2,257	22 57			2,403
500	9 41	91	6 63			3	0 03			
		114	7 22	5	0 18	3,194	31 94			42
664	12 50	3	0 30	28	0 66					1,148
										11,746
36	0 70	4	0 40	34	0 85	5	0 05			2
				16	0 45	7	0 07			
1,240	23 30			213	7 36			627	6 27	278,761
41	0 81	17	1 42	13	0 33	185	1 85			2
2	0 04	12	0 72	11	0 48					
		448	35 20	2	0 06	70	0 70	34	0 34	41
		119	9 40			2	0 02	172	1 72	5
15	0 29	7	0 46	5	0 15					81
33	0 63	155	7 07	9	0 27	1	0 01	1	0 01	
10	0 19	4	0 08	41	1 06	4	0 04			
8	0 16			6	0 13	83	0 83			1
		20	1 20	109	2 71	95	0 95			19
		269	23 55			4	0 04	2	0 02	1
		17	1 64	3	0 07	1	0 01			1
3	0 06									
		2,210	195 01	1,082	29 20	16	0 16			
4,438	84 11	9,186	620 52	16,075	398 41	15,014	150 14	949	9 72	416,948

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No. (A) 14.—STATEMENT of Traffic on the undermentioned Canals, and

Articles.	Welland Canal.		St. Lawrence Canals.		Chamblly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 4.</i>		\$ cts.		\$ cts.		\$ cts.
Ashes, pot and pearl.....	40	8 00	114	22 80		
Agricultural implements.....			67	8 39		
Crockery and earthenware.....	11	1 65	85	14 74	23	2 30
Dye woods and dye stuffs.....			18	1 40	25	2 50
Furniture.....	33	5 02	1,584	277 78		
Glass (all kind).....	30	5 00	1,014	188 04	17	1 61
Marble.....	863	129 45				
Manilla.....	174	26 10	33	6 54		
Molasses.....	290	47 40	486	58 35	86	2 93
Nails.....	11	0 60	901	135 59		
Oil (in barrels).....	20,125	4,016 09	2,576	251 46	112	8 19
Paint.....	64	11 50	394	62 15	66	6 51
Pitch and tar.....	35	5 27	478	69 80	1,770	177 00
Rags.....	70	1 32	597	85 30		
Rosin.....	14	0 27	1,710	87 03	1,954	195 40
Soda ash.....	85	12 32	550	103 15	181	13 14
Sugar.....	13,393	2,012 06	4,725	797 55	935	93 04
Stone (wrought).....			269	50 97	54	0 88
Tin.....			1,244	246 10		
Turpentine.....			276	13 95	273	27 30
White lead.....	17	3 35	79	12 88		
Whiting.....			794	150 54		
Whisky and all other spirits.....	48	7 25	716	130 99		
Merchandise (not enumerated).....	52,902	7,619 64	17,236	2,484 22	5,691	450 71
Total, Class No. 4.....	88,205	13,912 29	35,946	5,250 72	11,187	981 51
<i>Class No. 5.</i>						
Bark.....						
Barrels (empty).....	677	122 82	728	58 44	43	4 32
Floats.....			49	0 86		
Fire wood (in vessels).....	7,893	421 36	8,733	165 55	162,264	5,429 68
" (in rafts).....						
Lumber sawn (in vessels).....	77,464	13,882 71	42,804	1,755 49	39,635	2,315 61
" (in rafts).....	4	0 30	979	42 80		
Hoops.....			2	0 25		
Railway ties (in vessels).....	1,563	124 88	170	5 88	3,261	260 41
" (in rafts).....						
Masts, spars and telegraph poles (in vessels).....	9	1 80	5	0 13		
Masts, spars and telegraph poles (in rafts).....	6	0 65	20,487	512 30		
Square timber (in vessels).....	20,319	3,042 76	648	9 07		
" (in rafts).....			5,094	127 55		
Woodenware and wood partly manu- factured.....	71	28 40	60	17 80		
Shingles.....	97	67 49	25	4 50		
Split posts and fence rails (in vessels).....			3	0 30		
Saw logs.....	7,082	278 56	575	13 11		
Staves and headings (barrel).....	780	37 41				
" (salt barrel).....						
Traverses.....			100	1 25		
Hop poles.....			84	0 50		
Total, Class No. 5.....	115,965	18,009 14	80,546	2,715 78	205,203	8,010 02

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the Amount of Tolls collected, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
42	1 06	8	1 52	15	2 56	1	0 01			39
25	0 64	2	0 38	139	15 29	28	0 28			
				15	1 34	18	0 18			
170	4 43	12	1 91	48	4 40	47	0 47			66
186	4 71	10	1 90	54	4 84	40	0 40			78
5	0 13					3,033	30 33			5
		1	0 19	7	0 63	16	0 16			
4	0 10	3	0 57	121	10 59	211	2 11			
2	0 06			110	10 94	583	5 83			351
172	4 30	2	0 38	198	17 65	240	2 40	20	0 60	865
75	1 92	4	0 76	38	3 60	18	0 18			75
67	1 65	33	6 27	56	5 37	11	0 11			20
16	0 41	41	7 52	34	4 00	10	0 10			3
						3	0 03			
88	2 21					1	0 01			
139	3 51			503	45 28	117	1 17			591
73	1 83	1	0 19	19	1 68	49	0 49			20
						1	0 01			
2	0 06	1	0 19	20	1 80	1	0 01			15
219	5 50			7	0 63					10
106	2 68			116	10 26	122	1 22			487
5,877	147 08	984	126 83	1,326	127 89	1,367	13 67	101	3 03	41,285
7,268	182 32	1,102	148 61	2,826	268 75	5,917	59 17	121	3 63	43,820
9	0 18	56	6 43	39	3 32	35	0 35	53	2 27	20
		31,805	267 48	1,160	20 30	25	0 25	6,095	44 20	
3,828	31 93	11,292	316 58	6,147	123 65	485	4 85	16,971	179 34	9,495
		440	10 31					205	8 18	1,350
372	4 18	301,852	21,101 55	29,632	2,730 40	15,261	152 61	1,854	44 89	12,408
		230	1 80	96	3 63			94	1 88	
		3	0 26			2	0 02			
125	1 25	1,192	213 81	28	1 11	270	2 70			978
								952	37 75	
171	1 08					27	0 27	53	1 06	
								140	2 00	34
		1,214	15 32			531	5 31	61	1 11	3,140
		4,500	47 22					1,011	10 65	140
		30	17 78	145	33 90	866	8 66	105	7 02	1
						47	0 47			740
		3,859	83 88					14,465	123 33	8,703
								158	1 50	
				700	4 44			75	0 75	
				17	2 50					
4,505	38 62	356,503	22,082 42	37,964	2,923 25	17,549	175 49	42,292	465 93	37,009

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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>Special Class.</i>		\$ cts.		\$ cts.		\$ cts.
Coal.....	47,392	9,478 40	307,397	43,941 82	92,598	9,072 90
Kryolite or chemical ore.....			307	34 54		
Iron ore.....	58,400	2,920 00				
Stone (unwrought, not suitable for cutting)	271	16 84	2,442	64 80	5,385	316 13
Total, Special Class.....	106,063	12,415 24	310,146	44,041 16	97,983	9,389 03
Total freight and tolls.....	712,925	104,116 96	948,320	96,906 58	348,561	21,045 31
Timber and other wood, free.....			15,942	1,456 71		
Wheat, corn, flour, iron, salt, coal, &c., free.....	6,435	935 87	344,804	33,302 10		
Grand totals (passengers and tonnage of vessels not included)	719,360	105,052 83	1,309,066	131,665 39	348,561	24,206 35

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

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the Amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
718	13 48	.....	.....	17,292	648 04	32,418	324 18	.....	.....	530,298
.....	.....	.....	.....	15	0 75	31	0 31	.....	.....	5,435
1	0 05	.....	.....	.....	.....	60	0 60	.....	.....	999,591
2,117	21 17	.....	.....	.....	.....	2,824	28 24	210	0 98	2,576
2,836	34 70	.....	.....	17,307	648 79	35,333	353 33	210	0 98	1,537,900
19,067	829 80	366,791	25,625 28	74,172	6,078 75	73,813	3,055 65	43,572	1,173 61	2,035,677
.....	.....	22,354	23,543	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	1,260	.....	.....	.....	.....	.....	.....
19,067	829 80	389,145	25,860 71	75,432	6,078 75	73,813	3,055 65	43,572	1,173 61	2,035,67

RICHARD DEVLIN,
Compiler of Canal Statistics.

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SUPPLEMENTARY APPENDIX

No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned Canals during of each description of property passed through

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
Vessels of all kinds.....	1,012,812	14,398 01	1,368,618	19,387 00	300,755	3,128 63
Passengers.....	No. 63,104	680 99	No. 71,901	3,638 78	No. 2,192	32 41
<i>Forest—Produce of Wood.</i>	Tons.		Tons.		Tons.	
Bark.....			49	0 86		
Floats.....						
".....Free.						
Firewood.....	7,893	421 36	8,733	165 55	162,264	5,429 68
".....Free.						
Hoops and hop poles.....			86	0 75		
Lumber, sawed.....	77,468	13,883 01	43,783	1,798 29	39,635	2,315 61
".....Free.			15,760			
Masts, spars, &c.....	15	2 45	20,492	512 43		
Railway ties.....	1,563	124 88	170	5 88	3,261	260 41
Saw logs.....	7,082	278 56	575	13 11		
".....Free.						
Staves, all kinds.....	780	37 41				
Shingles.....	97	67 49	25	4 50		
Split posts and rails.....			3	0 30		
Timber, square.....	20,319	3,042 76	5,742	136 62		
".....Free.						
Traverses.....			100	1 25		
Total.....	115,217	17,857 92	95,518	2,639 54	205,160	8,005 70
<i>Farm Stock.</i>						
Cattle.....			286	21 77	91	3 24
Hogs.....			42	3 27		
Horses.....	60	2 94	557	33 99	53	1 94
Sheep.....			105	8 10	123	4 24
Total.....	60	2 94	990	67 13	267	9 42
<i>Produce of Animals.</i>						
Bones.....			357	47 82		
Horns and hoofs, hides and skins, raw..	51	7 65	44	3 73		
Lard and lard oil.....	1,597	318 95	2,103	137 09	11	1 10
Meats other than pork.....			11	1 40		
Pork.....	137	26 40	694	51 03		
".....Free.	1					
Tallow.....	1,271	222 20	379	19 55		
Wool.....			4	0 38		
Agricultural products not enumerated, animal.....			3,070	314 87		
Total.....	3,057	575 20	6,662	575 87	11	1 10

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A—Continued.

the Season of Navigation ended December 31, 1900, showing the Total Quantity and the amount of Tolls collected thereon.

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal. Free.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
213,179	263 34	270,116	2,602 63	191,515	1,681 36	115,783	2,317 52	100,970	565 12	2,194,748
No. 18,678	226 71	No. 11,964	171 10	No. 7,447	158 19	No. .....	.....	No. 19,470	128 23	No. 22,280
Tons.		Tons.		Tons.		Tons.		Tons.		Tons.
.....		31,805	267 48	1,160	20 30	35	0 35	53	2 27	20
.....		12,764						6,095	44 20	.....
3,828	31 93	17,732	326 89	6,147	123 65	485	4 85	17,176	187 52	10,845
.....		660								.....
372	4 18	302,082	21,103 35	29,728	2,734 03	15,261	152 61	1,948	46 77	12,408
.....		3	0 26	17	2 50	2	0 02			.....
171	1 08	50				27	0 27	193	3 06	34
125	1 25	1,192	213 81	28	1 11	270	2 70	952	37 75	978
.....		3,859	83 88					14,465	123 33	8,703
.....		2,080								.....
.....		30	17 78	145	33 90	866	8 66	233	2 25	.....
.....						47	0 47	105	7 02	740
.....		5,744	62 54			531	5 31	1,072	11 76	3,280
.....		6,800		700	4 44					.....
4,496	38 44	378,801	22,075 99	37,925	2,919 93	17,524	175 24	42,292	465 93	37,008
.....		448	35 20	2	0 06	70	0 70	34	0 34	41
.....		119	9 40			2	0 02	172	1 72	5
33	0 63	155	7 07	9	0 27	1	0 01	1	0 01	173
.....		269	23 55			4	0 04	2	0 02	1
33	0 63	991	75 22	11	0 33	77	0 77	209	2 09	220
.....									
2	0 04	12	0 72	11	0 48					.....
15	0 29	7	0 46	5	0 15					81
10	0 19	4	0 08	41	1 06	4	0 04			6
8	0 16			6	0 15	83	0 83			1
.....		20	1 20	109	2 71	95	0 95			19
.....									
.....		17	1 64	3	0 07	1	0 01			1
3	0 06								
.....		2,210	195 01	1,082	29 20	16	0 16		
38	0 74	2,270	199 11	1,257	33 82	199	1 99			108

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No. (A) 15.—SUMMARY STATEMENT of Traffic on the undermentioned

Articles.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
<i>Agricultural Products.</i>						
Agricultural products not enumerated, vegetable	7	1 35	1,644	238 22		
Apples	451	12 91	4,639	675 91	437	25 02
Barley	4,035	432 80	19,808	1,330 58	48	1 61
"	Free.		1,288			
Buckwheat			1,159	62 14		
Corn	163,509	16,350 90	174,854	4,572 99		
"	Free.		113,315			
Flax and hemp	470	70 50	941	23 53		
Flour	10,968	1,877 55	11,682	807 52	524	17 78
"	Free.		1,595			
Hay, pressed	1	0 18	1,992	145 64	19,207	1,495 82
Meals, all kinds	14,244	2,848 80	600	37 61		
Manilla	174	26 10	33	6 54		
Oats	41,055	4,152 78	44,058	1,615 47	3,867	129 07
"	Free.		8,925			
Pease	119	11 90	11,106	1,045 28	77	2 60
"	Free.		115			
Potatoes	1	0 17	87	4 03	62	2 17
Rye	3,538	353 80	9,466	645 95		
"	Free.		3,078			
Seeds, flax, clover and grass	11	1 65	6,965	256 35	30	1 17
"	Free.					
Tobacco, raw	218		155	12 15		
Wheat	137,800	13,809 21	153,658	5,016 36		
"	Free.		122,571			
Total	376,601	39,950 60	693,734	16,496 27	24,252	1,675 24
<i>Manufactures.</i>						
Ashes, pot and pearl	40	5 00	114	22 80		
"	Free.		25			
Agricultural implements			67	8 39		
Barrels, empty	677	122 82	728	58 44	43	4 32
"	Free.		182			
Bricks	326	41 22	13,161	868 51	827	80 91
"	Free.					
Cement and water lime	39	6 75	6,907	828 21	822	82 20
"	Free.					
Crockery and earthenware	11	1 65	85	14 74	23	2 30
"	Free.					
Furniture	33	5 02	1,584	277 78		
"	Free.		1			
Glass of all kinds	30	5 00	1,014	188 04	17	1 61
"	Free.		6			
Iron, railway	456		503	29 49		
"	Free.					
" pig	1,792	358 40	1,793	166 95	861	86 10
"	Free.		508			
" all other	6,398	1,253 13	7,250	767 75	1,705	165 02
"	Free.		4,292			
Molasses	290	47 40	486	58 35	86	2 93
Nails	11	0 60	901	135 59		
"	Free.					
Oil	193		2,576	251 46	112	8 19
"	Free.		15,647			
Oil cake	2,705	541 00				
Paint	64	11 50	394	62 15	66	6 51
"	Free.					

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Canals, and the Amount of Tolls collected, &c.—*Continued.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal. Free.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
41	0 81	17	1 42	13	0 33	185	1 85			2
193	3 66	36	2 40	159	3 86	69	0 69			198
332	6 24	2	0 12			9	0 09			2,520
128	2 41	117	11 44	63	2 70					
				147	3 51	8	0 08			9,975
						9	0 09			
10	0 19	11	1 09	470	11 83	1,851	18 51			72,029
70	1 32	1,170	108 99	404	9 76	1,324	13 24			1,830
28	0 54	1	0 06	123	3 02	693	6 93			1,486
		1	0 19	7	0 63	16	0 16			
		1,752	133 75	670	25 23	2,257	22 57			2,403
500	9 41	91	6 63			3	0 03			
		114	7 22	5	0 18	3,194	31 94			42
664	12 50	3	0 30	28	0 66					1,148
36	0 70	4	0 40	34	0 85	5	0 05			11,748
				16	0 45	7	0 07			
1,240	23 30			313	7 36			627	6 27	278,761
3,242	61 08	3,319	274 01	2,452	70 37	9,630	96 30	627	6 27	382,142
42	1 06	8	1 52	15	2 56	1	0 01			39
		2	0 38	139	15 29	28	0 28			
9	0 18	56	6 43	39	3 32	25	0 25			
41	0 77			1,681	39 52	1,652	16 52	113	1 36	542
131	2 50	133	7 29	1,185	28 98	324	3 24			1,097
25	0 64			15	1 34	18	0 18			
170	4 43	12	1 91	48	4 40	47	0 47			66
186	4 71	10	1 90	54	4 84	40	0 40			78
74	1 39	430	12 98	5	0 24	50	0 50			20,426
		100	2 00	22	0 53	85	0 85			1,400
781	14 75	36	2 42	494	12 41	208	2 08			1,740
4	0 10	3	0 57	121	10 59	211	2 11			
2	0 06			110	10 94	583	5 83			351
172	4 30	2	0 38	198	17 65	240	2 40	20	0 60	865
		5	0 49							1
75	1 92	4	0 76	38	3 60	18	0 18			75

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

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Canals, and the Amount of Tolls collected, &c.—*Concluded.*

Murray Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.		Sault Ste. Marie Canal. Free.
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.
	§ cts.		§ cts.		§ cts.		§ cts.		§ cts.	
67	1 69	33	6 27	56	5 37	11	0 11			20
88	2 21					3	0 03			
106	2 68			116	10 26	122	1 22			487
41	0 78			15	0 44					9
139	* 3 51			503	45 28	117	1 17			501
73	1 83	1	0 19	19	1 68	49	0 49			20
2	0 06	1	0 19	20	1 80	1	0 01			15
219	5 50			7	0 63	1	0 01			10
										1
2,447	55 07	836	45 68	4,900	221 67	3,835	38 35	133	1 96	27,743
44	0 83	1,900	47 01	7,579	177 01	302	3 02			5,862
718	13 48			17,292	648 04	32,418	324 18			530,298
15	0 30	3	0 18	11	0 28	1,456	14 56			701
1	0 05			109	2 59	315	3 15			
5	0 13			15	0 75	91	0 91			1,005,026
16	0 41	41	7 52	34	4 00	3,033	30 33			5
18	0 34			1,261	32 52	10	0 10			3
2,117	21 17					286	2 86			1,800
5,877	147 08	984	126 83	1,326	127 89	3,270	32 70	210	0 98	3,476
8,811	183 79	2,928	181 54	28,887	993 08	1,367	13 67	101	3 03	41,285
19,067	829 80	389,145	25,625 28	75,432	6,078 75	42,548	425 48	311	4 01	1,588,456
						73,813	3,055 65	43,572	1,173 61	2,035,667

RICHARD DEVLIN,
Compiler of Canal Statistics.

1-2 EDWARD VII., A. 1902

APPENDIX A—Continued.
No. (A) 16.—STATEMENT showing the amount of Tolls accrued each month during the Season of Navigation ended December 31, 1900.

Canals and Offices.	January	April	May.	June.	July.	August.	September	October.	November	December.	Total.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
WELLAND CANAL.											
Chippawa.....	5 25	4 85	2 50	1 00	8 51	25 64	2 25	.....	50 00
Colborne.....	2,539 92	12,327 03	10,881 15	10,294 88	12,022 16	11,567 64	8,464 26	7,828 71	1,514 02	77,439 77
Dalhousie.....	2,317 53	4,854 99	3,811 30	3,187 61	3,708 31	2,816 06	2,123 93	2,167 62	701 59	25,688 94
Dunnville.....	0 36	51 61	57 50	50 95	79 12	63 20	142 29	46 75	26 77	518 55
St. Catharines.....	22 73	26 75	55 37	28 27	40 82	58 02	83 86	98 63	5 25	419 70
Total Welland Canal.....	4,880 54	17,265 63	14,810 17	13,564 21	15,851 41	14,513 43	10,839 98	10,143 96	2,247 63	104,116 96
ST. LAWRENCE CANALS.											
Beauharnois.....	224 88	55 14	42 20	74 47	47 13	46 30	22 08	.....	512 20
Cardinal.....	30 00	47 98	55 87	52 76	45 92	35 29	52 80	65 01	12 46	338 09
Cornwall.....	97 61	3,943 45	5,185 86	5,665 70	5,875 85	4,995 56	3,246 86	3,936 03	78 29	33,025 21
Kingston.....	873 92	3,747 94	2,534 80	3,553 30	3,339 34	2,913 87	3,841 16	3,593 14	.....	24,397 47
Lachine.....	376 51	481 00	497 21	562 35	385 75	291 58	204 35	.....	2,799 35
Montreal.....	4,241 92	3,808 47	4,141 23	4,354 13	3,365 86	2,795 06	2,440 15	93 31	25,240 19
Soulanges.....	1,070 47	1,180 27	1,869 67	2,019 36	1,613 57	1,748 45	1,032 63	0 25	10,534 07
Total St. Lawrence Canals.....	1,001 53	13,653 15	13,302 01	15,822 13	16,271 42	13,357 03	12,022 21	11,292 79	184 31	96,906 58
CHAMBLY CANAL.											
Chamby.....	897 24	1,741 20	1,848 50	1,991 65	1,601 50	1,875 91	1,049 32	.....	10,975 32
St. Johns.....	3,033 69	1,618 36	2,168 00	2,287 82	1,662 38	1,059 78	831 46	11 87	12,673 36
St. Ours.....	8 91	45 08	65 36	100 62	65 42	60 96	137 50	73 32	0 50	557 67
Total Chamby Canal.....	8 91	3,946 01	3,424 92	4,117 12	4,344 89	3,324 84	3,073 19	1,954 10	12 37	24,206 35

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OTTAWA CANALS.											
Ottawa	2,623 69	2,414 94	3,070 26	3,522 25	2,511 36	2,953 08	1,812 07	18,907 65			
Carillon	3 15	3 64	3 25	2 93	1 23	0 96	2 68	17 84			
Grenville	829 90	794 03	622 97	721 59	1,207 39	1,061 99	443 27	5,681 14			
St. Anne's	112 61	138 86	203 59	139 84	117 18	112 23	69 97	1,018 65			
Total Ottawa Canals.....	4 37	3,411 47	3,900 07	4,446 61	3,837 16	4,128 26	2,327 99	25,625 28			
RIDEAU CANAL.											
Kingston Mills	187 22	186 10	252 86	198 19	148 93	57 02	30 29	1,060 61			
Ottawa	540 48	1,002 34	917 30	530 66	408 62	447 19	398 78	4,251 41			
Smith's Falls.....	53 34	102 86	135 15	173 08	167 70	79 41	55 19	766 73			
Total Rideau Canal.....	781 04	1,291 30	1,305 31	901 93	725 25	583 62	484 26	6,078 75			
St. Peter's CANAL.											
St. Peter's.....	303 92	389 55	517 69	511 26	301 68	332 84	337 81	3,055 65			
TRENT VALLEY CANALS.											
Bolckaygeon.....	20 67	61 96	84 99	106 46	92 37	106 86	58 71	532 52			
Buckhorn.....	1 50	10 30	26 22	37 19	12 16	22 40	15 70	125 47			
Burleigh	5 61	11 53	10 57	19 16	12 38	18 00	14 60	92 85			
Kanelon Falls..	1 00	33 41	25 70	26 11	8 65	4 15	3 85	102 87			
Hastings.....	1 14	6 56	8 38	1 75	6 25	0 50	0 25	21 83			
Peterborough.....	19 74	38 22	57 10	66 13	53 29	35 62	22 03	295 07			
Total Trent Valley Canals	49 66	161 98	212 96	256 80	185 10	187 53	115 14	1,173 61			
MURRAY CANAL.											
Brighton.....	68 69	86 82	149 10	197 53	130 77	118 69	69 55	829 80			
Grand total	39,637 45	36,378 22	39,588 59	42,781 85	36,375 26	31,286 32	26,725 60	261,992 98			

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, September 9, 1901.

1-2 EDWARD VII., A. 1902

APPENDIX A—Continued

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals, during the Season of Navigation ended December 31, 1900, 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.....	1,361	137,860	133,425										
" sail.....	404	48,751	43,643	74,536	1,115	195		148		212,396	209,169	421,565	4,189 40
Total Canadian.....	1,765	186,611	177,068	102,519	1,609	195		148		289,473	285,908	575,381	7,427 30
United States vessels, steam.....	444	173	192	15,188	780	165,621	164,758	91	18,295	181,073	184,025	365,098	5,436 21
" sail.....	190	613	306	12,939		24,972	18,043		16,360	37,624	34,709	72,333	1,534 50
Total United States.....	634	786	498	28,127	780	189,693	182,801	91	34,655	218,697	218,734	437,431	6,970 71
Grand Total, Welland Canal.....	2,399	187,397	177,566	130,646	2,389	189,788	182,801	239	141,886	508,170	504,642	1,012,812	14,398 01
ST. LAWRENCE CANALS.													
Canadian vessels, steam.....	3,505	365,017	292,551	19,309									
" sail.....	5,232	667,811	553,437	45,731				280	29,851	385,606	322,402	708,008	4,770 60
Total Canadian.....	8,737	1,033,828	845,988	65,040	682	341	64		77,132	713,883	611,315	1,325,198	13,569 35
United States vessels, steam.....	471	285	1,310	4,433	47	6,475	6,065	1,655	12,949	12,248	20,371	32,619	219 58
" sail.....	450	2,204	8,393	16,079	587	216	180	25,109	19,764	43,608	28,924	72,532	827 47
Total United States.....	921	2,489	9,703	20,512	634	6,691	6,245	26,164	32,713	55,856	49,295	105,151	1,017 05
Grand Total, St. Lawrence Canals..	9,658	1,036,317	855,691	85,552	1,316	7,032	6,309	26,444	139,696	1,155,345	983,012	2,138,357	19,387 00

CHAMBLEY CANAL.

Canadian vessels, steam.....	330	32,651	32,120	114	.....	.....	.....	.....	112	32,765	32,232	64,997	210 90
" sail.....	334	7,353	6,462	3,651	.....	.....	.....	.....	5,117	11,004	11,579	22,583	248 27
Total Canadian.....	664	40,004	38,582	3,765	.....	.....	.....	.....	5,229	43,769	43,811	87,580	459 17
United States vessels, steam.....	25	14	29	182	.....	.....	.....	.....	507	196	536	732	10 49
" sail.....	2,152	284	2,468	93,525	88	.....	.....	.....	116,068	93,809	118,634	212,443	2,658 97
Total United States.....	2,177	298	2,497	93,707	98	.....	.....	.....	116,575	94,005	119,170	213,175	2,669 46
Grand Total, Chambley Canal.....	2,841	40,302	41,079	97,472	98	.....	.....	.....	121,804	137,774	162,981	300,755	3,128 63

OTTAWA CANALS.

Canadian vessels, steam.....	936	40,430	96,586	.....	.....	.....	.....	.....	.....	40,430	96,586	137,016	642 50
" sail.....	974	8,032	101,205	.....	795	.....	.....	.....	.....	8,032	105,000	113,032	1,500 31
Total Canadian.....	1,910	48,462	200,791	.....	795	.....	.....	.....	.....	48,462	201,586	250,048	2,142 81
United States vessels, steam.....	6	18	129	.....	297	.....	.....	.....	.....	18	426	444	11 23
" sail.....	198	3,641	633	.....	14,978	.....	.....	.....	312	3,953	15,671	19,624	448 56
Total United States.....	204	3,659	822	.....	15,275	.....	.....	.....	312	3,971	16,097	20,068	459 79
Grand Total, Ottawa Canals.....	2,114	52,121	201,613	.....	16,070	.....	.....	.....	312	52,433	217,683	270,116	2,602 63

RIDEAU CANAL.

Canadian vessels, steam.....	1,590	66,974	67,071	3,068	.....	.....	.....	.....	3,952	70,042	71,023	141,065	885 62
" sail.....	761	13,485	13,603	5,157	98	.....	.....	.....	5,048	18,642	18,749	37,391	548 68
Total Canadian.....	2,351	80,459	80,674	8,225	98	.....	.....	.....	9,000	88,684	89,772	178,456	1,434 30
United States vessels, steam.....	57	199	117	205	.....	.....	.....	.....	333	404	450	854	14 89
" sail.....	171	4,737	2,210	171	4,905	.....	.....	.....	182	4,905	7,297	12,205	232 17
Total United States.....	228	4,936	2,327	376	4,905	.....	.....	.....	515	5,312	7,747	13,059	247 06
Grand Total, Rideau Canal.....	2,579	85,395	83,001	8,601	5,063	.....	.....	.....	9,515	93,996	97,519	191,515	1,681 36

ST. PETER'S CANAL.

Canadian vessels, steam.....	278	24,937	18,759	.....	.....	.....	.....	.....	.....	24,937	18,759	43,696	873 93
" sail.....	1,343	35,271	36,178	35,442	36,178	71,620	1,434 25
Total Canadian.....	1,621	60,208	54,937	60,379	54,937	115,316	2,308 18

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No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—Continued.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
ST. PETER'S CANAL—Concluded.													
United States vessels, steam.....	4	61	43	.....	.....	.....	.....	183	.....	244	43	287	5 74
" sail.....	3	25	77	.....	.....	.....	.....	78	.....	103	77	180	3 60
Total United States.....	7	86	120	.....	.....	.....	.....	261	.....	347	120	467	9 34
Grand Total, St. Peter's Canal.....	1,628	60,294	55,057	.....	.....	.....	.....	432	.....	60,726	55,057	115,783	2,317 52
TRENT VALLEY CANALS.													
Canadian vessels, steam.....	1,541	29,763	30,545	.....	.....	.....	.....	.....	.....	29,763	30,545	60,308	402 72
" sail.....	671	20,233	20,429	.....	.....	.....	.....	.....	.....	20,233	20,429	40,662	162 40
Total Canadian.....	2,212	49,996	50,974	.....	.....	.....	.....	.....	.....	49,996	50,974	100,970	565 12
United States vessels, steam.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" sail.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total United States.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Total, Trent Valley Canals..	2,212	49,996	50,974	.....	.....	.....	.....	.....	.....	49,996	50,974	100,970	565 12
MURRAY CANAL.													
Canadian vessels, steam.....	520	100,238	63,535	.....	60	.....	.....	.....	.....	117,985	82,529	200,514	211 04
" sail.....	185	4,254	4,839	.....	1,026	.....	.....	.....	.....	5,280	5,189	10,469	42 28
Total Canadian.....	705	104,492	68,374	.....	60	.....	.....	.....	.....	123,265	87,718	210,983	253 32
United States vessels, steam.....	23	119	465	.....	190	.....	.....	.....	.....	934	726	1,660	5 52
" sail.....	17	19	5	.....	345	.....	.....	.....	.....	364	172	536	4 50
Total United States.....	40	138	470	.....	190	.....	.....	.....	.....	1,298	898	2,196	10 02
Grand Total, Murray Canal.....	745	104,630	68,844	.....	250	.....	.....	.....	.....	124,563	88,616	213,179	263 31

SAULT STE. MARIE CANAL.										
Canadian vessels, steam.....	1,554	137,705	154,439	58,954	10,915	1,465	32,995	101,609	231,119	498,082
" sail	236	25,528	29,513	8,650	763	908	4,421	9,445	39,507	79,228
Total Canadian.....	1,790	163,233	183,952	67,604	11,678	2,373	37,416	111,054	270,626	577,310
United States vessels, steam.....	1,066	206	1,337	11,448	5,001	839,940	16,520	5,915	968,114	1,335,736
" sail	225	718	50	2,664	3,560	172,243	2,246	300	177,871	281,702
Total United States.....	1,291	924	1,387	14,112	8,561	1,012,183	18,766	6,275	1,045,985	1,617,438
Grand Total, Sault Ste. Marie Canal.	3,081	164,157	185,339	81,716	20,239	1,014,556	56,187	117,329	1,316,611	2,194,748

DEPARTMENT OF RAILWAYS AND CANALS,
 OTTAWA, September 9, 1901.

RICHARD DEVLIN,
Compiler of Canal Statistics.

1-2 EDWARD VII., A. 1902

No. (A) 17.—SUMMARY STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—*Concluded*.
RECAPITULATION.

CANADIAN VESSELS.	Total Number.	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.		
Steam and Sail.											\$ cts.
Welland.....	1,765	186,611	177,068							575,381	7,427 30
St. Lawrence.....	8,737	1,033,828	825,988			195	107,231	289,473	285,908	933,717	18,339 95
Chamblé.....	664	40,004	38,582			341	106,989	1,099,489	933,717	87,580	459 17
Ottawa.....	1,910	48,462	200,791				5,229	48,462	201,586	250,048	2,142 84
Rideau.....	2,351	80,439	80,674				9,000	88,684	89,772	178,456	1,434 30
St. Peter's.....	1,621	60,208	54,337					60,379	54,337	115,316	2,308 18
Trent Valley.....	2,212	49,996	50,374					49,996	50,374	100,970	565 12
Murray.....	705	104,492	68,374				19,284	125,265	87,718	210,983	253 32
Sault Ste. Marie...	1,790	163,233	183,952			2,373	111,054	270,026	306,684	577,310	.....
Total Canadian...	21,755	1,767,293	1,681,340			2,909	358,781	2,074,143	2,055,107	4,129,250	32,930 18
UNITED STATES VESSELS.											
Welland.....	634	786	498							218,734	437,431
St. Lawrence.....	921	2,480	9,708							49,295	105,151
Chamblé.....	2,177	298	2,497			6,691	32,713	55,876	49,295	119,170	213,175
Ottawa.....	204	3,659	822				116,575	94,005	119,170	20,068	459 79
Rideau.....	228	4,936	2,327				515	3,971	16,097	13,039	247 06
St. Peter's.....	7	86	120					347	120	407	9 34
Trent Valley.....										2,196	10 02
Murray.....	46	138	470			158	298	1,298	898	1,617,438	.....
Sault Ste. Marie...	1,291	924	1,387			1,012,183	6,275	1,045,985	571,453	2,408,985	11,413 43
Total United States	5,502	13,316	17,824			1,208,725	190,971	1,425,471	983,514	6,538,235	44,343 61
Grand total Canadian and United States.....	27,257	1,780,609	1,699,164			1,211,634	549,752	3,499,614	3,038,621	.....	.....

RICHARD DEVLIN,
Compiler of Canal Statistics.DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September, 1901.

No. (A) 18.—COMPARATIVE STATEMENT of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation 1899 and 1900, and the Amount of Tolls collected on the same, including 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.		
1899.												
Welland	6,557	148,272	10,907	4,902	135,038	225,378	.....	258,716	152,502	637,268	789,770	118,033 43
St. Lawrence	169,002	917,528	7,125	472	314	1,233	.....	218,432	211,428	1,137,665	1,349,043	86,348 81
Chambly	2,221	12,210	227,428	.....	.....	.....	34,957	120,776	229,649	132,986	362,635	26,000 10
Ottawa	445	449,840	.....	69,820	.....	.....	.....	.....	445	519,660	520,105	35,365 40
Rideau	25,311	9,609	11,337	19,727	.....	.....	.....	12,921	36,618	33,257	69,905	5,704 22
St. Peter's	23,818	46,986	.....	.....	.....	.....	.....	.....	23,818	46,986	70,804	3,151 33
Trent Valley.....	31,177	8,983	.....	.....	.....	.....	.....	.....	31,177	8,983	40,160	1,240 74
Murray	10,089	5,815	501	.....	.....	.....	.....	383	10,590	6,198	16,788	714 49
Sault Ste. Marie	27,588	234,169	9,066	29,212	596,648	1,903,264	90,721	115,996	724,023	2,282,641	3,006,664	No Tolls.
Grand Total.....	296,208	1,833,412	266,364	115,133	732,030	2,129,875	125,678	727,224	1,420,280	4,805,644	6,225,924	276,559 02
1900.												
Welland	8,633	146,034	10,037	4,344	99,560	218,969	.....	231,783	118,290	601,130	719,360	104,116 96
St. Lawrence	168,182	875,505	7,587	705	290	1,177	17,836	237,787	193,895	1,115,171	1,309,066	96,906 58
Chambly	4,350	8,468	222,011	68	.....	.....	25	113,639	226,386	122,175	348,561	24,296 35
Ottawa	299	347,678	.....	41,168	.....	.....	.....	.....	299	388,846	389,145	25,625 28
Rideau.....	25,832	11,104	10,758	12,782	.....	.....	.....	14,956	36,590	38,842	75,432	6,978 75
St. Peter's	32,705	41,108	.....	.....	.....	.....	.....	.....	32,705	41,108	73,813	3,635 65
Trent Valley	31,886	11,686	.....	.....	.....	.....	.....	.....	31,886	11,686	43,572	1,173 61
Murray	9,776	7,413	1,423	70	.....	.....	.....	.....	11,189	7,878	19,067	829 80
Sault Ste. Marie	30,548	183,922	18,217	22,577	468,347	1,119,769	87,294	105,003	604,406	1,431,271	2,035,677	No Tolls.
Grand Total.....	312,201	1,632,915	270,033	81,714	568,197	1,339,915	105,155	703,563	1,255,586	3,758,107	5,013,693	261,992 98

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, September 9, 1901.

RICHARD DEVLIN,
Compiler of Canal Statistics.

1-2 EDWARD VII., A. 1902

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 1900.

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	15	120	5	40	14	112	5	40
10	3	30	7	70				
15	3	45			3	45		
20	4	80	10	200	4	80	3	60
25	4	100	3	75				
30	6	180	5	150	1	30		
35	5	175			3	105		
40	1	40	3	120	1	40		
45	1	45	3	135	1	45		
50			7	350	2	100		
55			1	55	1	55		
60	1	60	2	120	1	60	5	300
65			1	65			1	65
70	2	140	1	70				
75			5	375				
85	2	170						
90			2	180				
100			1	100			1	100
110			1	110				
120			1	120	1	120		
125							1	125
140			1	140	2	280		
150	1	150	1	150				
160	1	160	1	160				
165	1	165						
175					1	175		
180			1	180				
190	1	190	1	190	1	190		
200			2	400	1	200		
220	3	660	1	220				
230	1	230					1	230
260	1	260			1	260		
270			2	540			1	270
275			1	275	1	275		
280					1	280		
285			1	285				
290	1	290						
295							2	590
300					1	300	1	300
305							1	305
310	1	310						
315							2	630
320			3	960				
325			1	325				
330			1	330	1	330		
335			2	670			1	335
360	2	720			2	720		
375					1	375		
390							1	390
400	1	400			1	400	1	400
415	1	415			1	415		
425							1	425
435			2	870			1	435
440	1	440						
460	1	460	2	920				
470							3	1,410
480	1	480	1	480				

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APPENDIX A—Continued.

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.
485	1	485	1	485			3	485
490					1	490		
495	1	495					1	495
500	1	500					1	500
525							1	525
530	1	530						
540	1	540			1	540		
545	1	445	1	545			1	55
555	1	555					1	555
570	1	570	1	570				
575	1	575						
580							2	1,160
590			1	590	1	590	1	590
600	1	600			1		1	600
615					1	615	2	1,230
645			2	1,290				
660					1	660		
680			1	680	1	680		
710					1	710	1	710
719			1	719				
722	1	722						
740	1	740	1	740			1	740
760					1	760		
771	1	771						
787					1	787	1	787
796					1	796		
802			1	802			1	802
837	1	837						
908			1	908				
911					1	911		
918					2	1,836		
928	1	928						
940					1	940		
950	1	950			1	950		
977	1	977						
989	1	989						
994	1	994					1	994
997							1	997
1,029					1	1,029		
1,035	1	1,035			1	1,035		
1,040			1	1,040				
1,054					1	1,054		
1,075					1	1,075		
1,083							1	1,083
1,118					2	2,236		
1,168							1	1,168
1,172	1	1,172						
1,185					1	1,185		
1,203					1	1,203		
1,334	1	1,334			2	2,668		
1,399					1	1,399		
1,425					1	1,425		
1,441	1	1,441			2	2,882		
1,547					1	1,547		
1,548					1	1,548		
1,550					1	1,550		
1,553					2	3,106		
Total.....	88	24,800	94	17,799	81	41,199	51	19,831

1-2 EDWARD VII., A. 1902

APPENDIX A—Continued.

No. (A) 20.—STATEMENT of the Number and Tonnage of all kinds of Vessels passing through the Canals during the Season of Navigation in 1900.

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	42	336	20	160	7	56	2	16
10	8	80	9	90	1	10	.....	.....
15	14	210	4	60	6	90	1	15
20	11	220	13	260	1	20	.....	.....
25	9	225	1	25	1	25	1	25
30	12	360	7	210	.....	.....	.....	.....
35	11	385	1	35	2	70	1	35
40	5	200	13	520	2	80	3	120
45	4	180	3	135	1	45	.....	.....
50	7	350	9	450	2	100	1	50
55	6	330	3	165	.....	.....	.....	.....
60	4	240	21	1,260	1	65	.....	.....
65	.....	.....	2	130	.....	.....	.....	.....
70	5	350	6	420	.....	.....	.....	.....
75	.....	.....	6	450	.....	.....	.....	.....
80	2	160	8	640	.....	.....	2	160
85	2	170	9	765	.....	.....	3	255
90	3	270	6	540	.....	.....	12	1,080
95	5	475	6	570	.....	.....	43	4,085
100	5	500	12	1,200	.....	.....	59	5,900
105	4	420	11	1,155	.....	.....	10	1,050
110	2	220	9	990	1	110	13	1,430
115	1	115	7	805	1	115	9	1,035
120	2	240	7	840	.....	.....	3	360
125	1	125	2	250	.....	.....	.....	.....
130	4	520	3	390	.....	.....	.....	.....
135	2	270	6	810	.....	.....	1	135
140	1	140	12	1,680	.....	.....	.....	.....
145	2	290	7	1,015	1	145	1	145
150	.....	.....	24	3,600	.....	.....	.....	.....
155	1	155	30	4,650	.....	.....	.....	.....
160	1	160	13	2,080	.....	.....	2	320
165	.....	.....	10	1,650	.....	.....	.....	.....
170	.....	.....	6	1,020	.....	.....	.....	.....
175	.....	.....	3	525	1	175	.....	.....
180	.....	.....	6	1,080	.....	.....	.....	.....
185	2	370	5	925	.....	.....	.....	.....
190	.....	.....	1	190	.....	.....	.....	.....
195	1	195	3	585	.....	.....	.....	.....
200	.....	.....	1	200	.....	.....	.....	.....
205	1	205	.....	.....	.....	.....	.....	.....
220	.....	.....	3	660	.....	.....	.....	.....
230	2	460	4	920	.....	.....	.....	.....
255	.....	.....	3	765	.....	.....	.....	.....
260	1	260	3	780	.....	.....	.....	.....
265	1	265	3	795	.....	.....	.....	.....
275	.....	.....	1	275	.....	.....	1	275
285	1	285	3	855	.....	.....	2	570
290	.....	.....	3	870	.....	.....	1	290
300	1	300	6	1,800	.....	.....	.....	.....
305	2	610	2	610
310	2	620
315	3	945	1	315
320	7	2,240	1	320
325	1	325	1	325	1	325
330	1	330

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APPENDIX A.—*Continued.*No. (A) 20—STATEMENT of the Number and Tonnage of all kinds of Vessels,
&c.—*Concluded.*ST. LAWRENCE CANALS—*Continued.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
335			1	335				
340	2	680	6	2,040				
345			1	345				
350			2	700				
360	1	360	2	720				
365	1	365	4	1,460				
370			4	1,480				
375	1	375	2	750				
390			2	780				
395			1	395				
411	1	411	3	1,233			1	411
415			3	1,245	1	415		
433			3	1,299			1	433
436			2	872				
442			1	442			1	442
450	1	450						
454	1	454	2	908				
471	1	471						
473							1	473
475			3	1,425				
487			2	974				
500	3	1,500	1	500				
508	1	508						
518			2	1,036				
520	1	520	2	1,040				
539			1	539				
541	2	1,082	2	1,082				
556	1	556						
575	2	1,150	2	1,150				
586	1	586	3	1,758				
590			1	590				
593	1	593						
599	1	599	2	1,198				
628							1	628
681			2	1,362				
715			2	1,430				
771	1	771			1	771	3	2,313
803			1	803			1	803
823					1	823		
870	1	870						
922	1	922			2	1,844		
952	2	1,904						
989	1	989					1	989
1,075					1	1,075		
1,167							1	1,167
1,251							1	1,251
1,328					3	3,984		
1,465	1	1,465			1	1,465		
Total...	218	28,552	435	75,206	39	11,803	185	26,901

1-2 EDWARD VII., A. 1902

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 1900.

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	72	576	272	2,176	17	136	4	32
10	18	180	18	180	5	50		
15	9	135	5	75	6	90	1	15
20	12	240	10	200	3	60	3	60
25	6	150	4	100	4	100		
30			1	30	1	30		
35	5	175	2	70	1	35		
40	2	80	5	200	2	80	1	40
45	3	135	3	135				
50	4	200	5	250				
55	2	110	5	275				
60	1	60	2	120				
65			2	130				
70	1	70	1	70				
75			5	375				
80	2	160	2	160			5	400
85	1	85	1	85			9	765
90			4	360			38	3,420
95	1	95	1	95			150	14,250
100	2	200	12	1,200			216	21,600
105	1	105	3	315			48	5,040
110			5	550			46	5,060
115	1	115	2	230			16	1,840
120			3	360			14	1,680
125	2	250	3	375			6	750
135	1	135	3	405			2	270
140			5	700				
145	2	290	8	1,160			1	145
150	1	150	20	3,000				
155	1	155	24	3,720				
160			10	1,600				
165			7	1,155				
170			6	1,020				
175			1	175				
180			1	180				
185			1	185				
190			1	190				
195	2	390	1	195				
228	1	228	1	228				
262	1	262						
324	1	324						
332	1	332						
397	1	397						
Total.....	157	5,784	465	22,029	39	581	560	55,367

RICHARD DEVLIN,
Compiler of Canal Statistics.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, Sept. 9, 1901.

1-2 EDWARD VII., A. 1902

CANALS

CONSOLIDATED

No. 23.—RATES OF TOLLS ON THE CANALS

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA, CHAMBLY AND MURRAY CANALS.

(O. C., April 18, 1873.)

The Rates of Tolls are divided into Six Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, westward.		Welland Canal, eastward.		Lake Erie to Montreal.		St. Lawrence Canals, each way.		Chambly Canal and St. Ours Lock.		Rideau Canal, each way.		Ottawa Canals, and Ann's Lock, each way.		Ottawa to St. Johns, each way.		Murray Canal, each way.	
	¢	cts.	¢	cts.	¢	cts.	¢	cts.	¢	cts.	¢	cts.	¢	cts.	¢	cts.	¢	cts.
Class No. 1.																		
Vessel, steam.....per ton	0	01½	0	01½	0	02½	0	00¾	0	00¾	0	01½	0	00¾	0	01½	0	¾
" sail and other.....	0	02¼	0	02¼	0	03¾	0	01½	0	01¼	0	02¼	0	01	0	02½	0	⅙
Class No. 2.																		
Passengers, 21 years of age and upwards...	0	10	0	10	0	20	0	10	0	05	0	08	0	02½	0	09¾	0	1½
" under 21 years each.....	0	05	0	05	0	10	0	05	0	02	0	04	0	01¼	0	04½	0	0½
Class No. 3.																		
Bricks, cement and water lime.....	15	0	20	0	20	0	15	0	10	0	07	0	06	0	19¾	0	1½	
Clay, lime and sand.....																		
Brimstone.....																		
Corn.....																		
Flour.....																		
Iron, railway.....																		
" pig.....																		
" 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.....																		
Class No. 4.																		
All other articles not enumerated.....	0	15	0	20	0	20	0	20	0	10	0	26	0	14	0	29	0	2½

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REVENUE

TARIFF OF TOLLS

OF THE DOMINION OF CANADA, 1900.

TRENT VALLEY CANALS.

(O. C., July 25, 1888.)

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	Tolls Chargeable at Peterborough and Hastings.
Tolls 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.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 00 $\frac{3}{16}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{16}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{16}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{16}$ 0 00 $\frac{1}{4}$	0 00 $\frac{3}{4}$ 0 01	0 00 $\frac{3}{16}$ 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	0 04	01
0 03	0 03	0 03	0 03	0 12	03

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ON THE CANALS—*Continued.*

TRENT VALLEY CANALS.

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Peterborough to Hastings, each way.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Babcaygeon.	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 $\frac{1}{4}$	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 03	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 $\frac{1}{8}$	0 00 $\frac{1}{8}$	0 00 $\frac{1}{8}$	0 00 $\frac{1}{8}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{8}$
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	0 05	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 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 14	0 03 $\frac{1}{2}$
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.

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St. Peter's Canal.

Sec. 2. On each and every vessel passing through the said canal, two cents per ton on the vessel and one cent per ton on the freight, each way. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 109.

SPECIAL REGULATIONS RELATING TO TOLLS ON SOME OF THE CANALS.

Sec. 3. Coal may pass up all canals, except the Welland Canal, free of toll. O. C. June 6, 1869. Con. O. C. Oct. 26, 1889, sec. 83.

Sec. 4. Logs, lumber or other produce may pass free of toll down the Chippawa Creek, between the Aqueduct and Port Robinson. O. C. May 18, 1863. Con. O. C. Oct. 26, 1889, sec. 84.

Sec. 5. (a.) In view of the dam constructed across the Ottawa River at Carillon whereby the passage of the rapids at that point through the river is rendered difficult and at times impracticable, it appears necessary, owing to the continued difficulty attending passage through the slide built in the dam, that the canal should be used by rafts and until otherwise ordered, free passage be given to rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find necessary in the interest of the traffic of the canal to adopt. O. C. July 6, 1888.

Sec. 5. (b.) "Save in cases for which special permission may be given the Grenville Canal is closed to the passage of rafts, or any portion of a raft of any kind whatever." O. C. June 27, 1890.

Sault Ste. Marie Canal.

Sec. 6. All vessels and freight shall be permitted to pass through the Sault Ste. Marie Canal free of toll upon such vessels and freight, until otherwise ordered.

Sec. 7. (a.) All up bound goods on which full tolls have been paid for passage through the whole of the St. Lawrence Canals, or for passage through the Lachine Canal, the Ottawa and Rideau Canals or for passage through the Ottawa and Rideau Canals shall be entitled to pass free through the Welland Canal, or any portion thereof, and tolls paid for passage through the Chambly Canal, on goods thereafter so becoming entitled to the above privilege, shall be refunded at Montreal. All down bound goods on which full tolls have been paid for passage through the Welland Canal shall be entitled to pass free through any or all of the above mentioned Canals, or through any portion thereof. O. C. May 17, 1897.

(b.) All articles, goods or merchandise, not enumerated above, shall be charged to class No. 4. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86.

Sec. 8. Goods shipped to any port west of the St. Lawrence Canals, tolls upon which have already been paid for passage through such canals, may be re-shipped from such port and be passed through the Welland Canal free of tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance. O. C. June 23, 1883. Con. O. C. Oct. 26, 1889, sec. 87.

Sec. 9. Iron ore, kryolite or chemical ore, may pass through one section, or through all the canal sections aforesaid, for 5 cents per ton.

Sec. 10. No let-passes shall be issued to steam tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain, on payment of \$30 a season "Let-Pass," which will pass them up and down the canals as often as desired. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889, sec. 86.

Sec. 11. All vessels owned or chartered by persons having contracts for the enlargements or repair of any of the canals, and employed by them in removing earth or carrying materials necessary for the prosecution of such works, shall be entitled to pass through such canals free of toll upon such vessel and cargo. O. C. April 22, 1884. Con. O. C. Oct. 26, 1889, sec. 35.

Sec. 12. Government dredges and scows shall be permitted to pass through the canals free of tolls, but that such dredges and scows shall not be so passed as to interfere with the passage of other vessels of any kind whatever. O. C. May 18, 1891.

HARBOUR DUES.

Sec. 13. Vessels receiving or discharging freight at the premises of the Welland Railway, at Ports Colborne or Dalhousie, are to be free from harbour dues; but all other vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of freight so received or discharged, two cents. O. C. April 18, 1873. Con. O. C. Oct. 26, 1889.

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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.	$\frac{1}{32}$
2. From Chippawa Cut, or any part thereof, to Dunnville, Port Maitland or Port Colborne.	$\frac{1}{32}$
3. From Dunnville to Port Colborne.	$\frac{1}{32}$
4. From Thorold to St. Catharines or Port Dalhousie.	$\frac{1}{32}$
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places.	$\frac{1}{32}$
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson.	$\frac{1}{32}$
7. From Port Robinson to Allanburg or Thorold.	$\frac{1}{32}$
8. From Port Robinson to St. Catharines or Port Dalhousie.	$\frac{1}{32}$
9. From St. Catharines to Port Dalhousie.	$\frac{1}{32}$
10. From Dunnville to Maitland.	$\frac{1}{32}$
11. From Port Robinson through the Lock and Chippawa Cut.	$\frac{1}{32}$
12. From Port Colborne to Port Maitland.	$\frac{1}{32}$
13. From Chippawa Cut through Lock to Port Robinson.	$\frac{1}{32}$
14. From Colborne, Dunnville, Maitland and Marshville to Thorold.	$\frac{1}{32}$
15. From Colborne, Dunnville, Maitland and Marshville to St. Catharines.	$\frac{1}{32}$
16. Through the Chippawa Cut only.	$\frac{1}{32}$
17. Through the Port Robinson Lock only.	$\frac{1}{32}$

St. Lawrence Canals.

Sec. 15. The navigation is divided into four sections, viz., Cardinal, Cornwall, Beauharnois or Soulanges 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.	$\frac{1}{32}$
Vessels and property passing from Chambly to St. Johns, to pay.	$\frac{1}{32}$

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.

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(e.) All property stored in these sheds shall be at the risk of the proprietor from damage by fire or otherwise.

(f.) All dues for storage shall be paid before the removal of the property. O. C. August 21, 1846, October 28, 1846. Con. O. C. Oct. 26, 1889, secs. 90 and 91.

Flour.

Sec. 23. (a.) Flour shall be allowed to remain in the sheds for two whole days free of charge.

(b.) If kept there beyond two days or 48 hours, such flour shall be liable to a charge of one cent per day per barrel for the first four days after the expiration of the 48 hours of the exemption.

(c.) Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days.

(d.) Any part of a day shall be considered as one day. O. C. May 31, 1856. Con. O. C. Oct. 26, 1889, sec. 92.

WHARFAGE DUES ON COAL FOR LOCAL CONSUMPTION IN MONTREAL.

Sec. 24. Coal for local consumption in Montreal, landed on canal property between Montreal Harbour and Côte St. Paul, from vessels other than sea-going, and entering the Lachine Canal from Montreal Harbour, shall be charged wharfage dues at the rate of five cents a ton.

Coal screening shall be charged 3 cents a ton. Con. O. C. Oct. 26, 1889, sec. 93. O. C. May, 18, 1892.

CHARGES FOR WHARFAGE ON FIREWOOD ON 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 wharfs at Lachine and the Lachine Canal and basin, but are also extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine. O. C. Jan. 27, 1862. Con. O. C. 1889, sec. 94.

CANAL BASINS IN MONTREAL PART OF MONTREAL HARBOUR.

Sec. 26. Whereas under existing regulations for the collection of canal tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal are chargeable one Section Canal Toll if re-entering the Lachine Canal;

And whereas vessels loaded with grain destined for the Montreal Harbour frequently unload only part of their cargoes on board sea-going vessels in the harbour, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, in so far only as regards the collection of tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbour to take cargo, in which case the usual toll shall be charged against them on passing out of the canal a second time into the harbour. O. C. Aug. 8, 1878. Con. O. C. Oct. 26, 1889, sec. 95.

PHOSPHATES.

Sec. 27. Whereas vessels laden with grain for delivery in Montreal Harbour frequently carry also deck loads of phosphates, and being compelled to proceed at once to the harbour for the discharge of the grain, they pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and in accordance with the existing regulations, paying canal dues a second time for such re-entry;

It is ordered that the Lachine Canal basins, within the Montreal city limits, be considered as part of the Montreal Harbour, for the purpose of the unloading of phosphates carried by vessels in addition to their grain cargoes as described in this section: it being, however, provided that in the event of their returning to the harbour to take cargo, the usual tolls shall be charged against such vessels on their passing out of the canal a second time. O. C. July 12, 1881. Con. O. C. Oct. 26, 1889, sec. 96.

Extract from the Act, Canada, 1894, c. 48, amending and consolidating the Acts relating to the Harbour Commissioners of Montreal.

HARBOUR RATES WHARFAGE DUES IN ALL BASINS OF THE LACHINE CANAL ON SEA-GOING VESSELS.

Sec. 28. The corporation may, from time to time, levy such rates as are approved of by the Governor in Council, upon all goods landed or shipped in the harbour, moved by rail on the harbour tracks, or deposited within the harbour, except arms, ammunition and military accoutrements, and other munitions of war for the use of the Government or for the defence of the Dominion. 40 V., c. 53, s. 2, part 2. For the purposes of this section, the lower basins of the Lachine Canal shall be held to form part of the harbour of Montreal, and the corporation may levy from all vessels entering the same through the harbour for the purpose of discharging or loading there, except canal craft trading between Montreal and places above Montreal, the same rates as may be levied in the harbour and under the same regulations and penalties. In all other respects the said lower basins shall be and remain under the jurisdiction of the Minister of Railways and Canals. 18 V., c. 143, s. 18; 40 V., c. 53, s. 2, part 2.

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All property delivered or received by sea-going vessels in the Lachine Canal basins at Montreal (except the old lower basin) shall be charged wharfage dues as follows:—

All goods, wares and merchandise not elsewhere specified.....	25 cents per ton.
Hay, straw, pig and scrap iron, pot and pearl ashes.....	20 "
Apples, crates and their contents, flour and meal, fish, meats, pitch, potatoes, tar, horses, neat cattle, sheep and swine.....	15
Ballast, clay, fire-bricks, gypsum, lime, marble, phosphate, sand, salt.....	10
Coal and coke, grain and seeds of all kinds.....	6
Special—Bricks, 10 cents per 1,000; cordwood, 5 cents per cord; lumber, 10 cents per 1,000 feet, board measure.	

Bullion specie.....	Free.
Coal screenings.....	3 "

Each entry shall pay not less than 5 cents.

All property landed on the canal wharfs for re-shipment, or transhipped in canal waters, shall pay one wharfage only.

Lumber upon which tolls have been paid for passage down the Lachine Canal, and which is reshipped from the wharfs or vessels into sea-going vessels, shall pay wharfage dues equal to one section of canal tolls, viz., 3 $\frac{3}{4}$ cents per 1,000 feet board measure. O.C. Jan. 26, 1883. Con. O.C. Oct. 26, 1889, secs. 98, 99, 100 and 101. O.C. May 18, 1892.

Sec. 29.—Standard for Estimating Weights.

Ashes, pot or pearl.....	3 brls. to 1 ton.
Apples, flour, meal, potatoes.....	9 " 1 "
Fish, meat, pitch, tar.....	7 " 1 "
Horses.....	2 to 1 ton.
Neat cattle.....	3 to 1 "
Sheep.....	15 to 1 "
Swine.....	10 to 1 "

O.C. April 1, 1881. Con. O.C. Oct. 26, 1889, sec. 102.

TOLLS ON FLOATED TIMBER, ETC., ENTERING THE BASIN AT LACHINE.

Sec. 30. The following rates of tolls shall be collected on floated timber, lumber and firewood entering the basin at Lachine and Lachine Canal:—

Kinds of Timber.	For receiving Timber, &c., to include use of Basin and Wharf for one Month.	For each succeeding month during the Season of Navigation.	For Wintering in Basin or on Wharf.
	Cents.	Cents.	Cents.
Timber, square or round, of all kinds, above 12 x 12, per M cubic feet.....	25	20	35
Timber, round or fluted, 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	$\frac{1}{2}$	2
Floats, per 100.....	10	5	10
Traverses, per 100.....	10	5	10
Fence posts and rails, per M.....	10	5	10
Staves, barrel, per M.....	8	4	8
" pipe.....	8	4	8
" West India, per M.....	8	4	8
Firewood on bank of canal between Lock No. 3 and Lock No. 5, and also on wharves in canal basin at Lachine.....	3	3	3

Note.

Sec. 31. (a.) No allowance shall be made for fractional parts of a month or winter season.

(b.) The firewood shall be corded across the bank while being delivered from the boat in such manner and at such points as the superintending engineer may direct.

(c.) The rates on timber to take effect upon the completion of the booms in Lachine Canal. O.C. June 8, 1860. Con. O.C. Oct. 26, 1889, secs. 103 and 104.

CHARGES ON VESSELS WINTERING IN LACHINE CANAL.

Sec. 32. The following rates per ton shall be charged for wintering vessels in the Lachine Canal viz.:—For each boat, barge, scow or other vessel of ten tons measurement or under, seventy cents per vessel for the entire winter, and every ten tons above the first ten, an additional rate of eight cents. O.C. Aug. 22, 1879. Con. O.C. Oct. 26, 1889, sec. 97.

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CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

Sec. 33. The winterage dues for vessels wintering in the canal basin, at Ottawa, or other points along the line of the Rideau Canal, shall be as follows :—

In canal basin, Ottawa, steamers per season.....	\$ 8 00
" " barges "	4 00
Inside locks " steamers "	50 00
other stations " "	15 00

If the Minister of Railways and Canals deems it advisable, he is authorized to take security from parties wintering their vessels in locks against damage to Government property by fire. O.C. March 19, 1887. Con. O.C. Oct. 26, 1889, sec. 105.

CHARGES FOR WINTERING VESSELS IN THE OTTAWA RIVER CANALS AND LOCKS.

Sec. 34. The charge for vessels wintering on the Ottawa River canals and locks, and the same is hereby prescribed accordingly, namely :

In Carillon Canal, steamers per season.....	\$ 8 00
" " barges "	4 00
Grenville Canal, steamers "	8 00
" " barges "	4 00
Inside Locks, Ste. Anne, Carillon and Grenville Canals, steamers per season.....	25 00
" Culbute Canal, per season.....	15 00

Such security against damage by fire to be taken by way of bond as, in the opinion of the Minister of Railways and Canals, may seem desirable. O.C. Oct. 14, 1892.

Sec. 35. No charges to be made for vessels wintering outside the locks of any government canal. O.C. Dec. 12, 1889.

CHARGES FOR REPAIRING VESSELS ON THE BANKS OF CANALS.

Sec. 36. (a.) Persons using the banks of the Lachine Canal as a site for the repair of their vessels shall be subject to a charge of four dollars, payable in advance, for each vessel ; the period during which such site may be occupied under any one payment being limited to six months, and permission for repairing being first obtained from the proper officer, in conformity with the existing canal regulations.

(b.) In the event of failure to remove vessels so occupying the banks at the expiration of the period named, no fresh permits having been obtained, such vessels may be sold under the 16th section of the canal regulations. O.C. March 5, 1880. Con. O.C. Oct. 26, 1889, sec. 106.

Sec. 37. Rules with respect to the repairing of vessels on the banks of the Lachine Canal, the Beauharnois and the Chambly :—

(a.) Repairs shall only be executed at such points as may be indicated and approved by the superintending engineer.

(b.) For each vessel hauled up or beached for repairs, a charge of one dollar, over and above all other charges, shall be made, carrying the privilege of remaining one month, a further sum of one dollar being charged for each additional month, or fraction of a month, the vessel may remain.

(c.) In cases, however, where a vessel hauled up for repairs upon the canal bank remains there throughout the winter, a charge of four dollars only shall be made (in addition to the ordinary winterage dues), the period covered being from the 1st of November to the 1st of June, inclusive.

(d.) Any vessel remaining on the canal bank after having wintered thereon shall be charged at the rate of one dollar a month or fraction of a month of her subsequent stay.

(e.) Any vessel remaining more than one year on the bank of the canal shall for such time as she may remain in excess of that period pay at the rate of two dollars a month or fraction of a month throughout the whole year.

(f.) All charges shall be payable at the collector's office in advance on the first day of each month.

(g.) These rules shall be understood as applying to all cases where the canal bank is used in any manner for the repairs of vessels, whether such vessels are actually hauled up or not. O. C. August 6, 1881. Con. O. C. Oct. 26, 1889, sec. 107.

DRY DOCK CHARGES.

Trent Valley Canal,

Sec. 38. The following tolls and dues shall be charged for the use of the dry dock at Bobcaygeon, and of any of the locks on the Trent Valley Canal, during the winter or other shorter period :—

For Vessels	Wintering.	Per day.	Per week.
Over 15 tons.....	\$30 00	\$4 00	\$12 00
15 tons and under.	20 00	3 00	10 00

(O. C. Oct. 31, 1890.)

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Rideau Canal.

Sec. 39. The following tariff of tolls and regulations shall be, and the same are hereby established for the use of the dry dock on the Rideau Canal at Ottawa:—

(1) Steamers entering dock	\$ 8 00
Each day or portion of a day after day of entrance	2 50
(2) Barges entering dock	5 00
Each day or portion of a day after day of entrance	2 50
(3) Steam yachts or launches	5 00
Each day or portion of a day after day of entrance	2 50
(4) Boats wintering in the dry dock from the close to the opening of navigation	50 00
For every day such boat remains in the dock after the opening of navigation	8 00

(5) No vessel of any class shall be in the dock over six days after notice is given in writing by the lockmaster that the dock is required for another vessel unless a satisfactory agreement between all parties interested is arrived at.

(6) All entrances and discharge of vessels are covered by entrance fee.

(7) All drying off of vessels of all classes in the locks at Ottawa or Hartwell's during the season of navigation is prohibited unless for special reasons.

The owners of vessels of all classes to render the required assistance to open and close the gate under the supervision of the superintending engineer.

Vessel owners to supply all blocks, &c., to shove their boats up to make the necessary repairs and all refuse to be properly cleared out to the entire satisfaction of the lockmaster before leaving the dock.

(O. C. Dec. 28, 1893.)

Sec. 40. The use of horses for towage purposes between the lower entrance of the Cornwall Canal and lock No. 20, be prohibited during the works of enlargement of that portion of the Cornwall Canal.

(O.C. Aug. 20, 1890.)

Sec. 41. As the prohibition of the use of horses for towing purposes, between the lower entrance of the Cornwall Canal and Lock No. 20 during the progress of the works of canal enlargement, has entailed the use of tugs and consequently expenses to the parties concerned, that all tugs, used solely for the purposes of towing on the section in question, be permitted to pass free of toll, up and down the canal between the lower entrance of the canal and lock No. 20, until the completion of the enlargement of the works on that section. (O. C. Sept. 27, 1890.)

SPECIAL RATES FOR 1900 ONLY.

Sec. 42. For season of 1900 the Canal Tolls for the passage of the following food products:—wheat, Indian corn, pease, barley, rye, oats, flax seed and buckwheat, for through passage eastward through the Welland Canal, be ten cents per ton, and for through passage eastward through the St. Lawrence Canals only, ten cents per ton; payment of the said toll of ten cents per ton through the Welland Canal to entitle these products to free passage through the St. Lawrence Canals, or any portion thereof. (O. C. Feb. 20, 1900.) Also special rates, are granted to grain, &c., carried on the O. A. & P. S. and Canada Atlantic Railway systems, from Depot Harbour to Coteau Landing and thence by Canal to Montreal, as follows, viz.:—Wheat, Indian corn, pease, barley, rye, oats, flaxseed and buckwheat, 2½ cents per ton, and all rolling and package freight, 5 cents per ton. (O. C. Feb. 20, 1900.)

Sec. 43. (a.) That for the current season of navigation of 1900, there shall be allowed in the case of steamships specially chartered for the conveyance of excursion parties, going and coming the same day, a reduction of one-half of the usual passenger tolls for passage through the Government canals, it being distinctly understood that no freight is to be carried by the said steamers on such excursions. (O. C. June 12, 1900.)

Sec. 43. (b.) Whereas the Canal Tolls payable for passage through the Welland and St. Lawrence Canals of barrel staves and headings, are 40 cents per 1,000 in the case of ordinary materials, such as those for sugar and flour barrels; while in the case of staves and headings for salt barrels the charge is 8 cents per 1,000 only.

And whereas application is made to have this distinction removed on the ground that sugar and flour cooerage is of the same weight as salt cooerage.

His Excellency in virtue of the provisions of chapter 38 of the Revised Statutes of Canada, intituled "An Act respecting the Department of Railways and Canals," and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that Class 5 of the existing Tariff of tolls for passage through the Canals of the Dominion, established by the Order in Council of the 25th March, 1895, shall be and the same is hereby amended to the effect, and to that effect only, of removing the distinction between ordinary and salt barrel staves and headings, and making the tolls payable for these articles the same, namely, those at present charged on salt barrel staves and headings, on all the Canals of the Dominion. (O. C. May 28 1897.)

SPECIAL RATES ON SAND AND STONE.

Sec. 43. (c.) On the recommendation of the Acting Minister of Railways and Canals, the rate of toll on sand and stone used in the construction of the bridge being built at Cornwall by the Ottawa and New York Railway was reduced from 15 and 20 cents to 7½ and 10 cents respectively. (O. C. August 27, 1898.)

PART VI

STEAM AND ELECTRIC RAILWAY STATISTICS

STEAM RAILWAY STATISTICS

OF THE

DOMINION OF CANADA

FOR THE YEAR ENDED JUNE 30, 1901

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	1869.....	2,524
1836.....	16	1870.....	2,617
1837.....	16	1871.....	2,695
1838.....	16	1872.....	2,899
1839.....	16	1873.....	3,613
1840.....	16	1874.....	3,832
1841.....	16	1875.....	4,331
1842.....	16	1876.....	4,804
1843.....	16	1877.....	5,218
1844.....	16	1878.....	5,782
1845.....	16	1879.....	6,126
1846.....	16	1880.....	6,858
1847.....	54	1881.....	7,194
1848.....	54	1882.....	7,331
1849.....	54	1883.....	8,697
1850.....	66	1884.....	9,577
1851.....	159	1885.....	10,273
1852.....	205	1886.....	10,773
1853.....	506	1887.....	11,793
1854.....	764	1888.....	12,184
1855.....	877	1889.....	12,585
1856.....	1,414	1890.....	13,151
1857.....	1,444	1891.....	13,838
1858.....	1,863	1892.....	14,564
1859.....	1,994	1893.....	15,005
1860.....	2,065	1894.....	15,627
1861.....	2,146	1895.....	15,977
1862.....	2,189	1896.....	16,270
1863.....	2,189	1897.....	16,550
1864.....	2,189	1898.....	16,870
1865.....	2,240	1899.....	17,250
1866.....	2,278	1900.....	17,637*
1867.....	2,278	1901.....	18,140
1868.....	2,278		

NOTE.—*The year 1901 included 188 miles comprised in 13 Electric Railways which are shown in a separate statement of Electric Railways for the year ended June 30, 1901—Thus making an increase of the Steam Railways in operation at June 30, 1901, of 671 miles.

1-2 EDWARD VII., A. 1902

THE SUMMARY of Tables of Steam Railways for the Years ended June 30, 1900, and June 30, 1901.

	Comparative Statement.	
	June 30, 1900	June 30, 1901
	Steam Railways.	Steam Railways.
	\$	\$
Miles of railway completed (track laid).....	17,636	18,294
" sidings.....	2,549	2,710
" iron rails in main line.....	126	110
" steel ".....	17,510	18,184
" " (double track).....	591	634
Capital paid (including the four following items).....	991,186,646	1,042,785,539
Government (Dominion and Provincial) bonuses paid.....	169,645,925	177,640,765
" " " loans paid.....	20,869,264	20,613,489
" " (Provincial only) subscription to shares paid.....	300,000	300,000
Municipal aid paid.....	15,711,542	16,310,253
Miles in operation.....	17,469	18,140
Gross earnings.....	70,204,353	72,898,749
Working expenses.....	47,381,689	50,368,726
Net earnings.....	22,822,664	22,530,023
Passengers carried.....	17,104,343	18,385,722
Freight carried (tons).....	35,713,222	36,999,371
Train mileage.....	52,621,524	53,349,394
Passengers killed.....	7	16
Number of elevators.....	239	253
" guarded level crossings— public roads.....	165	193
" unguarded ".....	12,625	12,422
" overhead bridges.....	421	427
" public roads under crossings.....	Not stated.	280
" level crossings of other railways.....	219	233
" junctions with other railways.....	335	347
" " branch lines.....	244	230
" engines owned.....	2,170	2,316
" " hired.....	163	117
" sleeping and parlour cars owned.....	235	243
" " " hired.....	3	15
" first-class cars owned.....	1,038	1,087
" " hired.....	65	72
" second-class and immigrant cars owned.....	640	636
" " " hired.....	1	13
" baggage, mail and express cars owned.....	623	729
" " " hired.....	29	86
" refrigerator cars owned.....	736	728
" " " hired.....	207	273
" cattle and box freight cars owned.....	39,112	42,166
" " " hired.....	3,426	3,738
" platform cars owned.....	14,928	15,773
" " " hired.....	679	575
" coal and dump cars owned.....	5,737	6,557
" " " hired.....	133	218
" conductors' vans owned.....	1,055	1,019
" " " hired.....	1	21
" tool cars owned.....	*872	*948
" " " hired.....	7	7
" snow ploughs owned.....	293	301
" " " hired.....	3	3
" flangers owned.....	309	320
" " " hired.....	3	3

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

Number of cars with air brakes owned.....	48,072
" " " hired.....	4,342
" automatic couplers owned.....	56,423
" " " hired.....	4,711

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NOMINAL Capital paid up to June 30, 1901.

	Miles con- structed.	Amount.	Per Mile.	Remarks.
		\$ cts.	\$ cts.	
Ordinary share capital	18,294	291,340,772 62	15,925 48	
Preference "	18,294	133,073,541 39	7,274 16	
Bonded debt	18,294	391,696,522 93	21,411 20	
Aid from Dominion Government	18,294	166,158,731 11	9,082 69	
" Ontario "	6,605	7,839,578 04	1,186 92	Equal to an aver- age of \$1,770.83 per mile on the total mileage.
" Quebec "	3,544	16,347,392 64	4,612 69	
" New Brunswick Government	1,444	4,529,040 71	3,136 43	
" Nova Scotia Government	943	1,801,108 53	1,909 98	
" Prince Edward Island Government	209			
" Manitoba Government	2,056	1,840,902 75	895 38	Equal to an aver- age of \$891.56 per mile on the total mileage.
" British Columbia Government	1,408	37,500 00	26 63	
" North-west Territories Government	2,085			
" Municipalities in Ontario	6,605	12,102,164 37	1,832 27	
" " Quebec	3,544	2,942,929 62	830 40	
" " New Brunswick	1,444	336,500 00	233 03	Equal to an aver- age of \$891.56 per mile on the total mileage.
" " Nova Scotia	943	270,559 17	286 91	
" " Prince Edward Island	209			
" " Manitoba	2,056	595,600 00	289 69	
" " British Columbia	1,408	37,500 00	26 63	
" " North-west Territories	2,085	25,000 00	12 00	
Capital from other sources	18,294	11,810,194 91	645 58	
Total capital paid	18,294	1,042,785,538 79	57,001 50	

GOVERNMENT and Municipal Loans, Bonuses, &c., promised to Railways completed and under construction up to June 30, 1901.

	\$ cts.
Dominion Government	174,501,269 36
Ontario "	8,709,578 04
Quebec "	17,700,936 50
New Brunswick Government	4,544,439 71
Nova Scotia "	2,619,316 53
Manitoba "	1,841,952 75
British Columbia "	37,500 00
Municipalities in Ontario	12,198,164 37
" Quebec	4,881,574 00
" New Brunswick	361,500 00
" Nova Scotia	485,559 17
" Manitoba	595,600 00
" British Columbia	37,500 00
North-west Territories	25,000 00
	228,539,890 43

1-2 EDWARD VII., A. 1902

TOTAL FATAL ACCIDENTS for Year ended June 30, 1901.

	Passengers Killed.	Employees Killed	Others Killed.	Total Killed.
Falling from cars or engines	4	17	4	35
Jumping on or off trains in motion	7	8	10	25
At work making up trains		10		10
Putting heads or arms out of window		3		3
Coupling cars		6		6
Collisions and derailments	3	23	3	29
Striking bridges				
Walking or being on track	2	30	143	175
Explosions		1		1
Other causes		20	23	43
Total killed	16	118	183	317

1-2 EDWARD VII., A. 1902

TABLE showing Location of the Steam Railways of the Dominion of Canada, June 30, 1901.

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Alberta Railway and Coal Co....	From Lethbridge in District of Alberta, N.W.T., to Counts, on International boundary, 3 ft. gauge..... The portion from Dunmore to Lethbridge, 107 miles, was changed to 4 ft. 8½-in. gauge and sold to Can. Pac. Ry., 29th Nov., 1893.		64·62
Albert Southern.....	Harvey Branch Junction to Alma, N.B. Harvey Branch Albert to Harvey Bank, N.B.	16·00 3·00	19·00
Algoma Central and Hudson Bay.	Sault Ste. Marie to Spruce Lake..... Branch—Michipicoten to Helen Mines..... " Josephine Jct. to Josephine Mine..... 42 miles in operation. 49·50 miles under construction.	70·00 11·00 10·50	91·50
Baie des Chaleurs in Atlantic and Lake Superior System....	Metapedia Station on C.P.R. to Paspebiac, 98 miles in operation.....		100·00
Bay of Quinté Railway and Navigation Coy.....	Deseronto, on Bay of Quinté, Lake Ontario, to Deseronto Junction, Grand Trunk Railway.....		4·00
Bedlington and Nelson.....	Kuskoonook to Bedlington, B.C.....		15·20
British Yukon.....	White Pass to White Horse Spur, B.C., and Branch to White Horse.....		90·45
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..... " McLeod, District of Alberta.....	190·97 104·96	295·93
Canada Atlantic, including Ottawa, Arnprior and Parry Sound Ry.....	City of Ottawa to Junction with Grand Trunk at Lacolle and U.S. boundary. Crosses the St. Lawrence at Coteau by bridge. Connects with Grand Trunk Railway at Coteau and Lacolle, and Ottawa to Depot Harbour, Lake Huron, near Parry Sound.....		400·00
Central Counties.....	From Glen Robertson, on Canada Atlantic to Hawkesbury, Ont..... South Indian, on Canada Atlantic, to Rockland.....	21·00	37·00
Leased to Canada Atlantic.....		16·00	
Canadian Northern.....	Gladstone to Winnipegosis..... Sifton Junction to Erwood..... Winnipeg to boundary of Minnesota..... Dauphin to Grand View..... Port Arthur to Stanley..... Stanley to Gunflint Lake.....	125 177 108 27 19 66	522·00
Canada Coals and Railway Co., formerly Joggins.....	Maccan Station, I.C.R., to Joggins Coal Mine.....		12·00
Canada Southern.....	Main Line—Windsor, Ont., to Suspension Bridge.... Amherstburg Branch—Essex Centre to Amherstburg. St. Clair Branch—St. Clair Junction to Courtright... Fort Erie Branch—Fort Erie to Welland Junction... Erie and Niagara Branch—Old Fort Erie to Niagara. Oil Springs Branch—Oil Springs to Oil City..... Sarnia, Chatham and Erie—Oil City to Petrolen.....	226·18 16·83 62·63 17·50 30·60 5·50 7·00	382·19
Leased.....	Leamington and St. Clair—Comber to Leamington..	15·95	

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
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	
Canadian Pacific: Owned..	Main Line—Quebec to St. Martin's Junction.....	159'80	136'00
	" Montreal to Ottawa.....	120'30	
	" Ottawa to Bonfield.....	223'60	
	" Bonfield to Vancouver.....	2,561'00	
	Branches—Dunmore to Crows Nest.....	211'90	3,064'70
	" Piles Junction to Grand Piles.....	26'90	
	" Berthier Junction to Berthier.....	2'00	
	" Joliette Junction to St. Félix.....	16'80	
	" Ste. Thérèse Junction to St. Jérôme.....	13'60	
	" " to St. Eustache.....	6'00	
Montreal and Western.....	" St. Jérôme to Labelle.....	66'90	
	" St. Lin Junction to St. Lin.....	15'00	
	" Buckingham Stn. to Buckingham Village.....	4'20	
Brockville and Ottawa Railway..	" Carleton Junction to Brockville.....	45'00	
	" Sudbury to Sault Ste. Marie.....	180'60	
	" Sudbury to Copper Mines.....	5'60	
	" Dymont to Ottamine.....	7'00	
	" Molson to Lac du Bonnet.....	22'00	
	" Winnipeg Junction to Emerson.....	64'50	
	" " to Maniton.....	101'10	
	" Rosenfeldt to Gretna.....	13'70	
	" Winnipeg to West Selkirk.....	22'60	
	" Air Line Junction to Foxton.....	37'50	
	Souris Branch. { Kenmay to Estevan.....	156'20	
	{ Glenboro' to Souris.....	45'70	
	{ Deloraine to Napinka.....	18'60	
	Branches—Monteith Junction to Arcola.....	95'80	
	" North Portal to Pasqua.....	160'30	
	" New Westminster Junction to New Westminster.....	8'20	
Lake Témiscamingue Colonization	" Mattawa to Kippewa.....	45'80	
	" Mission Junction to Mission.....	10'00	
	" Revelstoke to Arrow Head.....	27'70	
	" Vancouver to Coal Harbour.....	1'20	
	" Three Forks to Sandon.....	4'20	
	" Wood Bay to Snowflake.....	16'30	
	" Cranbrook to Kimberly.....	19'40	
	" Deloraine to Waskada.....	17'20	
	Total mileage owned.....	4,554'20	
Leased Lines.....	Atlantic and North-west (in Canada)—		
	South end Lachine Bridge to Maine boundary, Que.....	182'50	
	Renfrew Jct. to Eganville, Ont.....	18'90	
	St. Lawrence and Ottawa—		291'40
	Ottawa to Prescott, Ont.....	51'80	
	Chaudière Junction to Sussex St., Ottawa.....	6'60	
	Ontario and Quebec—		58'40
	Montreal (Windsor St.,) to Daley's cut.....	6'70	
	Mile End to Daley's cut.....	7'40	
	Montreal Jct. to South End Lachine Bridge.....	3'60	
	" Toronto Junction.....	334'00	
	St. Luc Junction to Western Junction.....	1'70	
	Toronto Junction to Strachan Avenue.....	3'20	
	Leaside Junction to Union St., Toronto.....	5'30	
	London to Windsor.....	112'60	
		474'50	

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Canadian Pacific— <i>Continued.</i>			
Leased lines	Credit Valley—		
	Toronto Junction to St. Thomas	116 80	
	Streetsville Junction to Melville Jct	31 60	
	Cataract to Elora	27 30	
		175 70	
	West Ontario Pacific—Woodstock to London	26 60	
	Toronto, Grey and Bruce—		
	Toronto Junction to Owen Sound	116 80	
	Orangeville Junction to Teeswater	69 80	
	Glenannan to Wingham	4 50	
		191 10	
	Guelph Junction—		
	Guelph Junction on Credit Valley Ry. to Guelph ..	15 25	
	Montreal and Lake Maskinongé—		
	St. Félix to St. Gabriel de Brandon	12 90	
	Montreal and Ottawa—		
	Vaudrenil to Jct. with the Canada Atlantic ..	86 20	
	Rigaud to Pt. Fortune	7 00	
		93 20	
	Cap de la Madeleine—		
	From Main Line C.P.R., at Junction with		
	Piles branch to Cap de la Madeleine	2 32	
	New Brunswick—		
	Woodstock to Maine boundary	59 40	
	Newburg Junction to Fredericton	58 40	
	Amosook Junction to Edmondston	57 20	
		175 00	
	St John and Maine—		
	Vanceboro to McAdam Junction	6 30	
	McAdam Junction to Fairville	81 80	
	Fairville to Carleton	4 00	
		92 10	
	St. John Bridge and Railway Extension—		
	Fairville to St. John	2 00	
	Fredericton—		
	Fredericton Junction to Fredericton	22 10	
	New Brunswick and Canada—		
	McAdam Junction to St. Stephen	33 90	
	Watt Junction to St. Andrews	27 50	
	McAdam Junction to Woodstock	50 80	
	Debec Junction to Maine boundary	5 00	
		117 20	
	St. Stephen and Milltown Ry.—		
	St. Stephen to Milltown	4 64	
	Tobique Valley—		
	Perth Centre to Plaster Rock	28 00	
	Manitoba and North western—		
	Portage la Prairie to Yorkton	222 90	
	Binscarth to Russell	11 30	
	Saskatchewan and Western—Minnedosa to		
	Rapid City	18 40	
		252 60	
	Manitoba South-western Colonization—		
	Manitow to Deloraine	100 40	
	Winnipeg to Glenboro	101 90	
	Elm Creek to Carman	12 10	
		214 40	
	Great North-west Central, Chater to Miniota	71 00	
	Columbia and Kootenay—		
	Nelson to Robson	27 70	
	Slocan Junction to Slocan City	32 00	
	To Mouth of Kootenay River	0 80	
		60 50	
	British Columbia Southern—		
	Crows Nest to Kootenay Landing	182 00	
	Nelson to Proctor	20 20	
		202 20	

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Canadian Pacific— <i>Continued.</i> Leased lines	Shuswap and Okanagan— From Junction with C. P. R. at Sicamous to Lake Okanagan.....	50·80	
	Nakusp and Slocan— Nakusp on Arrow Lake to Three Forks of Carpenter's Creek, B.C.....	36·30	
	Columbia and Western— Robson to Rossland..... 32·10 Trail to Smelter Junction..... 2·00 Rossland to LeRoi..... 1·30 West Robson to Midway..... 99·00 Mining Spurs..... 23·50	157·90	
	Total mileage leased.....		2,738·11
	" owned.....		4,554·20
	" in Can. Pac. system		7,292·31
Canadian Government Railways.	Intercolonial— Halifax to Point Lévis (via Harlaka)..... 674·87 Dartmouth to Windsor Junction..... 12·12 Truro to Sydney..... 214·17 Mulgrave to Point Tupper Ferry..... 90 North Sydney Junction to North Sydney.. 4·43 New Glasgow to Pictou Landing..... 7·57 Stellarton to Oxford Junction..... 79·63 Brown's Point to Pictou..... 1·70 Pugwash Junction to Pugwash Station... 4·70 Pausac Junction to Pt. du Chêne... 11·38 Moncton to St. John..... 89·22 Derby Junction to Indiantown..... 13·51 Dalhousie Branch..... 5·97 St. Charles Junction to Chaudière Junction (via St. Henri)..... 16·38 Hadlow to Chaudière Curve..... 5·66 Moncton and Chaudière Branches..... 1·55 Freight Branches..... 27·57	1,171·33	
	Windsor Branch (32 miles) of I. C. Ry. is operated by Dominion Atlantic Ry.		
	Drummond County— Chaudière to Ste. Rosalie Jct. with Grand Trunk St. Leonard to Nicolet and Balls Wharf on St. Lawrence.....	115·93 14·68	
	Prince Edward Island— Main Line—Alberton to Charlottetown... 104·30 Royalty Junction to Georgetown..... 41·00 Branch—Mount Stewart to Souris..... 38·40 " Alberton to Tignish..... 13·30 " Emerald to Cape Traverse..... 12·00	209·00	1,301·94
			1,510·94
Caraguet.....	From Gloucester Junction, Intercolonial Railway, 5 miles south of Bathurst Station, easterly along the south shore of Baie des Chaleurs to Shippigan Harbour, N.B.....		68·0
Carillon and Grenville.....	Carillon to Grenville, Que., connecting at both termini with Ottawa River Navigation Company's steamers (Gauge, 5 ft. 6 in.).		13·00
Central (Nova Scotia), formerly Nova Scotia Central.....	From Middleton on the Windsor and Annapolis Railway to town of Lunenburg, on the Atlantic coast, N.S.....		74·00

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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, to Bancroft Branch, Ormsby Jet. to Coe-Hill Iron Mines, Wallaston, 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.....	117·00 8·00	125·00
Central Railway of New Brunswick.....	From Norton Station, on the Intercolonial Railway, to Chipman..... Branch to Elkin Mines.....	44·66 1·00	45·66
Coast Line, Nova Scotia, now Halifax and Yarmouth.....	Yarmouth towards Halifax, 240 miles, of which 50·10 miles are in operation and 61 miles under construction.....		50·10
Cobourg, Northumberland and Pacific.....	From Cobourg, Ont., to Junction with Central Ontario Railway, 49 miles under construction.....		
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..... Spring Hill and Oxford Branch, 14 miles from Spring Hill Mines to Oxford Village on the Oxford and New Glasgow Branch, I.C.R., not in operation.		32·00
Dominion Atlantic, comprising Windsor and Annapolis, Yarmouth and Annapolis and Cornwallis Valley and lease of Windsor Branch of Intercolonial.....	Windsor to Annapolis, N.S. Annapolis to Yarmouth..... Branches— Wilmot to Forbrook..... From Kentville to Kingsport, on Basin of Minas (formerly Cornwallis Valley Railway)..... Windsor Branch of I.C.R.—Windsor to Windsor Junction, Intercolonial Railway, 14 miles from Halifax, leased.....	84·00 87·00 3·50 14·00 32·00	220·50
Elgin and Havelock.....	From Elgin, County of Albert, N.B., to Petitcodiac Junction with Intercolonial Railway; thence to Havelock in County of King's, N.B..... Havelock to Keith's Mills.....	27·00 1·00	28·00 78·00
Esquimalt and Nanaimo.....	Victoria to Wellington, Island of Victoria.....		
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 Ry., at St. Mary's... Point Edward to Point Levis and Boundary Line, Vermont..... York to Sarnia Tunnel..... Suspension Bridge, Niagara Falls to Windsor.....	544·40 175·70 229·81	1·33 949·91
Grand Trunk (owned)—Main Line.....			
Branches, Eastern Division....	Arthabasca Branch..... St. Lambert to Ft. Covington (Boundary)..... Brosseaus to Rouse's Point (Boundary)..... St. Isidore to Province Line..... St. Martine to Valleyfield..... Bonaventure to Dorval..... Jacques Cartier Union Ry..... St. Paul Branch..... St. Henri curve..... Wharf Branch, Montreal..... Wharf Branch, Lachine..... Kingston Branch.....	35·34 67·20 36·79 24·15 19·12 10·12 6·54 1·08 0·31 0·85 0·68 2·25	204·43

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TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Grand Trunk (owned)— <i>Con.</i>			
Northern Division.....	Belleville Harbour to Midland	163·96	
	Madoc Junction to Eldorado	21·68	
	Port Hope to Peterboro'	30·57	
	Peterboro' to Lakefield	9·56	
	Millbrook Junction to Omamee Junction	15·12	
	Chemong Branch	3·00	
	Blackwater to Cobocok	36·19	
	Medonte Tramway	0·75	
	Scarboro Junction to Haliburton	114·82	
	Whitby Harbour to Manilla Junction	33·71	
	Stouffville to Jackson's Point	26·91	
	North Parkdale to Nipissing Junction	218·31	
	Muskoka Wharf Branch	1·00	
	Burlington Junction to Allandale	84·00	
	Allandale to Meaford	51·80	
	Colwell to Penetang	33·30	
	Beeton Junction to Lake Junction	39·20	
	Hillsdale Tramway	8·28	
			892·16
Middle Division	Blackwell to Point Edward	5·21	
	Galt to Elmira	25·02	
	St. Mary's to London	21·13	
	Toronto Belt Line	12·79	
	Bathurst St., Toronto to Hamilton	37·95	
	Port Dover to Hamilton	40·25	
	Burlington Beach Line	11·33	
	Stoney Creek and Gages connections	2·56	
	Komoka to Sarnia	50·85	
	Sarnia to Point Edward	2·67	
	Petrolia Branch	4·71	
	Fort Erie to Glencoe	145·55	
	Glencoe to Kingscourt	21·01	
	Port Colborne to Port Dalhousie	25·14	
	Clifton to Port Robinson	9·75	
	Welland Junction	0·20	
	Goderich to Goderich Harbour	1·60	
	Harrisburg to Tilsonburg Junction	42·54	
	Port Dover to Tavistock	55·68	
	Sincoe to Port Rowan	17·00	
	Harrisburg to Southampton	128·44	
	Palmerston to Durham	26·73	
	Harriston to Warton	63·97	
	Stratford to Palmerston	36·60	
	Listowell to Kincardine	57·66	
	Hyde Park to Winham	68·88	
	Cobourg to Harwood (not in operation)	15·00	
			929·62
Leased and partly owned.....	Buffalo and Lake Huron Ry.....		2,976·12
	Fort Erie to Goderich	162·00	
	Owen Sound Branch		
	Park Head to Owen Sound	12·42	
Leased or rented.....	Wharf Branch, Montreal		174·42
			3·44
			3,153·98
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		2·23
	(Length of tunnel between portals 6,000 ft., cylindrical in section with clear inside diameter of 19 ft. 10 inches).		

1-2 EDWARD VII., A. 1902

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description	Distance.	
		Miles.	Total.
Great Eastern in Atlantic and Lake Superior system.....	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	
	Yamaska to Sorel.....	10'00	
Great Northern, including Lower Laurentian.....	From Riv. à Pierre Jct. with Quebec and Lake St. John Ry. to Hawkesbury.....	169'38	
	From Shawenegan Junction to Shawenegan Falls....	3'98	
	From St. Jérôme Junction to St. Jérôme.....	1'74	
			175'10
Gulf Shore.....	Junction with Caraquet Railway at Pokemouche to Tracadie operated by Caraquet Ry.....		16'78
Hampton and St. Martin, formerly St. Martin and Upham..	From Hampton on Intercolonial Ry. to St. Martin, County of St. John, N.B., on Bay of Fundy.		29'00
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	
Interprovincial Railway Bridge and approaches.	Across the Ottawa River at City of Ottawa.....		53'30
			1'30
Irondale, Bancroft and Ottawa..	From Junction with Grand Trunk Railway, near Kinmount Station, to Bancroft Station.....		48'00
Inverness and Richmond.....	From Port Hastings to Broad Cove, Cape Breton....		56'50
	(Under construction from Port Hastings to Junction with Intercolonial Ry. 4'50 miles.)		
Kaslo and Slocan	From Kaslo to Sandon, B.C.	28'80	
	From Junction to Cody	3'00	
			31'80
Kent Northern.....	Richibucto, N.B., to Kent Jct. 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 Iron Mines, Lavant Mills, Clyde Forks Mills, Wilson's Mine, Caldwell's Mills, William's Mine, Cameron Bay	4'75	
	(Connects with Grand Trunk at Kingston, Canadian Pacific at Sharbot Lake and at Renfrew.)		
			112'85
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.....	4'37	
			60'82
Lenora Mount Sicker.....	Lenora Mines to Mount Sicker.....		6'25
Lotbinière and Mégantic.....	Lyster Station, Grand Trunk, to St. Jean des Chailions		30'34
L'Assomption.....	L'Epiphanie Station, C.P.R., to l'Assomption . . .		3'33
Lake Erie and Detroit River	Walkerville, Ont., to Ridgetown	84'22	
Erie and Huron.	Rondeau to Sarnia.	71'50	
			155'72
London and Port Stanley.....	London to Port Stanley on Lake Erie		24'00
Manitoulin and North Shore.....	Sudbury to Gertrude Mines.....	14'00	
	Stanley Jct. to Spanish River	1'50	
			15'50

SESSIONAL PAPER No. 20

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Midland of Nova Scotia (formerly Stewiacke Valley).	From Windsor to Truro, N.S.—57½ miles under construction		
Montfort and Gatineau Colonization	From Junction with Montreal and Western near St. Sauveur to Arundel		33·00
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.	31·95	
	Branch—Stanstead Junction to Stanstead	3·51	
			35·46
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	
	Marieville 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	10·00	
		139·30	
	Leased—Lake Champlain and St. Lawrence Junction—Stanbridge to St. Guillaume.	60·70	
	(Connects with Connecticut and Passumpsic, Grand Trunk and Stanstead, Shefford and Chambly Rys.).		200·00
Nelson and Fort Sheppard.	From Five Mile Point to Fort Sheppard on International boundary, B.C.		54·70
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
New Westminster Southern.	Douglas to New Westminster		24·10
Northern Pacific and Manitoba.	Winnipeg to International boundary	65·94	
	Portage Junction to Portage la Prairie	52·52	
	Morris to Brandon	145·24	
	Departure to near Hartney.	50·94	
	Connection with C.P.R. at Winnipeg.	1·24	
	Spurs to Industries.	4·63	
			320·51
Nosbonsing to Nipissing.	From Lake Nosbonsing to Lake Nipissing		5·50
Nova Scotia Southern.	Under construction 117 miles—		
	Shelburne to New Germany	77·00	
	Indian Gardens to Liverpool.	20·00	
	Sable River Junction to Lockport.	20·00	
Ontario, Belmont and Northern—Leased to Central Ontario Ry..	From Junction with Central Ontario Ry. to Iron Mines in Township of Belmont.		9·60

1-2 EDWARD VII., A. 1902

TABLE showing Location of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Orford Mountain.....	Eastman on C.P.R. to Lawrenceville and Kingsbury, Que.....		26·50
Ottawa and Gatineau, now Ottawa Northern and Western.....	Canadian Pacific Railway Junction in Hull, Que., to Gracefield.....		57·87
Ottawa Valley in Atlantic and Lake Superior System.....	Lachute on C.P.R., to St. Andrews on Ottawa River.....		7·00
Ottawa and New York	From Ottawa to International Boundary near Cornwall.....		56·79
Pembroke Southern leased to Canada Atlantic.....	From Pembroke to Golden Lake.....		21·00
Philipsburg.....	Stanbridge Station of Canadian Pacific and Central Vermont Railways, to Philipsburg, Missisquoi Co.....		7·50
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 Aylmer, Que., to Waltham.....		70·60
Portage and North-western.....	Portage la Prairie to Beaver.....	20·02	
	Portage la Prairie to Delta.....	15·05	
Qu'Appelle, Long Lake and Saskatchewan.....	From Canadian Pacific Railway at Regina, North-westery to Long Lake and Prince Albert.....		35·07
Quebec Bridge and approaches to connect adjacent Railways.....	(Across St. Lawrence River at Quebec, under construction 10 miles.)		253·96
Quebec and Lake St. John.....	Quebec to Roberval.....	191·00	
	Chambord Junction to Chicoutimi.....	51·00	
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
Quebec Southern, comprising East Richelieu Valley and United Counties.....	Noyan Junction to St. Robert Junction.....		83·80
Red Mountain.....	From International boundary Line, B.C. to Rossland.....		9·53
Restigouche and Western.....	Campbellton, N.B., to St. Leonard's, 100 miles (under const'n).....		10·00
Rutland and Noyan.....	International Boundary to Noyan Jet.....		5·00
Stanstead, Shefford and Chambly	From Junction with Montreal and Vermont Junction Railway, near St. John, Que., easterly to Waterloo.....		43·00
Shore Line (formerly Grand Southern).....	St. John to St. Stephen, N.B.....		82·50
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
St. John Valley and Rivière du Loup.....	From Fredericton, N.B., to Woodstock, N.B., 66 miles, of which 6 miles are 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	
South Shore (formerly Montreal and Sorel).....	From Junction with Grand Trunk at St. Lambert to St. François du Lac.....		33·00
			61·50

SESSIONAL PAPER No. 20

TABLE showing Location of Railways, &c.—*Concluded.*

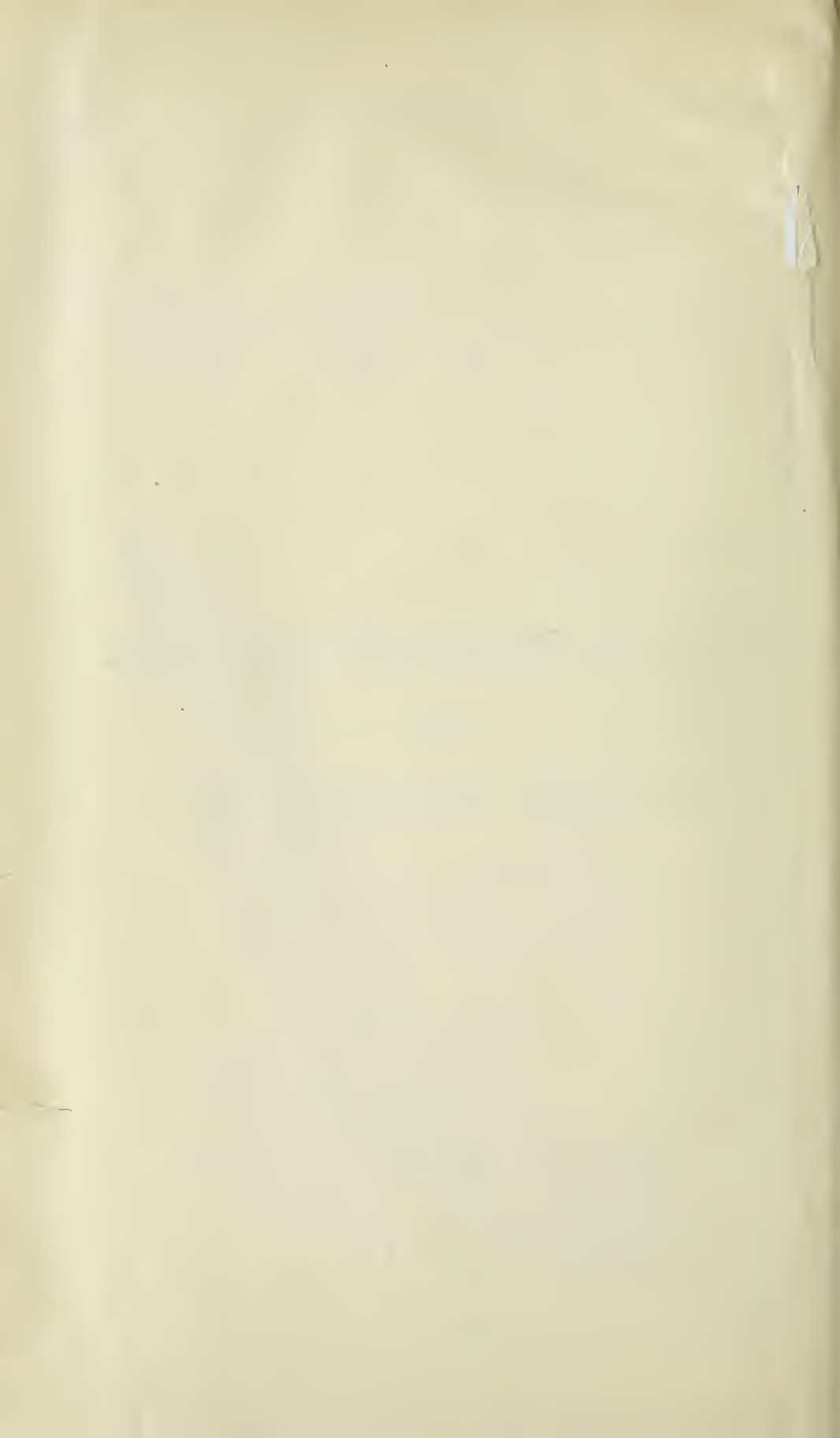
Name of Railway.	Description.	Distance.	
		Miles.	Total.
Sydney and Louisbourg (Dominion Coal Co.).....	Sydney Harbour to Louisbourg Harbour	39·15	
	Branches to coal mines	9·82	
			48·96
St. Mary's River.....	Stirling to Spring Coulee (District of Alberta.)		30·00
Thousand Islands.....	Gananoque on St. Lawrence River to Gananoque Station, G.T.R.....		6·33
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 Junction with Canada Southern Railway, north of Tilsonburg		20·00
Toronto, Hamilton and Buffalo, including Brantford, Waterloo and Lake Erie.....	Main Line—Waterford Jct. with Canada Southern to Welland Jct. with Canada Southern—passing through the city of Hamilton.....	79·87	
	Toronto Extension—Hamilton to Grand Trunk Jct. ..	1·77	
	Chantler to Fonthill.....	4·00	
	Belt Line City of Hamilton.....	3·52	
			89·16
Victoria and Sidney	City of Victoria to Sidney, Vancouver Island		16·26
York and Carleton.....	Junction with Canada Eastern Ry. at Cross Creek Station to Stanley, N.B.....		5·75



SUMMARY STATEMENT OF CAPITAL

FOR THE

FISCAL YEAR ENDED JUNE 30, 1901.



A. NOTE.—With regard to certain subsidies granted by Dominion Parliament.

By 60-61 Vic., cap. 4, 1897, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, 1900, and 1 Edward VII., cap. 7.—A subsidy was authorized on certain mileage of these railways specified in the said Acts 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 which are 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 an undetermined amount cannot be shown here.

Of the Railways shown in this statement the following is the mileage which may be entitled to the additional subsidies under these said Acts :—

Algoma Central.....	225 miles.
Canadian Pacific—Extension of Pipestone Branch.....	50 "
Central Railway of New Brunswick.....	45 "
Coast Railway of Nova Scotia now Halifax and Yarmouth.....	61 "
Cobourg, Northumberland and Pacific.....	50 "
Drummond County, now Intercolonial.....	42½ "
East Richelieu Valley, now in Quebec Southern.....	24 "
Great Northern.....	44 "
Gulf Shore.....	5½ "
Ontario and Rainy River, now in Can. Northern.....	80 "
Ottawa, Arnprior and Parry Sound.....	56 "
Ottawa and Gatineau, now Ottawa, Northern & Western	20 "
Ottawa and New York.....	53·87 "
Pembroke Southern.....	24 "
Philipsburg Railway and Quarry Co.....	0 ⁶⁶ / ₁₀₀ "
Pontiac Pacific Junction.....	21½ "
Restigouche and Western.....	110 "
St. Lawrence and Adirondack.....	13½ "
St. Stephen and Milltown.....	1 ¹⁴ / ₁₀₀ "
Tilsonburg, Lake Erie and Pacific.....	3½ "
United Counties, now in Quebec Southern.....	1 "
Inverness and Richmond.....	98 "
Montreal and Province Line.....	19 "
Nova Scotia Southern.....	97 "
Ontario and Rainy River.....	80 "
York and Carleton.....	6 "
Atlantic and Lake Superior—Baie des Chaleurs.....	30 "
Central Ontario.....	20 "
Midland of Nova Scotia.....	58 "
Kingston and Pembroke.....	41 "

NOTE B.—Memorandum of adjustment with Statement No. 3, Part II, being Accountant of Department of Railways and Canals, Statement of Railway Subsidies to June 30, 1901.

	\$	cts.	\$	cts.
Total Dominion Government aid paid up. Statement I			166,158,731	11
ADD—Atlantic and North-west Railway (portion in United States)			1,386,000	00
St. Catherines and Niagara Railway (Electric Railway) in Electric Railway Statistics			38,400	00
Oshawa Railway and Niagara Company (Electric Railway) in Electric Railway Statistics			22,400	00
The above not included in Statement No. 1			167,605,531	11
LESS—Intercolonial Railway, including Windsor Branch (cost)	63,973,971	47		
Prince Edward Island Railway (cost)	4,123,827	21		
Canadian Pacific Railway, construction of lines built by Dominion (not including subsidies) and transferred to Canadian Pacific Company	31,112,213	45		
Fredericton and St. Mary's Bridge Company (loan)	300,000	00		
Grand Trunk Railway Company (loan)	15,142,633	33		
Kent Northern Railway (rails loan)	58,334	27		
Salisbury and Harvey Railway (loan including rails)	29,391	01		
St. John Bridge and Railway Extension (loan)	433,900	00		
Windsor and Annapolis Railway	1,193,369	00		
Canadian Pacific Railway Subsidy	25,000,000	00		
Western Counties	500,000	00		
			141,867,639	74
Agreeing with subsidy No. 3, Part II, accountant's statement to June 30, 1901			25,737,891	37

STEAM RAILWAYS

SUMMARY STATEMENTS RELATING TO MILEAGE, ROLLING STOCK,
CHARACTERISTICS OF ROADS, OPERATIONS, PASSENGERS
AND FREIGHT CARRIED, EARNINGS, OPERATING
EXPENSES AND ACCIDENTS.

1-2 EDWARD VII., A. 1902

No. 3.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Weight per Yard.		
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.	Length of Siding.	Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
1	Alberta Railway and Coal Co.	64·62			64·62	13·21		35
2	*Albert Southern	16·00			19·00			
	Harvey Branch	3·00						
3	Algoma Central and Hudson Bay	42·00	49·50		42·00	18·00		85
4	Atlantic & Lake Superior, comprising—							
	Baie des Chaleurs	100·00						
	Great Eastern	23·00			130·00	4·00		56
	Ottawa Valley	7·00						
5	Bay of Quinté, including	4·00			64·82	7·00		56, 60, 65
	Kingston, Napanee & Western	60·82						
6	Bedlington and Nelson	15·20			15·20	·87		56
7	British Yukon	90·45			90·45	7·97		45
8	Brockville, Westport & Sault Ste. Marie	45·00			45·00	2·00		56
9	Buctouche and Moncton	32·00			32·00	2·50		54 & 56
10	†Calgary and Edmonton	295·93			295·93	9·81		56
11	Canada Atlantic, including Ottawa, Ar- prior and Parry Sound	400·00			400·00	93·00		56, 72, 73, } 75..... }
	Leased lines—							
	Central Counties	37·00			37·00	6·00		56
	Pembroke Southern	21·00			21·00	2·00		56
12	Canada Coals and Railway Co., formerly Joggins	12·00			12·00	3·00		56
13	Canada Eastern	136·00			136·00	6·50		56 to 60
14	‡Canada Southern	382·19			382·19	176·62		60, 80, 65 }
15	§Canadian Northern, comprising Lake Manitoba Ry. and Canal Co.'s Line, Winnipeg Great Northern Ry., Mani- toba South Eastern Ry., Ontario and Rainy River Ry. and Port Arthur, Duluth and Western Ry.	522·00	270·00		522·00	67·02		56
16	Canadian Government Railways— Intercolonial, exclusive of Windsor Branch (32 miles), but including Drummond Co.	1,301·94			1,301·94	210·85		56, 58, 67 & 80.. }
	Prince Edward Island	209·00		28·00	181·00	16·40	38	50, 52, 56
17	††Canadian Pac. Ry.	4,554·20						
	Leased lines—							
	Fredericton	22·10						
	New Brunswick	175·00						
	New Brunswick and Canada	117·20						
	St. John and Maine	92·10						
	St. John Bridge and Rail- way Extension	2·00						
	St. Stephen and Miltown	4·64						
	Tobique Valley	28·00						
	*Cap de la Madeleine	2·32						
	**Montreal and Lake Mask- inongé	12·90						
	Atlantic and North-west	201·40			7,292·31	907·80		50 & 52 } 56, 60, 72 } 73, 80, 100 }
	Montreal and Ottawa	93·20	7,292·31		7,292·31			
	Ontario and Quebec	474·50						
	St. Lawrence and Ottawa	58·40						
	Credit Valley	175·70						

* No return, reported unsafe and not in operation. † Operated by C.P.R. ‡ 132·50 miles double track. For mileage see Nos. 54 and 64. § C.P.R. return 4·60 miles as operated. ¶ C.P.R. return 3·00 as houses.

1-2 EDWARD VII., A. 1902

No. 3.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
	Can. Pac.—Leased lines— <i>Con.</i>							
	*Guelph Junction	15 25						
	Toronto, Grey and Bruce . . .	191 10						
	West Ontario Pacific	26 60						
	†Manitoba & North-western . . .	252 60						
	Manitoba South-western							
	Colonization	214 40						
	Columbia and Kootenay	60 50						
	Nakusp and Slocan	36 30						
	Shuswap and Okanagan	50 80						
	Columbia and Western	157 90						
	Great North-west Central . . .	71 00						
	British Columbia Southern . .	202 20						
18	Caraguet	68 00			68 00	3 25		50
19	Carillon and Grenville	13 00		13 00		25	65	
20	Central Ontario	125 00			125 00	13 00		42 & 56
	Ontario, Belmont & Northern . .	9 60			9 60			56
21	Central of New Brunswick . . .	45 66			45 66	2 00		52 to 56
22	Central Ry. of Nova Scotia, formerly Nova Scotia Central	74 00			74 00	3 50		56
23	Cobourg, Northumberland and Pacific .		49 00					
24	Cumberland Ry. and Coal Co.	32 00	14 00		32 00	16 00		56 to 6
25	Dominion Atlantic, comprising—							
	Windsor and Annapolis	87 50						
	Cornwallis Valley	14 00						
	Yarmouth and Annapolis (Western Counties)	87 00						
	Windsor Branch of Intercol- onial	32 00						
26	Elgin and Havelock	28 00			28 00	2 00		46 & 56
27	Esquimalt and Nanaimo	78 00			78 00	3 92		54, 56, 60
28	Fredericton and St. Mary's Ry. Bridge.	1 33		1 33			56	
29	*Grand Trunk	880 35						
	Wharf Br., Montreal	3 44						
	Great Western	561 80						
	Brantford, Norfolk and Port Burwell	34 39						
	Buffalo and Lake Huron	162 00						
	Grand Trunk, Georgian Bay and Lake Erie	171 00						
	Owen Sound Branch	12 42						
	London, Huron and Bruce . . .	68 00						
	Waterloo Junction	10 25						
	South Norfolk	17 00						
	Wellington, Grey and Bruce . .	168 13						
	Northern	172 10						
	North Simcoe	33 00						
	Hamilton & North-western . .	172 00						
	Northern Pacific Junction . . .	111 37						
	Toronto Belt Line	12 79						
	Midland	166 00						
		3,153 98			3,153 98	758 12		50 to 100

* C. P. R. return 15 00 miles as operated.

† Including Saskatchewan and Western Branch.

SESSIONAL PAPER No. 20

Roads, &c., for the year ended June 30, 1901—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		Number of Level Crossings.	Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Public Roads under Crossings.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
		Guarded.	Not guarded.											
						Ft.					Ft.		Ft.	
2600	Fishplates		12						1	1	1,000	60	4' 8 $\frac{1}{2}$ "	18
1760	Chairs	1	8	1	16			1			1,910	100	5' 6"	19
2640	Fishplates and angle bars		105	1	20			2	5	1	955	105	4' 8 $\frac{1}{2}$ "	20
2300	Fishplates		8						1		717	72	4' 8 $\frac{1}{2}$ "	
2640	"		21	2	15' 0"				1		816	74	4' 8 $\frac{1}{2}$ "	21
2640	Angle bars		32	1	20				1		819	80	4' 8 $\frac{1}{2}$ "	22
														23
2600	Fishplates		17								820	160	4' 8 $\frac{1}{2}$ "	24
2640	Fishplates	1	109	4	22' 0"				3	2	637	79	4' 8 $\frac{1}{2}$ "	25
2640	"		25					1	1		1,910	90	4' 8 $\frac{1}{2}$ "	26
2992	Angle fishplates and bolts		17	1	23		3	1	2		573	80	4' 8 $\frac{1}{2}$ "	27
2564	Angle fishplates		6						2		1,433	50	4' 8 $\frac{1}{2}$ "	28
3200	Angle bars and fishplates. ...	10	91	2,950	240	$\left\{ \begin{array}{l} 15' 9\frac{1}{2}" \\ \text{to} \\ 40' 0" \end{array} \right\}$	134	53	56	70	717	106	4' 8 $\frac{1}{2}$ "	29

† 456 miles double track.

1-2 EDWARD VII., A. 1902

No. 3.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
	Grand Trunk—Con.							
	Grand Junction.....	85 21						
	Toronto and Nipissing.....	85 00						
	Lake Simcoe Junction.....	26 00						
	Victoria.....	53 00						
	Whitby, Port Perry and Lindsay.....	46 00						
	*Cobourg, Blairton and Mar- mora.....	15 00						
	Jacques Cartier Union.....	6 50						
	Montreal and Champlain Junction.....	61 73						
	Beauharnois Junction.....	19 50						
30	Gulf Shore.....	16 78			16 78	1 01		56
31	Halifax and Yarmouth.....	50 10	61 00		50 10	2 83		56
32	Hampton and St. Martin's.....	29 00			29 00	50		56
33	†Hereford.....	53 30			53 30	8 32		56
34	Irondale, Bancroft and Ottawa.....	48 00			48 00	2 50		56
35	Interprovincial Bridge and Approaches.....	1 30			1 30			75
36	Inverness and Richmond.....	56 50	4 59		56 50	3 00		56
37	Kaslo and Slocan, B.C.....	31 80			31 80	1 25		45
38	Kent Northern, including St. Louis and Richibucto.....	34 00			34 00	2 00		56
39	Kingston and Pembroke.....	112 85		9 75	103 10	21 00	50 to 84	56
40	L'Assomption.....	3 33			3 33	33		56
41	Lake Erie and Detroit River, including Erie and Huron.....	155 72			155 72	34 35		51 to 70
	Leased lines—London & Port Stanley.....	24 00			24 00	2 47		76
42	Lenora Mount Sicker.....	6 25			6 25	12		20 & 28
43	Lotbinière and Mégantic.....	30 34			30 34	6 35		56
44	Manitoulin and North Shore.....	15 50			15 50	0 50		65
45	Massawippi Valley.....	35 46			35 46	6 21		60
46	‡Midland of Nova Scotia.....		57 50			2 00		60
47	Montfort and Gatineau Colonization.....	33 00			33 00	42		56
48	Montreal & Atlantic, formerly South-eastern.....	139 30						
	Lake Champlain & St. Law- rence Junction.....	60 70	200 00		200 00	21 60		56, 60, 72, 73
49	Montreal and Province Line, formerly Montreal, Portland and Boston.....	40 60		8 60	32 00	1 00	38	56
50	Montreal and Vermont Junction.....	23 60			23 60	2 00		60 & 72
51	New Westminster Southern.....	24 10			24 10	3 46		56
52	Nelson and Fort Sheppard.....	54 70			54 70	3 44		56
53	New Brunswick & Prince Edward Island.....	36 00			36 00	1 50		56
54	§Northern Pacific and Manitoba.....	320 51			320 51	43 56		56
55	Nosbonsing and Nipissing.....	5 50			5 50	1 25		56
56	Nova Scotia Southern.....		117 00					56 & 70
57	Nova Scotia Steel Co.'s Line.....	12 50			12 50	3 87		56
58	Orford Mountain.....	26 50			26 50	1 00		56
59	Ottawa and Gatineau, now Ottawa, Northern and Western.....	57 87			57 87	4 00		56 & 70
60	Ottawa and New York.....	56 79			56 79	3 24		65

* Not in operation. † Including Dominion Lime Co.'s line. ‡ Line under construction and leased to the Province of Manitoba. § These Elevators being on line leased to Canadian Northern are

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Roads, &c., for the Year ended June 30, 1901—*Continued.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		Number of Level Crossings.	Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Public Roads under Crossings.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number of Junctions with Branch Lines.	Radius of Sharpest Curve.	Number of Feet per Mile of heaviest gradient.	Gauge of Railway.	Number.
		Guarded.	Not guarded.											
						Ft.					Ft.		Ft.	
2600	Fishplates.....		19						1		574	53 4' 8 ¹ / ₂	30	
2640	Angle bars.....		31						1		955	79 4' 8 ¹ / ₂	31	
2640	Fishplates.....		18						1		955	90 4' 8 ¹ / ₂	32	
2800	".....		28					2	3		955	66 4' 8 ¹ / ₂	33	
2640	Flat fishplates.....		16						1		1,000	60 4' 8 ¹ / ₂	34	
2640	Angle bars.....		2	21 6	9				1		574	53 4' 8 ¹ / ₂	35	
2821	".....		22						1		698	78 4' 8 ¹ / ₂	36	
2640	Angle bars and bolts.....		13	1	22 6	2				1	193	172 3' 00	37	
2432	Fishplates and bolts.....		10						1	1	1,000	60 4' 8 ¹ / ₂	38	
2640	Plain and angle fishplates.....		56	3	16&21' 6"	1	6	6	6	13	955	79 4' 8 ¹ / ₂	39	
2500	Fishplates.....		1						1		955	20 4' 8 ¹ / ₂	40	
2800	Angle bars.....	1	3	221	5	20&21' 6"	10	10			637	60 4' 8 ¹ / ₂	41	
2800	Fishplates.....		1	30	4	20 0	2	2				53 4' 8 ¹ / ₂		
3168	Fishplates and bolts.....		2								76	501 3' 00	42	
2640	Fish and angle plates.....		10					1	2		717	80 4' 8 ¹ / ₂	43	
3900	Angle bars.....								2		717	65 4' 8 ¹ / ₂	44	
2800	Fishplates.....	1		28	1	19		1	2	1	441	76 4' 8 ¹ / ₂	45	
2600	Angle bars and bolts.....		27					1	2		882	55 4' 8 ¹ / ₂	46	
2600	Plain fishplates.....		20	1	22				1		573	158 4' 8 ¹ / ₂	47	
2640	Fishplates and angle bars.....		164	1	19 6	2	6	6	2		441	140 4' 8 ¹ / ₂	48	
3000	Fishplates and chairs.....		21					3	1	2	1,433	... 4' 8 ¹ / ₂	49	
3000	Fishplates and bolts.....		51						3		2,865	52 4' 8 ¹ / ₂	50	
2640	Angle bars.....		26								717	89 4' 8 ¹ / ₂	51	
2640	".....		5						2		478	132 4' 8 ¹ / ₂	52	
2400	Fishplates.....		26						1		750	66 4' 8 ¹ / ₂	53	
2640	Angle bars and bolts.....	(73)	1	278			5	2	4		574	63 4' 8 ¹ / ₂	54	
3000	Fishplates.....		2					1	1		955	132 4' 8 ¹ / ₂	55	
2640	Angle bars and bolts.....							1			717	80 4' 8 ¹ / ₂	56	
2640	".....		5						1	1	955	79 4' 8 ¹ / ₂	57	
2640	Fishplates.....		17						1		955	74 4' 8 ¹ / ₂	58	
2640	Plain and angle bars.....		50	1	21 6	9			1		573	106 4' 8 ¹ / ₂	59	
2750	40-lb. angle bar with 6 ¹ / ₂ " bolt..		70	1	22			3	3		2,865	40 4' 8 ¹ / ₂	60	

steel rails laid 57·5 miles.
included in that Ry.

§ For 11 months only to May 31, 1901, at which date this property was

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No. 3.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
		Miles.	Miles.	Miles.	Miles.	Miles.	Lbs.	Lbs.
61	Philipsburg Ry. and Quarry Co.'s Line.	7.50			7.50			56
62	*Pontiac and Renfrew.	4.25			4.25	0.75		56
63	Pontiac Pacific Junction	70.60	8.50		70.60	3.50		56
64	†Portage and North-western	35.07			35.07	2.59		56
65	Qu'Appelle, Long Lake & Saskatchewan	253.96			253.96	7.75		56
66	Quebec Bridge Co.		10.00					
67	Quebec Central.	213.50			213.50	20.50		56 to 70
68	Quebec and Lake St. John.	242.00			242.00	22.50		56 & 70
	†Great Northern.	20.00						
	Lower Laurentian.	35.00						
69	Great Northern Ry. of Canada, including Lower Laurentian	175.10			175.10	11.59		56 & 70
70	**Quebec, Montmorency and Charlevoix (now Quebec Ry., Light and Power Co.)	30.00			30.00	4.00		56 & 70
71	Quebec Southern.	83.80			83.80	6.00		56
72	Red Mountain.	9.53			9.53	3.34		56
73	*Restigouche and Western	10.00	100.00		10.00	.76		56
74	Rutland and Noyan.	5.00			5.00	0.20		60
75	Salisbury and Harvey.	45.00		37.00	8.00	6.00	56	56
76	Shore Line, New Brunswick.	82.50			82.50	2.50		50
77	Stanstead, Shefford and Chambly.	43.00		12.00	31.00	2.00	60	60
78	St. Clair Tunnel, Yard and Approaches.	2.23			2.23	11.00		100
79	St. John Valley and Rivière du Loup.		6.00					
80	St. Lawrence and Adirondack.	33.00			33.00	6.83		72 to 80
81	St. Mary's River	30.00			30.00			28
82	Sydney & Louisburg (Dom. Coal Co.).	48.96			48.96	4.00		56 & 80
83	South Shore, formerly Montreal & Sorel	61.50			61.50	3.00		56
84	Temiscouata.	113.00			113.00	3.00		56
85	Tilsonburg, Lake Erie and Pacific.	20.00			20.00	2.50		56 & 65
86	Thousand Islands.	6.33			6.33	1.00		56 & 65
87	†Toronto, Hamilton and Buffalo.	89.16			89.16	20.81		56 to 80
88	*United Counties.							
	East Richelieu Valley.							
89	Victoria and Sidney, B.C.	16.26			16.26	1.20		50
90	York and Carleton.	5.75			5.75	10		56
Total.		18,294.43	852.00	109.68	18,184.75	2,709.60		

*Not in operation. †For 11 months only to May 31, 1901, at which date this property was leased to the 1900. For balance of year see Great Northern Ry. of Canada. 6,000 feet in length, 19 feet 10 inches inside

†† Includes 5 warehouses.

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Roads, &c., for the year ended June 30, 1910—*Concluded.*

Number of Ties per Mile.	Nature of Rail Fastenings.	Number of Grain Elevators.		Number of Level Crossings.	Number of Overhead Bridges.	Height of Overhead Bridges above rail level.	Number of Public Roads under Crossings.	Number of Level Crossings of other Railways.	Number of Junctions with other Railways.	Number 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.	
2816	Fishplates.....			7					1	1	955	52	4' 8½"	61
2640	"								1		717	106	4' 8½"	62
2640	Fish and angle plates..	10		52					1		1,146	53	4' 8½"	63
2640	Angle bars and bolts.....	1		29				2	1	1	2,262	15	4' 8½"	64
2640	Angle bars and fishplates..	8		53					1	1	1,146	65	4' 8½"	65
2640	Fish and angle plates.....			115			3	2	7	2	882	76	4' 8½"	66
2640	Fishplates and angle bars..	1	2	56			3		2	2	717	105	4' 8½"	67
														68
2640	Fishplates and angle bars..	2		88	1	16' 0"		5	5		2,292	104	4' 8½"	69
2640	Plain and angle fishplates..		1	10					2		1,433	42	4' 8½"	70
2640	Fishplates.....			53				5	5		717	40	4' 8½"	71
2640	Angle bars.....										287	184	4' 8½"	72
2600	Fishplates.....			7					1		574	79	4' 8½"	73
2640	Angle bars.....			2				1	2		637	26	4' 8½"	74
2600	Fishplates and sleeves.....			27	1	15' 0"			1		717	80	4' 8½"	75
2992	Fishplates.....			15	5	23' 0"		3	3		574	85	4' 8½"	76
2640	Fishplates and chairs.....			42	1	18' 0"		3	4		1,910	60	4' 8½"	77
												105	4' 8½"	78
														79
3000	36" angle bars, 6 bolts.....			31	1	20' 6"	2	2	4		1,146	57	4' 8½"	80
2113	Fishplates.....			6					1		382	79	3' 0"	81
3000	Angle bars, 4 and 6 bolts..			26	2	18' 0"	4	2	2	7	1,433	70	4' 8½"	82
2640	Fishplates.....			32					4		1,910	28	4' 8½"	83
2640	"			38			2	1	2	1	819	79	4' 8½"	84
2640	Angle bars.....	3		19	1	21'	3	1	2	1	955	52	4' 8½"	85
3000	"			8					1		410	84	4' 8½"	86
3000	4 bolt angle bars.....	6		122	15	22'	2	5	6	3	675	79	4' 8½"	87
														88
2464	8" plain fishplates.....			13			1				637	105	4' 8½"	89
2600	Fishplates.....								1		675	64	4' 8½"	90
		253	193	12,422	427		280	233	347	230				

Province of Manitoba. ‡ Included in Quebec and Lake St. John for 4 months only, up to October, 31 diameter. § 4' 69 miles of double track. ¶ Now Quebec Southern, see No. 71. ** Double track 6 miles

1-2 EDWARD VII., A. 1902

No. 4.—SUMMARY STATEMENT of the Operations of the

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
1	Alberta Railway and Coal Co.	64·62	22,002	44,448	3,888	70,428
2	Albert Southern.					
	Harvey Branch.					
3	Algoma Central and Hudson Bay.	42·00	825	5,344	24,236	30,405
4	Atlantic and Lake Superior, comprising—					
	Baie des Chaleurs. 98·00					
	Great Eastern, 23 miles not under					
	traffic.	98·00	60,000	5,000		65,000
	Ottawa Valley, 7 miles not under					
	traffic.					
5	Bay of Quinté Railway and Navigation					
	Co. 4·00	64·82			134,041	134,041
	Kingston, Napanee & Western. 60·82					
6	Bedlington and Nelson.	15·20	7,941	10,271		18,212
7	British Yukon.	90·45	17,348	31,631	44,359	93,339
8	Brockville, Westport & Sault Ste. Marie.	45·00	1,452	4,024	28,010	33,486
9	Buctouche and Moncton.	32·00			18,432	18,432
10	Calgary and Edmonton.	295·93		93,347	126,183	219,530
11	Canada Atlantic, including Ot-					
	tawa, Arnprior and Parry					
	Sound. 400·00	458·00	507,09	853,554	172,413	1,533,065
	Leased—Central Counties. 37·00					
	Pembroke Southern. 21·00					
12	Canada Coals & Ry. Co., formerly Joggins	12·00			35,265	35,265
13	Canada Eastern.	136·00	90,726	77,430	25,290	193,440
14	Canada Southern.	382·19	1,243,641	2,579,621	139,801	3,963,063
15	Canadian Northern, comprising Lake					
	Manitoba Railway and Canal Co.'s					
	line, Winnipeg Great Northern, Mani-					
	toba South Eastern, Ontario and					
	Rainy River, Port Arthur, Duluth					
	and Western.	522·00	12,660	10,831	187,167	210,658
16	Canadian Government Railways—					
	Intercolonial.	1,301·94	1,954,489		4,308,185	6,262,674
	Prince Edward Island.	209·00	92,941		177,314	270,25
17	Canadian Pacific Railway,					
	owned. 4,554·20					
	Leased lines—					
	Fredericton. 22·10					
	New Brunswick. 175·00					
	New Brunswick & Canada	117·20				
	St. John and Maine. 92·10					
	St. John Bridge and Ry.					
	Extension. 2·00					
	St. Stephen and Milltown	4·60				
	Tobique Valley. 28·00					
	Cap de la Madeleine. 3·00					
	Montreal and Lake Mas-					
	kinongé. 11·00					
	Atlantic and North-west.	201·40				
	Montreal and Ottawa. 93·20					
	Ontario and Quebec. 474·50	7,290·80	7,042,667	8,986,878	1,641,169	17,670,714
	St. Lawrence and Ottawa	58·40				
	Credit Valley. 175·70					
	Guelph Junction. 15·00					
	Toronto, Grey and Bruce.	191·10				
	West Ontario Pacific. 26·60					
	Manitoba and North-					
	western. 252·60					

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Year and Mileage, for the Year ended June 30, 1901.

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.
71,690	4,203	69,881	18	14	1	
30,405	15,267	202,366	20	15	3	2 No return, not in operation.
65,000	11,522	20,014	25	20	4	
134,041	71,736	282,241			5	
18,212	5,401	31,293	20	15	6	Running powers on C.P.R. from Creston Junction to Sirdar Junction, 8.70 miles.
95,616	18,033	38,208	15	15	7	
33,756	35,281	14,270	26	16	8	
19,072	9,443	20,615	16		9	
244,823	43,914	98,204	25	13	10	Operated by C.P.R.
1,956,094	339,640	1,592,987	30	15	11	
38,650	8,216	68,227	20	15	12	
199,600	45,270	138,411	30	18	13	
5,278,819	611,718	4,722,276	46	14	14	
253,680	49,533	220,894	28	14	15	Also leased lines, Northern Pacific and Mani- toba, and Portage and Northwestern for month of June, 1901; for mileage see Nos. 50 and 58. Running powers over the Mani- toba and Northwestern Ry., 36 miles from Portage la Prairie to Gladstone Junction.
7,909,297	2,025,295	2,111,310	25	15	16	Running powers over Grand Trunk— Point Lévis to Hadlow..... 1.50 Chaudière Curve to Chaudière..... 1.18 Ste. Rosalie Junction to Montreal... 37.62
344,144	157,793	73,696	22	16		
						40.30
23,924,917	4,309,536	7,145,276	30	18	17	Also running powers on— Grand Trunk Ry., Toronto to Hamil- ton Junction..... 36.20 Toronto, Hamilton and Buffalo Ry., Hamilton Junction to Hamilton. . . 2.70 Canada Atlantic Ry., Montreal and Ottawa Junction to Ottawa..... .80
						39.70

1-2 EDWARD VII., A. 1902

No. 4.—SUMMARY STATEMENT of the Operations of the Year

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
	Can. Pac.—Leased lines— <i>Con.</i> —					
	Manitoba South-western					
	Colonization.....	214 40				
	Columbia and Kootenay...	60 50				
	Nakusp and Slocan.....	36 30				
	Shuswap and Okanagan...	50 80				
	Columbia and Western...	157 90				
	Great Northwest Central...	71 00				
	British Columbia Southern	202 20				
18	Caraquet.....	68 00			47,000	47,000
19	Carillon and Grenville.....	13 00	6,000	500		6,500
20	Central Ontario.....	125 00				
	Ontario, Belmont and Northern	9 60	16,300	10,400	96,300	123,000
21	Central of New Brunswick.....	45 66			9,500	9,500
22	Central of Nova Scotia (formerly Nova Scotia Central).....	74 00			49,358	49,358
23	Cumberland Railway and Coal Co.'s line.	32 00			75,133	75,133
24	Dominion Atlantic, comprising—					
	Windsor and Annapolis.....	87 50				
	Cornwallis Valley.....	14 00				
	Yarmouth and Annapolis.....	87 00				
	Windsor Branch, Intercolonial.	32 00	218,307		302,065	520,372
25	Elgin and Havelock.....	28 00			14,472	14,472
26	Esquimaux and Nanaimo.....	78 00	118,010	78,825		196,835
27	Fredericton and St. Mary's Ry. Bridge..	1 33				
28	Grand Trunk.....	880 35				
	Wharf Branch,					
	Montreal.....	3 44				
	Great Western.....	561 80				
	Brantford, Norfolk and Port Burwell.....	34 39				
	Buffalo and Lake Huron.....	162 00				
	Grand Trunk, Georgian Bay and Lake Erie.....	171 00				
	Owen Sound Branch.....	12 42				
	London, Huron and Bruce.....	68 00				
	Waterloo Junction.....	10 25				
	South Norfolk.....	17 00				
	Wellington, Grey and Bruce..	168 13				
	Northern.....	172 10				
	North Simcoe.....	33 00	3,138 98	5,824,058	9,649,082	1,015,221
	Hamilton and North-western.	172 00				16,488,361
	Northern Pacific Junction...	111 37				
	Toronto Belt Line.....	12 79				
	Midland.....	166 00				
	Grand Junction.....	85 21				
	Toronto and Nipissing.....	85 00				
	Lake Simcoe Junction.....	26 00				
	Victoria.....	53 00				
	Whitby, Port Perry & Lindsay	46 00				
	Jacques Cartier Union.....	6 50				
	Montreal & Champlain Junction.....	61 73				
	Beauharnois Junction.....	19 50				
29	Gulf Shore.....	16 78			3,210	3,210
30	Halifax and Yarmouth (formerly Coast Line of Nova Scotia).....	30 80	2,705		43,483	46,188
31	Hampton and St. Martins.....	29 00			19,000	19,000
32	Hereford.....	53 30	11,770	53,495		65,265
33	Inverness and Richmond.....	56 50				
34	Irondale, Bancroft and Ottawa.....	48 00	386		30,048	30,434
35	Kaslo and Slocan.....	31 80	2,359		22,624	24,983

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and Mileage, for the Year ended June 30, 1901—*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.
47,000	5,610	18,904	15	15	18	
7,000	5,600	172	25	20	19	
869,954	78,718	195,229	25	20	20	
23,890	946	4,510	15	15	21	
54,553	46,022	33,824	20	20	22	Running powers on Dominion Atlantic from
139,762	23,934	438,006	20	20	23	Middleton Junction to Middleton 0.33 miles.
520,372	273,639	221,613	30	15	24	Running powers over I.C.R., Halifax to
14,472	4,090	7,622	15	.....	25	Windsor Junction, 14 miles.
196,835	130,562	158,595	27	20	26	
.....	*14,447	.....	.....	.....	27	Running powers on Canada Eastern, 0.17
						miles. *Included in the Canada Eastern
						Ry., which company run their trains across
						this bridge paying tolls.
19,968,153	6,548,098	9,753,557	34	18	28	
3,210	585	4,563	15	15	29	
50,824	70,362	7,903	24	.....	30	Also 19.3 miles not in operation but was in
19,000	5,796	18,790	15	15	31	operation last year.
87,937	17,642	88,203	26	15	32	
31,434	7,625	19,589	18	.....	33	Road not opened for traffic until June 15,
34,617	14,853	18,597	12	12	34	1901, and no separate returns for the 15 days
					35	in June are available.

1-2 EDWARD VII., A. 1902

No. 4.—SUMMARY STATEMENT of the Operations of the Year

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
36	Kent Northern, including St. Louis and Richibucton	34 00			18,000	18,000
37	Kingston and Pembroke	112 85	65,194	8,138	61,974	135,216
38	L'Assomption	3 33			6,146	6,146
39	Lake Erie and Detroit River, including Erie and Huron and leased lines	155 72				
	London and Port Stanley	24 00				
		179 72	260,815	7,480	111,488	379,783
40	Lenora Mount Sicker	6 25		5,040		5,040
41	Lotbinière and Megantic	30 34			17,505	17,505
42	Massawippi Valley	35 46	73,531	61,111	18,867	153,509
43	Montfort and Gatineau Colonization	33 00	21,034	31,204		52,238
44	Montreal and Atlantic, formerly South-eastern	102 70				
	Lake Champlain and St. Lawrence Junction	60 70				
		163 40	89,281	178,394	99,996	367,671
45	Montreal and Province Line	40 60	39,703	1,850	35,173	76,726
46	Montreal and Vermont Junction	23 60	79,138	196,159	2,016	187,313
47	New Westminster Southern	24 10	2,826	48	14,832	17,706
48	Nelson and Fort Sheppard	54 70	24,945	25,374		50,319
49	New Brunswick & Prince Edward Island	36 00	2,288	15,680	21,792	39,760
50	Northern Pacific and Manitoba	320 51	108,459	76,296	52,263	237,009
51	Noshousing and Nipissing	5 50		8,950		8,950
52	Nova Scotia Steel Co.'s Ry.	12 50			15,000	15,000
53	Orford Mountain	26 50	17,528	1,140	8,920	27,588
54	Ottawa, Northern and Western	57 87	20,426	2,380	40,310	63,116
55	Ottawa and New York	56 79	77,484	20,591	15,138	113,213
56	Philipsburg Railway and Quarry Co.	7 50	240	1,056		1,296
57	Pontiac Pacific Junction	70 60	1,750	420	44,380	46,550
58	Portage and North-western	35 07	4,398	35	5,024	9,457
59	Qu'Appelle, Long Lake & Saskatchewan	253 96			66,968	66,968
60	Quebec Central	213 50	145,421	111,085	302,969	559,475
61	Quebec and Lake St. John	242 00	143,919	125,376	63,112	332,407
	Great Northern, St. Tite to St. Boniface	20 00				
	Lower Laurentian, Rivière à Pierre to St. Tite	35 00				
62	Great Northern Ry. of Canada, including Lower Laurentian (8 months only ending June 30, 1901, previous 4 months included in Quebec and Lake St. John)	175 10	73,111	42,576	61,001	176,688
63	Quebec, Montmorency and Charlevoix	30 00	111,456		51,954	163,410
64	Quebec Southern	83 80	53,805	10,733	55,088	121,626
65	Red Mountain	9 53	8,862	13,186		22,048
66	Rutland and No. 1	5 00				
67	Salisbury and Harvey	45 00			24,917	24,917
68	Shore Line, New Brunswick	82 50			61,084	61,084
69	Stamstead, Sheffield and Chambly	43 00	44,565	12,449	26,638	83,652
70	St. Clair Tunnel	2 23				
71	St. Lawrence and Adirondack	33 00	120,225	19,882	51,467	191,574
72	St. Mary's River	30 00	455	9,225	4,775	14,455
73	Sydney and Louisburg, Dom. Coal Co.'s line	48 06	53,520	370,663		424,183
74	South Shore, formerly Montreal & Sorel	61 50	40,878		38,310	79,188
75	Temiscouata	113 00	452		85,276	85,728

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and Mileage, for the Year ended June 30, 1901—*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.
18,000	5,795	4,070	18	.....	36	
135,216	37,170	105,248	25	18	37	
6,146	5,756	446	15	15	38	
649,800	499,288	520,286	33	22	39	
5,040	.....	7,775	.....	6	40	
19,262	7,034	28,148	.....	.....	41	
216,613	104,877	279,761	25	12	42	Also running powers on Grand Trunk from
52,238	8,200	27,185	15	12	43	Lennoxville to Sherbrooke, 2·95 miles.
570,324	175,428	733,919	30	18	44	Also 36·6 miles from Sorel to Drummondville
76,726	86,388	48,080	30	12	45	not in operation.
187,313	115,825	945,386	40	15	46	
17,706	6,964	8,652	.....	.....	47	
50,319	17,309	24,285	20	12	48	Running powers on C. P. R. from Five Mile
44,394	15,046	47,076	20	15	49	Point to Nelson, 4·70 miles.
309,203	98,991	158,154	28	14	50	For eleven months only to May 31, 1901, at
9,670	.....	190,300	.....	20	51	which date this property was leased to the
33,500	5,729	160,306	15	15	52	Province of Manitoba.
27,588	5,109	20,443	28	16	53	
63,691	67,534	33,234	30	20	54	
113,213	72,608	39,076	35	18	55	
1,296	200	4,185	25	15	56	
46,900	32,987	23,636	30	20	57	
40,357	2,118	11,315	28	14	58	For eleven months only to May 31, 1901, at
95,736	9,440	32,894	18	13	59	which date this property was leased to the
576,519	178,969	370,010	25	15	60	Province of Manitoba.
497,291	238,727	341,690	26	16	61	Running powers on Intercolonial Ry., Harlaka
.....	.....	.....	.....	.....	62	Junction to Lévis, 5 miles.
.....	.....	.....	.....	.....	63	Included in Quebec and Lake St. John for 4
.....	.....	.....	.....	.....	64	months only up to Oct. 31, 1900, for balance
.....	.....	.....	.....	.....	65	of year see Great Northern Railway of
.....	.....	.....	.....	.....	66	Canada.
254,401	63,379	185,697	25	15	62	Running powers on Quebec and Lake St. John.
56,223	537,933	24,493	21	21	63	from Quebec to Rivière à Pierre, 58 miles.
121,919	36,447	134,515	30	16	64	Running powers on South Shore; St. Robert
41,848	11,901	275,881	12	10	65	Junction to Sorel, 6·00 miles.
.....	.....	.....	.....	.....	66	Operated by Rutland Ry. as a connection
.....	.....	.....	.....	.....	67	with Canadian Rys.
28,813	10,895	35,170	18	.....	67	
61,084	8,549	21,479	20	20	68	
83,652	134,940	949,922	30	12	69	
80,163	.....	.....	.....	.....	70	
187,047	178,853	243,787	32	20	71	Running powers: Grand Trunk, 13·20; Can-
19,779	730	2,104	18	14	72	adian Pacific, 8·70.
424,183	153,245	2,343,356	27	17	73	
79,818	140,412	42,296	40	22	74	
85,927	26,707	66,753	26	17	75	

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No. 4.—SUMMARY STATEMENT of the Operations of the Year

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
76	Tilsonburg, Lake Erie and Pacific.	20·00	13,009	7,000	20,000	40,000
77	Thousand Islands	6·33	.....	.....	25,082	25,082
78	Toronto, Hamilton and Buffalo.....	89·16	161,092	120,100	738	281,930
79	United Counties..	16·26	.....	.....	24,250	24,250
	East Richelieu Valley..... }					
80	Victoria and Sidney.....	5·75
81	York and Carleton
		18,139·97	19,115,472	23,888,302	10,345,620	53,349,394

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and Mileage, for the Year ended June 30, 1901—*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— Hour.	Number.	Remarks.
40,000	19,201	13,458	30	30	76	
25,082	28,276	19,321	.....	.....	77	
462,345	201,671	616,987	35	20	78	Running powers Hamilton and Dundas Street Ry., Hamilton to Dundas, 3' 67 miles.
.....	.....	.....	.....	.....	79	Now Quebec Southern, see No. 64.
24,250	22,761	18,726	25	25	80	
.....	81	This Ry. has only been in operation for one month.
68,621,424	18,385,722	36,999,371		

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NO. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
1	Alberta Railway and Coal Co.	64·62	186	18	13,035	234	527
2	Albert Southern..... } Harvey Branch..... }						
3	Algoma Central and Hudson Bay.....	42·06			297,333	9,545	421
4	Atlantic & Lake Superior, comprising— Baie des Chaleurs.....98·00 Great Eastern, not under traffic23·00 Ottawa Valley " " 7·00	98·00	7,460	746	4,403	75	230
5	Bay of Quinte Ry. and Navigation Co.....4·00 Kingston, Napanee & Western.60·82	64·82	22,560	2,256	183,818	5,055	7,055
6	Bedlington and Nelson.....	15·20	580	58			59
7	British Yukon	90·45	11,078	1,108	236,550	3,785	
8	Brockville, Westport & Sault Ste. Marie.....	45·00	11,906	1,191	88,055	2,641	11,957
9	Buctouche and Moncton.....	32·00					
10	Calgary and Edmonton.....	295·93	19,618	1,962	1,305,546	23,296	42,480
11	Canada Atlantic, including Ottawa, Arnprior & Parry Sound.....400·00 Leased— Central Counties.....37·00 Pembroke Southern.....21·00	458·00	679,589	67,959	19,301,281	482,531	37,770
12	Canada Coals & Ry. Co., formerly Joggins.....	12·00	1,456	146	22,746	389	
13	Canada Eastern.....	136·00	73,600	7,360	128,300	2,131	601
14	Canada Southern.....	382·19	1,446,980	144,698	51,699,525	599,397	705,002
15	Canadian Northern, comprising— Lake Manitoba Ry. and Canal Co's Line..... Winnipeg Great Northern..... Manitoba South Eastern..... Ontario and Rainy River..... P. Arthur, Duluth and Western.....	522·00	50,951	4,762	756,613	20,812	6,222
16	Canadian Government Railways— Intercolonial..... Prince Edward Island.....	1,301·94 209·00	1,292,106 21,843	129,210 2,184	3,535,364 811,110	77,518 13,909	95,923 17,924
17	Canadian Pacific— Owned.....4,554·20 Leased lines— Fredericton.....22·10 New Brunswick.....175·00 New Brunswick & Canada.117·20 St. John and Maine.....92·10 St. John Bridge and Railway Extension.....2·00 St. Stephen and Milltown.....4·60 Tobique Valley.....28·00 Cap de la Madeleine.....3·00						

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Freight carried for the Year ended June 30, 1901.

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.					
306.	879,320	1,319	.....	.....	689	*67,315	69,881	1	*Including 40,801 tons coke and 25,415 tons coal.
263	5,876,000	8,814	45	90	54,389	129,265	202,366	3	No return, not in operation.
40	848,084	848	870	1,305	13,000	4,000	20,014	4	
2,822	52,009,143	91,016	35,511	53,267	63,876	63,949	282,241	5	
15	36,000	54	236	299	26	†30,841	31,293	6	†Includes 13,227 tons ore and 17,021 tons coal.
3,891	2,966,250	3,532	.....	.....	17,655	8,237	38,208	7	Running powers on C.P.R..
1,629	371,618	721	.....	.....	5,986	2,102	14,270	8	Creston Jct. to Sir- dard Jct. 8.70 miles.
.....	8,703,000	7,174	2,862	5,723	1,873	*5,845	20,615	9	*Includes produce, stone coal, &c.
19,766	9,712,973	12,613	839	1,258	29,466	9,843	98,204	10	Operated by C.P.R.
9,442	318,690,000	438,202	73,137	120,677	99,964	*374,212	1,592,987	11	*Includes, coal 162,- 843 tons.
.....	283,500	405	.....	.....	1,996	65,291	68,227	12	
305	38,100,000	38,100	10,700	13,375	32,462	44,678	138,411	13	
175,898	168,013,000	263,750	29,112	43,194	625,931	2,869,408	4,722,276	14	
2,842	23,965,000	43,382	50,077	75,115	13,337	60,644	220,894	15	Also leased lines, Northern Pacific & Manitoba, and Por- tage & Northwes'n for month of June, 1901, for mileage. See Nos. 50 and 58. Running powers over Man. & North- western Ry., 36.0 miles from Portage la Prairie to Glad- stone Jct.
15,079 2,220	396,858,964 2,985,000	496,074 4,921	69,024 3,271	120,792 5,790	450,118	822,519 44,672	2,111,310 73,696	16	Running power on Grand Trunk— Point Lévis to Hadlow.... 1.50 Chaudière curve to Chaudière.. 1.18 St. Rosalie Junction to Montreal... 37.62

40.30

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No. 5 — SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
	Can. Pac.—Leased lines— <i>Con.</i>						
	Montreal & L. Maskinongé 11'00						
	Atlantic and North-west 201'40						
	Montreal and Ottawa 93'20						
	Ontario and Quebec 474'50	7,290'80	3,733,423	373,341	32,894,928	836,967	942,638
	St. Lawrence and Ottawa 58'40						
	Credit Valley 175'70						
	Guelph Junction 15'00						
	Toronto, Grey and Bruce 191'10						
	West Ontario Pacific 26'60						
	Manitoba & North-west 252'60						
	Manitoba South-western						
	Colonization 214'40						
	Columbia and Kootenay 60'50						
	Nakusp and Slocan 36'30						
	Shuswap and Okanagan 50'80						
	Columbia and Western 157'90						
	Great North-west Central 71'00						
	B. Columbia Southern 202'20						
18	Caraqueet 68'00		6,000	600	2,000	34	300
19	Carillon and Grenville 13'00						94
20	Central Ontario 125'00	134'60	12,123	1,188	217,920	5,448	4,176
	Ontario, Belmont & Northern 9'60						
21	Central of New Brunswick 45'66		150	15			
22	Central of Nova Scotia, formerly Nova Scotia Central 74'00		12,426	1,242	19,821	530	240
23	Cumberland Ry. and Coal Co's. Line 32'00		12,806	1,280	45,440	772	12
24	Dominion Atlantic, comprising—						
	Windsor and Annapolis 87'50						
	Cornwallis Valley 14'00						
	Yarmouth and Annapolis 87'00	220'50	153,515	15,351			11,107
	Windsor Branch of Inter-colonial 32'00						
25	Elgin and Havelock 28'00		2,381	238	2,391	57	2,031
26	Esquimalt and Nanaimo 78'00		2,670	267	23,000	575	5,466
27	Fredericton and St. Mary's Railway Bridge 1'33						
28	Grand Trunk 880'35						
	Wharf Branch, Montreal 3'44						
	Great Western 561'80						
	Brantford, Norfolk and Port Burwell 34'39						
	Buffalo and Lake Huron 162'00						
	Grand Trunk, Georgian Bay and Lake Erie 171'00						
	Owen Sound Branch 12'42						
	London, Huron and Bruce 68'00						
	Waterloo Junction 10'25						
	South Norfolk 17'00						
	Wellington, Grey and Bruce 168'13						
	Northern 172'10	3,138'98	5,318,790	531,879	74,264,120	1,856,603	1,356,555
	North Simcoe 33'00						
	Hamilton & North-western 172'00						
	Northern Pacific Junction 111'37						
	Toronto Belt Line 12'79						
	Midland 166'00						
	Grand Junction 85'21						

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Freight carried for the Year ended June 30, 1901—*Continued*.

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
236,118	898,554,142	1,192,807	204,713	352,408	1,950,254	2,203,381	7,145,276	17	Also running powers on Grand Trunk Toronto to Hamilton Jct. 36·20 Toronto, Hamilton & Buffalo Ry. Hamilton Junction to Hamilton.. 2·70 C. A. R., Montreal and Ottawa Jct. to Ottawa.. 0·80 39·70
125 42	9,000,000	13,500	300	425	2,700 40	1,520 90	18,904 172	18 19	
2,088	11,003,200	13,754	50,388	100,777	50,977	*20,997	195,229	20	*Includes 11,049 tons iron ore.
.....	192,800	2,410	406	691	.....	*1,394	4,510	21	*930 tons of coal included.
55	10,899,097	16,351	2,217	3,326	3,494	8,826	33,824	22	Running powers over Dom. Atlantic from Middleton Jct. to Middleton, 0·33 miles.
6	11,358,000	19,876	.....	.....	8,177	*407,895	438,006	23	*407,895 tons of coal.
2,829	35,350,000	52,950	1,750	2,575	43,482	*104,426	221,613	24	*Apples, produce & minerals, included.
152	3,037,000	5,045	165	230	1,555	345	7,622	25	Running power over I.C.R., Halifax to Windsor Jct., 14 miles.
709	8,269,265	13,769	12,093	10,884	8,148	124,243	158,595	26	
.....	.....	.....	.....	.....	.....	.....	.....	27	Running powers on Canada Eastern, 0·17 miles.
271,311	651,733,500	1,303,467	208,974	313,461	1,262,631	4,214,205	9,753,557	28	

1-2 EDWARD VII., A. 1902

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live No.
			Barrels.	Tons.	Bushels.	Tons.	
	Grand Trunk— <i>Con.</i>						
	Toronto and Nipissing.....	85.00					
	Lake Simcoe Junction.....	26.00					
	Victoria.....	53.00					
	Whitby, Port Perry and Lindsay.....	46.00					
	Jacques Cartier Union.....	6.50					
	Montreal and Champlain Junction.....	61.73					
	Beauharnois Junction.....	19.50					
29	Gulf Shore.....	16.78	3,000	300	2,000	34	20
30	Halifax and Yarmouth (formerly Coast Line of Nova Scotia).....	30.80	16,080	1,608	16,602	430	156
31	Hampton and St. Martin's.....	29.00					
32	Hereford.....	53.30	7,270	727	46,872	837	590
33	Inverness and Richmond.....	56.50					
34	Irondale, Bancroft and Ottawa.....	48.00	2,070	207	9,180	230	2,032
35	Kaslo and Slocan.....	31.80	740	74	5,250	158	17
36	Kent Northern, including St. Louis and Richibucto.....	34.00	2,235	223	4,450	75	12
37	Kingston and Pembroke.....	112.85	11,785	1,153	57,009	1,710	240
38	L'Assomption.....	3.33	960	96	850	16	
39	Lake Erie and Detroit River, including Erie & Huron.....	155.72	95,622	10,327	1,863,190	48,270	117,877
	Leased London & Pt. Stanley.....	24.00					
40	Lenora Mount Sicker.....	6.25					
41	Lotbinière and Mégantic.....	30.34	2,720	272	1,441	24	70
42	Massawippi Valley.....	35.46	17,130	1,713	764,650	15,281	14,733
43	Montfort and Gatineau Colonization ..	33.00	4,600	460	10,000	170	
44	Montreal and Atlantic, form- erly South-eastern.....	102.70					
	Lake Champlain and St. Lawrence Junction.....	60.70	619,846	62,185	3,571,759	87,465	30,065
45	Montreal and Province Line.....	40.60	3,500	350	15,480	430	132
46	Montreal and Vermont Junction.....	23.60	343,860	34,386	7,940,555	226,873	73,864
47	New Westminster Southern.....	24.10	2,390	239	32,477	876	65
48	Nelson and Fort Sheppard ..	54.70	13,970	1,397	6,615	147	2,118
49	New Brunswick and Prince Edward Island ..	36.00	15,735	1,573	44,000	880	1,339
50	Northern Pacific and Manitoba.....	320.51	19,430	1,943	2,514,108	42,612	3,325

* Includes, ore and copper, 28,743 tons; bark, 6,631 tons; wood pulp, 48,152 tons; stone and sand.

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Freight carried for the Year ended June 30, 1901—*Continued.*

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
10	3,000,000		3,300	20	30	889	4,563	29	
78	1,022,117		1,533	121	182	1,986	2,086	7,903	30 Also 19.3 miles not in operation, but was in operation last year.
595	12,511,800		17,037 20,583	21,876	52 43,752	11,117	*1,701 10,592	18,790 88,203	31 32 *Includes 113 tons of coal.
							†	33	†Road not opened for traffic until June 15, 1901, and no separate returns for the 15 days in June are available.
508	214,000		288	2,208	3,863	1,777	12,716	19,589	34 Includes pulp wood, telegraph poles, &c.
7	1,131,250		1,970	10	12	1,950	*14,426	18,597	35 *Ore 12,333 tons.
6	470,000		705	215	150	2,911		4,070	36
120	25,230,000		37,846	13,203	24,375	34,447	5,595	105,248	37
	50,000		75			259		446	38
16,722	71,916,200		89,895	6,589	9,906	32,907	312,259	520,286	39
	110,000		110				*7,665	7,775	40 *Includes 7,315 tons copper ore.
16	6,096,000		6,974	7,428	9,285	137	11,440	28,148	41
1,961	83,904,000		115,356			20,148	*125,302	279,761	42 *Includes.—See foot note.
	3,500,000		10,880	900	2,900	975	11,800	27,185	43 Running powers on G.T.R. from Lennoxville to Sherbrooke, 2.95 miles.
7,458	60,411,850		81,007	13,650	20,475	262,192	213,137	733,919	44 Also 36.6 miles, Sorel to Drummondville not in operation.
33	6,914,352		10,472	193	288	3,139	33,368	48,080	45
18,466	31,222,746		48,681	368	558	164,483	451,939	945,386	46
1	308,000		112			1,574	5,850	8,652	47
706	1,764,500		3,529	1,376	1,972	5,723	*10,811	24,285	48 Running powers on C.P.R. from Five mile Point to Nelson, 4.70 miles. *Includes 5,282 tons of ore.
181	14,252,000		28,520	1,176	2,960	2,652	10,310	47,076	49
1,847	6,486,249		9,953	14,930	26,193	12,218	63,408	158,154	50 For 11 months only to May 31, 1901, at which date this property was leased to Prov. of Manitoba.

3,614 tons.

1-2 EDWARD VII., A. 1902

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
51	Nosbonsing and Nipissing	5·50					
52	Nova Scotia Steel Company's Ry.	12·50	1,151	115	8,560	150	
53	Orford Mountain	26·50	6,560	656	11,430	229	884
54	Ottawa, Northern and Western	57·87	19,923	1,992	59,446	1,166	5,274
55	Ottawa and New York	56·79	5,600	560	34,950	1,049	1,843
56	Philipsburg Junction and Quarry Co. Railway	7·50					
57	Pontiac Pacific Junction	70·60	28,068	2,806	165,925	3,385	10,900
58	Portage and North-western	35·07			276,356	4,684	175
59	Qu'Appelle, Long Lake and Saskatchewan	253·96	6,549	655	406,393	12,107	10,975
60	Quebec Central	213·50	158,097	15,809	36,370	1,091	50,900
61	Quebec and Lake St. John	242·00	38,601	3,860	126,818	2,536	2,325
	Great Northern (St. Tite to St. Boniface)	20·00					
	Lower Laurentian (Riv. a Pierre to St. Tite)	35·00					
62	Great Northern Ry. of Canada, including Lower Laurentian (for 8 months only ending June 30, 1901, previous 4 months included in Quebec and Lake St. John).	175·10	46,860	4,686	1,056,755	26,418	418
63	Quebec, Montmorency and Charlevoix	30·00	5,716	582	13,073	379	41
64	Quebec Southern	83·80	19,610	1,961	163,000	3,743	1,220
65	Red Mountain	9·53	7,620	762	3,619	76	270
66	Rutland and Noyan, operated by Rutland Ry. as a connection with Canadian Rys	5·00					
67	Salisbury and Harvey	45·00	4,563	456	31,833	541	341
68	Shore Line, New Brunswick	82·50	3,484	348	22,972	382	35
69	Stanstead, Shefford and Chambly	43·00	351,940	35,194	8,628,515	246,529	73,700
70	St. Clair Tunnel	2·23					
71	St. Lawrence and Adirondack	33·00	15,860	1,586	77,600	1,940	498
72	St. Mary's River	30·00	64	6	8,850	159	374
73	Sydney and Louisburg, Dominion Coal Co's line	48·96	3,000	300	2,700	70	212
74	South Shore, formerly Montreal and Sorel	61·50	2,589	258	10,403	326	228
75	Temiscouata	113·00	15,315	1,532	37,097	556	336
76	Tilsonburg, Lake Erie and Pacific	20·00	3,900	390	22,900	610	10,000
77	Thousand Islands	6·33	4,890	489	8,909	245	1,312
78	Toronto, Hamilton and Buffalo	89·16	29,030	2,903	608,611	17,011	62,648
79	United Counties						
	Leased East Richelieu Valley						
80	Victoria and Sidney, B.C.	16·26	1,514	151	31,711	649	3,258
81	York and Carleton. This railway has only been in operation one month	5·75					
		18,139·97	14,857,644	1,486,351	214,613,974	4,694,853	3,733,471

*Includes pulp wood, asbestos, pulp, brick, lime, butter and cheese, etc. Running powers on I.C.R.

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Freight carried for the Year ended June 30, 1901—*Concluded.*

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
.....	13,460,000	190,300	.....	.....	.....	.....	190,300	51	
.....	4,730,000	5,910	20	15	354	*153,762	160,306	52	Including ore, pig
198	6,479,000	7,242	3,120	4,680	673	6,765	20,443	53	iron, coal, etc.
817	3,790,000	5,683	3,100	4,505	10,239	8,832	33,234	54	
1,106	5,038,000	6,297	4,846	7,269	2,263	20,532	39,076	55	
.....	10,000	15	32	35	232	3,903	4,185	56	
1,049	3,150,000	4,724	250	375	6,067	5,250	23,656	57	
97	1,695,188	2,596	473	830	1,009	2,099	11,315	58	{ For 11 months only to May 31, 1901, at which date this property was leased to the Province of Manitoba.
5,401	3,999,987	5,080	1,662	2,494	6,162	995	32,894	59	
3,819	62,637,410	93,956	8,744	16,394	9,224	*229,717	370,010	60	See foot note.
660	90,900,000	131,736	23,550	42,390	19,869	140,639	341,690	61	
.....	.....	.....	.....	.....	.....	.....	.....	.....	Included in Que. & Lake St. John for 4 mos. only up to Oct. 31, '00, for balance of year. See Great Northern Ry. of Can.
209	24,058,000	36,087	9,814	6,543	35,962	75,792	185,697	62	Running powers on Quebec & Lake St. John; Quebec to River a Pierre, 58'00 miles.
35	924,616	1,621	3,911	4,029	4,980	12,864	24,493	63	*Includes pulp wood.
610	7,803,000	11,705	*44,042	*88,084	2,978	25,434	134,515	64	Running powers on South Shore, St. Robert Jct. to Sorel 6'00 miles.
172	8,240,500	16,481	12,740	14,787	2,156	*241,447	275,881	65	*237,755 tons of ore. included.
.....	.....	.....	.....	.....	.....	.....	.....	66	
170	10,917,000	13,646	1,595	2,990	436	*16,931	35,170	67	*Includes 13,877 tons plaster.
35	7,710,000	11,565	447	894	6,123	2,132	21,479	68	
18,425	36,168,096	53,806	261	396	150,765	444,807	949,922	69	
.....	.....	.....	.....	.....	.....	.....	.....	70	No record kept.
249	25,625,333	38,438	3,515	2,343	9,845	189,386	243,787	71	Running power, G.T. R., 13'20, C. P.R., 8'70 miles.
218	313,000	470	.....	.....	350	901	2,104	72	
85	26,050,400	65,101	.....	.....	700	*2,277,100	2,343,356	73	*Includes 2,144,800 tons coal; and pig iron, brick, sand, gravel and stone.
40	2,498,505	3,747	62	123	22,576	15,226	42,296	74	
168	46,541,460	46,541	3,804	6,762	3,735	7,459	66,753	75	
1,000	850,275	2,900	600	1,007	567	6,984	13,458	76	
525	1,665,715	2,915	.....	.....	9,860	5,287	19,321	77	
6,826	4,740,062	8,699	3,268	5,177	31,760	544,611	616,987	78	Running powers on Hamilton & Dun- das St. Ry., Ham- ilton to Dundas, 3'67 miles.
.....	.....	.....	.....	.....	.....	.....	.....	79	{ Now Quebec South- ern. See No. 64.
310	341,700	598	6,211	12,422	1,241	3,355	18,726	80	
.....	.....	.....	.....	.....	.....	.....	.....	81	
838,895	3,400,547,167	5,301,519	977,020	1,597,159	5,642,947	17,437,647	36,999,371	

Harlaka Jct. to Lévis, 5 miles.

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No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			\$ cts.	\$ cts.	\$ cts.
1	Alberta Railway and Coal Co.	64.62	9,831 26	52,023 49	1,220 57
2	Albert Southern.				
	Harvey Branch.				
3	Algoma Central and Hudson Bay	42.00	13,385 26	125,741 21	250 00
4	Atlantic and Lake Superior, comprising—				
	Baie des Chaleurs. 98.00	98.00	10,224 00	20,395 74	3,016 94
	Great Eastern, 23 miles not under traffic.				
	Ottawa Valley 7 " " 4.60	4.60			
5	Bay of Quinte Ry. and Navigation Co.	64.82	24,537 24	146,461 20	8,441 11
	Kingston, Napanee and Western. 60.82	60.82			
6	Bedlington and Nelson.	15.20	4,027 01	10,271 82	111 23
7	British Yukon.	90.45	113,021 75	708,532 37	8,349 70
8	Brockville, Westport and Sault Ste. Marie.	45.00	15,161 15	16,996 36	2,739 09
9	Buctouche and Moncton.	32.00	4,243 19	10,820 92	369 15
10	Calgary and Edmonton.	295.93	119,610 72	274,587 04	11,192 03
11	Canada Atlantic, including Ottawa, Arnprior & Parry Sound. 400.00	458.00	283,658 22	1,390,197 10	29,276 01
	Leased Central Counties. 37.00				
	Pembroke Southern. 21.00				
12	Canada Coals and Railway Co., formerly Joggins.	12.00	2,586 65	25,608 18	451 91
13	Canada Eastern.	136.00	31,440 62	95,618 39	3,981 46
14	Canada Southern.	382.19	1,030,163 03	3,789,571 36	261,009 46
15	Canadian Northern, comprising—				
	Lake Manitoba Ry. and Canal Co.'s line.				
	Winnipeg Great Northern.	522.00	93,700 26	279,473 86	5,715 51
	Manitoba South-Eastern.				
	Ontario and Rainy River.				
	Port Arthur, Duluth and Western.				
16	Canadian Government Railways—				
	Intercolonial.	1,301.94	1,607,166 79	3,121,006 15	244,062 93
	Prince Edward Island.	209.00	78,689 73	97,425 85	17,310 90
17	Canadian Pacific Railway—				
	owned. 4,554.20				
	Leased lines—				
	Fredericton. 22.10				
	New Brunswick. 175.00				
	New Brunswick and Canada. 117.20				
	St. John and Maine. 92.10				
	St. John Bridge & Ry. Extension. 2.00				
	St. Stephen and Milltown. 1.60				
	Tobique Valley. 28.00				
	Cap de la Madeleine. 3.00				
	Montreal and Lake Maskinonge. 11.00				
	Atlantic and North-west. 201.40				
	Montreal and Ottawa. 93.20				
	Ontario and Quebec. 474.50	7,290.80	7,992,976 53	18,651,233 27	1,302,175 13
	St. Lawrence and Ottawa. 58.40				
	Credit Valley. 175.70				
	Guelph Junction. 15.00				
	Toronto, Grey and Bruce. 191.10				
	West Ontario Pacific. 26.60				
	Manitoba and North-western. 252.60				
	Manitoba South-western Colonization. 214.40				
	Columbia and Kootenay. 60.50				
	Nakusp and Sloean. 36.30				
	Shuswap and Okanagan. 50.80				
	Columbia and Western. 157.90				
	Great North-west Central. 71.00				
	British Columbia Southern. 202.20				
18	Caraguet.	68.00	3,198 67	18,202 01	1,984 66

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for the Year ended June 30, 1901.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	p. c.	Cts.		
93,983 79	157,059 11	50,314 38	147	223·00	1	
1,620 11	140,996 58	79,125 47	228	463·73	3	2 No return : not in operation.
.....	33,636 68	544 81	102	51·75	4	
5,687 76	185,127 51	79,843 84	176	138·11	5	
133 13	14,543 19	- 12,632 25	54	79·85	6	Running powers on C.P.R. from Creston
16,417 60	846,321 42	562,790 87	298	906·71	7	Junction to Sirdar Junction, 8·70 miles.
218 45	35,115 05	3,019 18	109	104·86	8	
535 73	15,968 99	- 2,764 07	85	86·63	9	
963 04	406,352 83	178,820 01	179	185·10	10	Operated by C.P.R.
83,206 94	1,786,338 27	374,905 23	127	116·52	11	
328 87	28,975 61	15,888 20	221	82·16	12	
2,412 78	133,453 25	11,670 34	110	68·99	13	
13,630 41	5,094,374 26	314,520 55	107	128·55	14	
4,473 52	383,363 15	161,451 47	173	181·98	15	(Also leased lines Northern Pacific & Manitoba & Portage & Northwestern for month of June, 1901 ; for mileage, see Nos. 50 and 58. Running powers over the Man. & Northwestern Ry., 36·0 miles from Portage la Prairie to Gladstone Jct.
4,972,235 87	- 488,186 77	91	79·39	16	Running powers over the Grand Trunk—	
457 00	193,883 48	- 67,882 76	74	71·74	16	Point Levis to Hadlow... 1·50 Chaudière curve to Chaudière... 1·18 Ste. Rosalie to Montreal..... 37·62
					Total, Miles.	40·30
2,432,204 36	30,378,589 29	12,127,168 58	166	171 91	17	Also running powers on— G.T.R., Toronto to Hamilton Jct. 36·20 T. H. & B. Ry., Hamilton Jct. to Hamilton. 2·70 C.A. Ry., Montreal and Ottawa Jct. to Ottawa..... 0·80
					Total, Miles.	39·70
787 60	26,172 94	- 1,045 98	96	55·69	18	

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No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			\$ cts.	\$ cts.	\$ cts.
19	Carillon and Grenville.....	13 00	1,718 53	138 31	.....
20	Central Ontario.....	125 00	.....	.....	.....
	Ontario, Belmont and Northern.....	9 60	40,059 68	120,827 57	9,937 50
21	Central of New Brunswick.....	45 66	534 06	1,961 42	1,153 08
22	Central of Nova Scotia, formerly Nova Scotia Central.....	74 00	278,34 53	28,046 64	3,199 57
23	Cumberland Ry. and Coal Co.'s line.....	32 00	10,418 77	17,950 51	2,938 22
24	Dominion Atlantic, comprising—				
	Windsor and Annapolis.....	87 50			
	Cornwallis Valley.....	14 00			
	Yarmouth and Annapolis.....	87 00			
	Windsor Branch of Intercolonial.....	32 00			
		220 50	514,966 13	298,109 79	56,276 91
25	Elgin and Havelock.....	28 00	1,226 56	5,267 03	491 87
26	Esquimalt and Nanaimo.....	78 00	99,920 30	115,885 90	2,920 32
27	Fredericton and St. Mary's Ry. Bridge Co.....	1 33	908 25	4,008 53	.....
28	Grand Trunk.....	880 35			
	Wharf Branch, Montreal.....	3 44			
	Great Western.....	561 80			
	Brantford, Norfolk and Port Burwell.....	34 39			
	Buffalo and Lake Huron.....	162 00			
	Grand Trunk, Georgian Bay and Lake Erie.....	171 00			
	Owen Sound Branch.....	12 42			
	London, Huron and Bruce.....	68 00			
	Waterloo Junction.....	10 25			
	South Norfolk.....	17 00			
	Wellington, Grey and Bruce.....	168 13			
	Northern.....	172 10	3,138 98	5,650,866 30	13,584,583 82
	North Simcoe.....	33 00			982,008 37
	Hamilton and North-western.....	172 00			
	Northern and Pacific Junction.....	111 37			
	Toronto Belt Line.....	12 79			
	Midland.....	166 00			
	Grand Junction.....	85 21			
	Toronto and Nipissing.....	85 00			
	Lake Simcoe Junction.....	26 00			
	Victoria.....	53 00			
	Whitby, Port Perry and Lindsay.....	46 00			
	Jacques Cartier Union.....	6 50			
	Montreal and Champlain Junction.....	61 73			
	Beauharnois Junction.....	19 50			
29	Gulf Shore.....	16 78	350 20	1,923 23	.....
30	Halifax and Yarmouth, formerly Coast Line of Nova Scotia.....	30 80	22,158 74	9,766 37	2,104 63
31	Hampton and St. Martins.....	29 00	2,982 07	7,792 70	.....
32	Hereford.....	53 30	11,401 37	32,424 57	1,302 55
33	Inverness and Richmond.....	56 50	.....	.....	.....
34	Irondale, Bancroft and Ottawa.....	48 00	4,547 15	13,411 53	958 59
35	Kaslo and Slocan.....	31 80	15,289 50	50,328 92	1,547 77
36	Kent Northern, including St. Louis and Richbucto.....	34 00	3,597 53	6,946 88	842 40
37	Kingston and Pembroke.....	112 85	31,751 29	111,115 66	8,954 54
38	L'Assomption.....	3 33	907 15	218 20	65 00
39	Lake Erie and Detroit River, including Erie and Huron.....	155 72	152,672 88	269,153 07	15,610 66
	Leased London and Port Stanley.....	24 00			
40	Lenora Mount Sicker.....	6 25	.....	1,126 92	.....
41	Lotbinière and Mégantie.....	30 34	2,819 01	12,837 93	.....
42	Massawippi Valley.....	35 46	48,524 44	77,499 97	2,965 56
43	Montfort and Gatineau Colonization.....	33 00	5,727 30	14,238 86	491 94

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for the Year ended June 30, 1901—*Continued.*

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
§ cts.	§ cts.	§ cts.	p. c.	Cts.		
499 14	2,355 98	1,142 81	67	36 25	19	
8,202 69	179,027 44	72,659 36	168	145 55	20	
176 90	3,825 46	35,331 98	10	40 27	21	
772 84	59,853 58	15,365 72	135	121 26	22	Running powers on Dominion Atlantic, Middleton Jct. to Middleton, 0 33 miles.
90,632 26	121,939 76	60,004 85	197	162 30	23	
	869,352 83	167,859 75	124	167 06	24	Running powers on I. C. R., Halifax to Windsor Junction, 14 00 miles.
16 00	7,001 46	3,968 75	64	48 38	25	
15,467 58	234,194 10	18,027 71	108	118 98	26	
500 00	5,416 78	4,184 86	440	.....	27	Running powers on Canada Eastern, 0 17 miles. The earnings are receipts from tolls on trains run across the bridge by Canada Eastern and Canadian Pacific Railway Co's.
683,488 15	20,900,946 64	7,584,815 30	157	126 76	28	
	2,273 43	1,015 73	181	70 82	29	
1,486 16	35,515 90	8,287 83	130	76 89	30	Also 19 3 miles not in operation, but was in operation last year.
640 92	11,415 69	3,121 24	79	60 08	31	
15 54	45,144 03	22,912 57	66	69 17	32	
1,313 86	1,313 86	189 35	117	.....	33	Road not open for traffic until June 15, 1901, and no separate returns for the 15 days in June are available.
	18,917 27	598 99	97	62 16	34	
260 63	67,426 82	26,962 45	167	269 89	35	
	11,386 81	1,706 81	118	63 26	36	
11,268 32	163,089 81	32,678 55	125	120 61	37	
12 00	1,202 35	458 75	72	19 56	38	
31,876 60	469,313 21	160,492 86	152	123 57	39	
	1,126 92	7,877 47	13	22 36	40	
81 30	15,738 24	2,380 68	118	89 91	41	
	128,989 97	18,851 03	117	84 03	42	Running powers on G. T. R., Sherbrooke to Lennoxville, 2 95 miles.
714 57	21,172 67	1,386 52	94	40 53	43	

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No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Railway.	Mileage.	Passenger Traffic.	Freight Traffic.	Mails and Express Freight.
			\$ cts.	\$ cts.	\$ cts.
44	Montreal and Atlantic, formerly South Eastern..... 102·70 } Lake Champlain and St. Lawrence Junct..... 60·70 }	163 40	115,842 58	264,559 13	10,475 69
45	Montreal Province Line.....	40·60	30,634 01	24,233 91	3,219 24
46	Montreal and Vermont Junction.....	23·60	63,787 90	119,463 88	5,072 50
47	New Westminster Southern.....	24·10	5,348 03	2,064 07	1,438 48
48	Nelson and Fort Sheppard.....	54·70	34,077 37	48,739 03	3,235 63
49	New Brunswick and Prince Edward Island.....	36·00	5,514 01	16,961 80	1,041 93
50	Northern Pacific and Manitoba.....	320·51	78,695 01	169,781 37	8,489 64
51	Nosbousing and Nipissing.....	5·50	.....	33,536 55	.....
52	Nova Scotia Steel Co.'s Ry.....	12·50	1,272 10	12,427 23	.....
53	Orford Mountain.....	26·50	1,928 59	12,311 76	524 16
54	Ottawa, Northern and Western.....	57·87	38,249 51	39,399 23	3,565 27
55	Ottawa and New York.....	56·79	42,458 02	29,876 68	2,322 88
56	Philipsburg Junction and Quarry Co.'s Ry.....	7·50	62 52	1,458 68	.....
57	Pontiac Pacific Junction.....	70·60	24,568 85	24,723 68	3,642 64
58	Portage and North-western.....	35 07	674 35	4,953 87	254 54
59	Qu'Appelle, Long Lake and Saskatchewan.....	253·96	33,888 57	94,726 73	3,408 33
60	Quebec Central.....	213·50	181,840 09	386,272 63	18,909 36
61	Quebec and Lake St. John.....	242·00	111,131 67	238,872 19	13,898 86
	Great Northern (St. Tite to St. Boniface)..... 20·60 } Lower Laurentian (Riv. à Pierre to St. Tite)..... 35·00 }	.....	.....	.....	.....
62	Great Northern Ry. of Canada, including Lower Laurentian (for 8 mos. only ending June 30, 1901, previous 4 months included in Quebec & Lake St. John).....	175·10	26,122 53	109,101 21	1,456 09
63	Quebec, Montmorency and Charlevoix.....	30·00	71,602 35	18,557 96	1,131 12
64	Quebec Southern, including United Counties and East Richelieu Valley.....	83·80	20,256 73	50,394 20	1,455 14
65	Red Mountain.....	9·53	13,930 34	87,645 15	957 49
66	Rutland and Noyan. Operated by Rutland Ry. as a connection with Canadian Rys.....	5·00	.....	.....	.....
67	Salisbury and Harvey.....	45·00	6,865 18	15,807 18	2,477 35
68	Shore Line, New Brunswick.....	82·50	10,993 70	18,281 43	3,201 86
69	Stanstead, Shefford and Chambly.....	43·00	22,476 82	46,932 24	2,744 77
70	St. Clair Tunnel.....	2·23	35,098 67	176,566 84	* 162 50
71	St. Lawrence and Adirondack.....	33·00	84,636 80	97,903 20	5,636 02
72	St. Mary's River.....	30·00	992 93	2,756 06	23 31
73	Sydney & Louisburg—Dominion Coal Co.'s line.....	48·96	48,656 37	504,714 22	600 00
74	South Shore, formerly Montreal and Sorel.....	61·50	38,064 76	16,755 57	2,338 33
75	Témiscouata.....	113·00	25,211 50	62,294 74	.....
76	Tysonburg, Lake Erie and Pacific.....	20·60	5,167 26	7,935 63	492 76
77	Thousand Islands.....	6·33	5,602 42	13,300 35	2,327 32
78	Toronto, Hamilton and Buffalo.....	89·16	110,674 38	281,782 97	5,125 30
79	Victoria and Sidney, B.C.....	16·26	9,703 01	10,281 65	401 61
80	York and Carleton. This railway has only been in operation one month.....	5·75
	Total.....	18,139·97	19,396,302 15	46,665,103 67	3,105,457 39

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for the Year ended June 30, 1901—*Concluded.*

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Train Mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	p. c.	Cts.		
8,782 82	399,660 22	40,406 61	111	108 70	44	Also 36·6 miles, Sorel to Drummondville, not in operation.
1,267 00	59,354 16	1,356 88	102	77 36	45	
250 00	188,574 28	40,214 45	127	100 67	46	
202 39	9,052 97	24,770 87	27	51 13	47	
262 79	86,314 82	21,364 18	133	171 53	48	Running powers on C.P.R., from Five Mile Point to Nelson, 4·70 miles.
82 44	23,600 18	5,785 03	132	59 36	49	
1,076 05	258,042 07	42,682 79	86	108 87	50	For 11 months only to May 31, 1901, at which date this property was leased to the Province of Manitoba.
5,400 00	33,536 55	3,194 20	111	374 71	51	
.....	19,099 33	707 49	96	127 33	52	
.....	14,764 51	860 02	106	53 52	53	
819 70	82,033 71	16,213 11	125	129 97	54	
1,116 16	75,773 74	11,509 56	87	66 93	55	
3,689 29	5,210 49	2,702 48	208	402 04	56	
575 54	53,510 71	8,895 18	120	114 95	57	
44 00	5,926 76	12,026 42	33	62 67	58	" " "
566 34	132,089 97	7,246 02	106	197 24	59	
1,536 49	588,558 57	187,590 61	147	105 20	60	Running powers on Intercolonial Railway, Harlake Junction, to Levis, 5 miles.
11,793 77	375,695 89	91,373 97	132	113 02	61	
.....	.....	.....	.....	.....	.....	Included in Quebec and Lake St. John for 4 months only, up to Oct. 31, 1901, for balance of year see Great Northern Ry. of Canada.
3,274 66	139,954 49	36,678 83	136	79 22	62	Running powers on Quebec and Lake St. John; Quebec to River a'Pierre, 58·00 miles.
758 00	92,049 43	35,959 79	164	56 33	63	
187 50	72,293 57	50,086 39	59	59 44	64	Running powers on South Shore, St. Robert Junction to Sorel, 6 miles.
1,176 71	103,679 69	45,595 42	178	470 25	65	
.....	.....	.....	.....	.....	66	
175 75	25,325 46	691 15	103	101 64	67	
23 00	32,499 99	29,547 62	52	53 21	68	
325 00	72,478 83	10,664 00	117	86 64	69	
15 00	211,843 01	113,897 21	216	.....	70	*New locomotives. The earnings of the Company are from rents and tolls on vehicles hauled through the tunnel.
400 57	188,576 59	103,569 21	222	98 44	71	Running powers on Grand Trunk 13·20 miles, and on C. P. R. 8·70 miles.
31 62	3,803 92	444 00	113	26 32	72	
131,775 93	685,746 52	249,019 67	157	161 66	73	
5,459 73	62,618 39	18,812 53	143	79 08	74	
8,395 97	95,902 21	2,270 34	102	111 87	75	
.....	13,595 65	5,548 65	169	33 99	76	
2,063 35	23,293 44	9,130 03	164	92 87	77	
35,871 80	433,454 45	156,081 79	156	153 75	78	Running powers on Hamilton and Dundas St. Railway, Hamilton to Dundas, 3·67 miles.
.....	20,386 27	153 74	101	84 07	79	
.....	.....	- 600 00	.....	.....	80	
3,731,885 92	72,898,749 13	22,530,022 91	144 73	136 64		

1-2 EDWARD VII., A. 1902

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 Railway and Coal Co.....	64·62	33,458	82	17,481	52
2	Albert Southern.....					
	Harvey Branch.....					
3	Algoma Central and Hudson Bay.....	42·00	1,565	58	16,425	37
4	Atlantic and Lake Superior, comprising—					
	Baie des Chaleurs, 98 miles.....	98·00	11,933	47	13,302	41
	Great Eastern, 23 miles not under traffic.....					
	Ottawa Valley, 7 " ".....					
5	Bay of Quinte Railway and Navigation Co.....	4·00	64·82	31,629	43	33,374
	Kingston, Napanee and Western.....	60·82				
6	Bedlington and Nelson.....	15·20		6,460	87	5,488
7	British Yukon.....	90·45		122,140	21	49,171
8	Brockville, Westport and Sault Ste. Marie.....	45·00		8,445	92	12,066
9	Buctouche and Moncton.....	32·00		6,542	04	5,966
10	Calgary and Edmonton.....	295·93		109,366	13	55,829
11	Canada Atlantic, including Ottawa, Arnprior and					
	Parry Sound.....	400·00	458·00	250,491	62	562,512
	Leased: Central Counties.....	37·00				
	Pembroke Southern.....	21·00				
12	Canada Coals and Railway Co., formerly Joggins.....	12·00		4,640	84	5,238
13	Canada Eastern.....	136·00		42,384	16	50,581
14	Canada Southern.....	382·19		937,498	58	1,363,833
15	Canadian Northern, comprising—					
	Lake Manitoba Railway and Canal Co.'s Line.....	522·00	67,444	25	73,306	40
	Winnipeg Great Northern Ry.....					
	Manitoba South Eastern.....					
	Ontario and Rainy River.....					
	Port Arthur, Duluth and Western.....					
16	Canadian Government Railways—					
	Intercolonial.....	1,301·94		1,151,263	65	1,970,987
	Prince Edward Island.....	209·00		96,213	25	73,813
17	Canadian Pacific Railway, owned.....	4,554·29				
	Leased lines—					
	Fredericton.....	22·10	7,290·80	4,072,210	52	5,603,356
	New Brunswick.....	175·00				
	New Brunswick and Canada.....	117·20				
	St. John and Maine.....	92·10				
	St. John Bridge and Railway Extension.....	2·00				
	St. Stephen and Milltown.....	4·60				
	Tobique Valley.....	28·00				
	Cap de la Madeleine.....	3·00				
	Montreal and Lake Maskinongé.....	11·00				
	Atlantic and North-west.....	201·40				
	Montreal and Ottawa.....	93·20				
	Ontario and Quebec.....	474·50				
	St. Lawrence and Ottawa.....	58·40				
	Credit Valley.....	175·70				
	Guelph Junction.....	15·00				
	Toronto, Grey and Bruce.....	191·10				
	West Ontario Pacific.....	26·60				
	Manitoba and North-western.....	252·60				
	Manitoba South-western Colonization.....	214·40				
	Columbia and Kootenay.....	60·50				
	Nakusp and Slocan.....	36·30				
	Shuswap and Okanagan.....	50·80				
	Columbia and Western.....	157·90				
	Great North-west Central.....	71·00				
	British Columbia Southern.....	202·20				
18	Caraquet.....	68·00		8,322	72	10,960
19	Carillon and Grenville.....	13·00		1,660	00	1,575
20	Central Ontario.....	125·00	134·60	31,646	84	38,229
	Ontario Belmont and Northern.....	9·60				

SESSIONAL PAPER No. 20

Expenses for the Year ended June 30, 1901.

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of operating per train mile.	Number.	Remarks
\$ cts.	\$ cts.	\$ cts.	Cents.		
4,386 04	51,418 35	106,744 73	151 56	1	
				2	No return. Not in operation.
5,683 04	38,197 12	61,871 11	203 49	3	
	7,855 99	33,091 87	50 91	4	
10,260 00	30,020 01	105,283 47	78 54	5	
777 21	14,448 37	27,175 44	149 22	6	Running power on C.P.R., Creston
9,061 18	103,157 41	283,530 55	303 76	7	Jct. to Sirdar Jct., 8 70 miles.
3,162 35	8,421 47	32,095 87	95 84	8	
572 66	5,651 45	18,733 06	101 63	9	
9,642 31	52,695 29	227,532 82	103 65	10	Operated by C. P. R.
116,033 90	482,395 19	1,411,433 04	92 07	11	
1,143 38	2,065 02	13,087 41	37 11	12	
4,544 61	24,272 65	121,782 91	62 95	13	
383,311 62	2,095,209 88	4,779,853 71	120 61	14	
20,085 67	61,075 36	221,911 68	105 34	15	{ Also leased lines Northern Pacific and Manitoba and Portage and Northwestern for month of June, 1901; for mileage see Nos. 50, 58. Running powers over the Manitoba and North-western, 36 miles from Portage la Prairie to Gladstone Jct.
745,773 59	1,592,397 70	5,460,422 64	87 19	16	Running powers on Grand Trunk—
16,844 84	74,894 25	261,766 24	96 86		Pt. Lévis to Hadlow 1 50 Chaudière Curve to Chaudière 1 18 Ste. Rosalie Jct. to Montreal.. 37 62
					40 30
1,439,087 43	7,136,766 08	18,251,420 71	103 29	17	Also running power on— Grand Trunk Ry., Toronto to Hamilton Jct. 36 20 Toronto, Hamilton and Buffalo Ry., Hamilton Jct. to Hamil- ton 2 70 Canada Atlantic Ry., Mont- real and Ottawa Jct. to Ottawa 80
					39 70
825 00	7,110 97	27,218 92	57 91	18	
250 00	13 79	3,498 79	53 83	19	
9,357 75	27,133 56	106,368 98	86 48	20	

1-2 EDWARD VII., A. 1902

No. 7.—SUMMARY STATEMENT of Operating

Number.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.	Working and Repairs of Engines.
			\$ cts.	\$ cts.
21	Central of New Brunswick.....	45·66	29,420 75	2,620 71
22	Central of Nova Scotia, formerly Nova Scotia Central.....	74·00	17,933 43	13,711 88
23	Cumberland Railway and Coal Co.'s line.....	32·00	20,175 90	18,367 54
24	Dominion Atlantic, comprising—			
	Windsor and Annapolis.....	87·50		
	Cornwallis Valley.....	14·00		
	Yarmouth and Annapolis.....	87·00		
	Windsor Branch, Intercolonial.....	32·00		
		220·50	139,134 99	282,893 58
25	Elgin and Havelock.....	28·00	4,275 86	3,602 65
26	Esquimalt and Nanaimo.....	78·00	60,437 72	52,476 28
27	Fredericton & St. Mary's Railway Bridge Co.....	1·33	1,176 83	
28	Grand Trunk.....	880·35		
	Wharf Branch, Montreal.....	3·44		
	Great Western.....	561·80		
	Brantford, Norfolk and Port Burwell.....	34·39		
	Buffalo and Lake Huron.....	162·00		
	Grand Trunk, Georgian Bay and Lake Erie.....	171·00		
	Owen Sound Branch.....	12·42		
	London, Huron and Bruce.....	68·00		
	Waterloo Junction.....	10·25		
	South Norfolk.....	17·00		
	Wellington, Grey and Bruce.....	168·13		
	Northern.....	172·10		
	North Simcoe.....	35·00		
	Hamilton and North-western.....	172·00		
	Northern Pacific Junction.....	111·37		
	Toronto Belt Line.....	12·79		
	Midland.....	166·00		
	Grand Junction.....	85·21		
	Toronto and Nipissing.....	85·00		
	Lake Simcoe Junction.....	26·00		
	Victoria.....	53·00		
	Whitby, Port Perry and Lindsay.....	46·00		
	Jacques Cartier Union.....	6·50		
	Montreal and Champlain Junction.....	61·73		
	Beauharnois Junction.....	19·50		
		3,138 98	2,856,710 03	4,726,928 67
29	Gulf Shore.....	16·78	599 45	359 00
30	Halifax and Yarmouth, formerly Coast Line of Nova Scotia.....	30·80	6,160 65	11,309 90
31	Hampton and St. Martin's.....	29·00	5,327 38	3,309 91
32	Hereford.....	53·30	23,779 83	24,651 96
33	Inverness and Richmond.....	56·50		
34	Irondale, Bancroft and Ottawa.....	48·00	6,517 31	5,356 38
35	Kaslo and Slocan.....	31·80	14,544 38	10,043 32
36	Kent Northern, including St. Louis and Richibucto.....	34·00	3,170 00	3,010 00
37	Kingston and Pembroke.....	112 85	35,615 84	42,006 32
38	L'Assomption.....	3·33	480 60	781 00
39	Lake Erie and Detroit River, including Erie and Huron.....	155·72		
	Leased London and Port Stanley.....	24·00		
		179·72	63,180 15	110,926 75
40	Lenora Mount Sicker.....	6·25	2,300 00	3,690 00
41	Lotbinière and Mégantic.....	30·34	4,168 72	5,559 26
42	Massawippi Valley.....	35·46	33,301 59	42,493 32
43	Montfort and Gatineau Colonization.....	33·00	8,528 24	8,117 41
44	Montreal and Atlantic, formerly South-eastern.....	102·70		
	Lake Champlain and St. Lawrence Junction.....	60·70		
		163·40	79,500 58	137,814 79
45	Montreal and Province Line.....	40·60	11,631 50	18,204 26
46	Montreal and Vermont Junction.....	23·60	21,298 05	44,642 52
47	New Westminster Southern.....	24·10	16,151 03	6,147 33
48	Nelson and Fort Sheppard.....	54·70	28,402 17	16,429 28

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Expenses for the Year ended June 30, 1901—*Continued.*

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of operating per train mile.	Number.	Remarks.
£ cts.	£ cts.	£ cts.	Cents.		
305 62	6,810 36	39,157 44	412 18	21	
1,816 56	11,025 99	44,487 86	90 13	22	Running power on Dominion Atlantic, Middleton Junction to Middleton, 0·33 miles.
5,973 87	17,417 60	61,934 91	82 43	23	
16,229 12	263,225 39	701,493 08	134 81	24	Running powers over I.C.R., Halifax to Windsor Jct., 14 miles.
	3,091 70	10,970 21	75 80	25	
9,686 95	93,565 44	216,166 39	109 82	26	
	55 09	1,231 92		27	Running powers on Canada Eastern, 0·17 miles.
1,311,869 72	4,420,622 92	13,316,131 34	80 76	28	
	299 25	1,257 70	39 18	29	
969 58	8,787 94	27,228 07	58 95	30	Also 19·3 miles not in operation, but was in operation last year.
633 04	5,266 60	14,536 93	76 51	31	
5,652 48	13,972 53	68,056 60	104 28	32	
	1,124 51	1,124 51		33	Road not open for traffic until June 15, 1901, and no separate returns for the 15 days in June are available.
871 00	6,771 48	19,516 17	64 13	34	
1,359 85	14,516 82	40,464 37	161 97	35	
450 00	3,050 00	9,680 00	53 78	36	
5,726 32	47,062 78	130,411 26	96 45	37	
35 00	364 50	1,661 10	27 03	38	
22,628 31	112,085 14	308,820 35	81 31	39	
150 00	2,864 39	9,004 39	178 66	40	
840 30	2,789 28	13,357 56	76 31	41	
8,129 84	26,214 19	110,138 94	71 75	42	Running powers on G.T.R. from Len- noxville to Sherbrooke, 2·95 miles.
	5,913 54	22,559 19	43 19	43	
20,425 05	121,513 19	359,253 61	97 71	44	Also 36·6 miles, Sorel to Drummond- ville not in operation.
8,091 89	20,069 63	57,997 28	75 59	45	
33,515 84	48,903 42	148,359 83	79 20	46	
724 32	10,801 16	33,823 84	191 03	47	
2,419 48	17,699 71	64,956 64	129 08	48	Running powers on C.P.R. from Five Mile Point to Nelson, 4·70 miles.

1-2 EDWARD VII., A. 1902

No. 7.—SUMMARY STATEMENT of Operating

Number.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.	Working and Repairs of Engines.
			§ cts.	§ cts.
49	New Brunswick and Prince Edward Island.	36·00	6,696 59	7,135 94
50	Northern Pacific and Manitoba.	320·51	94,924 67	81,765 49
51	Nosbousing and Nipissing.	5·50	*9,835 00	1,810 00
52	Nova Scotia Steel Co.'s Railway.	12·50	5,166 65	9,820 17
53	Orford Mountain.	26·50	5,074 87	4,887 50
54	Ottawa, Northern and Western.	57·87	16,316 59	17,209 75
55	Ottawa and New York.	56·79	18,336 81	23,775 30
56	Philipsburg Railway and Quarry Co.	7·50	1,024 44	316 37
57	Pontiac Pacific Junction.	70·60	15,594 59	11,849 67
58	Portage and North-western.	35·07	6,851 08	2,313 85
59	Qu'Appelle, Long Lake and Saskatchewan.	253·96	74,723 49	30,361 14
60	Quebec Central.	213·50	165,563 15	126,849 13
61	Quebec and Lake St. John.	242·00	55,399 03	108,428 60
	Great Northern, St. Tite to St. Boniface. 20·00			
	Lower Laurentian, Riv. à Pierre to St. Tite. 35·00			
62	Great Northern Railway of Canada, including Lower Laurentian (for 8 months only, ending June 30, 1901, previous 4 months included in Quebec and Lake St. John).	175·10	25,846 24	44,825 01
63	Quebec, Montmorency and Charlevoix.	30·00	11,568 43	16,408 54
64	Quebec Southern, including United Counties and East Richelieu Valley.	83·80	16,221 43	21,636 55
65	Red Mountain.	9·53	19,119 76	27,118 67
66	Rutland and Noyan—operated by Rutland Ry. as a connection with Canadian Rys.	5·00		
67	Salisbury and Harvey.	45·00	11,572 35	7,928 28
68	Shore Line of New Brunswick.	82·50	33,703 91	14,333 80
69	Stanstead, Shefford and Chambly.	43·00	17,485 65	18,753 09
70	St. Clair Tunnel.	2·23	2,992 31	64,089 49
71	St. Lawrence and Adirondack.	33·00	25,461 37	26,480 60
72	St. Mary's River.	30·00	1,119 12	689 15
73	Sydney and Louisburg—Dominion Coal Co.'s line.	48·96	42,222 16	101,123 72
74	South Shore, formerly Montreal and Sorel.	61·50	9,540 52	15,504 87
75	Temiscouata.	113·00	30,721 32	25,941 99
76	Tilsonburg, Lake Erie and Pacific.	20·00	1,677 00	3,415 00
77	Thousand Islands.	6·33	2,088 63	4,257 17
78	Toronto, Hamilton and Buffalo.	89·16	43,444 05	82,026 06
79	Victoria and Sidney, B.C.	16·26	4,867 59	7,457 32
80	York and Carleton—This railway has only been in operation one month.	5·75		300 00
	Total.	18,139·97	11,195,400 68	16,467,767 90

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Expenses for the Year ended June 30, 1901—*Concluded.*

Working and Repairs of Cars.	General Operating Expenses.	Total.	Cost of operating per train mile.	Number.	Remarks.
\$ cts.	\$ cts.	\$ cts.	Cents.		
797 14	3,185 48	17,815 15	44·81	49	
14,355 27	109,679 43	300,724 86	126·88	50	For eleven months only to May 31, 1901, at which date the property was leased to the Province of Manitoba.
					*And steamers.
2,227 00	16,470 35	30,342 35	339·02	51	
300 00	4,520 00	19,806 82	132·05	52	
339 21	3,602 91	13,904 49	50·40	53	
4,274 88	28,019 38	65,820 60	104·29	54	
1,990 41	43,180 78	87,283 30	77·09	55	
	1,167 20	2,508 01	193·52	56	
3,232 56	13,938 71	44,615 53	95·84	57	
1,864 69	6,923 56	17,953 18	189·84	58	For eleven months only to May 31, 1901, at which date this property was leased to the Province of Manitoba,
3,382 11	16,377 21	124,843 95	186·42	59	
27,496 61	141,039 07	400,967 96	71·67	60	Running powers on I.C.R., Harlaka Jct. to Lévis, 5 miles.
18,756 14	101,738 15	284,321 92	85·53	61	
					Included in Quebec and Lake St. John for 4 months only, up to Oct. 31, 1900—for balance of year see Great Northern Railway of Canada.
2,998 77	29,605 64	103,275 66	58·45	62	Running powers on Quebec and Lake St. John, Quebec to River a Pierre, 58 miles.
7,238 27	20,874 40	56,089 64	34·32	63	
1,565 15	*82,956 83	122,379 96	100·62	64	*Including extraordinary expenses, permanent improvements, equipment and betterments, &c. Running powers on South Shore, St. Robert Jct. to Sorel, 6 miles.
1,791 30	19,054 54	58,084 27	263·44	65	
				66	
930 91	4,202 77	24,634 31	98·87	67	
2,038 64	11,971 26	62,047 61	101·58	68	
6,545 85	19,030 24	61,814 83	73·90	69	
774 63	30,089 37	97,945 80		70	
2,485 01	30,580 40	85,007 38	44·37	71	Running powers on G. T. Ry. from Valleyfield to Beauharnois, 13·20 miles, and on C.P.R. from Adirondack Jct. to Montreal, 8·70 miles.
35 80	1,515 85	3,359 92	23·24	72	
52,325 29	240,985 68	426,726 85	102·96	73	
688 44	18,072 03	43,805 86	55·32	74	
10,753 68	26,214 88	93,631 87	109·22	75	
	2,955 00	8,047 00	20·12	76	
535 79	7,281 82	14,163 41	56·47	77	
11,081 24	140,821 31	277,372 66	98·38	78	Running powers on Hamilton and Dundas St. Ry., Hamilton to Dundas, 3·67 miles.
192 10	7,715 52	20,232 53	83·43	79	
100 00	200 00	600 00		80	
4,420,473 61	18,285,084 03	50,368,726 22	94·41		

1-2 EDWARD VII., A. 1902

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.
1	Algoma Central and Hudson Bay Railway	42·00	{ Passengers				1
			{ Employees		1		
			{ Others				
2	Bedlington and Nelson	15·20	{ Employees				2
3	British Yukon	90·45	{ Passengers				1
			{ Employees				1
4	Buctouche and Moncton	32·00	{ Employees			1	
5	Calgary and Edmonton	295·93	{ Passengers		1		
			{ Employees		1		
6	Canada Atlantic	458·00	{ Passengers				1
			{ Employees			1	
			{ Others				1
7	Canada Eastern	136·00	{ Employees				
8	Canada Southern	382·19	{ Passengers				2
			{ Employees	2	1		1
			{ Others				2
9	Canadian Government Railways—						
	Intercolonial	1,301·94	{ Passengers	1		1	1
			{ Employees	2	18	2	7
			{ Others		1	1	2
	Prince Edward Island	209·00	{ Employees				
10	Canadian Northern	522·00	{ Employees		1		
			{ Passengers	2	3	1	12
11	Canadian Pacific: owned and leased lines	7,292·31	{ Employees	6	46	2	30
			{ Others	2	5	3	12
12	Caraquet	68·00	{ Others				
13	Central Ontario	134·60	{ Employees				
14	Central of New Brunswick	45·66	{ Employees				
15	Central of Nova Scotia	74·00	{ Employees				
16	Dominion Atlantic	220·50	{ Employees	1	1	1	
17	Elgin and Havelock	28·00	{ Passengers				
18	Esquimalt and Nanaimo	78·00	{ Passengers				1
			{ Employees				
19	Grand Trunk	3,138·98	{ Passengers	1	6	4	11
			{ Employees	6	55		19
			{ Others	2	6	5	12
20	Great Northern Railway of Canada	175·10	{ Employees				1
21	Hereford	53·30	{ Employees		1		1
			{ Others				
22	Kaslo and Slocan	31·80	{ Others				
23	Kingston and Pembroke	112·85	{ Employees				
24	Lake Erie and Detroit River	179·72	{ Others				
25	Manitoulin and North Shore	15·50	{ Employees				
			{ Passengers				
26	Massawippi Valley	35·46	{ Employees				
			{ Others				
27	Montreal and Atlantic	163·40	{ Employees		1		
			{ Others		1		
28	Montreal and Province Line	40·60	{ Passengers				
			{ Employees				3
29	Nelson and Fort Sheppard	54·70	{ Employees		2		
			{ Others				
30	Northern Pacific and Manitoba	320·51	{ Passengers				1
			{ Employees		2		2
			{ Others				
31	Ottawa and New York	56·79	{ Others				
32	Ottawa, Northern and Western	57·87	{ Employees				
33	Pontiac Pacific Junction	70·60	{ Employees				
34	Portage and North-western	35·07	{ Others			1	

*14 at highway crossing. †17 at highway crossings.

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Year ended June 30, 1901.

At work on or near Track making up Trains.		Putting Arms or Heads out of Window.		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.	
					5			1						2	10	2	16	1
																1	2	2
					3										12		1	3
							1									1	6	4
															3		2	5
	3			1	4	1	12							1	12	4	31	6
		1	1					5	5				1		9	5	16	
							1	1							1	1	3	7
								9	2						5	3	9	8
																9	4	
3	24		1	1	42	3	7	3	4					1	2	24	16	2
								18	15							3	19	128
1					6	1									5	1	11	9
1					2												1	10
1			1	1	125	2	32	1	3						9	6	59	
							23	5	8				2	4	92	21	327	11
								*67	+41					1	7	73	65	
					1												1	12
					1												1	13
						1										1		14
					1												1	15
																3	1	16
															1		1	17
					1	3										1	1	18
							16	1								3	6	
5	22	2		1	67	10	43	15	17				1	9	13	98	48	46
1						3	5	35	22					20	34	65	80	322
				1	5					1	1				1	2	8	20
									1								2	21
														1			1	22
								1								1		23
								2	3							2	3	24
							1										1	25
					1	1	6										6	
							5									1	6	26
					4										3		3	
								2	5				1		3	9	6	27
																2	2	
					1		2								2		2	28
					1		8								1		11	
								1	2							1	2	29
					1												1	
														1	6	1	11	30
									1								2	
					1										1		1	31
					1												1	32
																	1	33
															1		1	34

1-2 EDWARD VII., A. 1902

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.
35	Quebec Central	213·50	{ Passengers..... Employees..... Others.....	.....	.....	1 1.....	.....
36	Quebec and Lake St. John	242·00	{ Employees.....	.....	.....	1	.....
37	Quebec, Montmorency and Charlevoix	30·00	{ Employees..... Others.....	.....	.....	.....	.....
38	Quebec Southern.....	83·80	{ Passengers..... Employees.....	.....	1	.....	.....
39	Red Mountain	9·53	{ Passengers..... Employees.....	.....	1	.....	.....
40	Stanstead, Shefford and Chambly	43·00	{ Passengers..... Employees.....	.....	2	.....	.....
41	St. Clair Tunnel	2·23	{ Employees.....	.....	.....	2	.....
42	St. Lawrence and Adirondack.....	33·00	{ Employees..... Others.....	.....	.....	.....	.....
43	South Shore.....	61·50	{ Others.....	.....	.....	.....	.....
44	Sydney and Louisburg	48·96	{ Employees..... Others.....	.....	.....	.....	.....
45	Temiscouata	113·00	{ Employees.....	.....	.....	.....	.....
46	Thousand Islands	6·33	{ Employees.....	.....	.....	.....	.....
47	Toronto, Hamilton and Buffalo.....	89·16	{ Passengers..... Employees..... Others.....	.....	1	.....	2
				25	158	25	134

NOTE.—This Statement shows the Railways on which Accidents have occurred.

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Year ended June 30, 1901—*Concluded.*

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	.....	35
								1	.....							1	.....
								1	.....							1	.....	36
					4			1	.....							2	.....
					1				.....								7	37
									1								1	
					1				1								2	38
									1								1	
					1			1	.....								1	39
									.....						4		6	
					2				.....								4	40
									.....						1		5	
									.....						4		4	41
									.....						1		3	
									1						1		2	42
									
								2	.....					1		1	.....	43
								1	.....					1		3	.....
									.....							1	.....	44
															1	
														1		1	45
									
														1		1	46
									
									47
														7		21	
			1		2	1								1		2	47
								1						1		2	
10	50	3	4	6	284	29	178	175	136	1	1	...	6	43	366	317	1,317	

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No. 9.—Lines of Railway owned by Coal and Iron Mines, for the year ended June 30, 1901.

Name.	Length of Railway.	Gauge.	No. of Engines.	No. of Wagons.	Remarks.
*Albion Mines Railway..	3·0	4·8½	2	20	*This taken from last year's return.
*Vale " " " " " " " " " "	6·00	4·8½	2	2	" " " " " " " " " "
Intercolonial Coal Mining Co.	8·00	4·8½	2	201	Connecting Drummond Colliery with the Intercolonial Railway at Westville and Granton wharf, at Middle River, Port of Pictou, Nova Scotia.
†Londonderry Iron Co. Ry	3·50	4·8½	2	17	From this Company's works at Acadia Mines to Londonderry Station, I.C.R.
" " " " " " " " " "	4·00	4·8½	...	...	From the East Mines (operated by this Co.) to East Mines Station, I.C.R.
" " " " " " " " " "	2·00	4·8½	...	...	From the Lime Quarry (operated by this Co.) to Graham's Siding, I.C.R.
" " " " " " " " " "	3·00	3·00	2	21	From the West Mines (operated by this Co.) to the works at Acadia Mines.
	29·50	.....	10	261	
CAPE BRETON.					
The Nova Scotia Steel Co. of New Glasgow, N.S., formerly the General Mining Association of London, Eng.	5·15	4·8½	4	197	This railway is used for colliery purposes only. It conveys the coal from the old Sydney mines, situated in the town of Sydney Mines, Cape Breton, to the shipping port of North Sydney, and is connected with the Intercolonial Railway by a short branch line to the North Sydney Station. It does not carry the public or do any passenger traffic further than carrying the employees of the Nova Scotia Steel Company Ltd., to and from their work.
Dominion Coal Co. Ltd.— Sydney & Louisbourg Railway, Main Line	39·15	4·8½	20	860	This forms part of the Sydney and Louisbourg Railway, between Sydney and Louisbourg Harbours, which is included in the general statistics.
Branches: Main Line to Bridgeport Colliery	·50	4·8½			
Branches: Main Line to Reserve Colliery	2·12	4·8½			
Branches: Main Line to International Colliery	·25	4·8½			
Branches: Main Line to Hub Colliery	2·00	4·8½			
Branches: Main Line to Glace Bay Colliery	·50	4·8½			
Branches: Main Line to Caledonia Colliery	1·11	4·8½			
Branches: Main Line to Gowrie Colliery	1·50	4·8½			
Stirling Pit to Glace Bay Harbour	·50	4·8½			
Caledonia Colliery	·33	4·8½			
	48·96	.....	20	860	

† This taken from last year's return, proper return from year ending June 30, 1901, not received.

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).....	*	29,685	45									
Algona Central and Hudson Bay.....												
Albert Southern.....												
Atlantic and North-west in Canada.....												
Baie des Chaleurs (now in Atlantic and Lake Superior).....												
Belleville and North Hastings—Grand Junction (now in Grand Trunk).....												
Beauharnois Junction.....												
Brantford, Waterloo and Lake Erie (now Toronto, Hamilton and Buffalo).....												
Brockville, Westport and Sault Ste. Marie.....												
Buckeye and Moncton.....												
Canada Atlantic.....												
Canada Central.....												
Canada Eastern (formerly Northern and Western of New Brunswick).....												
Canadian Northern.....												
Canadian Pacific.....												
" Revelstoke to Arrow Lake.....												
" Crow's Nest Pass.....												
" Extension—Pipe Stone Branch.....												
Cap de la Madeleine.....												
Caracquet.....												
Central of New Brunswick.....												
Central of Nova Scotia (formerly Nova Scotia Central).....												
Central Ontario.....												
Coast Railway of Nova Scotia (now Halifax and Yarmouth).....												
Colbourg, Northumberland and Pacific.....												
Columbia and Kootenay.....												
Cornwallis Valley (now in Dominion Atlantic).....												
Cumralland Railway and Coal Company.....												
Dumfries County (now in Intercolonial system).....												
Dominion Line Company (now in Herford Ry).....												
East Richelieu Valley (now part of Quebec Southern).....												
Elgin and Havelock.....												

* Including \$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 July 1, 1889 and also \$1,386,000 as bonus in addition on the portion of this railway through the state of Maine. 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, \$31,112,213.45. d Including \$41,252.82 rails.

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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.						
Erie and Huron (now in Lake Erie and Detroit River Ry.)			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					
Victoria Jubilee Bridge of Grand Trunk Ry			500,000 00			
Grand Trunk, Georgian Bay and Lake Erie, Owen Sound Branch			39,744 00			
Great Eastern (in Atlantic and Lake Superior)			40,345 00			
Great Northern (exclusive of Ottawa Valley Section)			4 550,911 11			
Guelph Junction			46,000 00			
Gulf Shore			4 53,639 20			
Hampton and St. Martin (formerly St. Martin and Upham)			83,612 54			
Harvey Branch			5,553 57			
Hereford			155,200 00			
Intercolonial			63,973,971 47			
Interprovincial Bridge—Ottawa			212,500 00			
International (Atlantic and North-west) C. P. R.			196,800 00			
Inverness and Richmond			4 313,600 00			
Ipsdale, Bancroft and Ottawa			160,000 00			
Joggins (now Canada Coals and Railway Co.)			37,500 00			
Kent Northern	58,334 27					
Kingston, Napawee and Western (now in Bay of Quinte)			208,732 80			
Kingston and Pembroke			48,000 00			
L'Assomption			11,200 00			
Lake Erie and Detroit River			338,731 00			
Lake Tenaiscaumie Colonization			310,335 95			
Leamington and St. Clair (now in Canada Southern)			51,200 00			
Lothburiere and Megantic			96,000 00			
Lower Laurentian (now in Great Northern)			217,600 00			
Massawippi Valley			5,376 00			
Midland of Nova Scotia			4 219,350 00			
Montfort and Gatineau Colonization			167,440 00			
Montreal and Lake Maskinongé			41,280 00			
Montreal and Champlain Junction			103,600 00			
Montreal and Ottawa			192,000 00			
Montreal and Province Line (formerly Montreal Portland & Boston)			4 60,800 00			
Montreal and Western			361,270 00			

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Victoria	312,000 00
Wellington, Grey and Bruce	241,276 00
Whitby, Port Perry and Lindsay	94,357 59
Interprovincial Bridge at Ottawa	50,000 00	.....	.....	.....	.....
	26,000 00	.....	.....	.....	.....
	8,083,578 04	.....	.....	.....	.....
QUEBEC GOVERNMENT.					
Baie des Chaleurs (now in Atlantic and Lake Superior)	1,415,000 00	.....	.....	.....	.....
Beauharnois Junction	179,073 00	.....	.....	.....	.....
Canada Atlantic	192,000 00	.....	.....	.....	.....
Great Eastern (now in Atlantic and Lake Superior)	156,000 00	.....	.....	.....	.....
Great Northern (including Lower Laurentian)	1,025,733 66	.....	.....	.....	.....
Drummond County (now in Intercolonial Ry.)	347,420 54	.....	.....	.....	.....
East Richelieu Valley (now part of Quebec Southern)	115,215 00	.....	.....	.....	.....
Hereford (including Dominion Line Coy's Line)	60,500 00	.....	.....	.....	.....
International (now Atlantic and North-west—C.P.R.)	391,122 02	.....	.....	.....	.....
Lake Champlain and St. Lawrence Junction	250,280 00	.....	.....	.....	.....
Lake Témiscamingue Colonization Railway	350,076 82	.....	.....	.....	.....
L'Assomption	5,512 50	.....	.....	.....	.....
Lafontaine and Mégantic	126,994 00	.....	.....	.....	.....
Missisquoi Valley (now Atlantic and North-west—C.P.R.)	228,000 00	.....	.....	.....	.....
Montfort and Gatineau Colonization	168,305 80	.....	.....	.....	.....
Montreal and Champlain Junction	150,000 00	.....	.....	.....	.....
Montreal and Ottawa	182,210 00	.....	.....	.....	.....
Montreal, Portland and Boston (now Montreal and Province Line)	251,122 00	.....	.....	.....	.....
Montreal and Sorel (now South Shore)	276,645 00	.....	.....	.....	.....
Montreal and Western	472,500 00	.....	.....	.....	.....
Montreal and Lake Maskinonge	87,750 00	.....	.....	.....	.....
Orford Mountain	98,884 92	.....	.....	.....	.....
Ottawa and Gatineau (now Ottawa Northern and Western)	796,520 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 Bridge	250,000 00	.....	.....	.....	.....
Quebec and Lake St. John	2,533,000 00	.....	.....	.....	.....
Quebec Central	1,076,123 14	.....	.....	.....	.....
Quebec, Montreal, Ottawa and Occidental, including North Shore	3,722,956 00	.....	.....	.....	.....
Quebec, Montmorency and Charlevoix	306,945 50	.....	.....	.....	.....
South-eastern (now Montreal and Atlantic)	444,000 00	.....	.....	.....	.....
St. Lawrence and Adirondack	65,216 00	.....	.....	.....	.....
Témiscouata	362,250 00	.....	.....	.....	.....
United Counties (now part of Quebec Southern)	210,000 00	.....	.....	.....	.....
Waterloo and Niagara (now in Atlantic and North-west—C.P.R.)	92,000 00
	3,722,956 00
	13,977,980 50

A See note on page No. 21.

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No. 10.—STATEMENT of Aid granted to Railways by Governments—Continued.

Name of Railway.	Loan.		Total.		Bonds.		Total.		Subscription to Shares or Bonds.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
NEW BRUNSWICK GOVERNMENT.												
Albert (now Salisbury and Harvey).....					455,000	00						
Albert Southern.....					48,680	00						
Buctouche and Moncton.....					96,000	00						
Carapet.....					180,000	00						
Central of New Brunswick.....					139,000	00						
Fredericton.....					230,000	00						
Grand Southern (now Shore Line).....					413,000	00						
Gulf Shore.....					41,950	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.....					39,708	90						
Northern and Western (now Canada Eastern).....					400,000	00						
Elgin, Petterdiac and Havelock (now Elgin and Havelock).....					107,500	00						
Restigouche and Western.....					23,000	00						
St. Martin and Upland (now Hampton and St. Martin).....					145,600	00						
St. John Bridge and Railway Extension.....					5,181	81						
St. John and Maine.....					880,000	00						
St. Louis and Richibucto.....					21,000	00						
St. Stephen and Milltown.....					13,920	00						
Teniscouata.....					68,000	00						
Tobique Valley.....					70,000	00						
York and Carleton.....					13,899	00						
							4,244,439	71			300,000	00
NOVA SCOTIA GOVERNMENT.												
Coast Line (now Halifax and Yarmouth).....					288,000	00						
Cornwallis Valley (now in Dominion Atlantic).....					44,800	00						
Canada Coal and Railway Co. Line (formerly Joggins).....					33,200	00						
Inverness and Richmond.....					272,000	00						
Midland Ry. of Nova Scotia (formerly Stewiacke Valley and Lunsdowne).....					192,000	00						
New Glasgow Iron, Coal and Railway Co. (now Nova Scotia Steel Co.).....					40,000	00						
Nova Scotia Central (now Central Railway of Nova Scotia).....					432,261	08						
Nova Scotia Southern.....					374,400	00						
Springhill and Parrsboro' (Cumberland Railway and Coal Co.).....					173,650	00						

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Sydney and Louisburg, Dominion Coal Co. (now in Dominion Atlantic). Western Counties, Yarmouth and Annapolis	87,808 00 679,197 45	2,619,316 53
MANITOBA GOVERNMENT.					
Canadian Pacific .....	.....	.....	300,377 50	•	.....
Manitoba South-western Colonization.	900,000 00	.....	641,575 25		.....
Northern Pacific and Manitoba .....	.....	.....			.....
	900,000 00	.....		941,952 75	.....
BRITISH COLUMBIA GOVERNMENT.					
Canadian Pacific. ....	.....	.....	37,500 00	37,500 00	.....
Total aid granted by Governments.	20,613,489 05	.....	.....	189,041,503 84	300,000 00

NOTE.—For Statement of payments of Government Aid granted to Railways, see No. 1 Summary Statement of Capital.

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No. 10.—STATEMENT of Aid granted to Railways—Constructed and under Construction—by Municipalities, June 30, 1901.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscrip- tion in Shares or Bonds.	Total.
		\$	cts.	\$	cts.	\$	cts.
ONTARIO.							
Deseronto	Bay of Quinté Ry.....	.....	.....	30,000 00	.....	.....	.....
Town of Napane.....	Kingston, Napance and Western..	.....	.....	.....	.....	.....	30,000 00
Village of Newburgh.....	" .....	.....	.....	30,000 00	.....	.....	.....
Township of Camden.....	" .....	.....	.....	15,000 00	.....	.....	.....
" Sheffield.....	" .....	.....	.....	5,000 00	.....	.....	.....
" Loughborough.....	" .....	.....	.....	75,000 00	.....	.....	.....
City of Kingston.....	" .....	.....	.....	.....	.....	.....	102,500 00
Town of Brockville.....	Brockville, Westport and Sault Ste. Marie.....	.....	.....	30,000 00	.....	.....	.....
Elizabethtown.....	" .....	.....	.....	7,000 00	.....	.....	.....
Rear of Yonge and Escott. . .	" .....	.....	.....	15,000 00	.....	.....	.....
" Leads and Lansdowne..	" .....	.....	.....	5,000 00	.....	.....	.....
Bastard and Burgess .....	" .....	.....	.....	28,000 00	.....	.....	.....
South Crosby.....	" .....	.....	.....	6,000 00	.....	.....	.....
Village of Newboro'.....	" .....	.....	.....	4,000 00	.....	.....	.....
North Crosby .....	" .....	.....	.....	15,000 00	.....	.....	.....
Various municipalities.....	Buffalo and Lake Huron.....	.....	.....	.....	.....	.....	116,000 00
Renfrew	Canada Central, now Can. Pacific.	.....	.....	.....	.....	30,000 00	.....
Horton.....	" .....	.....	.....	.....	.....	7,500 00	.....
Adrianston .....	" .....	.....	.....	.....	.....	5,000 00	.....
County of Elgin.....	Canada Southern.....	.....	.....	200,000 00	.....	.....	.....
Township of Townsend.....	" .....	.....	.....	30,000 00	.....	.....	.....
" Derham.....	" .....	.....	.....	15,000 00	.....	.....	.....
" Anderton.....	" .....	.....	.....	15,000 00	.....	.....	.....
Town of St. Thomas.....	" .....	.....	.....	25,000 00	.....	.....	.....
Township of Malden .....	" .....	.....	.....	15,000 00	.....	.....	.....
Town of Amherstburg.....	" .....	.....	.....	15,000 00	.....	.....	.....
South Norwich.....	" .....	.....	.....	7,500 00	.....	.....	.....
Sault Ste. Marie.....	Canadian Pacific.....	.....	.....	20,000 00	.....	.....	322,500 00
Carleton Place .....	" .....	.....	.....	20,000 00	.....	.....	.....
Owen Sound.....	" .....	.....	.....	40,000 00	.....	.....	.....
Northumberland and Durham.....	Cobourg, Blairton and Marmora..	.....	.....	.....	.....	.....	80,000 00
West Hawkesbury	Central Counties.....	.....	.....	15,000 00	.....	.....	113,500 00
							42,500 00

Vankleek Hill.....	"	.....	1,200 00
Dalketh.....	"	.....	800 00
Rockland.....	"	.....	6,000 00
Clarence.....	"	.....	1,000 00
24,000 00			
Central Ontario.....			
Town of Trenton.....	"	.....	10,000 00
Wellington Village.....	"	.....	2,500 00
Town of Picton.....	"	.....	21,000 00
County of Prince Edward.....	"	.....	60,000 00
93,500 00			
Colborne, Northumberland & Pacific.....			
Town of Cobourg.....	"	.....	30,000 00
Village of Campbellford.....	"	.....	15,000 00
Township of Percy.....	"	.....	25,000 00
Haldimand.....	"	.....	14,000 00
Brighton.....	"	.....	2,000 00
Hamilton.....	"	.....	4,500 00
Cramahé.....	"	.....	3,000 00
93,500 00			
Credit Valley.....			
County of Oxford.....	"	.....	200,000 00
Wellington.....	"	.....	135,000 00
Waterloo.....	"	.....	110,000 00
Peel.....	"	.....	75,000 00
Halton.....	"	.....	70,000 00
City of Toronto.....	"	.....	350,000 00
St. Thomas.....	"	.....	50,000 00
Town of Milton.....	"	.....	30,000 00
Brampton.....	"	.....	20,000 00
Ingersoll.....	"	.....	10,000 00
Orangeville.....	"	.....	15,000 00
Village of Streetsville.....	"	.....	20,000 00
1,085,000 00			
Erie and Huron, now in Lake Erie and Detroit.....			
City of Chatham.....	"	.....	155,000 00
Town of Sarnia.....	"	.....	30,000 00
Village of Dresden.....	"	.....	16,000 00
Blenheim.....	"	.....	20,500 00
Wallaceburg.....	"	.....	11,000 00
Township of Somers.....	"	.....	11,000 00
Woodhouse.....	"	.....	14,000 00
257,500 00			
Grand Trunk, Georgian Bay and Lake Erie.....			
Town of Simcoe.....	"	.....	15,000 00
Township of South Norwich.....	"	.....	10,000 00
do ".....	"	.....	10,000 00
Town of Woodstock.....	"	.....	40,000 00
Township of East Oxford.....	"	.....	25,000 00
Woodstock.....	"	.....	25,000 00
Town of Woodstock.....	"	.....	60,000 00
Stratford.....	"	.....	120,000 00
County of Perth.....	"	.....

1-2 EDWARD VII., A. 1902

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.		Total.		Bonds.		Total.		Subscription to Shares or Bonds.		Total.	
		£	cts.	£	cts.	£	cts.	£	cts.	£	cts.	£	cts.
ONTARIO—Continued.													
Township of Mornington	Grand Trunk, Georgian Bay and Lake Erie												
Township of Elba.....	"						40,600 00						
Town of Listowel	"						10,000 00						
Township of Wallace	"						15,000 00						
Town of Palmerston	"						10,000 00						
Township of Minto.....	"						30,000 00						
Town of Harriston	"						25,000 00						
Township of Normanby	"						20,000 00						
Township of Bentinck	"						80,000 00						
" Brant.....	"						65,000 00						
" Elderslie	"						20,000 00						
" Arran	"						45,000 00						
" Anabel	"						45,000 00						
" Keppel	"						43,000 00						
" Albemarle	"						32,000 00						
Town of Mount Forest	"						10,000 00						
Township of Egremont	"						22,000 00						
Township of Glenelg	"						60,000 00						
Town of Durham.....	"						20,000 00						
							32,000 00					929,000 00	
Town of Owen Sound	Grand Trunk, Owen Sound Branch.						75,000 00						
Township of Sarawak	"						7,500 00						
" Keppel.....	"						3,000 00					85,500 00	
City of Belleville	Grand Junction and Belleville.....						150,000 00						
Village of Sterling	" & N. Hastings Ry.						5,000 00						
Township of Rawdon	"						15,000 00						
" Seymour	"						35,000 00						
" Percy	"												
" Asphodel	"						8,000 00					50,000 00	
City of Guelph	Guelph Junc. leased to Can. Pac. R.											213,000 00	
County of Frontenac	Kingston and Pembroke						170,000 00						
City of Kingston	"						318,000 00					193,000 00	
Village of Renfrew.....	"						3,000 00						
												491,000 00	

50,000 00
193,000 00

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City of Hamilton.....	Hamilton and North-western.....	99,733 00	
Village of Georgetown.....	" ".....	11,289 00	
County of Peel.....	" ".....	30,974 00	
" Simcoe.....	" ".....	354,007 00	
Town of Collingwood.....	" ".....	12,084 00	
Township of Innisfil.....	" ".....	22,592 00	
Woodhouse.....	" ".....	20,740 00	
" Adajala ..	" ".....	2,500 00	
" Essa.....	" ".....	2,500 00	
" Tossoronto ..	" ".....	10,000 00	
" Mulmur.....	" ".....	5,000 00	
Village of Alliston.....	" ".....	8,000 00	
Township of Nottawasaga.....	" ".....	20,386 00	599,805 00
Interprovincial Bridge at Ottawa.....	City of Ottawa.....	.....	150,000 00
Township of South Colchester.....	Lake Erie and Detroit River.....	20,000 00	
" Gosfield.....	" ".....	15,000 00	
Village of Kingsville.....	" ".....	10,000 00	
Township of Romney.....	" ".....	10,000 00	
" East Tilbury.....	" ".....	5,000 00	
" Raleigh.....	" ".....	10,000 00	
Village of Bleauheim.....	" ".....	5,000 00	
" Ridgetown.....	" ".....	12,500 00	87,500 00
Township of East Gwillimbury.....	Lake Simcoe Junction (in Grand Trunk system).....	45,000 00	
" North.....	" ".....	20,000 00	
" Georgina.....	" ".....	20,000 00	
" Whitechurch.....	" ".....	15,000 00	
Village of Leamington.....	Leamington and St. Clair, in Canada Southern.....	12,000 00	100,000 00
Township of Mersea.....	" ".....	15,000 00	
Village of Comber.....	" ".....	6,000 00	
Township of London.....	London, Huron and Bruce (now in Grand Trunk system).....	15,000 00	33,000 00
" Stephen.....	" ".....	17,500 00	
" Osborne.....	" ".....	25,000 00	
" Hay.....	" ".....	15,000 00	
" Goderich.....	" ".....	15,000 00	
" East Wawanosh.....	" ".....	25,000 00	
" Hallet.....	" ".....	25,000 00	
" Tuckersmith.....	" ".....	10,000 00	
" Turnberry.....	" ".....	5,000 00	
" Morris.....	" ".....	10,000 00	
" Stanley.....	" ".....	10,000 00	
Village of Clinton.....	" ".....	20,000 00	
" Exeter.....	" ".....	10,000 00	

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" Hagarty.	"	"	"	"	2,000 00	32,000 00
Town of Arnprior.....	"	"	"	"	152,900 00	30,000 00
Town of Pembroke.....	Pembroke Southern,	"	"	"	20,000 00	
Port Arthur.....	Port Arthur, Duluth and Western	"	"	"	40,000 00	
Municipality of Neeshing.....	(now in Canadian Northern).	"	"	"	85,000 00	
Township of Russell.....	Ottawa and New York	"	"	"	10,000 00	
City of Ottawa.....	"	"	"	"	75,000 00	
Town of Simcoe.....	South Norfolk (in Grand Trunk sys-	"	"	"	5,000 00	
Township of Charlotteville.....	tem).	"	"	"	20,000 00	
" " South Walsingham.....	"	"	"	"	40,000 00	
City of Ottawa.....	St. Lawrence and Ottawa.	200,000 00	"	"	65,000 00	60,000 00
Town of Prescott.....	"	100,000 00	"	"		30,000 00
" Gananoque.....	Thousand Islands	300,000 00	"	"	10,000 00	
Township of Bayham.....	Tilsonburg, Lake Erie and Pacific.	"	"	"	35,000 00	
" " Malahide.....	"	"	"	"	4,000 00	
" " Houghton.....	"	"	"	"	3,000 00	
Town of Tilsonburg.....	"	"	"	"	10,000 00	
Village of Vienna.....	"	"	"	"	3,000 00	
City of Toronto.....	Toronto and Nipissing (in Grand	"	"	"	150,000 00	55,000 00
Township of Scarborough.....	Trunk system).	"	"	"	10,000 00	
" " Markham.....	"	"	"	"	30,000 00	
" " Uxbridge.....	"	"	"	"	50,000 00	
" " Scott.....	"	"	"	"	10,000 00	
" " Brock.....	"	"	"	"	50,000 00	
" " Eldon.....	"	"	"	"	44,000 00	
" " Bexley.....	"	"	"	"	15,000 00	
" " Somerville.....	"	"	"	"	15,000 00	
Townships of Laxton, Digby and	"	"	"	"	12,500 00	
Langford.....	"	"	"	"	2,000 00	
Town of Uxbridge.....	"	"	"	"		**376,702 59
Township of Albion.....	Toronto, Grey and Bruce (in Can.	"	"	"	40,000 00	
" " Caledon.....	Pac. system).	"	"	"	45,000 00	
" " Mono.....	"	"	"	"	45,000 00	
" " Ananuth.....	"	"	"	"	30,000 00	
" " Arthur.....	"	"	"	"	35,000 00	
Town of Orangeville.....	"	"	"	"	15,000 00	
" " Mount Forest.....	"	"	"	"	20,000 00	

* Amount returned has realized, balance has lapsed, see return of 1875.

1-2 EDWARD VII., A. 1902

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscriptions to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO—Con.							
City of Toronto.....	Toronto, Grey and Bruce.....	.....	.....	350,000 00	.....	.....	.....
County of Grey (Group).....	" .....	.....	.....	300,000 00	.....	.....	.....
Town of Owen Sound.....	" .....	.....	.....	5,000 00	.....	.....	.....
Township of Minto.....	" .....	.....	.....	15,000 00	.....	.....	.....
" Howick.....	" .....	.....	.....	35,000 00	.....	.....	.....
Townships of Gorrie and Wroxeter.....	" .....	.....	.....	5,000 00	.....	.....	.....
Village of Teeswater.....	" .....	.....	.....	5,000 00	.....	.....	.....
Township of Culross.....	" .....	.....	.....	38,000 00	.....	.....	.....
" Tumbury.....	" .....	.....	.....	5,000 00	988,000 00	.....	.....
Toronto, Hamilton and Buffalo, com- prising Brantford, Waterloo and Lake Erie.....	" .....	.....	.....	25,000 00	.....	.....	.....
City of Brantford.....	" .....	.....	.....	9,000 00	.....	.....	.....
Township of Oakland.....	" .....	.....	.....	5,000 00	.....	.....	.....
" Waterford.....	" .....	.....	.....	225,000 00	.....	.....	.....
City of Hamilton.....	" .....	.....	.....	4,000 00	268,000 00	.....	.....
Township of South Grimsby.....	" .....	.....	.....	.....	.....	.....	.....
Town of Lindsay.....	Victoria (in Grand Trunk sys- tem), .....	.....	.....	85,000 00	.....	.....	.....
Village of Fenelon Falls.....	" .....	.....	.....	25,000 00	.....	.....	.....
Townships of Verulam and Somerville.....	" .....	.....	.....	22,000 00	.....	.....	.....
County of Haliburton.....	" .....	.....	.....	54,000 00	186,000 00	.....	.....
Township of Woolwich.....	Waterloo Junction (in Grand Trunk system), .....	.....	.....	28,000 00	.....	.....	.....
Section of Peel.....	" .....	.....	.....	7,000 00	.....	.....	.....
Village of Elmira.....	" .....	.....	.....	10,000 00	.....	.....	.....
" St Jacobs.....	" .....	.....	.....	2,000 00	47,000 00	.....	.....
Fergus.....	Wellington, Grey and Bruce.....	.....	.....	10,000 00	.....	.....	.....
Peel.....	" .....	.....	.....	40,000 00	.....	.....	.....
Elora.....	" .....	.....	.....	10,000 00	.....	.....	.....
Maryboro'.....	" .....	.....	.....	40,000 00	.....	.....	.....
Nichol.....	"	10,000 00
Wallace.....	"	35,000 00
Minto.....	"	65,000 00
Brace.....	"	278,000 00
Howick.....	"	20,000 00

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Listowel.....	"	15,000 00	682,000 00	1,211,500 00
Grey.....	"	35,000 00	25,000 00	
Elma.....	"	30,000 00		
Morris.....	"	.....	30,000 00		.....
W. Wawanosh.....	"	.....	18,000 00		.....
Ashfield.....	"	.....	10,000 00		.....
Turnbury.....	"	.....	28,000 00		.....
Kincardine.....	"	.....	8,000 00		.....
City of London.....	West Ontario Pacific.....	.....	70,000 00		.....
Town of Whitby.....	Whitby, Port Perry and Lindsay (in Grand Trunk system).....	.....	15,000 00		.....
Township of Whitby.....	"	.....	30,000 00		.....
" Reach.....	"	.....	2,000 00		.....
" Saugoy.....	"	.....	85,000 00		.....
County of Victoria.....	"	.....	20,000 00		.....
Village of Port Perry.....	"	.....	94 93		.....
Manufacturing Co.....	"	.....	980,311 00		.....
QUEBEC.						
Caplin.....	Baie des Chaleurs (now in Atlantic and Lake Superior system).....	.....	5,000 00		.....
New Richmond.....	"	.....	6,000 00		.....
Maria.....	"	.....	6,000 00		.....
Charleton.....	"	.....	6,000 00		.....
Novelle and Shoolbred.....	"	.....	6,000 00		.....
New Carlisle.....	"	.....	6,000 00		.....
Paspébiac.....	"	.....	3,000 00		.....
Hamilton.....	"	.....	2,500 00		.....
Parish of St. Antoine.....	Great Eastern.....	.....	10,000 00	40,500 00	.....
" St. Denis.....	"	.....	10,000 00		.....
Village St. Andrews.....	Ottawa Valley.....	.....		20,000 00	.....
Parliament.....	Canadian Pacific.....	.....		10,000 00	.....
Town of Nicolet.....	Drummond County (now in Interco- lonial Ry.).....	.....	10,000 00	20,000 00	.....
Municipality of St. Leonard.....	"	.....	5,000 00		.....
Suberovois.....	East Richelieu Valley (now in Que- bec Southern).....	.....	2,000 00	15,000 00	.....
Henryville.....	"	.....	4,500 00		.....
Parish of St. Sophie.....	Great Northern of Canada.....	.....	4,000 00	6,500 00	.....
Village of New Glasgow.....	"	.....	2,000 00		.....
Village of St. Elizabeth.....	"	.....	6,000 00		.....
Town of Joliette.....	"	.....	35,000 00	47,000 00	.....

1-2 EDWARD VII., A. 1902

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscriptions to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>QUEBEC—Concluded.</i>							
City of Three Rivers.....	Lower Laurentian (in Great North- ern).				25,000 00		
City of Quebec.....	(Great Northern of Canada..... International, now in Atlantic and North-west, C.P.R.)						200,000 00
County of Compton.....	Missisquoi & Black Riv. Valley, now in Atlantic & North-west, C.P.R.					25,000 00	225,000 00
Township of Melbourne and Bromp- ton Gore.....	"					25,000 00	
Township of Ely.....	"					25,000 00	
Township of North Stukely.....	"					25,000 00	
" Bolton.....	"					25,000 00	100,000 00
St. Pie.....	Lake Champlain and St. Lawrence-J (leased to Montreal and Atlantic Ry.)			20,000 00			
L'Ange Gardien.....	"			10,000 00			
St. Paul.....	"			6,000 00			
Phillipsburg.....	"			15,000 00			
Town of L'Assomption.....	L'Assomption.				51,000 00		
Ascot.....	Massawippi Valley.				1,500 00	40,000 00	
Hatley.....	"					25,000 00	
Ormstown.....	Montreal & Champlain Junction— (Grand Trunk)						
St. Constant.....	"			10,000 00			
Ste. Thelme.....	"			1,800 00			
Laprairie.....	"			2,820 00			
Huntingdon.....	"			1,904 00			
St. Isidore.....	"			3,000 00			
Dewittsville.....	"			1,500 00			
	"			750 00			
Municipality of Rigaud.....	Montreal and Ottawa.			2,000 00			21,774 00
Parish of Rigaud.....	"			800 00			
Point Fortune.....	"			2,500 00			
Chambly Canton.....	Montreal and Province line, formerly Montreal, Portland and Boston.			15,000 00			5,300 00
" Basin.....	"			10,000 00			25,000 00

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County of Pontiac Village of Shawville	Pontiac Pacific Junction	100,000 00 1,000 00	
City of Sherbrooke	Quebec Central	50,000 00	101,000 00
Parish of Dudswell	"	25,000 00	
" Weedon	"	25,000 00	
Township of Garthby	"	3,000 00	
City of Quebec	Quebec Bridge		103,000 00
City of Quebec	Quebec and Lake St. John		300,000 00
Town of Chicoutimi	"		
City of Montreal	Quebec, Montreal, Ottawa and Océanidal		12,090 00
" Quebec		1,000,000 00	
" Three Rivers	"	1,000,000 00	
" "	"	100,000 00	
County of Ottawa	"	200,000 00	
St. Sauveur de Quebec	"	25,000 00	
Côte St. Louis	"	25,000 00	
Village of Ste. Therese	"	12,000 00	
Parish of "	"	12,000 00	
" St. Jerome	"	10,000 00	
Village "	"	15,000 00	
Ste. Scholastique	"	10,000 00	
St. Andrews	"	25,000 00	
St. Jerusalem d'Argenteuil	"		
County of Bromont	South-eastern (now Montreal and Atlantic).	2,434,000 00	25,000 00
Township of Bromont	"		
" Sutton	"		
" Potton	"		
" Farnham	"		
Village of West Farnham	"		
" East	"		
" Waterloo	"		
" Drummondville	"		
County of Drummond	"		
Township of Wickham	"		
" St. Germain	"		
Township of Sorel	"		
Village of Actonville	"		
" Roxton Falls	"		
Township of Roxton	"		
" Shefford	"		
" West Wickham	"		
City of Sorel	"		
Fraserville	South Shore, formerly Mont. & Sorel		
	Tenurescounta		
		2,434,000 00	879,574 00
			528,000 00
			1,568,000 00

1-2 EDWARD VII., A. 1902

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—*Concluded.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
NEW BRUNSWICK.							
Hillsboro', Hopewell and Harvey Parishes	Albert, now Salisbury and Harvey			40,000 00			70,000 00
Coverdale, Hillsboro', Hopewell and Harvey Parishes	"			30,000 00			40,000 00
City of St. John	Canadian Pacific			50,000 00			80,000 00
" Fredericton	"			30,000 00			
County of York	"						
Parish of St. George	Grand Southern, now Shore Line			2,000 00			3,000 00
" Pennfield	"			500 00			
Leppau	"			500 00			
Town of Fort Fairfield	New Brunswick.			12,000 00			23,000 00
" Lyndon	"			11,000 00			
City of Calais	New Brunswick and Canada			12,500 00			47,500 00
" Horton	"			22,000 00			20,000 00
" St. Stephen	"			13,000 00			13,000 00
County of Northumberland	Northern and Western of New Brunswick, now Canada Eastern.						5,000 00
Parish of Elgin	Elgin and Havelock						
Town of Campbellton	Restigouche and Western.						
City of St. John	St. John and Maine						60,000 00
NOVA SCOTIA.							
County of King	Cornwallis Valley, (now in Dominion Atlantic)						301,500 00
Counties of Yarmouth, Digby and Annapolis	Western Counties, Yarmouth and Annapolis (now in Dominion Atlantic)						27,685 00
Town of Truro	Midland of N.S., formerly Stewiacke Valley and Lansdowne						150,000 00
							30,000 00

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County of Pictou.....	New Glasgow Iron, Coal and Railway Co., (now Nova Scotia Steel Co's Ry.).....	4,000 00
" Shelburne.....	" Nova Scotia Southern.....	.....	.....	50,000 00	
" Queen's.....	" ".....	.....	.....	25,000 00	
" Lunenburg.....	" ".....	.....	.....	5,000 00	
County of Lunenburg.....	Central, Nova Scotia.....	.....	.....	.....	80,000 00
County of Argyle.....	Halifax & Yarmouth.....	.....	.....	.....	88,874 17
County of Inverness.....	Inverness & Richmond.....	.....	.....	.....	5,000 00
					100,000 00
					485,559 17
MANITOBA.					
City of Winnipeg.....	Canadian Pacific.....	.....	.....	200,000 00	
County of Selkirk.....	" ".....	.....	.....	35,000 00	
Township of St. Andrews.....	" ".....	.....	.....	35,000 00	
Town of Morris.....	" ".....	.....	.....	100,000 00	
County of Westbourne.....	Manitoba and North-western.....	.....	.....	.....	370,000 00
Town of Portage la Prairie.....	" ".....	.....	.....	75,000 00	
" Minnedosa.....	" ".....	.....	.....	50,000 00	
Municipality of Shoal Lake.....	" ".....	.....	.....	30,000 00	
" Birdie.....	" ".....	.....	.....	20,000 00	
" Strathclair.....	" ".....	.....	.....	40,000 00	
Rapid City.....	Saskatchewan and Western.....	.....	.....	600 00	
					215,600 00
					10,000 00
					595,600 00
City of New Westminster.....	Canadian Pacific.....	.....	.....	.....	37,500 00
BRITISH COLUMBIA.					
City of New Westminster.....	Canadian Pacific.....	.....	.....	.....
NORTH-WEST TERRITORIES.					
Calgary.....	Canadian Pacific.....	.....	.....	.....	25,000 00
Total aid granted by municipalities.		3,414,311 00	.....	.....	12,831,500 00

NOTE.—For statement of payments of Municipal Aid granted to Railway—See No. 1 Summary statement of Capital.

1-2 EDWARD VII., A. 1902

No 10.—SUMMARY STATEMENT of aid granted to Steam Railways constructed and under construction by Governments and Municipalities, June 30, 1901.

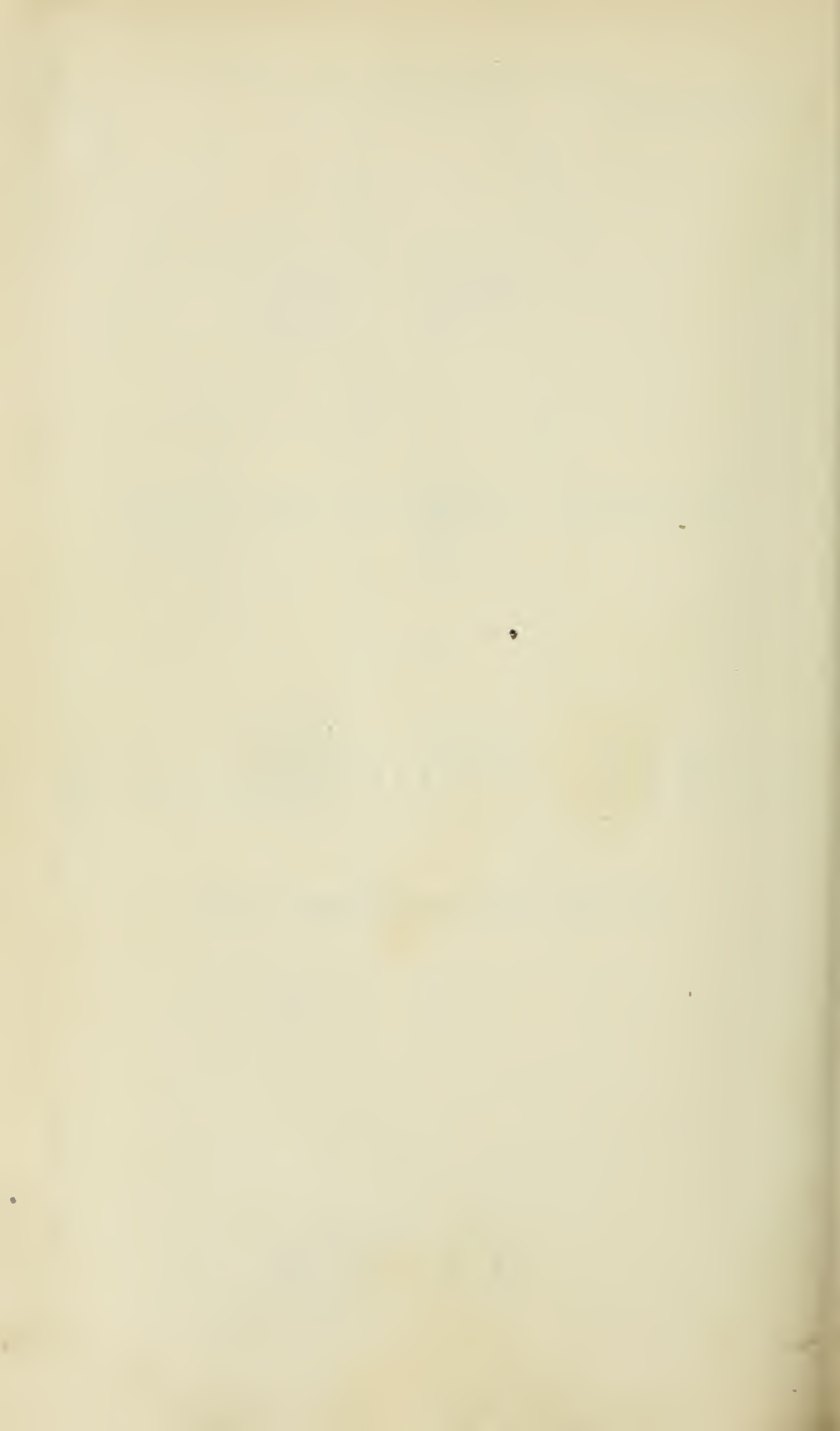
	Loan.	Total.	Bonus.	Total.	Subscription to shares or Bonds.	Total.	Grand Total.
	£	cts.	£	cts.	£	cts.	£
<i>Governments.</i>							
Dominion.....	15,964,533 65		158,536,736 31				174,501,269 36
Ontario.....	26,000 00		8,683,578 04				8,709,578 04
Quebec.....	3,722,956 00		13,977,980 50				17,700,936 50
New Brunswick.....			4,244,439 71		300,000 00		4,544,439 71
Nova Scotia.....			2,619,316 53				2,619,316 53
Manitoba.....	900,000 00		941,952 75				1,841,952 75
British Columbia.....		20,613,489 65	37,500 00			300,000 00	37,500 00
				189,041,503 84			209,554,992 89
<i>Municipalities.</i>							
Ontario.....	980,311 00		10,006,353 37		1,211,500 00		12,198,164 37
Quebec.....	2,434,000 00		879,574 00		1,568,000 00		4,881,574 00
New Brunswick.....			301,500 00		60,000 00		361,500 00
Nova Scotia.....			485,539 17				485,539 17
Manitoba.....			535,600 00				535,600 00
British Columbia.....			37,500 00				37,500 00
North-west Territories.....			25,000 00				25,000 00
		3,413,311 00		12,331,086 54		2,839,500 00	18,584,897 54
		24,027,800 65		201,372,590 38		3,139,500 00	228,539,890 43

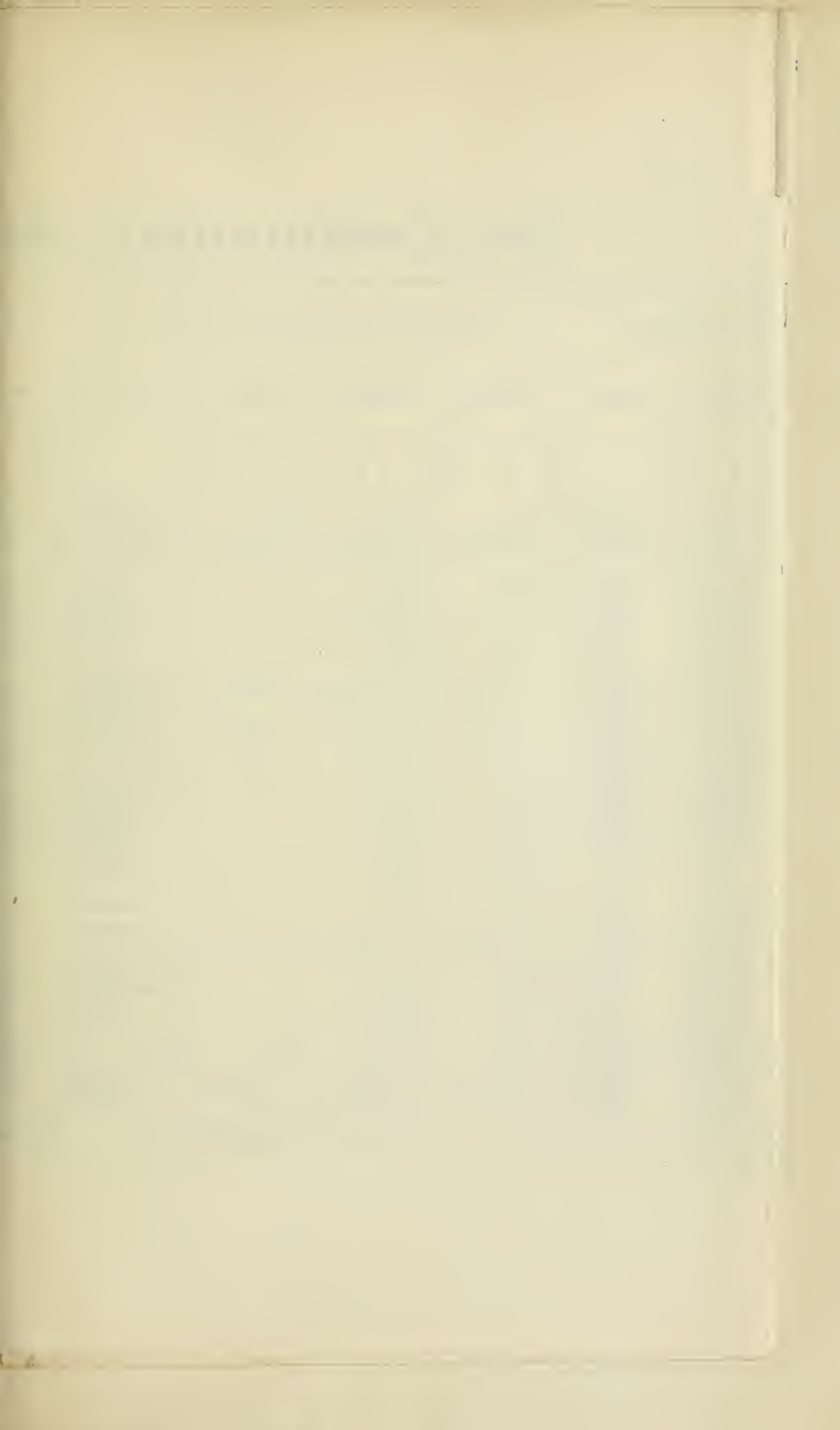
ELECTRIC RAILWAY STATISTICS

OF THE

DOMINION OF CANADA

FOR THE YEAR ENDED JUNE 30, 1901.







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ELECTRIC RAILWAYS.

NOMINAL Capital paid up, June 30, 1901.

	Miles Con- structed.	Ordinary Share Capital.	Preference Share Capital.	Bonded Debt.	Dominion Government Aid.	Municipal Aid.	Capital from other Sources.	Total.
		§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.
Ontario	386 00	10,784,545 96	158,300 00	7,052,427 89	60,800 00	173,000 00	1,138,031 43	19,367,755 28
Quebec	197 20	8,212,900 00	315,000 00	2,736,333 00	.....	.....	690,264 45	11,954,497 45
New Brunswick	12 00	500,000 00	.....	675,000 00	.....	.....	.....	1,175,000 00
Nova Scotia	10 43	805,450 00	.....	600,000 00	.....	.....	.....	1,405,450 00
Manitoba	18 00	895,170 00	.....	1,000,000 00	.....	.....	.....	1,895,170 00
British Columbia	50 95	1,223,333 00	661,866 00	1,216,666 00	.....	.....	176,280 85	3,278,145 85
	674 58	22,421,448 96	1,135,166 00	13,280,426 89	60,800 00	173,000 00	2,005,176 73	39,076,018 58

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No. 2.—SUMMARY STATEMENT of the different descriptions

Number.	NAME OF ELECTRIC RAILWAY.	Length of Line.		Power Houses.		No. of Motor Cars.		Trailers.	
		Completed.	Under Construction.	With Water Power.	With Steam Power.	Owned.	Hired.	Owned.	Hired.
				Owned.	Owned.				
		Miles.	Miles.						
1	Belleville Traction Co.	2.00							
2	Berlin and Waterloo	3.02				5		2	
3	Brantford Street	5.90			1	10		4	
4	British Columbia	48.30		1	2	*48			
5	Cornwall	6.00			1	8			
6	Galt, Preston and Hespeler	9.00			1	8		3	
7	Guelph	5.50			1				
8	Halifax	8.43							
9	Hamilton and Dundas	7.25				3		3	
10	Hamilton, Grimsby and Beams- ville	23.00			1	9		2	
11	Hamilton Radial	12.00				8		1	
12	Hamilton Street	22.00				64			
13	Hull	13.63		*2		17		4	
14	Kingston, Portsmouth and Cata- raqui	7.40				15			
15	London	28.50			4	31		9	
16	Metropolitan	28.00			2	13		3	
17	Montreal Park and Island	40.88			2	30	8		
18	Montreal Street	103.43			1	*666			
19	Montreal Terminal	14.10			1	17			
20	Nelson Electric Tramway Co.	2.65			*1	3			
21	Niagara Falls Park and River ..	13.68		1	1	25		16	
22	Niagara Falls, Wesley Park and Clifton	4.33				6			
23	Niagara, St. Catharines and Toronto	19.94		1	1	13			
24	Oshawa	8.02		1	1	2		1	
25	Ottawa	23.85		2		96		2	
26	Port Arthur	7.60			1	4			
27	Port Dalhousie, St. Catharines and Thorold	6.82		2		6		2	
28	Quebec Light and Power Co. ... } Quebec City Street Ry. ... }	17.22		1		56			
29	St. John	12.00			1	22			
30	St. Thomas	5.84			1	8		2	2
31	Sandwich, Windsor and Amherst- burg	15.00			1	25			
32	Sarnia	4.50			*1	4		2	
33	Schomberg and Aurora		15.00						
34	Sherbrooke	7.75				10			
35	Toronto and Mimico	5.87			*1	9			
36	Toronto and Scarboro	5.07				4			
37	Toronto Street	89.10			1	*425		219	
38	Toronto Suburban	7.50			1	5			
39	Winnipeg	18.00				46		16	
40	Woodstock, Thames Valley and Ingersoll	9.50	2.50		1	5			
41	Yarmouth	2.00				2			
		674.58	17.50	11	30	1,728	8	291	2

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of Rolling Stock, for the Year ended June 30, 1901.

Electric Locomotives.		No. of Baggage, Mail and Express Cars owned.	No. of Cattle and Box Freight Cars owned.	No. of Platform Cars owned.	No. of Tool Cars owned.	No. of Snow Ploughs owned.	No. of Snow Sweepers owned.	Number.	Remarks.
Owned.	Hired.								
								1	Not in operation. Return very imperfect. Road passed into hands of creditors Sept., 1901, and closed down.
					1		1	2	Power furnished by Berlin Gas Co.
						1		3	
		3					1	4	* Including trailers. This return from March 31, 1900, for year ended March 31, 1901.
1				2		1	1	5	
			1	1			1	6	
								7	Number of cars not given : imperfect return
1								8	"
								9	"
2			3	3			1	10	
				2				11	
							2	12	
2		1				2	1	13	* 1 rented.
			1					14	Imperfect return.
							1	15	
		2		5				16	
						1	2	17	
				16	3	2	19	18	* Includes 1 official car.
1				2		2		19	
								20	* One substation-electric power.
		1		2				21	
								22	
	1	1	1	15		1		23	
		1		1			1	24	
1		3			* 1		7	25	* Salt car.
					2			26	
								27	From May 9, 1901, to June 30, 1901.
							8	28	
							2	29	
						1		30	
							1	31	
		1						32	* Rented.
								33	Under construction.
						1		34	
								35	* Rented.
								36	2 15 miles not in operation. Imperfect return.
			1	2		2	12	37	* Includes 1 official car.
							1	38	
							1	39	
								40	
				5		1		41	
8	1	13	7	56	7	16	62		

1-2 EDWARD VII., A. 1902

No. 3.—SUMMARY STATEMENT of Characteristics of Electric

Number.	Name of Electric Railway.	Length of Line.				Length of Siding.	Weight per Yard.		No. of Ties to mile.
		Completed. (Rails laid.)	Under construction.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.	
1	Belleville Traction Co	2·00		25	1 75		40	60 & 65	....
2	Berlin and Waterloo.	3·02			3 02			45, 60, 65	2640
3	Brantford Street	5·90			5·90			40 & 56	1760
4	British Columbia	48·30			48 30			25 to 108	2640
5	Cornwall.....	6·00			6 00	50		56	....
6	Galt, Perston and Hespeler	9·00		4 50	4 50	1 00	56	56	2112
7	Guelph.....	5·50			5·50	33		56 & 60	....
8	Halifax	8·43			8·43	56		60 & 80	....
9	Hamilton and Dundas.....	7·25			7 25			60	2600
10	Hamilton, Grimsby and Beamsville.....	23·00			23 00			50-65	2347
11	Hamilton Radial	12·00			12 00	50		65	2640
12	Hamilton Street	22·00			22 00			60	2640
13	Hull	13·63			13·63	2 00		56	2640
14	Kingston, Portsmouth and Cataraqui	7·40			7 40				2640
15	London St.....	28·50			28 50				2640
16	Metropolitan	28·00			28 00	2 00		66	2600
17	Montreal Park and Island.....	40·88			40 88	98		56	2640
18	Montreal Street	103·43			103·43	2 16		56 to 90	2640
19	Montreal Terminal	14·10			14 10			56 & 65	2640
20	Nelson Electric Tramway Co	2·65			2 65			45 & 60	2600
21	Niagara Falls Park and River.....	13·68			13 68	89		56	2640
22	Niagara Falls, Wesley Park and Clifton.....	4·33			4 33			60	2600
23	Niagara, St. Catharines and Toronto	19·94			19 94	2 15		56	2640
24	Oshawa	8 02			8 02			64	2640
25	Ottawa.....	23·85			23 85				2630
26	Port Arthur.....	7 60			7 60	13		42	2640
27	Port Dalhousie, St. Catharines and Thorold	6·82			6 82			50	....
28	Quebec Light and Power Co. } Quebec City Street Railway. }	17·22			17 22			56 & 72	....
29	St. John	12·00			12 00			74	2464
30	St. Thomas	5·84			5 84	38		65	2640
31	Sandwich, Windsor and Amherstburg.....	15·00			15 00			56	1800
32	Sarnia	4 50			4 50	23		45, 56 & 66	2113
33	Schomberg and Aurora		15 00						....
34	Sherbrooke.....	7·75			7 75			60	2000
35	Toronto and Mimico.....	5·87			5 87	38		56	....
36	Toronto and Scarboro.....	5·07			5 07			56	....
37	Toronto Street	89·10			89 10			56 to 84	....
38	Toronto Suburban	7 50			7 50			56 & 72	....
39	Winnipeg.....	18 00			18 00			56	2640
40	Woodstock, Thames Valley and Ingersoll.....	9·50	2 50		9 50			56, 65	2112
41	Yarmouth	2·00			2 00			47
		674·58	17 50	4 75	669·83	14 19		

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Railways for the Year ended June 30, 1901.

Nature of Rail Fastening.	No. of Level crossings		No. of overhead bridges.	Height of overhead bridges above rail level.	Level crossings of other Railways.	No. of junctions with other Railways.	No. of junctions with Branch Lines.	Radius of sharpest curve.	No. of feet per mile of heaviest gradient.	Gauge of Railway.	Number.	Remarks.
	Guarded.	Not Guarded.										
								Ft.				
Plain fish plates.	2				2			40	209	4'8 $\frac{1}{2}$	1	Not in operation. Return
Fish plates					4			30	253	4'8 $\frac{1}{2}$	2	very imperfect; road passed
											3	into hands of creditors, Sept., 1901, and closed down.
Fish plates and angle bars.					4			27	630	4'8 $\frac{1}{2}$	4	This return from March 31,
Fish plates and bolts.								50	100	4'8 $\frac{1}{2}$	5	1900, for year ended Mar.
Plain fish plates.		3			1	1		72	264	4'8 $\frac{1}{2}$	6	31, 1901.
					1			64	396	4'8 $\frac{1}{2}$	7	
											8	1'58 miles double track.
Angle bars.		2	1	14 $\frac{1}{2}$	2	2		38	158	4'8 $\frac{1}{2}$	9	
Fish plates and angle bars.		35			2	1		127	211	4'8 $\frac{1}{2}$	10	
Angle bars.		2	2	16	5			105	158	4'8 $\frac{1}{2}$	11	
Plain fish plates.					3			40	370	4'8 $\frac{1}{2}$	12	10'50 miles double track.
Fish plates.		5	1	22'0	2	2	3	193	264	4'8 $\frac{1}{2}$	13	6'85 miles double track.
Angular fish plates.					1	1				4'8 $\frac{1}{2}$	14	Imperfect return.
	4									4'8 $\frac{1}{2}$	15	11'68 miles double track.
Angle bars		40	1	22'0				383	455	4'8 $\frac{1}{2}$	16	
Angle bars and bolts.	1	23	1	20	3			146	318	4'8 $\frac{1}{2}$	17	Double track, 14'10 miles.
Fish plates and angle bars.				4	29'6	13	4	40	666	4'8 $\frac{1}{2}$	18	Double track, 38'79 miles.
Angle plates.		11			5	1	3	88	26	4'8 $\frac{1}{2}$	19	
Fish plates								60	686	4'8 $\frac{1}{2}$	20	
Standard angle bar plates.	1	16	2	14'0		2	1	115	300	4'8 $\frac{1}{2}$	21	Double track, 11'43 miles.
				22'0								
Continuous rail joints.	1	19			1	2		48	158	4'8 $\frac{1}{2}$	22	
Fish plates		35	2	22	2	2		50	182	4'8 $\frac{1}{2}$	23	
Angle irons.		28			1	1		80	211	4'8 $\frac{1}{2}$	24	
Fish plates and angle bars.	3	2	1	17'0	5	3		35	422	4'8 $\frac{1}{2}$	25	Double track, 18'28 miles.
Fish plates		1			1			30	2	4'8 $\frac{1}{2}$	26	
"		25	2	25'0	1	1	1	66	334	4'8 $\frac{1}{2}$	27	From May 9, 1901, to June 30, 1901.
Plain and angle fish plates.	2				2			35	75	4'8 $\frac{1}{2}$	28	
Angle bars and bolts.					1			40	475	4'8 $\frac{1}{2}$	29	
Angle plates.					4			45	264	4'8 $\frac{1}{2}$	30	
Fish plates									106	4'8 $\frac{1}{2}$	31	
"					1					4'8 $\frac{1}{2}$	32	
Fish plates										4'8 $\frac{1}{2}$	33	Under construction.
					2			60	739	4'8 $\frac{1}{2}$	34	
								65	264	4'10 $\frac{1}{2}$	35	Imperfect return.
								65	264	4'10 $\frac{1}{2}$	36	2'15 miles not in operation ; imperfect return.
								40	264	4'10 $\frac{1}{2}$	37	44'40 miles double track ; imperfect return.
					2	1		35	412	4'10 $\frac{1}{2}$	38	
Fish plates								40		4'8 $\frac{1}{2}$	39	
Fish plates and bolts.			1	15				50	6	4'8 $\frac{1}{2}$	40	
Fish plates	1				1					4'8 $\frac{1}{2}$	41	Imperfect return.
	17	247	20		74	24	8					

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No. 4. SUMMARY STATEMENT of the Operations of the

Number.	Name of Electric Railway.	Mileage	TRAIN MILEAGE.			Locomotive Mileage.
			Passenger Cars.	Freight Cars.	Total Car Mileage.	
1	Belleville Traction Co.	2'00				
2	Berlin and Waterloo.	3'02	73,820		73,820	
3	Brantford Street	5'90	200,000		200,000	
4	British Columbia.	48'30	1,412,486		1,412,486	
5	Cornwall.	6'00	144,728	7,494	152,222	
6	Galt, Preston and Hespeler.	9'00	71,000	11,500	82,500	
7	Guelph	5'50	195,300	500	195,800	
8	Halifax	8'43	612,149		612,149	
9	Hamilton and Dundas.	7'25	70,889		70,889	
10	Hamilton, Grimsby and Beamsville.	23'00	232,024		232,024	
11	Hamilton Radial.	12'00	192,740		192,740	
12	Hamilton Street.	22'00	1,191,261		1,191,261	
13	Hull	13'63	353,923	19,420	373,343	19,420
14	Kingston, Portsmouth and Cataraqui.	7'40	96,011		96,011	
15	London	28'50				
16	Metropolitan	28'00	250,000		250,000	
17	Montreal Park and Island.	40'88	659,397		659,397	
18	Montreal Street.	103'43	10,491,387		10,491,387	
19	Montreal Terminal.	14'10	218,836	12,862	231,698	
20	Nelson Electric Tramway Co.	2'65	85,000		85,000	
21	Niagara Falls Park and River.	13'68	277,302		277,302	
22	Niagara Falls, Wesley Park and Clifton.	4'33				
23	Niagara, St. Catharines and Toronto.	19'94	183,600	21,900	205,500	21,900
24	Oshawa	8'02	42,471	9,450	51,921	
25	Ottawa	23'85	2,253,092		2,253,092	
26	Port Arthur.	7'60	71,000		71,000	
27	Port Dalhousie, St. Catharines and Thorold.	6'82				
28	Quebec Light and Power Co.					
	Quebec City Street Ry.	17'22	1,089,450		1,089,450	
29	St. John.	12'00	445,667		445,667	
30	St. Thomas	5'84				
31	Sandwich, Windsor and Amherstburg.	15'00				
32	Sarnia	4'50	82,632		82,632	
33	Sherbrooke.	7'75				
34	Toronto and Mimico.	5'87	165,557		165,557	
35	Toronto and Scarborough	2'92	99,256		99,256	
36	Toronto Street	89'10	9,292,020		9,292,020	
37	Toronto Suburban.	7'50	76,059		76,059	
38	Winnipeg	18'00	1,019,086		1,019,086	
39	Woodstock, Thames Valley and Ingersoll.	9'50	19,485		19,485	
40	Yarmouth	2'00				
		672'43	31,667,628	83,126	31,750,754	41,320

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Year and Mileage, for the Year ended June 30, 1901.

Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs., Handled.	Average Rate of Speed of Passenger Cars. Miles per Hour.	Average Rate of Speed of Freight Cars. Miles per Hour.	Number.	Remarks.
				1	Not in operation now. Return very imperfect.
302,400		7		2	Road passed into hand of creditors, Sept.,
260,514		8		3	1901. and closed down.
5,336,310		8		4	This report from March 31, 1900, for year ended March 31, 1901.
241,944		12	5	5	
250,168	21,231	10	6	6	
300,158				7	
2,968,811				8	
259,203	1,100	14		9	
278,507	3,618	15	12	10	
464,810	1,220	25		11	
3,693,677		12		12	
533,328	111,691	25	20	13	
653,171				14	
				15	Imperfect return.
424,924	800	20		16	
1,275,498	33,000	15		17	
45,833,652		8		18	
348,310	18,435	20	20	19	
110,000		10		20	
668,699		9		21	
226,110		8		22	Imperfect return.
253,845	52,996	20		23	
110,800	43,835			24	
7,469,304		8		25	
242,673		15		26	
				27	Imperfect return.
3,715,675		8		28	
1,710,223		8		29	
310,725				30	Imperfect return.
				31	Imperfect return.
295,166		8		32	
550,000		15		33	Imperfect return.
379,345				34	
288,232				35	
37,620,583				36	
335,962		9		37	
3,196,489				38	
25,440		12		39	
				40	Imperfect return.
120,934,656	287,926				

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No. 5.—SUMMARY STATEMENT of Description of Freight

Number.	NAME OF ELECTRIC RAILWAY.	Mileage.	Flour.		Grain.		Live Stock.	
			Barrels.	Tons.	Bushels.	Tons.	No.	Tons.
1	Belleville Traction Co.	2 00						
2	Berlin and Waterloo	3 02						
3	Brantford Street	5 90						
4	British Columbia	48 30						
5	Cornwall	6 00						
6	Galt, Preston and Hespeler	9 00	9,000	900	12,000	360	250	100
7	Guelph	5 50						
8	Halifax	8 43						
9	Hamilton and Dundas	7 25						
10	Hamilton, Grimsby and Beamsville	23 00			1,600	48		
11	Hamilton Radial	12 00	50	5	1,800	30		
12	Hamilton Street	22 00						
13	Hull	13 63	56,390	5,700	367,308	10,556	9,185	1,227
14	Kingston, Portsmouth and Cataraqui	7 40						
15	London	28 50						
16	Metropolitan	28 00						
17	Montreal Park and Island	40 88						
18	Montreal Street	103 43						
19	Montreal Terminal	14 10					50	15
20	Nelson Electric Tramway Co.	2 65						
21	Niagara Falls Park and River	13 68						
22	Niagara Falls, Wesley Park and Clifton	4 35						
23	Niagara, St. Catharines and Toronto	19 94	3,724	376	11,060	237		
24	Oshawa	8 02	2,480	248	56,655	1,558	1,273	509
25	Ottawa	23 85						
26	Port Arthur	7 60						
27	Port Dalhousie, St. Catharines and Thorold	6 82						
28	Quebec Light and Power Co. Quebec City Street Railway	17 22						
29	St. John	12 00						
30	St. Thomas	5 84						
31	Sandwich, Windsor and Amherstburg	15 00						
32	Sarnia	4 50						
33	Sherbrooke	7 75						
34	Toronto and Mimico	5 87						
35	Toronto and Scarborough	2 92						
36	Toronto Street	89 10						
37	Toronto Suburban	7 50						
38	Winnipeg	18 00						
39	Woodstock, Thames Valley and Ingersoll	9 50						
40	Yarmouth	2 00						
		672 43	71,644	7,229	450,423	12,789	10,758	1,851

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Carried, for the Year ended June 30, 1901.

Lumber of all kinds except Firewood.		Firewood.		Manufactured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
Feet.	Tons.	Cords.	Tons.	Tons.	Tons.	Tons.		
.....	1	Not in operation now. Return very imperfect. Road passed into hands of creditors Sept., 1901, and closed down.
.....	2	
.....	3	
.....	4	
.....	5	
200,000	500	.....	.....	3,000	16,371	21,231	6
.....	7	No record kept of contents of cars transferred.
.....	100	1,000	1,100	8	
.....	3,570	3,618	9	
73,800	120	.....	.....	.....	1,065	1,220	10
.....	11	
53,818,200	78,228	1,240	1,865	9,871	4,244	111,691	12	
.....	13	
.....	800	800	14	
.....	*33,000	33,000	15	
.....	16	
1,503,272	2,067	2,792	13,561	18,435	17	*Stone.
.....	18	Freight cars switched only, no record kept of weight or contents.
.....	19	
.....	20	
.....	21	
.....	22	
1,274,445	2,843	524	920	9,106	39,514	52,996	23	
2,608,572	4,565	1,022	1,534	10,306	25,115	43,835	24	
.....	25	
.....	26	
.....	27	
.....	28	
.....	29	
.....	30	
.....	31	
.....	32	
.....	33	
.....	34	
.....	35	
.....	36	
.....	37	
.....	38	
.....	39	
.....	40	
59,478,289	88,323	2,786	4,319	35,175	133,240	287,926		

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No. 6.—SUMMARY STATEMENT of Earnings

Number.	Name of Electric Railway.	Mileage.	Passenger	Freight	Mails
			Traffic.	Traffic.	and Express
			\$ cts.	\$ cts.	\$ cts.
1	Belleville Traction Co.	2 00	4,012 97		
2	Berlin and Waterloo.	3 02	12,818 59		545 17
3	Brantford St.	5 90	11,152 03		
4	British Columbia.	48 30	283,044 58		13,454 16
5	Cornwall.	6 00	11,206 42	4,310 24	250 00
6	Galt, Preston and Hespeler.	9 00	15,241 72	8,157 72	
7	Guelph.	5 50	12,584 08	328 15	
8	Halifax.	8 43	135,173 95		
9	Hamilton and Dundas.	7 25	24,731 07	1,559 23	
10	Hamilton, Grimsby and Beamsville.	23 00	40,192 12	7,424 93	2,833 38
11	Hamilton Radial.	12 00	38,345 36	1,730 00	
12	Hamilton Street.	22 00	152,127 15		
13	Hull.	13 03	37,388 60	16,887 11	600 00
14	Kingston, Portsmouth and Cataraqui.	7 40	25,817 10	1,420 00	
15	London.	28 50	125,575 25		
16	Metropolitan.	28 00	57,084 56	3,770 56	2,000 00
17	Montreal Park and Island.	40 88	120,369 36	1,657 99	
18	Montreal Street.	103 43	1,855,656 09		
19	Montreal Terminal.	14 10	34,435 96	3,825 95	500 00
20	Nelson Electric Tramway Co.	2 65	8,640 90		
21	Niagara Falls Park and River.	13 68	71,190 85		79 06
22	Niagara Falls, Wesley Park and Clifton.	4 33	10,174 99		
23	Niagara, St. Catharines and Toronto.	19 94	35,761 61	20,932 13	1,148 99
24	Oshawa.	8 02	6,048 29	22,165 97	1,684 56
25	Ottawa.	23 85	316,210 07	*912 36	4,000 00
26	Port Arthur.	7 60	11,622 93		
27	Port Dalhousie, St. Catharines and Thorold.	6 82	2,443 50		
28	Quebec Light and Power Co. } Quebec City St. Railway. }	17 22	159,126 65		750 00
29	St. John.	12 00	78,421 41		
30	St. Thomas.	5 84	11,716 76		505 32
31	Sandwich, Windsor and Amherstburg.	15 00	45,083 29		
32	Sarnia.	4 50	8,691 89		4,785 35
33	Sherbrooke.	7 75	27,000 00		
34	Toronto and Mimico.	5 87	20,050 36		
35	Toronto and Scarborough.	2 92	9,850 46		
36	Toronto Street.	89 10	1,545,771 43		
37	Toronto Suburban.	7 50	12,626 28		
38	Winnipeg.	18 00	141,466 11		
39	Woodstock, Thames Valley and Ingersoll.	9 50	1,910 83		
40	Yarmouth.	2 00	8,921 78		
		672 43	5,529,687 35	95,082 34	33,135 99

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for the Year ended June 30, 1901.

Other Sources.	Total Gross Earnings.	Total Net Earnings.	Proportion of Earnings to Working Expenses.	Earnings per Car Mile.	Number.	Remarks.
8 cts.	8 cts.	8 cts.	p. c.	Cts.		
.....	4,012 97	-- 801 78	83	.....	1	Not in operation now. Return very imperfect. Road passed into hands of creditors, Sept. 1901 and closed down.
92 25	13,456 01	2,318 41	121	18·23	2	
8,400 32	19,552 35	— 7,412 62	73	9·78	3	
1,200 00	297,698 74	95,098 67	147	21·08	4	This report from March 31, 1900, for year ended March 31, 1901.
656 11	16,422 77	— 7,021 00	70	16·79	5	
363 76	23,763 20	6,700 43	139	28·80	6	
.....	12,912 23	— 454 10	96	6·59	7	
.....	135,173 95	24,608 06	122	22·08	8	
4,300 00	30,590 30	17,140 63	227	43·15	9	
983 43	51,433 86	30,482 56	245	22·17	10	
.....	40,075 36	17,844 88	180	20·79	11	
5,451 64	157,578 79	71,105 03	182	13·23	12	
15,082 96	69,958 67	30,865 78	179	18·74	13	
9,819 64	37,056 74	7,425 98	125	38·60	14	
4,176 31	129,751 56	70,654 91	220	*	15	*No mileage given.
681 31	63,536 43	30,318 63	191	25·41	16	
3,364 53	125,391 88	49,809 54	166	19·02	17	
9,431 25	1,865,087 34	792,444 81	174	17·78	18	
3,531 53	42,293 44	20,224 14	192	18·25	19	
1,675 49	10,316 39	— 15,190 94	40	12·14	20	
15,753 34	87,025 25	41,439 05	191	31·38	21	
.....	10,174 99	3,055 54	143	*	22	*No mileage given.
.....	57,842 73	15,673 13	137	28·15	23	
1,446 97	31,345 79	11,008 78	154	60·37	24	
.....	321,122 43	128,916 35	167	14·25	25	*For switching cars.
119 88	11,742 81	902 95	109	16·54	26	
.....	2,443 50	1,131 20	186	*	27	From May 9, 1901 to June 30, 1901. *No mileage given.
.....	159,876 65	41,972 63	136	14·67	28	
.....	78,421 41	26,621 41	151	17·60	29	
118 99	12,341 07	— 2,072 49	86	*	30	*No mileage given.
.....	45,083 29	13,183 41	141	*	31	*No mileage given.
1,892 66	15,369 90	2,163 53	116	18·60	32	
.....	27,000 00	9,700 00	156	*	33	*No mileage given.
.....	20,050 36	7,958 05	166	12·11	34	
.....	9,850 46	3,145 16	147	9·92	35	
16,108 80	1,561,880 23	739,044 14	190	16·81	36	
375 00	13,001 28	— 545 04	96	17·09	37	
781 37	142,247 48	48,870 12	152	13·96	38	
.....	1,910 83	45 63	102	9·80	39	
4,567 89	13,489 67	4,744 67	154	*	40	*No mileage given.
110,377 43	5,768,283 11	2,333,120 24				

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No. 7.—SUMMARY STATEMENT of Operating

Number.	Name of Electric Railway	Mileage	Maintenance of Line, Buildings, &c.	Working and Repairs of Engines and Power Houses.	Working and Repairs of Cars.
			\$ cts.	\$ cts.	\$ cts.
1	Belleville Traction Co.....	2 00	4,814 75		
2	Berlin and Waterloo	3 02	746 13		630 15
3	Brantford St.	5 90	1,412 50	10,272 41	3,274 55
4	British Columbia..	48 30	17,321 81		21,381 20
5	Cornwall.....	6 00	339 44	6,579 67	
6	Galt, Preston and Hespeler	9 00	1,680 80	7,234 61	
7	Guelph.	5 50	2,081 99	2,678 24	2,059 98
8	Halifax.....	8 43			
9	Hamilton and Dundas.....	7 25	2,180 29	5,663 16	647 73
10	Hamilton, Grimsby and Beamsville.....	23 00	3,782 90	4,844 40	1,511 00
11	Hamilton Radial	12 00	1,740 06	12,336 52	1,731 99
12	Hamilton Street	22 00	1,818 44	21,719 66	6,174 80
13	Hull.....	13 63	5,834 88	832 30	6,791 89
14	Kingston, Portsmouth and Cataraqui.	7 40	862 37		2,726 15
15	London	28 50		34,296 14	3,848 34
16	Metropolitan.....	28 00	4,028 03		25,690 15
17	Montreal Park and Island.....	40 88	9,988 94	22,045 65	10,651 58
18	Montreal Street.....	103 43	153,776 66	+ 198,198 02	157,473 84
19	Montreal Terminal.....	14 10	1,204 57	7,747 20	1,183 60
20	Nelson Electric Tramway Co.....	2 65	1,439 10	9,892 91	2,045 36
21	Niagara Falls Park and River.....	13 68	12,478 36	5,099 64	4,688 86
22	Niagara Falls, Wesley Park and Clifton....	4 33	1,226 48		542 85
23	Niagara, St. Catharines and Toronto.....	19 94	4,927 73	14,185 91	4,178 68
24	Oshawa.....	8 02	2,371 07	7,589 44	984 93
25	Ottawa.....	23 85	28,089 90	9,324 77	+35,687 76
26	Port Arthur.....	7 60	2,105 32	4,171 52	3,525 95
27	Port Dalhousie, St. Catharines and Thorold.	6 82	94 88		361 49
28	Quebec Light and Power Co..... } Quebec City St. Railway..... }	17 22	19,983 52	69,219 16	7,913 76
29	St. John	12 00			
30	St. Thomas.....	5 84	408 80		729 37
31	Sandwich, Windsor and Amherstburg.....	15 00	2,617 04	10,138 20	
32	Sarnia.....	4 50		1,232 00	565 79
33	Sherbrooke.....	7 75	13,500 00		800 00
34	Toronto and Mimico	5 87			
35	Toronto and Scarborough.....	2 92			
36	Toronto St.....	89 10			
37	Toronto Suburban.....	7 50	658 60	4,717 10	5,956 49
38	Winnipeg.....	18 00	6,467 48	26,283 11	9,442 07
39	Woodstock, Thames Valley and Ingersoll...	9 50	59 58		
40	Yarmouth.....	2 00	850 00	5,800 00	100 00
		672 43	310,892 42	502,101 74	322,700 31

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Expenses for the year ended 30th June, 1901.

General Operating Expenses.	Total.	Cost of Operating per Car Mile.	Number.	Remarks.
\$ cts.	\$ cts.			
.....	4,814 75	.....	1	Not in operation now; return very imperfect; road passed into hands of creditors, Sept., 1901, and closed down.
9,761 32	11,137 60	15·09	2	
12,005 51	26,964 97	13·48	3	
163,897 06	202,600 07	14·34	4	This report, from March 31, 1900, for year ended March 31, 1901.
16,524 66	23,443 77	15·40	5	
8,147 36	17,062 77	20·68	6	
6,546 12	13,366 33	6·83	7	
110,565 89	110,565 89	18·06	8	Imperfect return.
4,958 49	13,449 67	18·97	9	
10,813 00	20,951 30	9·03	10	
6,421 91	22,230 48	11·53	11	
56,760 86	86,473 76	7·26	12	
25,633 82	39,092 89	10·47	13	
26,042 24	29,630 76	30·86	14	
20,952 17	59,096 65	*	15	* No mileage given.
3,499 62	33,217 80	13·29	16	
32,896 17	75,582 34	11·46	17	
563,194 01	1,072,642 53	10·22	18	† Including electric plant at power station.
11,933 93	22,069 30	9·53	19	
12,129 96	25,507 33	30·01	20	
23,319 34	45,586 20	16·44	21	
5,350 12	7,119 45	*	22	* No mileage given.
18,877 28	42,169 60	20·52	23	
9,391 57	20,337 01	39·17	24	
119,703 65	192,206 08	8·53	25	† Including general equipment.
1,037 07	10,839 86	15·27	26	
855 93	1,312 30	*	27	From May 9, 1901, to June 30, 1901. * No mileage given.
20,787 58	117,904 02	10·82	28	
51,800 00	51,800 00	11·62	29	
13,275 39	14,413 56	*	30	* No mileage given.
19,144 64	31,899 88	*	31	* No mileage given.
11,408 58	13,206 37	15·98	32	
3,000 40	17,300 00	*	33	* No mileage given.
12,092 31	12,092 31	7·30	34	Imperfect return.
6,705 30	6,705 30	6·76	35	
822,836 09	822,836 09	8·86	36	
2,214 13	13,546 32	17·81	37	
51,184 70	93,377 36	9·16	38	
1,805 62	1,865 20	9·57	39	
1,995 00	8,745 00	*	40	* No mileage given.
2,299,468 40	3,435,162 87			

1-2 EDWARD VII., A. 1902

No. 8.—SUMMARY of Accidents for

Number.	Name of Electric Railway.	Mileage	Passengers, Employees or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.		At work on or near Track making up Trains.		Putting arms or heads out of Windows.	
				Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1	Brantford Street.....	5.90	{ Passengers.....				1				
2	British Columbia	48.30	{ Others.....								
3	Halifax Electric Tramway Co.....	8.43	{ Passengers.....				7				
4	Hamilton and Dundas....	7.25	{ Passengers.....								
5	Hamilton Radial.....	12.00	{ Passengers.....		3						
6	Hamilton Street.....	22.00	{ Passengers.....		22		3				1
7	Kingston, Portsmouth and Cataraqui.....	7.40	{ Others.....								
8	Metropolitan	28.00	{ Others.....								
9	Montreal Terminal	14.10	{ Others.....								
10	Niagara, St. Catharines and Toronto.....	19.94	{ Others.....								
11	Port Arthur.....	7.60	{ Others.....								
12	Quebec City Street.....	17.22	{ Employees.....								
			{ Others.....		1		60				
13	Toronto Railway Co.....	89.10	{ Passengers.....		1		4	1	9		
			{ Employees.....		2						
			{ Others.....								
14	Toronto Suburban.....	7.50	{ Passengers.....								
15	Woodstock, Thames Valley and Ingersoll.....	9.50	{ Others.....								
				....	28	....	75	1	9	....	1

NOTE.—This statement shows the Electric Railways on which accidents have occurred

SESSIONAL PAPER No. 20

the Year ended June 30, 1901.

Coupling Cars.		Collisions or by Trains thrown from Track.		Walking, standing, lying or being on Track.		Explosions.		Striking Bridges.		Other Causes		Totals.		Number.
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
.....	1	.....	.....	.....	.....	.....	.....	1	.....	2	1
.....	1	1	.....	.....	.....	.....	.....	.....	1	1	2
.....	3	.....	.....	.....	.....	.....	.....	.....	10	3
.....	2	.....	.....	.....	.....	.....	.....	.....	2	4
.....	4	.....	.....	.....	.....	.....	.....	.....	4	5
.....	2	21	.....	.....	.....	.....	.....	.....	2	47	6
.....	1	.....	.....	.....	.....	.....	.....	.....	1	7
.....	1	5	.....	.....	.....	.....	.....	.....	1	5	8
.....	1	.....	1	.....	9
.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	10
.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	11
.....	1	1	1	12
.....	1	1	13
.....	17	2	3	7	90	13
.....	14	2	1	2	23	1	57	
.....	41	5	36	1	12	5	90	
.....	1	1	14
.....	1	1	15
.....	15	60	11	77	6	3	43	15	314	

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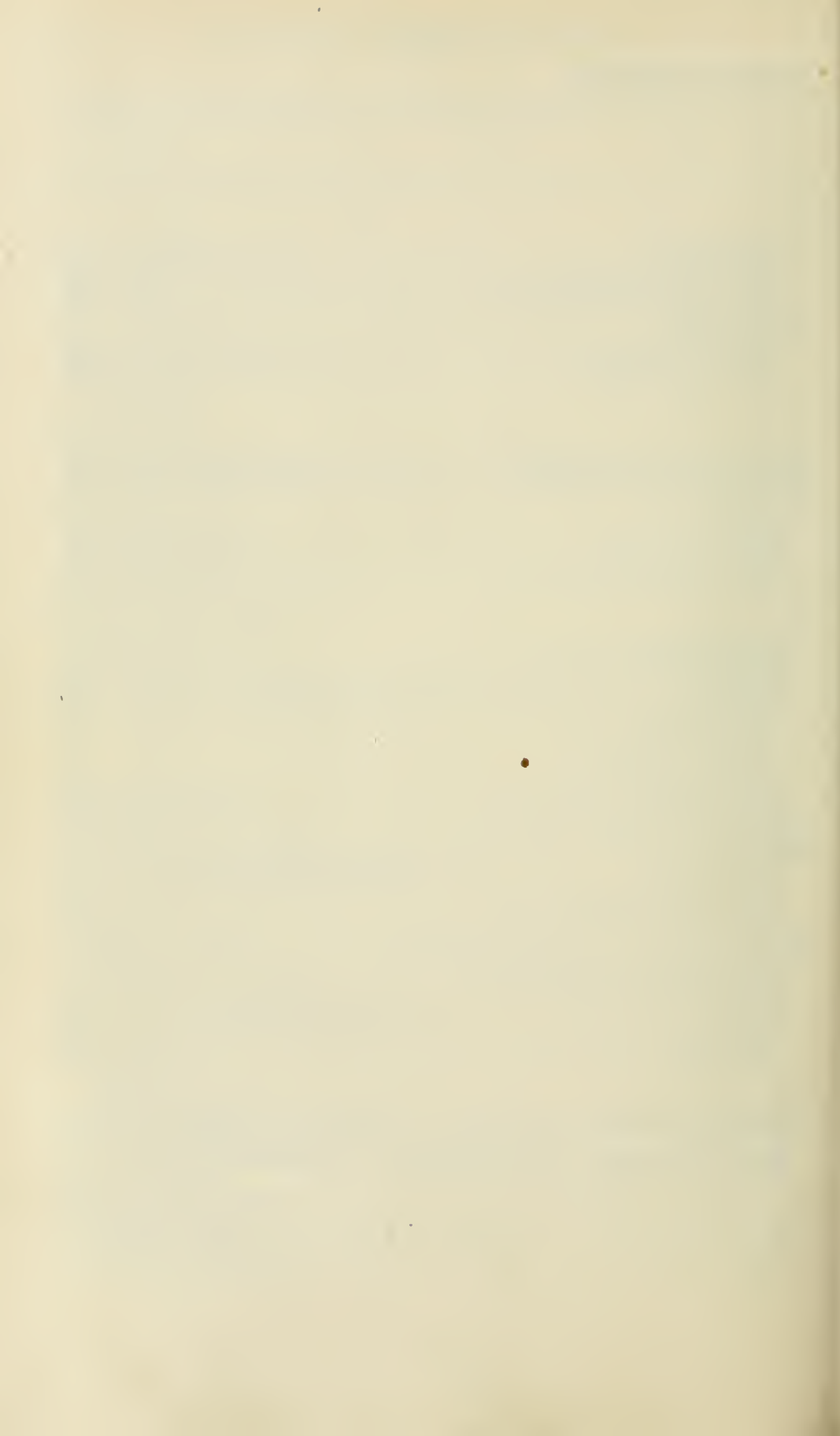
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REPORTS
UPON
RAILWAY COMMISSIONS
RAILWAY RATE GRIEVANCES
AND
REGULATIVE LEGISLATION

BY

Professor S. J. McLEAN, Ph.D., M.A.



OTTAWA

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EXCELLENT MAJESTY

1902

REPORTS
UPON
RAILWAY COMMISSIONS
RAILWAY RATE GRIEVANCES
AND
REGULATIVE LEGISLATION

BY
Professor S. J. McLEAN, Ph.D., M.A.

OTTAWA, ONT., February 10, 1899.

Honourable A. G. BLAIR,
Ottawa, Canada.

SIR,—In accordance with your instructions I beg to submit a Report upon Railway Commissions as applicable to Canada, and showing the regulative policy of other countries.

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

S. J. McLEAN.

THE GENERAL ARGUMENT FOR RAILWAY COMMISSIONS.

In the earlier days of railway construction, the importance of rapid development was such that the question of regulation and control was given scant attention. When attention was devoted to such matters it was tacitly, and in many cases explicitly, assumed that whatever difficulties might arise would be settled by competitive forces. The prices of commodities in general were settled by the operation of the law of supply and demand. The price of railway service would be determined in similar manner. The competition existing prevented prices of commodities in general being exorbitant, the same force it was assumed would exercise a corrective power in regard to the charges for railroad service.

There were few, it is true, who saw at an early time, that transportation problems differed from trade problems, and that the forces which controlled ordinary trade were not present in full force in railroad transportation. Such were, for example, Hon. Mr. Morrison, member in the Imperial Parliament for Inverness, and Mr. Stevenson, the engineer who, in uttering his famous statement 'where combination is possible competition is impossible,' drew attention to some of the limitations attending the application of competitive principles to the transportation question. But to the majority this meant nothing; to the majority there was no transportation problem.

The earlier point of view was that the railroad was under the domination of competitive forces. It was thought that there would be effective competition of different individuals on the roadbed of the railway company, thereby guaranteeing the public interests. The absolute necessity of unified control was not appreciated. The general point of view was that competition would exist on the railway as it did on the canal system. Even when it was seen that this method of control was not effective, the belief in competition was by no means given up. It was hoped that by means of competing lines the regulation of rates would be obtained.

The crucial point in all discussions concerning railway regulations is the rate question. The extreme individualist point of view is that railway rates should be allowed to adjust themselves through the exercise of competitive forces in the same way as the prices of commodities in general. The parallelism between the merchant and the railroad company is inexact. Between merchants there is more effective competition than between railroads. The large amount of capital demanded by railroad construction, added to the question of situation, makes the railroad an economic monopoly. The prices charged under such conditions will be on a monopoly, not on a competitive basis. The presence of different roads to some extent offsets this; but even here the competition is less effective than in ordinary business. There cannot be the same free play of supply and demand. The opportunities for choice between carriers by the shipper are much more limited than are the opportunities for choice by the buyer in ordinary business. The demand is relatively more urgent; the supply in proportion to the demand is less.

It may be urged that the effective way to control rates is through the establishing of competing lines. To a certain extent this is effective. But the limitations must be borne in mind. The competition is not of the same nature as in ordinary business. In railroading it is often the weaker road which forces upon the stronger road ruinous competition. The weaker road, when in a bankrupt condition, has nothing to lose and everything to gain by slashing rates. The restraining influence of solvency is not present. In fairness to railroads which are solvent, regulation of rates through such competition should not be relied upon. Such competition is not for the best interests of the public; through the fluctuations in rates it renders business fluctuating. Again, such competition cannot be relied upon as a constant regulator. The stronger road may be forced, in self-defence, to obtain control of the weaker and bankrupt competitor. Such was the case in regard to the relation between the New York Central and the West Shore. Even were the competing lines equally solvent the dependence upon continuing effective competition is futile. Each road occupies a quasi-monopolistic position. Although competition may exist for a time, yet in the long run the roads will find it more convenient to enter into agreements, formal or informal. The rate wars are not permanent. Recent experience in Canada in connection with the relations between the Grand Trunk and the Canadian Pacific are in point in this connection. The evidence presented to the English Select Committee on railways in 1882 showed that there was no effective competition between roads. They had found it in their interest to enter into agreements (Rept. Evidence Qns. 2,964 & 3,896.)

The argument is often made that the railroad's interests are the interests of the people it serves and therefore the road may always be looked to to adopt the policy which is best for all. Theoretically this essential identity of interest does exist: in practice some limitation must be made. A railway may consider it advantageous to build up one community or one individual at the expense of another. What the railway wants is traffic. If it can obtain this in bulk amount from one community or from one individual instead of from a number of scattered communities or individuals, then its interests are better advanced because it obtains the traffic and at the same time the cost of management and handling is lessened; the net profit is under such conditions greater.

The argument as to unity of interests as a preventive of evils has to face the existence of preferences, discriminations, rebates, and the evil effects of uncontrolled competitive rates. The preferences, discriminations, and rebates are the means whereby the road is enabled to centralize its business and enable it to be more easily handled. As business is organized to-day through rates must be lower proportionately than local rates.

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Otherwise the business would have to be local. The through rate cannot bear the rate the local business can, without substantial harm being done. This, however, is no argument in favour of the position that the local traffic should be unduly discriminated against on the ground that one rate is competitive, while the other is not. Such a rate is required as will best suit the interests of both. The interests of one species of traffic cannot be regarded as the dominant factor. This is a matter not indifferent to the public. The assumed essential unity fails here as in other respects.

If the uncontrolled operation of competitive principles based on self interest cannot settle the question, cannot indeed operate in their entirety, some other method must apply. The matter of regulation has been forced to the front in recent years. 'No general question of government policy occupies at this time so prominent a place in the thoughts of the people as that of controlling the steady growth of and extending influence of, corporate power and of regulating its relations to the public.' (Rpt. of Cul-um Committee of 1885-86, p. 3.)

The opposition to the exercise of government regulation over railroad transportation proceeds on the assumption that railroads are private business organizations, and that such regulation is a violation of private rights. This position is fallacious. It must be remembered that the railway occupies a dual position: it is not only a body organized for gain, but also a corporation occupying a quasi-public position and performing public functions. The distinction was asserted in the control of the government over common carriers. The provisions of the common law do not adequately meet the problems presented by the newer transportation system; it is necessary to supplement them and provide a more effective means of enforcement. The transportation problem is part of the life of the nation. Its management in harmony with the needs of the people is urgent. What the railroad wants is the greatest profit; what the country wants is the greatest good for the country and the most uniform development of its resources. For a further example bearing on the point that these interests are not always in essential harmony the following may be cited. The entire net increase of population, in the period 1870-1890, in Illinois, Wisconsin, Iowa and Minnesota, except in the new section, was in cities and towns possessing competitive rates; all those having non-competitive rates decreased in population. (Stickney, *The Railway Problem*, p. 62.)

The regulative legislation which has been passed in various countries, shows that the unqualified belief in uncontrolled competition as a regulative principle has passed away. Regulation of some sort must exist. In some countries it is exercised through the State owning the railways. In other countries it has been applied through special organizations. The question of regulative control can be met in one of two ways, State ownership or Commission regulation. There is no middle course.

The attempt to regulate such matter through politically organized bodies has not succeeded. The regulation is essentially an administrative function; an intermingling of this with political duties leads to lack of harmony and efficiency. The regulation of the railroad question, in the public interest, demands technical training. It demands all the time of those engaged in such matters. They should be concerned, not only with the settlement of grievances when they arise, but also with an attempt to prevent grievances. The duties of political officials prevent the exercise of such functions. Under a system of private ownership and management of railways, the only efficient method of controlling them in the public interest is through entrusting such matter to an efficiently organized Railway Commission.

REGULATIVE POLICY OF VARIOUS COUNTRIES.

All the civilized countries of the world recognize the necessity of some form of regulative control. On the continent of Europe the question is divided between government ownership and private ownership. Where the former exists the whole matter is manifestly subject to regulation. Where private ownership exists there is also control, in France the initiative in rates comes from the company; the government has a veto upon these rates. 'All tariffs are submitted to the ministry of public works and their acceptance or rejection is determined by a committee, composed of

public and railway officials sitting under the presidency of the minister.' No tariff can be established or changed without such consent. Changes in the tariff must be published for one month before they go into effect. The minister may also conditionally assent to a tariff and may also withdraw such conditional assent at any time he sees fit. Through rates to meet international competition may be established on twenty-four hours' notice both to the minister and to the public. The minister has the right to forbid the introduction of such rates. Established international rates may be lowered, if five days' notice has been given to the minister and no objection has been made by him within that time. An increase in such rate requires three months' notice.

In Italy, changes from the rates in existence at the time the roads were leased to private companies are subject to adoption or rejection by Parliament. Powers of reduction of tariff rates are given to the government provided such reduction does not effect more than one-half of one per cent of the net income.

In Austria the private roads are under rigorous government control. The same holds true in Holland.

In other countries of the continent government ownership is favoured. Their experience is not germane to the discussion.

In Australia the policy of government ownership has been given a thorough-going application. Over £120,000,000 have been expended in the construction of about 12,000 miles of railway. There are only about 500 miles of privately owned railway in Australia.

In Asia, Africa and South America, political exigencies have led to the construction of railroads by the State, or under close relations between the railroad and the State. In Brazil, there has been an attempt for the last two years to dispose of the State railways to private companies.

The precedents which bear most on the problem of regulation in Canada are to be found in the experience of England and of the United States. The extent to which railway development has been carried in both of these countries, the commercial vigour of these nations render their experience most valuable. The policy favoured has been one of private construction and management. Both of these countries have recognized the necessity of regulation. Both have recognized the quasi-public nature of railroads and of their services, and both have placed the regulative control in the hands of tribunals specially organized for this purpose.

ENGLISH POLICY AND EXPERIENCE.

Earlier methods of regulation. In one of the earliest railroad charters granted in England, that of the Liverpool and Manchester railway, (7 Geo. IV., cap. 49), maxima were indicated and it was further provided that when the dividend fell below 10 per cent the rates might be raised; when the dividend exceeded 10 per cent the rates were to be lowered one-twentieth. As time went on a more detailed policy appeared. In 1841 the House of Commons resolved that there should be inserted in all railway bills thereafter a clause stating that the railway was subject to any general law which might be passed. In 1845 preferences were forbidden (7 and 8 Vict., cap. 20, sect. 90).

From 1845 onward people commenced to appreciate the existence of a railway problem. In 1840 a parliamentary committee had reported that competition of carriers on individual lines, these carriers furnishing their own cars and locomotives and paying a toll for the use of the road, which had been relied upon as a regulator of rates, was ineffectual. This committee, of which Sir Robert Peel was a member, contented itself with expressing the belief 'that an enlightened view of their own interests would always compel managers of railroads to have due regard to the general advantage of the public.' In 1844 a committee of which Mr. Gladstone was chairman, reported in favour of ultimate acquisition of the railways by the government. It was considered that this was the only effective means of regulation.

As early as 1840, feeling in favour of some form of a Railway Commission had presented itself. In this year powers, similar to those now possessed by the Massachusetts Railway Commission, were conferred upon the Board of Trade. These were further de-

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fined in 1842. There was not sufficient power given and so this organization was ineffective. In 1844 another commission which was to make reports to parliament on applications for railroad charters was appointed. The board, thus established, was abolished in a year. 'It died of too much work and too little pay.' In 1846 another commission was appointed. In 1851 its powers and duties were transferred to the Board of Trade.

The rule against unreasonable preferences, which had been set forth in the Railway Clauses Consolidation Act of 1845, was reiterated in the Act of July 10, 1854, 'an Act for the better regulation of the tariff on railways and canals.' 'And it was further provided that in the case of connecting lines traffic should be handled and forwarded without unreasonable delay, and that no obstructions were to be placed in the way of continuous lines of communication. It was provided that individuals aggrieved through any violation of the provisions of the Act by a railroad might bring suit' in England to a Court of Common Pleas, in Ireland to a Superior Court, and in Scotland to the Court of Session or to any judge of such court. If the Board of Trade issued a certificate to the Attorney-General in Ireland or England, or to the Lord Advocate in Scotland, alleging a violation of the provisions of the Act it should be lawful for either of these officials to apply to the courts already mentioned to try and determine the matter. If the court found that the provisions of the Act had been contravened, then a writ of injunction might be issued; a penalty of 200 pounds per day was attached to a failure to obey the injunction. This Act established two leading principles of railroad regulation; (1) every company should be compelled to afford the public the full advantages of the convenient interchange of traffic from one line to another; (2) companies were under obligations to, and should, make equal rates to all under the same circumstances.

In terms of the recommendation of 1844 which provided for the acquisition by the State, of the railways, on defined terms, at the end of twenty-one years, 1865 should have been the year for such purchase. A royal commission which was appointed in that year reported against the advisability of exercising the reserved rights of the Government, in this respect; it made no recommendations of importance in connection with the matter of regulation.

The movement for a commission with sufficient powers to handle railway matters had meanwhile been gaining ground. When the Act of 1854, Cardwell's Act, had been drafted it was intended that the questions which arose under it should be decided by the Board of Trade—the powers of the former Commission having been transferred to it. As has been seen the jurisdiction was in reality conferred upon the court of Common Pleas and upon the courts of similar rank in Ireland and Scotland. This threw on the courts the adjudication of many questions of a technical railroad nature; and the courts showed themselves unwilling to grapple with any except the more distinctly legal questions that arose under Cardwell's Act. A committee appointed by Parliament, and which investigated railway conditions during 1865-67, saw this difficulty but made no conclusive recommendation. A committee appointed in 1872 reported that the only way to meet the existing difficulties was by appointing a railway commission with adequate powers.

The more important findings of this committee bearing on the question of regulation are as follows:—

(1) That a system of equal mileage rates or charges in proportion to distance was inexpedient—(a) it would prevent railway companies lowering their fares and rates, so as to compete with traffic by sea or by canal or by a shorter or otherwise cheaper railway, and would thus deprive the public of the benefit of competition, and the company of a legitimate source of profit. (b) It would prevent railway companies making perfectly fair arrangements for carrying at a lower rate than usual goods brought in larger or constant quantities, or for carrying for long distances at a lower rate than for a short distance. (c) It would compel a company to carry for the same rate over a line which has been very expensive in construction, or which, from gradients or otherwise, is very expensive in working, at the same rate at which it carries over less expensive lines.

(2) That the fixing of legal rates based upon the actual cost of the railways and calculated to yield a fair return upon such cost was impracticable.

(3) That the plan of maximum charges had been a failure and that such rates afforded no real protection to the public, since they were always fixed so high that sooner or later it became the interest of the companies to carry at lower rates.

(4) That there should be publicity of rates and tolls.

(5) That a new tribunal was needed to take supervision of the transportation interests of the Kingdom, and with authority to enforce the laws relating to railways and canals, to hear complaints and adjust differences, and to advise Parliament upon questions of railway legislation.

THE RAILWAY COMMISSION.

COMMISSION LEGISLATION.

The Regulation of Railways Act, 1873, provided for the appointment of a railway commission. The provisions of this Act are so important that the following summary of the provisions bearing directly on the question is given. Provision was made for the appointment of three commissioners and not more than two assistant commissioners. The commissioners were to receive a salary of £3,000 per annum. One of the commissioners was to be experienced in the railway business. The commissioners were not to be in any way interested in any railway or canal company, financially or otherwise. If they held investments in such companies at the time of their appointment they were to dispose of them within three months; and if during their tenure of office any such securities came to them by bequest or otherwise, they were to dispose of them within three months. The commissioners were to devote all their time to the duties of the office.

Complaints arising under the Act of 1854 and subsequent Acts, with reference to matters of rates and equal facilities, might come before the Commission either upon the initiative of the party aggrieved or upon a certificate of the Board of Trade alleging that there had been a violation of the Acts in question, or upon complaint of some person authorized to institute proceedings by the Board of Trade. In hearing complaints and in enforcing decisions the Commission was to have the power conferred upon the courts and judges, in regard to such matters, under the Act of 1854, and of issuing similar writs and orders. Except, in so far as the courts were called upon to enforce the decisions of the Commission, they were to cease to exercise the jurisdiction conferred upon them by the Act of 1854.

When a complaint was instituted against a railway or canal company the Commission might before instituting formal proceedings, communicate with such company so that it might make a rejoinder.

Where under any general or special Act provision was made for the reference to arbitration of disputes between railway companies or between canal companies, or between a railway and a canal company, the matter at the instance of one of the parties to the complaint, and with the consent of the commissioners was to be brought before the Commission for determination. In the case of differences between such companies and other parties, the application of the parties as well as the consent of the commissioners was essential.

Power was given to hear and determine matters arising in connection with terminal charges, and to decide what constituted a reasonable terminal charge. Decisions under this head were to be binding on all courts and in all legal proceedings.

The powers in respect to approval of working agreements between railway companies, and of the exercise by railway companies of their powers in relation to steam vessels, which had been conferred upon the Board of Trade by the Railway Clauses Act of 1863 were now transferred to the Commission.

Each railway and each canal company was required to keep, in a book accessible to the public, at each of its stations, all rates charged from that station, including any special rates. The commissioners on the application of any interested party were empowered to direct such company to itemize the charges making up such rates. Violations of this provision are subject to a fine of £5 per day.

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Decisions or orders of the commissioners might be made an order or a rule of any Superior Court and enforced, either by injunction as provided for under the Act of 1854 or in the same manner as any rule or order of such court.

Complaints might be heard by the Commission either in public or in private; on application of a party to the complaint the matter was to be heard in public. On questions of fact their decisions were to be final: on questions of law it was subject to appeal.¹ The Commissioners were to determine which were questions of law and which were questions of fact.

A yearly report was to be made to Parliament. It was to be laid before both Houses of Parliament within fourteen days after the report was made, if Parliament was then in session, if not then within fourteen days after the next meeting of Parliament.

Changes in the Commission.—The Commission so appointed was in the nature of an experiment. It was appointed for five years. At the expiration of its term in 1878, it was continued from year to year. It was found that the Commission was not working as satisfactorily as had been anticipated, and so its working, as well as the rates charged by railways and canals, was investigated in 1882 by a special committee of the House of Commons.

This committee found after a careful investigation that the Commission had been hindered in its work by its temporary character. The Commission notwithstanding this had been of public advantage in that it not only caused justice to be done more speedily in those cases which came before it, but also prevented differences from arising between railway companies and the public. An influence had thus been exerted much greater than that which pertained to its 'hearing and determining' function.

Recommendations of the committee.—That the Commission be made a court of record.

That the powers and jurisdiction of the Commission be extended to cover:—

(a) All questions arising under the special acts or the public statutes, for regulating railway or canal traffic, affecting passengers or goods.

(b) The making of orders which may necessitate the co-operation of two or more railway or canal companies within the statutory obligations of the companies.

(c) Power to order through rates on the application of traders, but no such order is to impose on a railway company a rate lower than the lowest rate of such railway company for similar articles under similar circumstances.

(d) The revision of traffic agreements, both of railways and canals, in as a large measure as the powers formerly exercised by the Board of Trade.

(e) The granting of damages and redress for illegal charges and undue preference.

(f) The commissioners to have power on the joint application of parties to act as referees in rating appeals.

(g) That the railway commissioners should deliver separate judgments when not unanimous.

(h) One appeal to be granted as of right from the decisions of the Commission, and 'prohibition' and the use of 'certiorari' to be forbidden.

Supplementary Legislation.—It was not until 1888 that the Railway Commission was put on a more permanent footing, in that year the 'Act for the better regulation of Railway and Canal Traffic and for other purposes' was passed. (51 & 52 Vict., cap. 25).

The constitution of the Commission was rearranged. It was constituted as a court of record, it was to have an official seal which was to be judicially noticed. In future the Commission was to be composed of two appointed commissioners, who should each receive a salary of £3,000 per annum, and three ex-officio commissioners. The appointed commissioners were to be appointed by Her Majesty on the recommendation of the Board of Trade, and one of them was to be experienced in railway business. They might be removed by the Lord Chancellor for inability or misbehaviour. The provisions of the Act of 1873 requiring that commissioners should not be pecuniarily interested in railway enterprise, were made applicable to the appointed commissioners.

One ex-officio commissioner was to be designated from a superior court in England by the Lord Chancellor, one in Ireland by the Lord Chancellor of Ireland, and one in Scotland by the Lord President of the Court of Session. The term for which they were to be designated was five years. An ex-officio commissioner was not to be required to attend meetings of the Commission outside of the section of the United Kingdom from which he was appointed. In the hearing of any case the ex-officio commissioner presides and his opinion upon any question which in the opinion of the commissioners is a matter of law prevails. When an ex-officio commissioner is unable to attend, the official who in the first place designated such commissioner may designate a judge of a superior court to take his place temporarily. When it appears that owing to the congested state of the court business it is impossible to have one of the judges set aside for this work, then an address may be presented to Her Majesty from both Houses to have an extra judge appointed. When an appointed commissioner is unable to attend, and the case demands speedy decision, the President of the Board of Trade may appoint a temporary commissioner. The central office of the Commission is in London, sittings may be held by the commissioners in any part of the United Kingdom they deem convenient.

Under the Act, the Board of Trade was given a regulative control in so far as determining what corporate bodies may bring complaints. A long list of municipal and corporate organizations is given, and it is stated that if any one of these obtains from the Board of Trade a certificate that it is a proper body to make a complaint before the Commission, it shall be empowered to do so without any proof that it is personally aggrieved.

The province of the Commission's jurisdiction is more carefully delimited. All powers vested in or capable of being exercised by the railway commissioners, either under the Act of 1873 or any other Act, were declared to pertain to the Commission. Provisions in special Acts with reference to traffic facilities, undue preferences, providing of stations, or imposing any obligation in favour of the public, and of the enforcement of these were to be placed under the jurisdiction of the Commission. Where disputes as to the legality of tolls and rates arise the commissioners are to hear and determine the same, and to enforce the payment of such toll, rate or charge, or so much thereof as they deem to be legal. The making and enforcing of orders with reference to reasonable facilities for traffic is in the hands of the Commission. In cases within the jurisdiction of the Commission there may, in addition to or in substitution for any other relief be awarded to any complaining party, who is found to be aggrieved, such damages as the commissioners find him to have sustained. Such damages are not to be awarded unless the complaint has been made to the Commission within a year from the discovery, by the complainant, of the matter complained of. In complaints arising from undue preferences, no action shall be taken by the Commission, where such rates have been published in a rate book as provided for under the Act of 1873, until after the party aggrieved shall have brought the matter before the railway and the railway shall have failed, within a reasonable time, to afford redress in a reasonable manner. The power of arbitration conferred under the Act of 1873 is continued.

There is no *appeal* on a question of fact or upon any question regarding the *locus standi* of a complainant. An appeal on a question of law lies to a Superior Court of Appeal. This appeal is to be treated as if it were an appeal from a judgment of a superior court. The Court of Appeal has power to make any order the commissioners could have made.

The Commission has full jurisdiction to determine all matters both of law and fact, and has such power of compelling attendance of witnesses, inspection of papers, and such other powers, rights and privileges pertaining to the exercise of such powers as are vested in a superior court; but in punishment for contempt the assent of an ex-officio commissioner is necessary. In any proceedings under the Act a person may appear before the Commission either in person or by counsel. The commissioners have power to review, rescind or vary any decision passed by them. The costs of every proceeding are in the discretion of the commissioners. From time to time with the approval of the Lord Chancellor and of the President of the Board of Trade rules of procedure and practice may be made by the commissioners; such rules are to be submitted to Parliament,

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if it is then sitting, within three weeks after they are made ; if Parliament is not sitting then they are to be submitted within three weeks after the beginning of the next session.

The auxiliary officers necessary to the carrying out of the process of the Commission are appointed by the Lord Chancellor, the Treasury consenting to the number. The salaries of such officers are determined by the Treasury. All the expenses of the Commission are to be met out of money provided by Parliament.

The matter of classification and maximum rates is in the hands of the Board of Trade. Every railway company is required to submit to the Board of Trade within six months after the passage of the Act—although a longer time may be allowed by the Board—a revised classification of merchandise and a revised schedule of maximum rates, clearly indicating in the latter the terminal charge. Such terminal charge is to be reasonable. An attempt is to be made to obtain an agreement if possible. If an agreement cannot be arrived at, the Board itself may act in the matter. If the railway does submit a satisfactory arrangement this is to be put in the form of legislation applicable to the particular railway. A similar method is pursued where the arrangement is effected by the Board itself, with this exception, that any petition against such arrangement presented to Parliament, while such bill is pending, may be referred to a select committee or to a joint committee. Any person, by giving not less than 21 days' notice to the railway company, may apply to the Board of Trade to have such classification or schedule amended by the addition to it of any articles, matters or things. Every determination of the Board of Trade in this regard is to be published in the London Gazette and take effect from publication. The Board may from time to time make and rescind rules with reference to the form of classification and schedule. The provisions as to submitting these to Parliament are identical with those regarding the submitting of the rules of the Commission.

Through Rates and Routes.—In case of dispute about through rates and routes the railway company or person desiring to obtain such through rate or route, shall first indicate to the forwarding company the route and rate proposed ; if within ten days an agreement has not been arrived at between the company or person and the forwarding company, then the matter shall come before the Commission for decision. The commissioners are to consider whether the proposed route and rate are reasonable. When the railway companies do not agree as to the apportionment of the through rate it is to be apportioned by the Commission. In apportioning through rates the commissioners are to consider all circumstances of the case including special expenses of construction, or maintenance, or working of route, or any special charges to which the company may have been put. It shall not be lawful for the commissioners in any case to compel any company to accept lower mileage rates than the mileage rates which such company may for the time being legally be charging for like traffic carried by a like mode of transit ; or any other line of communication between the same points, being the points of departure and arrival of the through route. When part of the transportation is effected by steam vessels operating in connection with the railway (or canal) then the power conferred covers such case also. If a company refuses, or neglects to accept the decision of the Commission as to rates, routes or apportionment, and there is no reason for such refusal or neglect, the Commission may award such costs to the applicants as they see fit. The Commission may decide that a proposed through rate is just and reasonable, although the portion of the through rate allotted to the forwarding company may be less than the maximum rate it is entitled to charge.

When *preferences* are charged the burden of proving that such preferences are not unreasonable is on the railway company. In deciding whether the preference is undue the Commission shall consider whether it is requisite in the public interest, in order to obtain the traffic in respect of which it is made ; but no difference in rates or treatment of home or foreign merchandise is to be sanctioned.

The 'long and short haul' clause of the Interstate Commerce Act appears. It is not absolute as in the American Act. The commissioners have power to direct that no higher rate shall be charged for similar services in respect of like descriptions of and like quantities of traffic for a shorter than for a greater distance on the same line of railway. It differs from the American Act in that it does not state that the lesser distance

is to be included in the greater. In this respect it resembles the 'long and short haul' clause of the Massachusetts legislation.

The railways may charge group rates. The determination whether the rates as so arranged constitute an undue preference is in the hands of the commissioners.

Each railway is required to keep its general classification of merchandise and schedule of rates open to public inspection at every station where goods are received for conveyance. Each railway is required within one week after application made in writing by a person who has shipped, or intends to ship, goods over the railway in question to make an itemized statement of the charges made, in which the terminal charges and the dock charges, if such are charged, shall be differentiated from the charge for conveyance.

Any company intending to make any increase in rates shall give at least fourteen days public notice of the intended change by publication in such manner as shall be prescribed by the Board of Trade. No charge shall be effective unless this notice has been given. Any company failing to comply with the provision in this respect is liable, on summary conviction, for each offence, and for each day such offence continues, to a penalty not exceeding £5.

PRESENT CONDITION IN ENGLAND.

OPERATION OF THE COMMISSION LAW.

It may be premised at the outset that immediate rectification of all the evils existing is not to be expected from the operation of any Commission law. The evils that have sprung into existence as a result of freedom from regulation are too deep seated to be settled at once. The reasons for falling below the standard of expectations, if such failure is shown, are attributable both to the magnitude of the concrete problem to be dealt with, and the nature of the law which attempts to deal with the problem. Weakness in the law may vitiate the expected results.

The questions of differential rates, exorbitant rates and of discrimination in favour of foreign trade against home trade have occupied an important place. During the period between 1873-1882 the question of differential rates occupied a prominent place in the public attention. This included both the matter of local discriminations and of a lesser charge for long distance traffic than for short distance traffic under the same circumstances. The matter of preferential rates occupied a considerable part of the time of the Commission in 1880. The select committee of 1881-2 which was appointed to investigate this matter did not arrive at any very definite conclusion. Difficulties arose as between the larger and the smaller shippers, the former claiming that as a result of their larger shipments they were entitled to better rates than the smaller shippers. As regards the matter of the 'long and short haul' it will be seen from the summary already given that the power in the hands of the Commission is discretionary. In the exercise of this discretion the commissioners have proceeded on the principle that it is not so much the damage of the particular individual as the damage, or otherwise, to the general public that has to be considered. And proceeding from such standpoint they have not uniformly negatived such arrangements of rates.

The question of exorbitant rates has also occupied considerable attention within recent years. The agitation against preferences, which was prominent in 1880, soon took on another phase. An agitation for a reduction of exorbitant rates was begun, there being a desire for a general reduction of rates.

The peculiar position occupied by the English railways, which are at about three-fifths of their stations exposed to water competition, brought up another important problem. There has been, and is, in England much complaint because the foreign producer is enabled to place his commodity in the English market at a more advantageous rate than the home producer. The American producer of grain, whose grain is sent into England at through rates has obtained at times relatively better terms than the English producer. In the south of England there has been a special complaint. For example

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the hops of France are brought into competition with the hops of Kent. French hops have been placed in the English market at one-half the rate charged for similar quantities of English hops which were carried from intermediate points. The reason for this lies in the fact that the French product may be brought to London by water, while the English commodity must be brought by rail. If the English road is to obtain any share of this trade, under these conditions, it must meet the water rate. The rail and water rate will be equal to, or possibly less, than the water rate. Under such conditions the rail portion of the rate will be less than the rail rate in the case of the English goods, although the latter may be carried a shorter distance by rail.

The important question the Commission has to face, has been that of rates. The Commission has not solved the rate question. Discriminations yet exist although personal discriminations have practically ceased. The local discriminations are of importance.

The rate question connects itself with the question of classification and revision of maxima. The Board of Trade grappled with the matter and the changes were made effective in the beginning of 1893. The classification of the railroads was reduced and made uniform. At present there are eight general classes (A, B, C, 1, 2, 3, 4, 5). In the revision of the maxima the commissioners, appointed for the work, proceeded from no general principle but simply empirically. The question of revision has not gone beyond the revision of the maxima, although there is in some quarters a desire for a revision of actual rates.

'The Commission has on the whole fulfilled its function.' To indicate what it has done it will be best to take up first the defects, later laying stress upon the good features.

It must be remembered in the first place that, although the total railway system of England represents only some 20,000 miles, that it represents a compact and powerful interest. The large investment of capital, the steadiness of the English business system, the permanency of the traffic agreements—some having remained in operation for fourteen years unchanged, the delimitation of railroad 'spheres of influence'—there being a division of territory between the different lines—all co-operate to give the English railway system a peculiar strength. There has not been the same readiness of acquiescence in the dictates of regulative law as in America. And there has been a tendency to contest the decisions of the Commission, if not to ignore them. To the conservative trend of English opinion, which, though powerful when aroused, is normally acquiescent, and to the fact that the roads had for a long time been free from any effective regulative control, this attitude must undoubtedly be attributed. This attitude has been helped on by the fact that under the earlier theory of the railway law which still has force in England—the railways occupy a position analogous to that occupied by canals. Under the earlier theory they might engage in the transportation business themselves, or they might allow others to make use of their tracks on the payment of certain tolls. The consequence of this is that if the Commission finds a rate unreasonable and declares what rate shall be reasonable, the company may fall back upon this power and say that it is not engaged in the transportation business and that it is simply allowing its tracks be used in return for certain payments; in this way it has the individual shipper at its mercy because, although the shipper has the option of using his own cars and engines in the transport of his goods, few shippers are in a position to take advantage of this; under such circumstances the payment of the obnoxious rate without further protest is the lesser evil. This is helped on by a technical defect in the phrasing of the Act of 1888. Section 24, which makes provision for the submitting of a revised schedule of rates and charges by the railway, makes no mention of tolls. The Board of Trade has taken the position that under the Act it has no jurisdiction in regard to tolls. This has rendered the work of the Commission more difficult. Of recent years, however, the railways have occupied a less antagonistic position.

A further difficulty has arisen as a result of the attitude of the courts. The Commission has to look to the courts to enforce its decisions. The Act of 1873, whose provisions in this regard are not superseded by the later Act, states 'any decision or order made by the Commission may be made a rule or order of a Superior Court

and shall be enforced.’ Under this section whether or not the decision should be enforced by the court was discretionary. An example of the attitude of the courts is in point. Under the Act of 1854, a refusal by a railway to comply with the decisions of the Court of Common Pleas subjected the refractory railway to a fine of £200 per day for every day’s delay. The jurisdiction conferred on the Court of Common Pleas by the Act of 1854 (section 3) was transferred to the Railway Commission by the Act of 1873 (section 6). Notwithstanding this the plea of the London, Chatham and Dover railway that it was not subject to such exercise of jurisdiction was upheld by the Exchequer Court. It was not until 1878 that a decision of the Court of Queen’s Bench declared judicially that the Commission had the power which in terms of the enabling act had been expressly conferred upon it. Another difficulty turns on a point of jurisdiction. As has been stated the Commission has power to make final decision on matters of fact; and it has also power to decide what constitutes a question of fact and what a question of law. However this power is invalidated by the fact that on *writ of mandamus* from a court of appeal the Commission may be compelled ‘to state a case’ which may be made the subject of action in a higher court.

Another difficulty has been in the matter of expense. When the Commission was created it was manifestly the intention to do away with the expense and delay connected with prosecuting matters pertaining to the violation of the railway law before the courts. The process is somewhat less expensive than it was, but it is unduly expensive yet. The difficulty arises because owing to the defects in the legislation there is a constant opportunity for appeal to higher courts. The powers intended to be given by the legislation have not really been given. The sphere of judicial intervention has not been properly delimited. The legislation has not been symmetrically arranged. Coupled with this is the fact, already referred to, that much of the theory of English railway law is archaic. I do not regard the defect in the question of expense as intrinsic in the Commission.

Another defect in the working of the Commission is connected with its membership. Provision is made that one of the appointed commissioners should be experienced in the railway business. No provision is made for the appointment of a business man on the Commission. This has militated against the usefulness of the body. This was recognized by the Select Committee of the House of Commons appointed in 1893.

Such being the main defects, what has been accomplished by the Commission? The Committee of 1882 indicated that the services of the Commission were not confined merely to the determination of those cases which came formally before that body, but that much had also been accomplished in preventing differences. That the work accomplished had been satisfactory to the trading class is evident in the evidence presented to the committee. This preventive work which is, in many respects, even more important than the formal work of decision is often under-estimated because it does not appear in formal statement. Then again the mediatorial position which the Commission has been able to occupy has engendered a better feeling in regard to the mutual responsibilities of shipper and carrier. The slow growth of this *rapprochement*, in the earlier period, is owing to the fact that the railways then regarded themselves as firmly entrenched in an individualistic position.

The decisions that the Commission has given have been carefully considered. The value of the decisions is to be measured not only by the direct benefit received by the individual, but also by the benefit received by the public. A public feeling has been created which has had an influence in preventing arbitrary action on the part of the railways.

The railways have recognized the value of the Commission by referring to it for arbitration disputes which have arisen among themselves. For example in 1886, 11 cases out of 12 before the Commission were concerned with railway quarrels; in 1887, 6 out of 12; in 1889, 3 out of 11; in 1890, 1 out of 28; in 1891, 1 out of 19.

The shippers although not uniformly satisfied are of the opinion that the Commission has done much to check the evils that formerly existed.

To sum up the question the Commission has:—(1) been fairly successful in grappling with the questions presented before it. (2) It has exercised an influence in the prevention of arbitrary exactions. (3) It has been recognized as an unbiassed arbiter

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in railroad disputes. (4) It has bettered the condition of the shippers. The defects in the operation of the Commission are in part attributable to defects in the legislation itself; in part to lack of co-operation on the part of the judiciary. And above all must be remembered the difficulty of the task.

Illustrative material bearing on these matters will be found in extenso in the statutes and committee reports referred to. The reports of the Interstate Commerce Commission contain some valuable information with reference to the English Commission. The report of the Cullom Committee is also valuable in this connection. A special report to the United States Government on the railway systems of Western Europe by Mr. Simon Sterne is also valuable. Hadleys' Railroad Transportation, and an article on 'The English Railway Rate Question' by Prof Mavor, (published in the Quarterly Journal of Economics) are of especial value.

THE EXPERIENCE OF THE UNITED STATES.

EARLIER REGULATIVE POLICY.

The earlier attitude of the United States towards railway development was on the whole one of belief in the efficacy of competition as a regulator. The evils that would flow from such a *laissez-faire* policy were not foreseen. The various provisions bearing on the question of regulation which do appear in the earlier Acts are inspired, not by a fear that the powers granted would work inequitably as between individuals and between localities, but by a fear that possibly too high a rate of profits would be ensured. Where the matter of profits is mentioned it appears that the legislators believed that the companies had a right to a comparatively high rate.

In the earlier charters the legislatures were content for the most part with indicating maxima. (The charter of the Baltimore and Ohio, Laws of Md., Feb. 28, 1827, is an example.) The next step was a provision that the legislature might at the end of a defined period legislate on the question of rates. (Charter of the Elkhorn and Wilmington, Laws of Md., cap. 187, Act passed March 14, 1828.) The legislation of New York was content with a simple declaration that rates which produced an excess of a defined dividend, varying from 12 per cent to 14 per cent were prohibited. No method of providing for revision of rates was provided. The most systematic policy is that of Massachusetts, where provision for a decennial revision of the rates, with the intent that these should not produce a dividend of more than ten per cent was made. The 'state purchase' clause, namely, that at the termination of a defined period the state should have a right, on defined time, to purchase the railroad—a provision which appears in the legislation of Massachusetts as well as in that of New York—is a recognition of the assumed great profits the railroad would make, and of the advantage of securing these profits to the state at some later period when the experiment had proved successful.

When the importance of the railroad as a means of connection with the West began to be recognized, all the questions of regulations were left in the background. What people were thinking of was not the regulation of possible evils arising from railroad transportation, but the rapid obtaining of an expanding railroad system. This is manifest in the feverish interest taken in transportation schemes in the period 1830-50. Pennsylvania, Ohio, Illinois and Michigan became interested in state-aided transportation schemes. The western states were enabled through the action of Congress to set aside grants of land in aid of these enterprises. Undue optimism prevailed as to immediate returns from these enterprises. When the time of failure came about 1850, it marked the definitive retirement of the states from active participation in railroad construction. The agitation over internal improvements had culminated in 1830 with the withdrawal of the Federal Government from the field; the disastrous outcome of the experiments of the period 1830-1850, resulted in the state governments also retiring. The matter of railway construction might, it was thought, be left advantageously to private enterprise. A corollary from this was an individualistic attitude towards railroad problems.

The period 1860-70 may be classed on the whole as a 'hands off' period. The possibility of the corporation obtaining a power menacing to state interests was not con-

ceived of. It was assumed that given a sufficient number of railways there would be no difficulty in regard to treatment of individuals and localities. Where an inequality existed the way to remove it was by inducing the construction of another railroad. Railroad construction not railroad regulation was what occupied the public mind.

The problem took on another phase in the period beginning about 1870. The railways, exhausted by the rate wars which were an outcome of excessive construction, had made pooling arrangements with the intention of obviating ruinous competition. This indicated to the people that the railways, instead of being separate completely competitive bodies formed an integrated system. The evils that had come into existence during a period of unbridled and vicious competition had also helped to change the public attitude towards the railway situation.

The conditions in the West were especially characteristic, and a rapid summary will serve to give the historical setting of the Commission movement in the West.

A policy of lavish subsidizing had brought about a rapid extension of the railroad system in the middle west, and more especially in the upper Mississippi Valley. Settlement was rapidly pushed forward and the fertile wheat lands of the North-west commenced to be cultivated. Then there came a change in the industrial conditions. Wheat fell in price. A demand for a reduction in rates was made. This demand was rendered all the stronger by the short-sighted policy of the railway managers. During the rate wars many illicit devices had been used in the struggle for traffic. Rebates, secret rates, discriminations, personal and local, had been lavishly employed. The stress of wasteful competition had driven down competitive rates to hard pan. If the railways were to equalize matters an increased rate upon the non-competitive traffic seemed to be necessary. The farmers who saw commodities carried long distances for rates which were only a fraction of those charged on their commodity which was carried a much shorter distance, assumed that there must be an exorbitant profit in the rates charged them. Their complaints were met with scant courtesy by the railways. A keen feeling of injustice was engendered. A feeling that they were paying exorbitant profits to absentee railroad stockholders, most of the capital invested was eastern capital, further embittered the farmers. The old feeling of confidence in the unregulated operation of competition passed away. The new attitude was one of belief in the necessity of state regulation.

THE COMMISSION MOVEMENT.

The State Railway Commissions may be broadly distinguished as eastern and western. To the commissions of the western type are to be added the commissions of the southern states. The western type represents the type that was called into existence by the necessity of regulating transportation in the public interest. In the eastern states railways are subject, in some degree, to water competition, and the regulative power of public opinion is greater.

A third type of commission may be mentioned for the sake of exactness. This type is simply a body organized for the assessing of railways within the state and collecting of the taxes due by them.

The first attempt in the west connected itself with the Granger legislation. In 1871 Illinois passed a law establishing a system of maxima. The precedent set was followed in the legislation of Wisconsin and Iowa. In Wisconsin the 'Potter law,' which was passed in 1874 and which is usually taken as the type of this legislation, provided that railroads were to be divided into three classes according to their earning power. Freights were to be divided into four general and seven special classes, and for each of these classes rates were to be fixed. In the same year an Act of similar import was passed in Iowa. The constitutionality of the general principle involved in this legislation was affirmed by the federal supreme court. The laws, however, proved too hard and fast to meet the changing conditions of railway transportation. The railway commission was accepted as the solution of the difficulty.

The commission of the eastern type, the so-called advisory commission 'commission without power,' came first in point of time. As early as 1844 New Hampshire appointed a

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commission to inspect railroads and report on their condition to the legislature. Connecticut in 1853, Maine in 1858, and Ohio in 1867, followed this precedent. The intent was rather a consideration for the safety of travellers than a consideration for their economic interests.

The Massachusetts commission, which was modelled upon the New Hampshire commission, is usually taken as the type of the advisory commission. The consideration of the law creating this commission, as well as of the New York commission law which is based upon the Massachusetts law, will give the legal setting. This portion of the subject matter also connects itself with the western conditions. From the repeal of the maximum rate law in Iowa in 1878 until 1888 the control of railway matters in that state was in the hands of an advisory commission of the Massachusetts type.

THE LAW OF THE ADVISORY COMMISSION

In Massachusetts the commission is composed of three commissioners appointed by the governor, with the advice of the council, for a term of three years. They may be removed by the governor with the consent of the council. The only provision as to the qualifications of the commissioners is that they shall be 'competent persons.' In New York three commissioners, one of whom is to be experienced in railway business, are appointed by the governor, with the advice and consent of the senate, for a term of five years.

In Massachusetts the additional officers of the Board are a clerk, an assistant clerk, who in the absence or disability of the clerk performs his work, an accountant and railroad inspectors. In New York the officers are a secretary and a marshal, an inspector of steam railroads, who must be a civil engineer skilled in railroad affairs, an inspector who is also an expert in electric railroad affairs, such additional clerical force as is found requisite, and engineers, accountants and other experts whose services may be needed because of some temporary exigency.

In both laws the commissioners are prohibited from holding stock or securities in or being employed by any railway company. They are also prohibited from seeking any indirect reward, consideration or favour from any railway.

The chairman of the Massachusetts board receives \$4,000 per year, the other commissioners \$3,500. The secretary receives \$2,500, the assistant clerk \$1,200, the accountant \$2,500, the inspectors who are appointed, one for each 1,000 miles of track, receive \$1,500. In New York each commissioner receives \$8,000, the secretary \$6,000, the marshal \$1,500, the accountant and the inspectors receive \$3,000 each. The salaries of the clerical force are fixed by the commissioners.

In both cases the expenses of the commissions are assessed upon the railway systems of the respective states; the assessment is made on the gross receipts. When on official business the commissioners, and such experts as they deem requisite, receive free transportation. In New York the total expenses of the commission, exclusive of the cost of printing and binding the annual reports, is limited to \$60,000 a year.

In Massachusetts an annual report is submitted to the legislature, indicating the relation of the transportation system to the condition of the state, and making such recommendations as to changes in general railroad policy as may seem requisite. The commission exercises a general supervision in regard to all matters pertaining to the public safety and convenience. It is required to see to the way in which the railroads comply with the provisions of their charters and the general railway laws of the state.

Whenever the Board is satisfied that a railway is acting in violation of law it gives notice in writing to the offending railway; if the violation continues it places the matter in the hands of the Attorney General, who takes such action as he sees fit. In New York there is a similar provision. In New York the supreme court, at a special term, may enforce by mandamus such decisions by the commission as it deems just and reasonable. From this there is an appeal to the general term of the supreme court and the court of appeals, and here the question may be reviewed and reversed both on the facts as well as upon the law.

The Massachusetts Board has a power of recommending to the railway companies such repairs or additions to rolling stock, changes in or additions to railway stations, or changes in rates and fares as it deems expedient in the public interest.

On complaint of the civic officials of a town or city, investigation of grievances shall be made. The investigation may also be made on petition of twenty or more votes of such town or city provided that application has been made to the civic officials and they have refused to bring the matter before the commissioners.

The Massachusetts Board is required to investigate all accidents resulting in loss of life. It has discretionary power where loss of life does not take place.

Every railroad corporation is required, under the Massachusetts law, on request of the commission to furnish any information required concerning its condition, management, operation, copies of leases, contracts and agreements, with express companies, and also its rates of freight and its passenger transportation on its own road and on the roads with which its business is connected.

The Massachusetts Board, from time to time, examines the books and accounts of railways (and street railways) to see that they are kept according to the uniform system prescribed by the board. The railways are required to prepare and publish financial statements at such times as the board deems expedient.

On the application of a director, or of any person holding one-fiftieth part of the paid in capital the commission (Mass.) is required to investigate the financial condition of any company operating a railway (or street railway), from whose shareholder or director such request is made, and to cause the result of such examination to be published in one or more of the daily papers of Boston. The board is at all times to have access to the list of shareholders of railway (or street railway) corporations. It may at any time cause these to be published in whole or in part for the information of the board or for that of persons holding stock in such enterprises. Refusals on the part of railway corporations to submit their books to the investigation of the Board, or to keep their accounts in the way indicated by the commission, through the forms of its accountant, are subject to a fine not exceeding \$5,000.

The commission (Mass.), in all cases investigated by the Board, may summon witnesses on behalf of the state, and administer oaths and take testimony. These witnesses receive the same fees as are paid to witnesses appearing before a superior court. A justice of the superior court may, in his discretion, upon the application of the Board, compel the attendance of such witnesses and the giving of testimony, in the same way as would be done in process in such court.

The regulation of the crossing of one railway by another or by a street railway or of the crossing of a highway or street railway is in the hands of the Massachusetts Commission. It may grant the right to make such crossing and in doing so may attach to it such conditions, limitations, regulations and restrictions as it sees fit. The enforcing of the decisions of the commission in this matter proceeds by an information filed by the Attorney General in the Supreme Court which has equity jurisdiction in such matter.

The provisions contained in the commission laws of either of these states confer no regulative power over rates upon the commission. The regulative power is retained in the legislature. The general railway law of Massachusetts affirms the right to confer such regulative power upon such body as it may create for that purpose.

The Massachusetts general railway law prohibits undue or unreasonable preferences; the local or joint charge for a shorter haul is not to exceed that for a longer haul under the same circumstances. A violation of these provisions renders the railway liable to the party aggrieved, not only in the damages actually sustained, but in a further sum of \$200. This is to be recovered by him in an action in tort for his own use. The Attorney General or the district attorney of the district in which the offence is committed, may bring suit in the matter, provide the private individual has not brought suit, and in such case the penalty accrues to the state. The action must be brought within one year from the date of such violation.

The powers of the commission in respect to railroad construction, and in respect to control of railway financing, are especially important.

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Section 34 of the railway law of the state provides that twenty-five or more persons, the majority of whom are inhabitants of the state, may on complying with certain general formalities be constituted a corporation for the construction of a railroad. As soon as the articles of association have been filed and the preliminary requirements of the Act have been met, the directors are required, within thirty days from the publication of such articles, to apply to the commission for a certificate of 'public exigency,' that public convenience and necessity require the construction of the proposed road. If the certificate is refused nothing can be done until a year from the date of such refusal has elapsed. The commission is also required to see that all the requirements of the law preliminary to incorporation have been complied with. In New York the commission has power to refuse the certificate; but the directors of the proposed enterprise may apply to the Supreme Court and the court may order the certificate to be issued.

In Massachusetts railroad (or street railroad), companies whether organized under general law or special charter, require to obtain the consent of the commission before issuing stocks and bonds. Within thirty days after the application to the commission it shall specify the respective amounts of stocks and bonds authorized to be issued, and the respective purposes to which the proceeds are to be applied. A certificate of this decision is filed by the commission with the Secretary of State within three days after the decision is made. The decision is binding on the railways covered by it. Violation of this through unauthorized issue, or other use of the proceeds than is indicated in the decision, or conniving at any such evasion is punishable by a fine of \$1,000, or imprisonment for one year or both. The bond issuing power of the corporation is further limited by the provision that it shall not have outstanding, unless express power is given, evidences of indebtedness in excess of the amount of the capital stock at the time actually paid in. This does not prevent the issue of refunding bonds.

When a railroad desires to increase its capital stock the consent of the commission is necessary. The new shares are first to be offered to the shareholders in proportion to their holdings, at not less than the market value at the time of the increase, as shall be determined by the commission. A period of fifteen days is to be indicated by the directors within which such subscription for the new stock may be made. If after this any shares are left unsold they may be disposed of to the highest bidder. But such shares are not to be sold for a less sum, to be actually paid in cash, than the par value thereof.

The New York Commission does not possess a regulative power over stocks and bonds.

THE LAW OF THE COMMISSION 'WITH POWER.'

In current discussion the Iowa Commission is taken as the type. However, it dates only from 1888, while the Illinois Commission dates from 1873. The various commissions 'with power' which have come into existence have been based on the Illinois law. As, however, the Iowa law embraces all the essential points and is also more detailed than the Illinois law, an analysis of the former with some additional references to the latter will give the requisite legal setting.

The Illinois Commission, which is known as the Railroad and Warehouse Commission, is composed of three commissioners appointed by the governor, with the consent of the Senate, for a term of two years. The Iowa Commission is composed of three commissioners elected by the people for a term of three years. Under both laws the commissioners are debarred from being in any way interested in any railroad company. In both cases bonds are required.

The commissioners in Illinois receive \$3,500 each per annum, in Iowa \$3,000. The secretary of the commission in each case receives \$1,500 per year.

The expenses of the commission are in each case a charge on the general revenues of the state. In Illinois the commissioners, when in discharge of official duties, have free transportation on the railways of the state. In Iowa a similar right is possessed by the commissioners, their secretary and such agents and experts as they may engage.

In the latter state a sum not exceeding \$10,000 annually is set aside to meet the costs incurred by the commissioners in making investigations and in prosecuting suits.

In Illinois the commissioners are required to examine into the condition and management, and all other matters concerning the business of the railroads and warehouses in so far as these are concerned with the public interest. In both states the commissions exercise a general supervisory power to see that all the laws of the state, under which the corporations operate, are obeyed.

In Iowa the provisions of the law are applicable to all railroad corporations, express companies, car companies, sleeping car companies, and freight or freight-line companies doing business within the state. It covers the transportation of passengers and of freight within the state, and the receiving, delivering, storage and handling of property by such companies within the state.

Under both commissions the railway systems respectively subject to them are required to make annual statistical returns to the commission. These are analogous to those required in Canada. An annual report embracing an account of the proceedings of the commission during the year preceding, as well as a statement of the statistical data received from the railroads, is made each year to the governor of the state.

Extortion and unjust discrimination are forbidden under the law of Illinois. Under unjust discrimination are included both personal discriminations and discriminations in regard to distance, such as are commonly included under the prohibition of a 'long and short haul' clause. Railroad corporations guilty of extortion or of unjust discrimination in regard to rates and fares are, on conviction, punishable by a fine of not less than \$1,000 nor more than \$5,000 for the first offence; not less than \$5,000 nor more than \$10,000 for the second offence; not less than \$10,000 nor more than \$20,000 for the third offence, and for each subsequent offence \$25,000. These fines are recoverable in an action of debt in the name of the people of Illinois. The commissioners have the responsibility of seeing whether the provisions of the Act in this respect are violated. When they are satisfied that there has been a violation of the Act they are empowered to cause suits to be entered against the parties offending. They may employ counsel to assist the Attorney General in prosecuting such suits on behalf of the state. In the Ohio law it is stated that all charges are to be reasonable, and that unjust and unreasonable charges are prohibited. Discrimination is prohibited. Equality of treatment is the rule; there may be, however, a lower rate per C. L. than on L. C. L. All preferences are forbidden. The 'long and short haul' rule is explicitly stated. The penalty for the violation of the provisions summarized above is not less than \$1,000 nor more than \$5,000 for the first offence; and for each subsequent offence not less than \$5,000 nor more than \$10,000. This may be recovered either by criminal prosecution or by civil action in the name of the state.

General supervisory control in regard to safety appliances, switches, crossings and accidents is possessed by each commission.

Under the Illinois law the commission is required to make for each railroad corporation doing business within the state a schedule of maximum rates; these may be revised from time to time. In all complaints arising in the state courts with reference to rates, these schedules are to be regarded as evidence that the rates therein provided for are reasonable maximum rates. The provisions in the Iowa law are much more detailed and may be summarized as follows: The initial provisions are identical with those referred to above. A provision is contained conferring power to regulate classification—a similar power is possessed by the Illinois Commission. When a schedule is made or revised it has to be published for two weeks successively in some paper of the capital city, and in this publication the date when the schedule goes into operation is indicated. If a complaint arises either with reference to a rate charged by a railroad, or a maximum rate fixed by the commission, the commission shall investigate the complaint. If it appears well grounded, then the commission, after hearing statements on both sides, shall give its decision as to what shall be a reasonable maximum rate in future. The commission may decide not only on the rates under review, but also as regards all such rates between points in the state and whatever part of the line of railway of such company within the state as may fairly have come within the scope of such investigation.

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The Iowa law requires that each railway shall keep posted for public inspection, in each of its stations, schedules of its rates and fares. No advance of rates shall be made until after ten days' public notice; reduction in rates may be made without previous notice. All such changes shall be posted. Each railway is required to file with the commission copies of its schedules of rates, and copies of agreements with other companies in respect to traffic agreements. Where joint tariffs have been arranged these also shall be filed. Conformity with these regulations may be enforced through the issue of a *mandamus* from any district court of the state. By supplementary legislation of 1890, the commission has been given power to establish reasonable joint through rates where such have not been established by the railroads themselves. This power is in its exercise, subject to the general provisions of the Act of 1888.

Under the Iowa law persons considering themselves aggrieved by any common carrier may elect to make complaint before the commission, or before a court of competent jurisdiction. When a complaint is entered before the commission, a statement of such complaint, with the damages alleged, if any, is forwarded to the railway company. The latter may submit a statement in rebuttal. If no such statement is made, or if it appears that there is reasonable cause for investigation, then it shall be the duty of the commission to institute an investigation. Whenever the commission has sufficient reason to believe that the law is being violated by any railway, it may commence such investigation of its own initiative. When such investigation has been made, a report shall be made. If the commission finds that the law has been violated, it shall communicate its findings to the railway company, and shall direct it to make reparation. If the company does not obey, then the commission applies, in a summary way, by petition to any district or superior court in any county in which the railway has its principal office, or through which its line passes, or in which the violation of the law took place. The case shall be prosecuted before the court by the Attorney General, with the assistance of the county attorney of the county in which any such proceedings are instituted. The court in hearing the matter is to proceed as a court of equity, but without the formal pleadings of ordinary suits in equity. In this suit the report of the commission is to be regarded as *prima facie* evidence. If it appears that the order of the commission has been disobeyed, it shall be lawful for the court to restrain further disobedience and enforce obedience through a writ of injunction; if the writ of injunction is not obeyed *writs of attachment* may be issued, and in addition a penalty of \$1,000 per day be affixed for each day that the railway, or person in default, fails to obey such injunction. There may be an appeal to the Supreme Court by the commissioners, or by any other person interested; but no such appeal shall operate to stay or supersede the order of the court, or the execution of any writ or process thereon.

The general rule as to proceedings before the commission is that it adopts such method as is in harmony with the dispatch of business and the ends of justice. A majority of the commissioners constitute a quorum. No commissioner is allowed to participate in a case in which he is financially interested. General rules of procedure, which conform as nearly as possible to those of the state courts, are drawn up by the commission, and are amended from time to time. Any person may appear before the commission in person or by an attorney. The votes and official proceedings of the commission are entered on record; these may be made public on the request of either party or of any person interested. The commissioners have an official seal; they have the right to administer oaths and affirmations in any proceedings before the Board. In performing the supervisory duties conferred upon it, the commission has the right to require the attendance and testimony of witnesses and the production of all books, papers, tariffs, schedules, contracts, agreements and documents material to the investigation. The aid of any court within the state, within the jurisdiction of which the investigation is carried on, may be invoked to enforce this provision.

In all violations of the Act, except as regards those provisions concerned with extortion and discrimination, the railroad, or agent, or officer of the railroad violating such provision shall be guilty of a misdemeanour, and shall, on conviction in any district court of the state of competent jurisdiction, be subject to a fine of not less than \$500 nor more than \$5,000 for each offence. A violation of the provisions of the Act also gives

the individual, or individuals, damaged thereby a right to three times the damage sustained, together with the costs and a reasonable counsel fee. This is to be determined by the court before whom the case comes up. The common carrier is liable to the individuals aggrieved. This is subject to the proviso, that before suit for recovery is made that demand for the money damages should have been made on the common carrier, and 15 days allowed to elapse after the presenting of this demand, before the suit is instituted.

THE WORKING OF THE STATE COMMISSIONS.

Both types of commissions are alike in possessing statistical functions and powers of control over track conditions and safety appliances. In the case of Massachusetts the overshadowing influence of Boston brings in a great deal of attention to the transportation industry as centering in that city. Much of the statistical information contained in the report is such as normally would be found in a report of a civic board of trade. In the matter of statistical returns the various Commissions are attending to uniformity; the report form of the Interstate Commerce Commission, with such changes as are adapted to state needs, is being adopted.

The most important functions of the advisory commissions may be summed up under the words supervision and advice. The regulative influence over railroad construction exercised through the right to grant or withhold a certificate of 'public exigency' places an obstacle in the way of excessive construction; it supervises in the public interests the railroad projects and excludes purely speculative enterprises; it prevents the wasteful expenditure of capital consequent on useless paralleling; its object is to have a system developed which is in harmony with the needs of the people. The general attitude for the need of supervision in railroad construction is a marked characteristic of the railway legislation of the eastern states. In the west, on the other hand, the attitude towards railway construction is essentially different, and there has been as a consequence much wasteful investment of capital.

The power of regulation over the issue of stocks and bonds possessed by the Massachusetts commission is very important. The result of this can be seen by turning to the statistical tables of the Interstate Commerce Commission. The various states are grouped, and in the New England group, in which the mileage of Massachusetts is the important factor, the capitalization is much less excessive than in the other groups. It has been a cardinal tenet of the American railway financing that the stock issued represents no necessary part of the cost of construction. Probably 90 per cent of the railroad construction of the United States has been done on the bonds. Under the Massachusetts system the stocks have been more than a mere perquisite. The last report of the New York Commission urges on the state of New York the necessity of conferring, in the public interest, similar regulative powers in this respect upon the New York Commission.

In the commissions 'with power' the attitude towards the matter of regulation of stock and bond issues has, except in the case of the Texas law, been on the whole one of indifference. Where it has been considered it is in connection with the matter of rates. Under the Texas law the commissioners have made revised valuations of the railroad properties within the state, in an endeavour to squeeze the water out. The intent has been to obtain a working basis for rate making on the cost of service principle. It will be seen that this differs essentially from the Massachusetts method.

The matter of prime importance in connection with the western commissions is the rate question; coupled with this are the questions of local and personal discriminations. The legislature has delegated to the commission the rate making power, and the legality of such delegation has been judicially upheld (*Reagan vs. Farmer's Loan and Trust Co.*). In the eastern type, on the other hand, the rate making power is not possessed by the commission. In the case of Massachusetts there is a power to fix milk rates. The commission has no other power in regard to fixation of rates, and it has explicitly declared that it has no desire to have the power to fix rates (15th Rpt. Mass. Com.,

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1884, p. 151). In New York there is no danger of the declared power of the legislature to regulate rates being exercised, since this power cannot be exercised until the rates produce a dividend in excess of 10 per cent.

The exercise of the rate making function by the 'strong' commission demands careful attention. Competition, in so far as it does exert a regulative force, is more important in inter-state than in intra-state traffic. The various commissions evidence, in their reports, their appreciation of the fact that the regulation of rates is a delicate matter, and that arbitrary interference is dangerous. It has, on the whole, been appreciated that the rate making must, at best, be a compromise. Even Kansas, whose name is usually regarded as a synonym for drastic regulation, appreciates this in its reports.

The earlier laws and regulation looked to the adoption of equal mileage rates. As early as 1884 a condemnation of this principle is to be found in the report of the Kansas Commission. The objection was based on the position that it would deprive those living at common points of the advantage of competition.

In the matter of rate making the commission 'with power' has also used a system of classification of roads. In Illinois there are two general classes of roads arranged according to the degree of prosperity of the systems. The difference in rates between these groups is about 6 per cent. In Iowa the roads are divided into three classes. The first class takes the standard rate, the second 15 per cent higher, and the third class 30 per cent higher. In Georgia the matter of classification is carried much further. The roads are arranged as regards freight transportation in seven classes. Class one takes the standard rate, and on the others there is a complicated arrangement of additional percentages on some of the commodity classifications.

The policy used is based on the use of maxima. In Iowa the rates are fixed on a mileage basis, the unit being five miles. Tables are prepared for all distances between five miles and five hundred. In general the policy of these distance tables, both in Iowa and the other western states, is that there is a fractional increase of rate per mile, the fractional additional increase per mile decreasing as the distance increases.

The base of rate-making must be, on the whole, empirical. Normally the standard of rate-making must be what the traffic will bear; and on this account the most careful consideration to effect what is at best a compromise is requisite. In Texas an attempt has been made by the commission to base rates on cost of service. It is impossible to make a thorough-going application of this principle. The attempt to do so in Texas has brought up endless disagreements and has resulted in the process of the commission being tied up by injunctions from the Federal courts.

At the outset there was a disposition on the part of the railways to contest the exercise of regulative power, in regard to rates, by the commissions. This power has been judicially established and is generally recognized by railway authorities to-day. For example both in Iowa and Illinois the railways are manifesting a feeling that the Commission occupies a position, in regulating rates, as arbiter between the people and the railroads. In both of these states the rate regulation has proceeded with extreme care. The part the railway is playing in industrial development is appreciated. It must be admitted at the same time that there have been dismal failures in connection with the exercise of rate making powers by the commissions. As has been said the Texas Commission has been involved in continual janglings—the reason for this has already been indicated. There has also been an inordinate belief in the efficacy of regulative power. In Kansas the law has not worked well. One great difficulty has been the lack of trained men to enforce the law. Political conditions, especially of recent years, have marred the efficiency of the system. Then again the people of Kansas are prone to look for quick results from their legislation; and if these are not obtained they are equally prone to pass to other legislation from which they expect equally rapid results. California is another case often pointed to as an example of the inefficient working of the rate-making power. The trouble there was that the commission attempted, instead of proceeding by gradual steps, to revolutionize conditions; the result was that at the outset it was discredited and its power was weakened. The more careful policy of Illinois, and more especially of Iowa, has precluded such conditions.

One important general question, which has already been touched on, is how are the recommendations of the commissions obeyed. As early as 1872 the Massachusetts commission stated its view, that the power it possessed of influencing public opinion was much more potent than any more formal power. In 1893 this position was reiterated by it. The commission has undoubtedly worked well. It has had no vexatious interferences placed in its way when matters came up before the courts. Then again it is concerned with a thoroughly organized system of railway in a very compact territory. It must also be remembered that, while in the United States in general the relative proportions between freight and between passenger traffic are 70 per cent and 30 per cent respectively, in the case of the New England group the proportions are 49 per cent and 51 per cent. In Massachusetts they are evenly divided. When the passenger traffic is so important the regulative power of public opinion is, so to speak, readily coerced into action if any grievance exists. In New York conditions have been somewhat different. At first the courts, when matters came before them from the Commission, were inclined to proceed *de novo*. A recent decision of the State Supreme Court has decided that the court is limited to inquiring whether the remedy applied by the Commission is just and reasonable. The Illinois Commission report for 1897 states 'that in the most of the cases which came before it with reference to discriminations, reductions in freight rates, &c., it was only necessary to call the attention of the railroad to the violation of the law to have it corrected immediately.' The conditions in Iowa are similar. A more ready obedience is shown in recent years. A further example may be taken from another source. The Georgia Commission in its current report states, 'during the past year the regulations of the Commission relative to traffic have been observed and enforced with reasonable promptness. The relations between the railroads and the public seem to be more harmonious than heretofore. Gradually a better feeling between the roads and their patrons is becoming manifest. This we believe is largely due to the enforcement of reasonable rates and uniform rules throughout the state, by which arbitrary acts and unjust discriminations, and the consequent strife and discord are prevented.'

THE DEFECTS OF THE COMMISSIONS MAY BE INDICATED IN SUMMARY.

- (1.) Political considerations play too great a part in the choice of commissioners. This is especially true when they are elected.
- (2.) The term is usually too short. In Iowa this has been gotten around by the re-election of competent men. But where the political conditions are more evenly balanced this is practically impossible.
- (3.) The salaries are too low. This applies especially in the western commissions. Railroad supervision requires specialized knowledge, and to obtain the service of men who possess such knowledge good salaries must be paid.
- (4.) Lack of requirements as to technical fitness for office. In most cases there is no statement whatever made with reference to the qualifications for the position.
- (5.) Lack of general regulative power in the matter of railroad construction, and in the issue of stocks and bonds.

THE RESULTS OF THE WORK OF THE COMMISSIONS OF BOTH FORMS.

The Advisory Commission—

- (1.) The Massachusetts Commission has prevented useless paralleling.
- (2.) They have adjudicated upon a large number of complaints.

Both types—

- (3.) They have served to bring about a more harmonious relationship between the railroads and the people.
- (4.) Through informal action and correspondence they have settled a large number of disputes before it became necessary to adjudicate.

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The Commission with power—

- (5.) They have rendered rates more stable.
- (6.) They have redressed inequalities of rates through lessening discriminations and extortions.
- (7.) They have harmonized the differences which existed between intra-state and inter-state rates, thereby helping the interests of the local manufacturer.
- (8.) They have exercised a control over station accommodation.
- (9.) They have exercised an advantageous control in regard to crossings and safety appliances. (This holds true of both types).
- (10.) They have ensured a more adequate service on branch lines.

THE INTER-STATE COMMERCE COMMISSION.

PRELIMINARY STEPS.

The limitations of the State Commissions must be borne in mind. The intra-state traffic does not constitute more than from 10 per cent to 20 per cent of the total traffic. The sphere of state activity being thus circumscribed, the place occupied by federal regulation is suggested.

The majority of the railroads of the United States have been chartered by the state legislatures. During the period from 1830 to 1850 the aid in developing the railway system came from the state not from the federal organization. The earlier court decisions favoured the exercise of regulative powers over traffic by the States.

Under the constitution the power to regulate commerce between the States is placed in the hands of the Federal Government. The question of the advisability of the regulation of the transportation system by the central government was brought to the front in 1868. In that year a Senate Committee was appointed to examine into the 'expediency of regulating the various railroads in the United States that extend into two or more States, as to rates of fare, freight, &c.' A report was presented declaring the power of the Federal Government to control such matters, but in the absence of detailed information nothing was done.

The matter was kept before Congress by the conditions of 1873 and the movements associated with the Granger legislation; petitions for the exercise of the federal regulative power over railway transportation poured in. Various suggestions as to the necessity of publicity of rates, the prohibition of stock watering, and the maintenance of efficient competition through the opening up of several lines of waterway under government control were made by the Committee of 1872, which was appointed to consider the question of cheap transportation to the sea-board. In 1878 Mr. Reagan, of Texas, now chairman of the Texas Commission, forced the matter to the front. The bill proposed by him and adopted by the House of Representatives was drastic.

A judicial decision (*Wabash Railway vs. Illinois Railway Commission*) affirmed the lack of control, by the Illinois Commission, over traffic originating outside of the State. Prior to this, although it had been explicitly stated in the constitution that the exercise of such power pertained to the Federal Government, the exercise of such power by the state had been connived at.

The definitive attempt of the Federal Government to deal with this matter dates from March, 1885, when a select committee of the Senate was appointed 'to investigate and report upon the subject of the regulation of the transportation by railroad and water routes in connection or in competition with said railroads of freights and passengers between the several states.' After careful investigation and the obtaining of evidence from all shades of representative opinion, a report was presented in January, 1886. The findings of this committee, which was presided over by Senator Cullom, present a searching condemnation of the evils which had arisen from lack of control. These findings were returned under eighteen counts which may be summarized as follows:—

- (1.) Local rates were unjustifiably high as compared with through rates. Rates at non-competitive points were unreasonably high as compared with those at competitive points.

- (2.) That there was an extensive system of personal and local discriminations.
- (3.) The existing policy of secret special rates, rebates, drawbacks, concessions, and rate fluctuations favoured the larger at the expense of the smaller shipper.
- (4.) The shipping public was suffering from the lack of a uniform system of classification.
- (5.) Capitalization and bonded indebtedness were not based, in many cases, on real assets.
- (6.) There was no adequate remedy under the existing common law for the redress of the grievances existing.

The bill introduced by the committee was subject to various modifications before it became law. The House favoured more radical action, and the bill in its finished form was the result of a series of compromises.

THE LAW OF THE INTER-STATE COMMERCE COMMISSION.

The commission is composed of six commissioners appointed by the President, by and with the consent of the Senate, for a term of six years each. Not more than three of the commissioners are to be appointed from the same political party. They are prohibited from holding any pecuniary or official relation to any common carrier subject to the provisions of the Act; during their term of office they are not to engage in any other business.

Each of the commissioners receives an annual salary of \$7,500, the secretary of the commission receives \$3,500. The commission has power to fix the compensation of such other employees as it may find necessary to the proper performance of its duties. (Under this provision there have been appointed an assistant-secretary who receives \$2,500 per year, a statistician and an auditor, each of whom receive a salary of \$2,500 per year, three law clerks, one of whom receives \$2,500, the others \$2,000 each, a special agent who receives \$2,000, and a clerical force, as indicated in the report for 1897, of 113.)

The expense of the commission, including travelling expenses, is borne by the United States.

The provisions of the Act are made applicable to any common carrier or carriers engaged in transportation of passengers or freight by railroad, or by railroad and by water, under a common control for a continuous carriage or shipment from one state or territory or the District of Columbia to another state or territory or the District of Columbia, or from such point to a point in an adjacent foreign country, or the shipment from a point in the United States to another point in the United States through a foreign country, or from a foreign country to the United States, and carried to such place from the port of entry. The term 'railroad' covers the road in use by any corporation operating a railroad whether owned or operated under a contract, agreement or lease.

The commission is required to examine into the management of all common carriers subject to the provisions of the Act; it has the power to obtain from such carriers such information as it may consider necessary in order to enable it to perform its duties; it sees to the enforcement and execution of the Act. Upon the request of the commission any district attorney of the United States is to institute, in the proper court and prosecute under the direction of the Attorney General, all proceedings necessary for the enforcements of the Act and the enforcements of the penalties attached to violations of the Act. The cost of this is to be paid out of the court appropriations of the United States.

In enforcing the provisions of the Act the commission is empowered to require, by subpoena, the attendance and testimony of witnesses, and the production of all books, papers, tariffs, contracts or agreements and documents bearing on the matter. Application may be made to a court to enforce this.

A commission may order the taking of evidence by deposition before certain judicial officials, subject to the requirements that they are not to be interested in the case.

Any person, firm, corporation, association, society, organization, railway commission or railway commissioner of a state or territory complaining of any omission or commission

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in contravention of the provisions of the Act may apply to the commission, by petition, briefly setting forth the facts of the case. A statement of the complaint is forwarded to the railway complained of; an opportunity for rebuttal is given, or for rectification of the matter complained of. If the complaint is not rectified or if there seems to be reasonable ground for investigation the commission shall investigate it. The commission may also institute an inquiry of its own initiative. No complaint is to be dismissed because of absence of direct damage to the complainant.

The findings and recommendations of the commission are to be regarded as *prima facie* evidence in judicial proceedings as to each and every fact found.

When a common carrier refuses to obey or perform a lawful order or requirement not founded on a controversy requiring a trial by jury, the commission, or any company or person interested in such order, may apply in a summary manner for its enforcement to a circuit court of the United States sitting in equity. The provisions of this section and the question of enforcement of the order or requirement by injunction or other process are practically identical with those of the similar clause already considered in the Iowa law. The main differences are that failure to obey the injunction or other process involves a fine of \$500 per day instead of \$1,000. When the subject in dispute involves \$2,000 or more there is an appeal to the Supreme Court. The cost of the proceedings are met from the appropriations made for the United States courts.

The features of difference from the foregoing procedure when the matter in dispute is founded on a controversy involving a trial by jury are, the application for enforcement is to be made to a circuit court sitting as a court of law; the court is required to fix a time for trial, which shall not be less than twenty nor more than forty days from the date of issue of the order for the trial. The defendants are required to file their answer within ten days after the service of a copy of the petition and the order on them. The findings of fact of the commission are to be *prima facie* evidence. An appeal within twenty days, if the matter in dispute is in excess of \$2,000, lies to the Supreme Court.

Persons claiming to be damaged by any common carrier shall elect between bringing a complaint before the commission and entering suit in the courts.

The commission has an official seal which is judicially noticed. It may make and amend, from time to time, general rules of procedure, including forms of notices and the service thereof. These are as far as possible to conform to those in use in the United States courts.

The commission is empowered to require detailed statistical reports annually from all common carriers subject to the provisions of the law. These are to be made according to the forms prescribed by the commission, and are to give detailed answers upon all questions concerning which the commission may desire information.

By an Act of 1893 the supervision of the use of automatic couplers and automatic brakes is lodged in the commission. It is required to see to the enforcement of the law.

Rates.—All charges must be reasonable and just.

Publicity of Rates.—Every common carrier is required to keep open for public inspection the rates, fares and charges between the various places on its line. It shall also state separately whatever terminal charges or other charges may affect the aggregate of the rates, fares and charges. Such schedules are to be posted in two conspicuous places in all stations and offices where freight and passengers are received for transportation. This applies also in the case of traffic sent from one point in the United States through foreign territory to another point in the United States.

The *published rates* are not to be deviated from.

Advance and Reduction.—When rates are advanced ten days' public notice is required; in case of reduction, three days' public notice. The proposed changes are to be shown by printing new schedules, or are to be otherwise clearly indicated.

Joint Rates.—No joint rate, fare or charge can be advanced until after ten days' notice has been given to the Commission; in case of reduction, three days' notice to the Commission is required. The notification to the Commission must indicate the changes proposed and the time when they are to go into effect. The Commission may provide for the publication of such advances or reductions. Published joint rates are not to be deviated from.

Filing of Schedules.—Each common carrier is required to file with the Commission copies of its schedules of rates, fares and charges which have been established and published in accordance with the foregoing requirements; there must also be filed with it copies of agreements, contracts and arrangements with other common carriers in regard to traffic affected by provisions of the Act; schedules of joint rates must also be filed. The Commission may provide for the publication of so much of these matters as it deems necessary in the public interest.

Neglect or refusal to act in harmony with the foregoing provisions in regard to filing are punishable by the provisions prescribed in the Act. In addition, obedience to the provisions is enforceable through the issue of a *writ of mandamus* by a Circuit Court. If such writ is not recognized, then a *writ of injunction* may be issued restraining such offending company from engaging in transportation or the receiving of property.

Discriminations and Preferences.—Unjust preferences, by collecting from any person through any special rate, rebate, drawback or device of a greater or less compensation for the transportation of persons or property than is charged for a like and contemporaneous service is forbidden. The 'long and short haul' clause, which prohibits the receiving of a greater charge for the transportation of passengers or like kind of property for a shorter than a longer distance over the same line, under substantially similar circumstances, the shorter distance being included in the greater, is only a peculiar form of unreasonable preference. In this case, however, it is provided that the Commission may, on investigation, relieve a carrier from the operation of the clause. All pooling of freights and divisions of earnings is forbidden. The influence of this legislation is seen in the similar clause in the Iowa law. Common carriers are to furnish facilities for interchange of traffic, through and local. Unjust discriminations through false billing, false classification, false weighing, or false report of weight, or by any other device, by a common carrier or its agent whereby the person so favoured obtains transportation for property at less than regular rates, or any similar action on the part of any person, or agent, or officer of any company or corporation shipping goods, or any attempt to obtain any such discrimination is classed as a misdemeanour.

Punishments Under the Act.—Violations of the provisions of the Act are punishable, on conviction in any district court within whose district the offence complained of took place or within which the offending railway has a representative, where the road is a foreign corporation, by a fine not exceeding \$5,000 for each offence. In unjust discrimination the punishment is two years' imprisonment, or a fine not exceeding \$5,000, or both in the discretion of the court.

The individual or individuals aggrieved by the violation of the Act are to receive, in case the offence is proved, the full amount of the damages sustained, together with a reasonable counsel fee to be fixed by the court in every case of recovery.

General Provisions.—The provisions of the Act do not prevent the free carriage, or the carriage at reduced rates, of property for the United States, or for state or municipal purposes, or for charitable purposes, or to or from fairs, or issuance of mileage or commutation tickets, or the giving of free carriage by railroads to their officials or to the officials of another railroad.

The Act does not abridge the remedies existing at common law or by statute, but is in addition to the remedies so provided.

THE WORKING OF THE INTER-STATE COMMERCE COMMISSION.

The attitude of general opposition on the part of railway officials to regulation has ceased. A glance through the columns of the *Railway Age*, which mirrors railway sentiment, will readily substantiate this statement. A further position is taken that it would be advantageous if it were possible to have that control centralized. (*State Regulation of Railways*, by H. P. Robinson, editor of the *Railway Age*, *North American Review*, April, 1898.)

The value of the statistical work accomplished by the Commission is uniformly admitted. From the outset this work has had the advantage of the trained oversight of

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Prof. H. C. Adams, of the Department of Political Economy in the University of Michigan. A wealth of information with reference to the financial condition of the country has been accumulated.

The routine of the commission is concerned with correspondence, preparation and distribution of the reports, including the statistical report, forms, opinions, orders and circulars, and the receiving, examination and filing of railway reports, tariffs, contracts and other documents.

The Commission has, since its inception until the end of 1897, conducted 185 formal investigations, in which 932 points bearing on railway economy have been decided. It does not follow that the formal investigation and the decisions therein rendered exhaust the scope of the Commission's activity. The mediatorial position occupied by the Commission is very important. From the outset it has taken the position that the principal part of its work should consist in bringing the parties together with a view to settling the disputes without proceeding to more formal proceedings (4 I.C.C.R., p. 3). Through the instrumentality of correspondence the Commission has been able to settle a large number of minor difficulties that might have grown to greater proportions. The Commission has also, owing to the fact that it receives schedules, reports, &c., from the railways, an opportunity of supplying to the shippers and carriers such general information in this regard as they may require. This function has been of great value to shippers, carriers and investors (10 I.C.C.R., p. 55).

When the Act was passed there were in existence a large number of classifications, general and local. The Commission urged on the railways the necessity of harmony. As a result of many meetings, the co-operation of the roads having been enlisted, the classification has been so far simplified that there are now three leading classifications. An attempt is being made to obtain a uniform classification. The stress laid upon this is owing to the fact that classification is at the base of rate making. To change a commodity from one class to another is to change the rate.

The Commission has laid stress upon the advisability of having steady rates (2 I.C.C.R., p. 22). It believes that it is advantageous for the country that the rates should be reasonably remunerative (2 I.C.C.R., p. 23). From the outset the dual responsibility of the commission to the carrier and to the shipper has been in mind. The question of extortionate rates has engaged the attention of the Commission. In one-third of the cases brought before it, a reduction of rates has been directed (11 I.C.C.R., p. 22).

The difficulties in reference to rates have come up in great degree in connection with the railway system of the South. The 'basing point' system which has been used there has worked a great deal of harm on the non-competitive points. In grappling with the rate question, a matter of jurisdiction, which is material to the whole of the rate-regulating power, has come up. Under the Act all charges are required to be just and reasonable. The enforcement of this provision is in the hands of the Commission. The Commission had to determine what constituted a reasonable rate. In their first report they virtually said that the only rule to adopt was what 'the traffic will bear' (1 I.C.C.R., p. 36). They said that in such determination they would take into consideration all such matters relating to business and condition of the road as were material (Ib., p. 96). The right of the Commission to regulate rates was asserted in the seventh report (7 I.C.C.R., p. 10-11). The claim that the Commission had power to ascertain what was a reasonable rate and enforce it was stated in the sixth report. This position is reiterated in succeeding reports, it being stated, for example, that the right to condemn a certain rate implies the power to indicate what rate is reasonable. The right claimed has not been to fix initial but amendatory rates. An amendment to this effect was suggested, but nothing has been done.

It would indeed appear that this was a legitimate and necessary inference from the powers conferred upon the Commission. Without the power to declare what constituted a reasonable rate, the proceedings under the Act would amount to but little. The absence of expressed power in this regard is a weakness in the Act. In a series of decisions the right claimed by the Commission was asserted and exercised. In *Coxe Bros. vs. Lehigh Valley Ry.*, and in the 'Orange' case this power has been exercised in regard to freight. The right has also been asserted in regard to passenger traffic (Case

re Eureka Springs Ry., 11 I.C.C.R., p. 112). The Commission has taken the ground in this connection that the determination of just and reasonable rates is an administrative function. The State Commissions have claimed that power in this regard was absolutely essential to the Federal Commission (Rpt. Ga. Ry. Comm. 26th, p. 13).

The decision of the Federal Supreme Court, in the 'Social Circle' case, which was decided March, 1896, controverts the position which has been outlined. In this case, which came up under the 'long and short haul' clause, it was decided that there was no necessary or implied power in the enabling Act which conferred the rate-making power (10 I.C.C.R., p. 22). In another decision of the same court in the same month it was stated that the Commission had no power to fix a rate for the future (I.C.C. *vs.* Cincinnati, New Orleans and Texas Ry., see 11 I.C.C.R., p. 14),

Preferences have been prominent in recent years in connection with the western grain traffic. As regards discriminations, the Commission took the ground in its first report that they were not justified by the fact that they were given to build up industry. (1 I.C.C.R., p. 85.) It has been the policy of the Commission to allow preferences and rebates if they were not unjust. (6 I.C.C.R., pp. 13, 14.) The most common way in which the provisions of the Act in this regard may have been violated is by the granting of rebates. Here it is exceedingly difficult to obtain evidence that will lead to conviction.

The interpretation placed upon the preference clause has been limited by judicial construction. In the 'import rate' case, which was decided by the Supreme Court in March, 1896, the general question at issue was whether in the carriage of goods from American seaports carriers, subject to the Act, could lawfully charge less for the carriage of import than of domestic traffic of like kind to the same destination. The Commission had decided that the import rates had enabled the foreign goods to be placed at interior points at lower rates than home goods which had a shorter distance to go. This was classed as undue preference. The Supreme Court decided that the conditions attendant upon the foreign traffic, in respect to competition, were sufficient to justify the rates complained of. The comment of the Commission on this decision is that it defeats the general rule of like charges for like service in transportation between the same points of both home and foreign goods of similar description; that it takes from the Act the prohibitive force against discriminations of this character, and that it makes the Act provide merely for hearing and investigation of such complaints relating to specific rates on import and domestic traffic as may from time to time be presented to the Commission. (10 I.C.C.R., pp. 6-16.)

The 'long and short haul' clause permits the commission when it sees fit to suspend its operation. It was held as early as 1885, by a federal judge in Oregon, that water competition was a sufficient reason for a departure from this rule. This came up in connection with the clause in the 'Houlik' bill, an Oregon measure modelled upon the Reagan bill.

Complaints arising from the violation of this clause have been most common in the South. During the first year of its operation, the Commission decided that railroads might depart from this rule, on their own initiative, when the competition to which they were subjected was 'rare and peculiar.' The Commission has since overruled this position, and stated that in all departures from the provision the consent of the commission was a primary requisite. The operation of this clause has exerted a steadying effect on rates. It has been helpful to the small shipper.

The Commission has taken the position that railway competition within the United States, the railway asking for an exemption from the operation of the clause being a party to the creation of such competition, is no cause in itself for exemption. This came up in the case of the I.C.C. *vs.* Alabama Midland Ry. The Supreme Court in November, 1897, decided this adversely to the Commission's contention. It decided that existing railway competition, between carriers subject to the Act, created a dissimilarity of circumstances which would take the case out of the exercise of the Commission's discretion. (11 I.C.C.R., p. 37 et seq.)

One clause, from which much was expected, is the 'anti-pooling' clause. It has not worked as well as was expected. Some form of agreement between railways is necessary.

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The Commission has recognized that the various railway associations and traffic agreements have been useful in establishing and obtaining publicity of joint rates and in obtaining joint running arrangements. But it is considered that dangerous features are connected with them. (10 I.C.C.R., p. 86, et seq.) At an early date the commission expressed the opinion that traffic associations exert little influence in the maintenance and uniformity of rates. (4 I.C.C.R., p. 5.) On this point the New York Commission holds the opposite opinion. (15 N.Y. Rpt., p. 8.)

The question of a changed attitude towards pooling has been forced to the front in connection with the various traffic agreements. The agreement of the Western Trunk lines in 1895, also known as the Union League Club agreement, was essentially a pool. It provided for a percentage division of competitive traffic. The constant claim is made, by the railways, that the only way to obviate the necessity of giving rebates is to allow pooling. (Blanchard Railway Pools, p. 6.) In the appendix to the sixth report of the Commission a large amount of testimony, which on the whole favoured pooling under government supervision, is given. A qualified approval of this position is contained in the eighth report. In the eleventh report it is stated that a majority of the Commission favour pools under government supervision; a fear is expressed, however, that the steadying of rates would be obtained at the expense of competition.

The Foraker bill, which was introduced to deal with this matter, requires that all pooling contracts should be filed with the commission; they are not to go into effect until approved. They may be annulled at any time. It also gives power to change any and all rates maintained under pooling contracts. Although it is hardly probable that such a drastic change will, for some time at least, be accepted, the railroads, in view of the unsettled conditions introduced by the Joint Traffic Association decision, will probably be willing to accept a considerable control of maximum rates in return for the acceptance of pooling. Although a majority of the Commission have pronounced themselves as not opposed to pooling, under restrictions, yet it is a *dernier resort*. The manifest preference of the Commission is that the amendments, elsewhere referred to, should be tried.

The defects in the Act.—(1.) Lack of definite statement. The powers of the Commission, as will be seen in the foregoing paragraphs, are not clearly enough indicated. This is due in considerable degree to the fact that the legislation was a compromise.

(2.) Lack of power. If the defendant will not obey the recommendation of the Commission the courts have to be looked to. The recommendations and decisions of the Commission are to be taken as *prima facie* evidence in such proceedings. The Commission has complained that it has no final power. In many cases the courts have proceeded *de novo*. (5 I.C.C.R., pp. 19-22). The consequence of this has been a limitation of power. 'If a carrier can simply ignore the findings of the Commission and wait for a new trial in the courts and upon different testimony, in a proceeding to be instituted and carried on by the Commission, there can be no certainty upon any administrative question until the judgment of the court of last resort is pronounced and the delay alone substantially defeats the remedy.' (4 I.C.C.R., p. 10.)

As a result of this condition cases have dragged on. *Coxe Bros. vs. Lehigh Valley*, the 'Social Circle' case, the 'import' rate case are examples of cases which have dragged on from three to five years before being finally settled. The average duration of cases which have been prosecuted before the courts for the enforcement of the Act has been about four years. (11 I.C.C.R., p. 32.)

Some decisions, already quoted, have indicated what essential changes in the law have been made by the courts. Further examples may be cited. Clause four provides 'a greater compensation is not to be received for transportation of like property under similar circumstances and conditions for a shorter than for a longer distance over the same line in the same direction, the shorter being included in the greater distance.' In construing this provision, the Commission has assumed that by the word 'line' a physical line is meant. The courts took the view that there are as many lines as there are carriers, and that each is wholly independent of any other as regards the legality of rates under the fourth section (see 6 I.C.C.R., pp. 31-7 and 7 I.C.C.R., pp. 32 et seq.) It will be seen that this opens up an easy way for evading the provision. In the con-

struction of section 22, which relates to the cases in which free or reduced transportation may be granted, the Commission held that there could be no such free or reduced transportation in cases not covered by this section. The context of the section would seem to substantiate this position. The courts, however, took the position that the details mentioned were illustrative not exceptive. (6 I.C.C.R., p. 26.)

The Commission claims that, subject to such review, as the courts consider proper, the orders of the Commission should be not merely *prima facie* evidence, but conclusive on all the parties concerned. (11 I.C.C.R., p. 84.) The Commission complains bitterly of the attitude of the courts. Many examples might be cited from recent reports. The extreme of statement is to be found in the report for 1897, which says that judicial decisions have so shorn the Commission of power that it has ceased to be a body for the regulation of interstate carriers. (11 I.C.C.R., p. 51.) The same complaints appear in the advance sheets of the twelfth report. The commission also complains that, as a result of this condition, the railways are not obeying the law as loyally as at the outset, because 'the proceedings and orders of the Commission go for nothing. Such is the theory of the present Act as interpreted by the courts.' (11 I.C.C.R., p. 34.) As a pendant to this statement may be cited an extract from the dissenting opinion of Mr. Justice Harland in a 'long and short haul case,' I.C.C. *vs.* Alabama Midland Ry. Co. and others, also known as the 'Troy' case, which was decided by the Supreme Court in November, 1897. 'Taken in connection with other decisions defining the powers of the Interstate Commerce Commission, the present decision it seems to me goes far to make the Commission a useless body for all practical purposes, and to defeat many of the important objects desired to be accomplished by the various enactments of Congress relating to interstate commerce. It has been shorn, by judicial interpretation, of authority to do anything of an effective character.' (Quoted in 11 I.C.C.R., pp. 50-1.)

(3.) A necessary corollary from the foregoing is that the expense to the individual complainant has been much greater than was anticipated.

(4.) I consider the lack of a requirement as to technical qualifications on the part of the Commissioners as a defect. The term is also too short. The obtaining of the requisite intimacy with the conditions of the problems, even when the Commissioners are technically qualified, is a work of time. A much longer term—if not a life term—is required. This would have the added advantage that the permanency of the position coupled with an adequate salary would enable a wider choice to be made than is at present possible.

SUGGESTED AMENDMENTS TO THE ACT.

The reports of the Commission contain a number of suggested amendments which may be summarized as follows:—

(1.) Changes in rates, either reduction or increase, should require filling of notice with the Commission at least sixty days before the change is to take effect. The Commission may allow the change on less than sixty days' notice.

(2.) If the commission considers the rates, fares or charges so filed unreasonable or in violation of the law they may determine what are reasonable rates, &c.

(3.) When it is determined that a carrier has violated the Act, the Commission shall order such carrier to pay to the complainant the sum to which he is entitled before a certain day. In addition to the power to order the carrier to desist from such violation, the Commission shall be empowered (a) to fix a maximum rate, (b) to fix a minimum rate, (c) to determine divisions between joint carriers of a joint rate and the conditions of interchange, (d) to make changes in classification.

(4.) An order, other than for payment of money, is to be known as an administrative order. When such order is directed to a common carrier who has been violating the provisions of the Act, unless the carrier brings suit on it within thirty days from the issue of the order, it shall be final in its operation. If it is not obeyed, the Commission may bring suit for its enforcement, and if it appears that the carrier disobeyed an order duly made and served, the court shall either restrain the disobedience or enforce obedience.

(5.) Through rates and through routes—the Commission asks for substantially the powers, in this respect, possessed by the English Commission.

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(6.) That the 'long and short haul' clause be no longer obligatory, but that the commission have a discretionary power of enforcement as under the English law. This is in view of the judicial decisions already referred to.

RESULTS OF THE COMMISSION'S WORK.

It might seem from the résumé given that the work of the Commission means little. But this is far from being the case. The difficulties that have been met may be frankly faced. The weaknesses in the Act and the difficulty of the problem it has had to encounter must be remembered. Those who anticipated that the Commission would solve the problem in a short time little knew the difficulty of the problem. Those who drafted the Act did not anticipate that all would be settled in a short time. The words of the Cullom Committee may be quoted: 'That a problem of such magnitude, importance and intricacy can be summarily solved by any master stroke of legislative wisdom is beyond the bounds of reasonable belief. That a satisfactory solution of the problem can ever be secured without the aid of wise legislation the committee does not believe.' (Rept., p. 180.) At the same time it was suggested that changes in the law might from time to time be necessary. (Ib. p. 215.)

All has not been accomplished that was desired. Any candid observer, acquainted with the conditions, will state that conditions are incomparably better than they were in 1887.

In summarizing the results accomplished by the Commission, the first seven points I give are taken from a pamphlet by Mr. Geo. R. Blanchard, who was one of the officials of the Joint Traffic Association. This pamphlet, entitled *Railway Pools*, is pro-railway in tone.

- (1.) It has secured more publicity of rates.
- (2.) It has lessened open rate wars.
- (3.) It has equalized long and short haul rates.
- (4.) It has exercised beneficial warning or police powers.
- (5.) It has silenced much unjust clamour against the railways.
- (6.) It has been mutually educational.
- (7.) It has been judiciously administered.
- (8.) It has benefited the smaller shipper.
- (9.) By obtaining a more uniform classification it has afforded a more uniform basis for rate making.
- (10.) Its statistical work has been of great value.
- (11.) It has exercised important supervisory functions in regard to the application of automatic couplers and safety appliances.

Illustrative material bearing upon the question of regulation in the United States will be found in the laws and committee reports referred to, the reports of the various Commissions, the report of the Cullom Committee, and in the following works: Hadley's *Railroad Transportation*, Dixon's *State Railroad Control*, Adams' *Railroads, their Origin and Problems*, Blanchard *Railway Pools, their Equity and Value*, *Compendium of Transportation Theories*, edited by C. C. McCain, ex-auditor of the Inter-State Commission, the files of the *Railway Age*, and a series of articles by leading men, which have appeared in the last two years in the *Forum*, *North American Review*, *Atlantic Monthly* and various economic journals.

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Earlier Legislative Attitude Towards Control.—To the Canadian provinces the question presented by transportation was not how to deal with the evils of the system, but how to obtain rapid development.

The legislation was, in the main, influenced by the legislative precedents both of England and of the United States. There prevailed the same general belief in the regulative effects of competition.

At an early time, however, some provisions bearing on some phase of regulation are to be found. The earlier policy differed in the provinces.

In Lower Canada the charter of the St. Lawrence and Champlain Railway contained maxima. There was also a maximum dividend indicated, and it was provided that when the rates allowed produced more than 12 per cent, the rates, i.e. maxima, should be reduced one-fourth. This is moulded on the similar clause in the charter of the Liverpool and Manchester Railway.

In Upper Canada the legislature, in the charter of the Cobourg Railway, gave the directors of the corporation power to fix and regulate rates. It was assumed in the legislation that there would be effective competition on the roadbed, each individual being allowed to use it on payment of defined way tolls.

In New Brunswick the attitude shown was much more *laissez faire*. The charter of the New Brunswick and Quebec Railway in 1836 provided that the company was to charge such rates as it considered reasonable. This was subject to the limitation that after ten years from the completion of the road the legislature might, if the tolls were declared excessive, reduce them so that they should not produce a greater rate of profit than 25 per cent.

A reserved right of purchase which appears in some of these earlier Acts is also to be regarded as one phase of asserted control. This clause was derived from United States' experience.

In the legislation of the period 1845-47, a changing attitude shows. The attempt to regulate the rates automatically through the operation of the dividend was given up, in the charter of the Atlantic and St. Lawrence Railway in 1845, and it was provided that on all net income in excess of 12 per cent a tax of one-half was to be paid. This was a departure from English precedent.

In 1846 an attempt was made in Canada to systematize the railway policy by drafting general laws. In the same year Mr. Gladstone, then Colonial Secretary, recommended to the various colonies that whenever the railway profits exceeded 15 per cent there should be a revision of rates. A general recommendation in favour of a state purchase clause was also made.

The divergent policy on the matter of rates commenced to be harmonized, the practice of Upper Canada being on the whole in the predominance. There was the added provision in the charter of the Canada New Brunswick and Nova Scotia Railway in 1847 that the regulation of tolls by the directors should be exercised subject to the approbation of these tolls by the Governor-in-Council. In 1846 it was provided in the charter of the St. Lawrence and Atlantic that 'tolls were to be charged equally to all persons under the same circumstances.' This is based on the Imperial legislation of 1845. A provision for posting up rates in a public place appears in various charters of 1847. The state purchase clause was retained in amended form. In the charters granted in 1847 and subsequent years, it is stated that railroads were not exempt by their special charters from the operation of any general railroad law that might subsequently be passed.

In the period intervening between this and the confederation time, the policy in regard to regulation is somewhat fluctuating. In regard to rate regulation the policy of a tax on dividends in excess of a certain figure was favoured as late as 1850. The matter was set at rest by the 'Railway Clauses Consolidation Act' in 1851, which provided that 'tolls were to be fixed by the directors subject to the approval of the Governor-in-Council, and that there were to be no preferences.'

In the Nova Scotian legislation of this period it is stated explicitly that there are to be no preferences. In New Brunswick an explicit statement to this effect is also found in 1864. In 1853 Nova Scotia declared the right of the Governor-in-Council to require that the tolls should be approved by him before they became operative.

The summary given will indicate the evolution of the principle set forth in this matter in the Railway Act of 1868.

The Present Condition.—The integration of the provinces in the Dominion brought to the front some of the questions connected with the railway problem. The earliest project for a more effective control is contained in a bill introduced in 1873 by Hon.

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Mr. Oliver 'for the better regulation of the traffic on railways.' This bill provided for equal mileage rates. No machinery for a commission was provided under this Act. The matter of improved methods of regulation was referred in 1875 to the Committee on Railways, Telegraphs and Canals; but nothing was done. It is not necessary to go into a detailed consideration of the Commission projects at this point which was later presented. There has been an increasing body of public opinion in favour of commission regulation.

The movement in Canada has proceeded part of the way towards a Commission. In other countries it has been shown that general regulative control over rates and other features of railway transportation has gradually passed to bodies smaller than the legislatures which at first were entrusted with such regulative power, and this with the consent of such bodies. The larger political organizations have been considered unfitted for dealing with such matters. Matters of railway regulation require the most careful consideration at the hands of those especially qualified to deal with the subject. This consideration is best obtained from a smaller body whose functions are not political. In Canada the declaration of a right of control over rates by Parliament still exists. But in view of the fact that this can not be exercised until a dividend of 15 per cent is obtained, such declaration of power amounts to nothing. It is to a smaller organization that we must look for the regulative function. As it is organized now it is in the hands of the Railway Committee, and in some degree ultimately in the hands of the Cabinet. Canada has only gone part of the way, followed by England and the United States. It has committed the regulative function to a smaller body; but that body is political in its functions.

An initial objection to placing such power in the hands of the present organization is that it mingles essentially administrative functions with political functions. The transportation problem is the most important problem that Canada faces to-day. The greatest care in its regulation, in the interests of the people, is essential. The political duties of the members of the Cabinet, the wide sweep of duties with which the Ministers are concerned, do not permit of their devoting themselves to all the intricate questions connected with the matter of regulation. They are not able to devote all their time to the work; it is at the same time a problem which demands entire attention. Then again the shifting conditions of political life preclude that continuity which is essential if the results of experience and the advantage of fixed policy are to be obtained. A further consideration of the general problems facing Canada and of the way in which the Committee has met them will strengthen the argument.

The rate question is the central fact in the discussion of the transportation problem. It is through the changes in rates and their equitable or inequitable pressure that people are brought in contact with the problem. The generally accepted base of rate-making is *what the traffic will bear*; care has to be taken that the railway does not charge what *the traffic will not bear*. There should be stability of rates and there should be as between individuals and localities, similar rates for similar services under similar circumstances.

The geographical position of Canada, and its lateral extent of territory make the rate question take on a peculiar significance. Dependence on railroad transportation is essential. With the exception of that portion of the railway system which is situated in the provinces of Ontario and Quebec there is no such regulative water competition as exists in the Central Western States. The necessity for regulation presents itself all the more strongly. Stability, reasonableness and uniformity of rates are, under such circumstances, primarily essential.

The consideration of the rate question brings up that phase which most concerns Canada, the preference question. The grievances complained of under preference may be found operative owing to a system of rebates or secret rates, or they may affect localities through the operation of competitive and non-competitive rates. The extent to which the evils connected with rebates are present in Canada is somewhat difficult to determine. Those who are affected adversely by such rates, are in the absence of any efficient means of investigating their complaint apt to abstain from complaint through fear of obtaining a harsher treatment. It is manifest that local discriminations have

been wrought through the operation of rates as at present established. Complaints are prevalent that one industrial portion of the country is favoured in rates over another. A glance through the reports of the Board of Trade of Toronto, will indicate that this is complained of by Toronto. What is needed is a policy that will endeavour to equalize the advantages of rates.

Competitive through rates have introduced such anomalies in the North-west as are prohibited under the 'long and short haul' clause. Communities which have non-competitive rates have found it advantageous to transport their produce by wagon to some point where competitive rates prevailed. This was the only means whereby a profit might be obtained. In the development of the traffic the distant manufacturer has been given an advantage over the home manufacturer. The rates to intermediate points have been fixed at the same figure as, or even higher than, rates to the coast. The rate system has been favourable to some sections and unfavourable to others. The development of the North-west is bound up with a satisfactory solution of the rate question. There is no doubt that the population and business of this section have not been allowed to move and develop in accordance with natural principles. The arbitrary constraint of competitive rates has influenced the development. What is needed, not only in the interest of this section but of all portions of the country, is a satisfactory solution of the rate problem.

The position of Canada, contiguous to the United States, has made Canadian roads competitors for American traffic. The first railway enterprises in Upper Canada looked to obtaining some share in the American east-bound traffic. It is admittedly for the advantage of the Canadian road to obtain some share in this traffic. The question that concerns Canada is what effect this exerts on her interests. In order to obtain the American traffic the American rate has to be met or even gone below. Under such conditions the phenomenon presents itself of American traffic being carried the longer distance, in the same direction, than traffic originating in Canada, for a lower rate. It may be urged that since the American traffic is export traffic the matter is of minor importance. The value of this traffic to the Canadian road may be recognized without binding us to the anomalous features connected with it. For example it discriminates against export trade through Canadian ports in favour of export trade through American ports. A rate of 58·5c. first class from Detroit to New York appears at the same time as a rate of 98·5c. first class from Detroit to Halifax. When the commodities so carried are placed in Canada, there is a double disadvantage, the Canadian producer has the higher rate and increased competition. Reason for complaint is manifestly present. For example, a rate of 58·5 first class, the same rate as to New York, has been quoted from Detroit to Montreal, while the rate from Windsor to Montreal has been 70c. In west-bound trade the Montreal-Chicago rate is the same as the Portland-Chicago rate. Without contending that the Canadian roads should be shut out from the advantages of a share in the American traffic, regulation in the interests of Canada is manifestly necessary. The policy in regard to this matter has been 'hands off'. What is wanted is a policy of regulation which will work more symmetrically.

To the manipulation of rates by the railway company is to be attributed, in great degree, the tendency to build up the larger community at the expense of the smaller. The movements of population in Ontario for example, from the country to the city is undoubtedly influenced by the competitive rates which favour the larger places. In a country whose wealth is in great degree agricultural, such a fact is too important to be permitted to escape unnoticed. If a proper system of regulation is adopted this tendency can be redressed.

The rate question stands in close relation to the tariff question. In France the railways are prohibited from so reducing their rates as to interfere with protection afforded by the tariff. In Canada any advantage obtained by the consumer, through reduction of the tariff, can be offset through a corresponding increase of rates.

The matter of through rates is of importance. Where connecting lines are concerned in the carriage of goods it is essential that no obstacle to forwarding them, through the inability to obtain a through rate should be presented. The through rate should be less than the sum of the rates. If the only way to obtain the transmission of the goods is through adding the rates a grievance is presented.

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In the handling of goods there should be equal treatment. Preferences in the matter of handling constitute a preference.

The rate question being of such importance, it follows that the greatest care should be taken to ensure equitable rates. When grievances arise an opportunity for settling them, if possible, through the exercise of mediatorial functions should be present. Such process should not entail a great burden of expense. Reduction or increase of rate should be kept under very careful supervision. No railway companies should be able to reduce their rates and then, by mutual agreement, raise them again without such action being subject to regulative control.

The question of traffic agreements is important. Such agreements are necessary in order to provide for common regulation and handling of traffic. The examples quoted from the experience of the United States will have shown how such arrangements shade off into pooling organizations. The most rigid supervision in the public interest is necessary. The tendency of railroad systems is toward amalgamations. Mere legislative prohibition, without some form of control will never settle the matter. The most constant care for the public interests is necessary.

The exercise of supervision over the roadbed, the condition of the rolling stock, the introduction of adequate safety appliances, the supervision of crossings are all functions which without contest will be admitted to demand some regulative control in the public interest.

What has the Railway Committee accomplished? In the period January, 1899, to December, 1896, 408 cases came before the committee. Of these seven dealt with rates. In 1893 there was a complaint with reference to passenger rates between Hamilton and Suspension Bridge. In 1895 several cases came up: a complaint with reference to overcharge on grain shipped by the Canadian Pacific from the North-west was dismissed because the committee had no jurisdiction. Complaints were also brought up with reference to discriminating rates on the Temiscouata Railway, and in regard to discriminations by both the Grand Trunk and the Canadian Pacific with reference to rates on export cheese. In 1896 there was one case. This slender list of cases would on the face of it, indicate that the rate question on which so much stress has been laid occupies a minor position in Canada. It is difficult to accept this conclusion, however, in the face of the complaints about rates which have been prevalent in recent years. The fact that two of the parties in these cases did not enter an appearance would seem to further substantiate the position which minimizes the importance of the rate question. But on the other hand it must be remembered that process before the committee is expensive. It is necessary for the complainant to come to Ottawa, if the value of the articles concerned is small, the party aggrieved will not, although the damage is very material to him, feel like undergoing the expense of a long journey and a contest with strong railway corporations. Then again parties may, even after lodging the complaint, be afraid to pursue the matter because of the rate power possessed by the railway. Many legitimate complaints do not come before the existing tribunal.

The committee has been unable owing to its organization to grapple effectively with the problem presented. It has been impossible, owing to its stationary character, to deal effectively with questions pertaining to rates and preferences. A more migratory body could deal more effectively with these matters: it could also deal more effectively with the question of crossings. This question has been dealt with by the committee and the urban communities have had their interests fairly well looked after. The country communities which have not been able to stand the expense of presenting their cases before the committee have not had their interests adequately protected.

In so far as has been possible the committee has dealt with the matters presented to it. Its work has not been an unmitigated record of failure. I consider, however, that in the most material matters it has not been effective, and that for the reasons already indicated.

The defects in the Railway Committee as a regulator of railway transportation I would place under the following heads:—

- (1.) It has a dual function—political and administrative.
- (2.) The lack of migratory organization renders it impossible to deal effectively with complaints.

- (3.) The distance to be travelled by the complainants renders the expense too great.
- (4.) There is a lack of technical training for the work.
- (5.) The existing organization is not sufficiently permanent.

In my opinion, the only way to put the matter of railway regulation on a more satisfactory footing in Canada is by entrusting it to a railway commission composed of men of technical training, who shall receive salaries adequate to attract the most efficient, and who shall have a long tenure of office.

The transportation problem presents in every country especial features. I do not regard the policy adopted either in England or in the United States as applicable in its entirety to Canada.

The main points of the legislation I suggest I present here in summarized form; the detailed statement will be given in the draft legislation.

There should be a commission composed of three members, one of whom should be a railway man, one a business man, and one a lawyer. They should have control over all matters of regulation now possessed by the Railway Committee. It will also be advisable to give them, in the public interest, a regulative control over the issue of stocks and bonds. This would tend to prevent the floating of purely speculative enterprises that would tend to affect adversely the credit of the country. An investigating power as regards the *bona fide* nature of proposed railway projects seeking incorporation, and of their necessity for the districts through which they are to pass, should, subject to the final action of Parliament, be possessed by the Commission. The Commission should be empowered to arbitrate, on the application of either party, in disputes between railways and their employees. Any dispute of this nature which, unchecked, leads to disarrangement of the transportation system is of the greatest importance to the people. The Commission will also answer such questions regarding pending railway bills as are directed to it by Parliament, and would make such investigation as Parliament may from time to time direct. The Minister of Railways and Canals may also ask for its opinion on matters of railway policy.

The Commission should not only have power of passing upon cases originating by petition, but also have power of initiatory investigation. When such investigation is made by the Commission or its officers, and it appears from its findings that there is *prima facie* evidence of a violation of the law by a common carrier, it shall submit the matter to the adjudication of the courts. The findings of the Commission in such matter are not conclusive. It would be obviously unfair to the railroads to permit the Commission to determine the matter after having made the investigation.

In the matter of rate regulation, I do not believe that the policy of the Commissions 'with power' in affixing maxima should be followed. The conditions in a compact territory like Iowa or Illinois differ essentially from those in a long scattered strip of country such as Canada has to deal with. The power of the Commission should be to prescribe amendatory rates when grievances arise, the *onus probandi* that the initial rates are reasonable, being on the railway. This should be the policy at least at the outset—personally I regard it as the best form for a more permanent policy. The attempt of any commission, no matter how well equipped, to prescribe at the outset of its career maximum rates applicable to all sections of the railroad system of the Dominion would doom it to failure. The commission must proceed by degrees and accumulate experience.

A question which comes up in this connection is the assumed impossibility of regulating the rates of the Canadian Pacific. While the general rates can not be regulated until a dividend of 10 per cent is obtained—in other words never—there is no power conferred to charge unreasonable rates or to make preferences; in this respect this company would be subject to regulation.

The experience already cited indicates the necessity of carefully delimiting the functions of the commission from those of the courts. The matters with which the commission will be concerned are administrative. All evidence bearing on the matter should be submitted to the Commission. It should have final power to determine in all cases of fact. If its order is not obeyed by the carrier recourse will have to be had to the courts; here no new evidence should be admitted; the court should simply concern

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itself with whether the order of the Commission is reasonable ; if it finds it reasonable it should enforce it by appropriate process. The time for bringing the matter before a court should also be limited. If no action is brought by the carrier within the time limited then the court should simply satisfy itself that the order had been issued and served, and enforce its observance.

A large part of the work of the Commission will be mediatorial. Many complaints will be settled by correspondence without the necessity of recourse to more formal procedure. The experience of other countries warrants this conclusion.

A question which comes up in connection with the matter of expenses has reference to the location of the Commission. The head office should be in Ottawa ; but provision for holding sessions in other parts should also be made. The question of expense is very important. The whole attempt should have in mind the furnishing of an inexpensive process. It may happen, however, that in the case of the small shipper, the initial expense may be more than he can bear. I suggest that in such case when it appears to the Commission that there is a grievance but that the shipper or person aggrieved cannot bear the expense of prosecuting the matter, the Commission shall submit the matter to the Minister of Railways and Canals and to the Minister of Justice and if they so decide a public prosecutor to present the case before the Commission shall be indicated by the Minister of Justice.

The general expenses of the Commission should be apportioned on the railroads in proportion to their gross receipts ; but when a public prosecutor is appointed, as above provided, or when the Commission prosecutes before the courts any matter which has originated from its initial investigation the expense should be a charge on the funds laid aside for the administration of justice. When in discharge of their official duties the commissioners and the officers of the commission should have free transportation.

Under the powers conferred by the British North America Act, as well as under the powers conferred by section 306 of the Railway Act, a general power over the railways of Canada is possessed by the Dominion. These railways would be under the regulative control of the Commission. The government roads would not be subject to its control. If complaints with reference to rates or other matters in connection with the Government roads arose, the Minister of Railways and Canals might, in his discretion, refer such complaints to the Commission for investigation.

SUMMARY OF DUTIES OF THE COMMISSION.

(1.) To have transferred to it all regulative powers in regard to rates, preferences, discriminations, rebates and secret rates possessed by the railway committee.

(2.) That power of supervision in regard to through rates and through routes should be possessed by the Commission.

(3.) That the Commission should be empowered to see that equal facilities of shipments are obtained by all, subject to differences in regard to perishable freight.

(4.) To have general regulative control in regard to traffic agreements.

(5.) To possess supervising and regulating powers in regard to crossings.

(6.) To have power to investigate serious accidents.

(7.) To have general supervision of safety appliances and of all matters requisite for the maintenance of the public convenience and safety.

(8.) Advisory power, subject to the final action of parliament, on all bills relating to railway projects.

(9.) To have general control of stock and bond issue.

(10.) To have power, on application of either party, to act as an arbitrator in case of disputes between railways and their employees.

(11.) To answer such questions *re* railway bills pending as may be directed to it by parliament. This will cover simply such features as may have come up in the preliminary investigation of the Commission.

(12.) To make such general investigations as parliament may direct.

(13.) To answer such questions in regard to railway policy as may be submitted to it by the Minister of Railways and Canals.

(14.) To see that the various railways obey the provisions of the Acts, general and special, under which they operate.

SUMMARY OF LEGISLATION.

(1.) Creation of a railway commission composed of three members, one experienced in law, one in railway business, and one in business.

(2.) Commission to be organized as a tribunal giving decisions, and as a body making independent investigations.

(3.) When it makes independent investigations and initiates a case it shall bring suit in an appropriate court.

(4.) The Commission shall have final decision as regards a matter of fact, it shall also have power to determine what constitutes a matter of fact and what a matter of law.

(5.) Where there is reason a public prosecutor may be indicated by the Minister of Justice.

(6.) The general expenses of the Commission to be a charge on the gross receipts of the railways. Where a public prosecutor is appointed or where the Commission initiates suit before a court as a result of its own investigation the charge shall be on the funds provided for the administration of justice.

(7.) The powers of the Commission shall extend to such portion of the railway system of Canada, excluding the government railways, as is under Dominion control.

RATE GRIEVANCES ON CANADIAN RAILWAYS

OTTAWA, ONT., January 17, 1902.

Hon. A. G. BLAIR,
Minister of Railways and Canals,
Ottawa.

SIR,—I have the honour to submit herewith a further report upon the subject of Railway Commission, and concerning my investigation under your instructions into the question of rate grievances on Canadian railways.

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

S. J. McLEAN.

The Honourable A. G. BLAIR,
Minister of Railways and Canals.

SIR,—I have the honour to submit the following report concerning the investigation conducted by me, under instruction from you, into the question of railway and passenger rate grievances. The plan adopted in the investigation was to deal primarily with Boards of Trade, Agricultural Associations and other responsible representative trade bodies rather than with individuals direct. At the same time, however, opportunities were given to individuals to present details dealing with the subject matter of the investigation. Wherever possible those making complaints were required to make them in writing. These statements, together with the supplementary papers and the evidence submitted will be found in the appendix to this report.

In a number of instances those who submitted complaints were unwilling to do so in public since they feared the results to themselves of antagonizing the railways. In such cases opportunities were afforded to make statements in private. In view of this condition I would respectfully recommend that if it is deemed expedient to print this report, that the evidence be not printed.

In addition to the hearing of information from the complainants, the officers of the railways concerned were met at various points and information was obtained from them with regard to the railway position on the general questions at issue. When the evidence was all in, a detailed list of questions covering the matters in dispute was prepared and submitted to the Grand Trunk and to the Canadian Pacific with a view to obtaining such specific statements in rebuttal as the railways might care to submit. Where questions of specific rates charged were at issue the railways were asked to check the rates, and to furnish tariffs covering the rates. The rates contained in the statements have also been checked by me.

Investigations were conducted at Toronto, Woodstock, Chatham, St. Thomas, Windsor, London, Stratford, Seaforth, Walkerton, Guelph, Winnipeg, Saltcoats, Yorkton, Portage la Prairie, Brandon, Regina, Prince Albert, Calgary, Edmonton, Revelstoke, Kamloops, Vancouver, Victoria, Rossland, Nelson and Montreal.

Communications were sent to the following agricultural associations requesting the representatives of these organizations to present either through representatives or through written statements at designated places such complaints as they might have to submit bearing upon the subject matter of the investigation: Ontario, the Farmers' Institutes of—South Perth, North Perth, East and West Kent, East and West Elgin, North and South Oxford, East and West Middlesex, South, East and West Huron

South and North Essex: Northwest Territories, the agricultural associations of Lacombe, Duck Lake, Red Deer, Fish Creek, Broadview, Sterling, Olds, Qu'Appelle, Wolsely, Pincher Creek, Macleod, Grenfell, Whitewood, Indian Head, Yorkton, Medicine Hat, Moosejaw, Rosthern, Moosomin.

The findings of the investigation are placed under their respective headings in the body of the report.

I.—CLASSIFICATION.

There is constant friction between shippers and railways with reference to the question of classification. In some instances the complaints are based on the statement that the classification is too high as compared with the value of the goods. In other instances it is asserted that the classification is too high as compared with the classification on similar articles in the United States.

The following examples cited from statements and testimony submitted indicate the scope of the complaints. Cocoa and chocolate, which are at present classed second and fourth, should, it is contended, be put in the same class as coffees which are third and fourth. The cocoa and chocolate are raw material. Piano and organ reeds and keys are classed too high. Drugs which are at present placed in first class should be in third class. Complaint is made that while Welland is given fourth and fifth on wire goods Windsor is classed third and fifth. Putty which is classed third and fifth should be reduced to fourth and fifth. Library tables and parlour cabinets should be shipped at 1½ instead of D. 1, in order to be in fair proportion to other goods shipped. While it may be all right to have a first class rate on some lines of dry goods, e. g. silks, on other lines of dry goods, e. g. denims and shirtings, third class would be high enough. Cased whiskey is classed fourth while whiskey in bulk is fifth. The following arguments are advanced for placing these in the same class: cased whiskey is the safer of the two to carry. Rough shunting and collision while it might cause barrels to leak, or might shatter them entirely, would be much less damaging to whiskey in cases. Cased whiskey is a much more desirable freight because a barrel of whiskey converted into cases represents a little more than twice the weight of the bulk package, to say nothing of the inward freight on the bottles, corks, capsules, &c. The general supposition that cased whiskey is of greater value than bulk whiskey is incorrect, as the bottled whiskey nets just the same price per gallon as the bulk whiskey. The question of classification comes up also in connection with the question of the relation between C. L. and L. C. L. rates. Wagons in car lots are carried at fourth or sixth class, according to the maximum, while in less than car lots they are placed in first class. The disparity is complained of.

In addition to the complaints concerning classification, as it stands at present it is claimed that there have been certain arbitrary changes in rates caused by raising the classification of the article. For instance, beer has been raised from fourth to third, while the rate on pianos has been raised from fourth to second.

It has to be recognized that the question of classification, like the question of rate making, proceeds upon no hard and fast principles. There is a rough correspondence between the value of the article and the class in which it is placed. The element of bulk has also to be considered. The railways claim that in the case of wagons the high rate of first class in less than car-lot shipments, as compared with sixth or car-lot shipments, is attributable to the bulky nature, light weight and risk of damage. The wagons will not admit of the freight being loaded on top, and this freight is generally of such a nature as to be objectionable except at first class rates.

It has to be recognized that the element of bulk does play a part in determining the class with which the goods should fall. At the same time it must be noticed that the classification places an obstacle in the attempt of any shipper to economize space by shipping finished vehicles without wheels. The rule governing this is that, when finished vehicles are shipped without the wheels, running gear, &c., they will be charged fifty per cent over the rates applied to complete vehicles (note on page 80, Canadian Joint Freight Classification).

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While difficulties arise with reference to classification, advantage is sometimes taken of the railways by misdescribing goods. This applies especially to interior points where there is no adequate system of inspection. The most flagrant example brought before my notice was in one case where a special rate had been granted to permit of the shipment of a car lot of potatoes; it was found later, on investigation, that in reality a car lot of dry goods had been shipped. The complaints concerning this condition of affairs came not only from the railway officials but also from merchants. Where a shipper misdescribes his goods and is successful in having the goods carried through, he has an advantage over his more honest competitor who has shipped on the established rate. At the same time if the one who has misdescribed his goods is detected, then he has simply to pay the established rate. Some of the merchants complaining were of opinion that in such a case a penalty should attach. A similar position has been considered by the Interstate Commerce Commission.

The question of classification is of especial importance because it is the basis of rate making. A change of a class means a change in a rate. A change of rate by changing the classification attracts much less public attention than when the rate itself is changed. As it stands to-day when any complaint arises with reference to classification, it may be taken before the classification committee. It is shown in evidence that concessions are made sometimes. At the same time it appears that changes in classification have been made in an arbitrary manner, and that the classification of certain articles does not proceed on any well-defined principle.

When a complaint is taken to the classification committee it goes before a body which stands for railway interests—a body representative of one of the parties to the dispute. And it is this body which determines the dispute. In the public interest there should be a supervision of all matters pertaining to classification.

III.—DISTRIBUTIVE RATES.

The matter of distributive rates is attracting a great part of the discussion of the rate question west of Winnipeg. The merchants of Regina complain that Regina is put at a disadvantage since it cannot obtain distributive rates. A similar contention is advanced by the merchants of Edmonton. They state that Calgary can ship along the Calgary and Edmonton branch into Edmonton territory, while Edmonton, owing to lack of distributive rates, cannot meet this competition in its own territory. The question of distributive rates resolves itself into the question of competition between localities. The merchants of Kamloops complain because Vancouver merchants can place goods in Kamloops territory more advantageously than Kamloops can. Vancouver can ship into points in Kamloops territory on a through rate from the coast, while Kamloops would have to pay the rate from the coast to Kamloops plus the local one to the point of destination. The same position is met at the coast. Vancouver complains that it has to meet the competition of Winnipeg in the Kootenay. It asserts that the eastern limit of the distributive territory of Vancouver should be further east. It is stated that in fairness to Vancouver this limit should be as far east as Calgary. Complaint is made that while the fifth class rate from Winnipeg to Calgary, a distance of eight hundred and forty-two miles, is 77 cents, the rate of fifth class from Vancouver to Calgary, a distance of six hundred and forty-two miles is \$1.01. A similar situation is met in the case of Nelson. Nelson claims 'that the railways do not recognize the geographical advantage of Nelson. There should be central points from which goods can be distributed. There is no question that Nelson is a point for this purpose. What Nelson is standing for is to be able to compete on equal terms with the shippers from the east and from the west. No other town in the Kootenay has a better claim than Nelson.'

To turn now to the railway side of the question, it is stated that as regards the distributive business from the Pacific coast into the Kootenay that the rates charged cannot be considered excessive. It has to be remembered that in the journey down from Revelstoke to the Kootenay the mixed rail and water rate involves a number of tran-

shipments, which greatly increase the cost of handling. The contention of Vancouver, that the eastern limit of its distributive territory should include Calgary, is considered unreasonable because it leaves out of consideration the fact that the goods on their way to the coast pass through Calgary and go through the mountains, and would have to stand the return haul to Calgary. It must also be remembered that some of the goods come by water around the Horn to Vancouver, and the railway under this condition does not receive revenue for such movement, while on the run west from Winnipeg there is a long rail haul over the Canadian Pacific. In regard to Nelson the railway position is that the existing rate situation puts Winnipeg, Vancouver and Nelson on an equal footing as regards business. The railway does not see any reason why in the present state of business in the Kootenay any town should be given an advantage in point of distributive rates. The argument advanced for not granting Edmonton a distributive rate is that since it is situated at the end of the line there is no balance of the rate for goods to be shipped out on.

The question of distributive rates is an exceedingly difficult one to handle. The general position of the railway is that distributive centres are necessary. It also holds that distributive rates will be granted when the volume of business warrants it. It will at the same time appear, however, that withholding these rates will assist in checking the development of business, while the point which has distributive rates is increasing. The railway has also to face local difficulties. This is illustrated in the case of the Kootenay. The Kootenay has connections with the railway system of the United States, and in any readjustment of rates the question has to be considered, will the American lines acquiesce in the readjustment.

In addition to this it has to be recognized that there is much local objection to granting distributive rates to Nelson. At present there is a blanket rate covering common points in the Kootenay. The merchants at other points complain that it would be unfair to them to give advantages to Nelson. This complaint is made by various firms located at Rossland, Sandon, Kaslo and in the 'boundary' country, who are doing a jobbing business in connection with their retail business. These complain that any readjustment of rates in the case of Nelson would be unfair since it would simply increase the competition they have already to face. I have gone through a file of correspondence which shows the generality of this feeling in the Kootenay. I include in the appendix some correspondence which reiterates the position which has just been outlined.

While there are the difficulties which have been sketched, it has to be recognized that in the application of distributive rates there has been some arbitrary operation. The argument advanced against the granting of distributive rates to Edmonton was that there was no balance of a through rate. Since the holding of the investigation the Canadian Pacific has departed from this position and granted distributive rates as far as Red Deer, a distance of ninety-seven miles south of Edmonton. In the case of Brandon distributive rates were obtained only after a continued struggle and as a result of the exertion of political pressure. It is well known that Winnipeg obtained its distributive rates only after a struggle.

It is not in the interest of the development of trade that places should have to fight for distributive rates. It is essential that there should be effective regulation.

III.—CAR LOT AND LESS THAN CAR LOT RATES.

In some instances less than car lot rates are out of proportion to car lot rates. Along the northern lines of the Canadian Pacific as far as Rat Portage the L. C. L. rate on beer is about 50 per cent higher than the C. L. rate. In the shipment out of small consignments of machinery from Walkerville the L. C. L. rates interfere seriously with business. Owing to the fact that the Canadian trade is a gradually developing one many orders are received for small consignments. These must be forwarded at once, and so there is not the opportunity to take advantage of the C. L. rate. It is complained, in the case of hog shipments from Stratford to Toronto, that the C. L. and L. C. L. rates

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are respectively 13c. and 25c. The complaint based on this, however, neglects the fact that other kinds of freight could not well be loaded into the same car with hogs. The car lot rate on flour from Edmonton to Olds is 20c., while the less than car lot rates is 38c. A marked discrepancy in the relation between the car lots and less than car lot rates exists in the tariffs governing the wholesale business out from Winnipeg. In the shipments out of dry goods, for example, the discrepancy in rate is indicated in the following table :—

RELATION OF C. L. TO L. C. L. RATES.

The calculations are based on the rates contained in Special Proportional Tariff No. 579.

Article, Dry Goods.	L. C. L. per cent higher than C. L.
Winnipeg—Brandon	45 per cent.
“ Virden	69 “
“ Medicine Hat	76 “
“ Calgary	78 “
“ Yorkton	84 “
“ Prince Albert	74 “
“ Edmonton	76 “

In the case of tea the following conditions will be found to exist :—

Article, Tea.	L. C. L. per cent higher than C. L.
Winnipeg—Brandon	35 per cent.
“ Virden	47 “
“ Medicine Hat	44 “
“ Calgary	37 “
“ Yorkton	44 “
“ Prince Albert	51 “
“ Edmonton	50 “

On shipments of sugar in western Ontario the L. C. L. rate is from 30 per cent to 65 per cent higher than the C. L. rate.

Wherever there is a great variation between the L. C. L. rates and the C. L. rates the variation is in favour of the larger dealer at the point of destination. The larger dealer, because of his ability to purchase in car lots, has naturally an advantage. But if a very wide divergence exists between car lot and less than car lot rates he has an unfair advantage over his weaker rival. It is necessary to have supervision with reference to the relation between C. L. and L. C. L. rates.

IV.—EXCESSIVE RATES AND DISCRIMINATIONS.

A minor case of complaint in Ontario which affects the retailers especially is concerned with cartage charges. In respect of traffic from certain sections designated in the tariffs as stations at which cartage services are performed, the cartage agents of the railway companies charge from one cent to two cents per 100 pounds for cartage, subject to a minimum of ten cents for any one cartage. The position of the railway companies in regard to this charge is as follows : *C. P. R.*—‘The cartage charge of ten cents on small shipments has been in effect for many years and in large cities is considered a convenience and benefit to both the shippers and the railways. The charge is made only when the goods are handled by the cartage companies who perform the service for the railway companies. If shippers elect to handle their own goods the charge is not made.’ The *G. T. R.* states : ‘At large centres railway companies maintain a cartage system in order to expedite the receiving and delivery of freight between patrons and depots. This charge of ten cents is a minimum charge made for any one consignment, which is considered fair and equitable. It is often less expensive to the patron than if he

performed cartage himself or hired others to do it for him (in fact we understand ordinary charge by express wagon is twenty-five cents per package). Further, the charge of ten cents does not accrue to railway companies but to cartage companies who perform the work. The additional charge for cartage at cartage stations is not made unless a cartage service is performed.

The specific complaints under this heading are that the policy of the companies, as indicated in the extracts from their statements, is departed from. In the case of shipments of dry goods from Montreal and Toronto to Stratford the cartage charges at Toronto and Montreal have been included in the freight bill and charged against the Stratford merchant. In the case of a shipment of goods from Bothwell to Brussels some three years ago, the purchaser of the goods had them taken at his own expense to the station at Bothwell. When the freight bill was presented to him it contained a cartage charge for moving the goods to the Bothwell station. No objection is taken, in general, to the amount of the charge collected under this heading. One witness stated that when he shipped a carload of goods from Guelph to Stratford he found that the Grand Trunk cartage charges were one-half what they would have been had he himself undertaken the cartage.

A disparity exists between rates eastbound and westbound in respect of certain commodities. For example, beer from London to Ottawa is twenty-one cents, while the rate on the returned empty casks from Ottawa to London is twenty-eight cents.

A complaint was lodged that on the shipment out of nails Brantford was discriminated against in favour of Hamilton. The Grand Trunk states in rebuttal that 'it is not the intention to have the rates higher from Brantford, where the distance is shorter than from Hamilton, a longer distance.' Under the rates charged, however, the C. L. rate on nails from Brantford to Elmira, a distance of thirty-four miles, is twelve cents, while the C. L. rate from Hamilton to Elmira, a distance of sixty-three miles, is ten cents.

The L. C. L. rates on wire goods discriminate in favour of Welland and against Windsor. The Grand Trunk admits this and states that it is considering the advisability of a readjustment of these rates.

The local rates for short distance traffic are on so high a basis that they interfere with the movement of commodities by the railways. For example, the C. L. rate on salt from Wingham to Fordwich, a distance of seventeen miles, is 5 cents, while the L. C. L. rate is 9 cents. The merchants of Fordwich can have the salt hauled by team for 5 cents, thus saving cartage charges. Other examples from the same section of country may be cited. Cheese box hooping costs by rail from Teeswater to Fordwich, a distance of twenty-one miles, 10 cents in L. C. L. quantities. This material was handled by teams for 7 cents. A car lot of hoops from Harriston to Fordwich, a distance of eight miles, which would have cost \$12 by rail, was hauled by team for \$7.50. It is complained that 'the rate upon cattle for distances of from thirty to thirty-five miles is 8 cents per 100 pounds for a car of 22,500 pounds, or \$18 per car, which is altogether too high, and as a consequence farmers travel their cattle.' The railways state in rebuttal that they do not find that any shipments of live stock, in carloads, are handled to points other than the regular established markets, except in the case of pedigreed cattle, on which half the regular rates are accepted, or on live stock for feeding and re-shipping on which a reduction of one-third the regular rate is made. In regard to a complaint made that the local rates on apples are so exorbitant that they are not moved by rail, it is rejoined that where there are small quantities shipped from place to place it is preferable to have these moved by road, since it would otherwise keep a considerable portion of the rolling stock of the company idle, when their rolling stock might more profitably be used in forwarding the through traffic of the farmer.

An especial complaint is made of local rates in the North-west. It is claimed that the local rates are excessive on grain. It is impossible to bring a carload of oats on local rates from Portage la Prairie to Winnipeg. It is claimed that rates should be reduced down to a reasonable figure so as to allow grain passing backward and forward as the trade wants it.

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The following comparison is instituted in the North-west between the rates in that section and the rates in contiguous territory in the United States, as well as the rates in eastern Canada :—

	Class.	Mileage.	Rate.
Chicago-St. Paul.	1st	410	60 cents.
Winnipeg-Moosejaw.	"	398	\$1.20 (traders), \$1.26 (local).
Chicago-St. Paul.	5th	.. . . .	20 cents.
Winnipeg-Moosejaw. . . . .	"	.. . . .	49 cents (traders), 58 cents (local).
Montreal-Halifax.	1st	756	56 cents.
Winnipeg-Calgary.	"	840	\$1.82 (traders), \$2.08 (local).
Montreal-Halifax.	5th	.. . . .	28 cents.
Winnipeg-Calgary. . . . .	"	.. . . .	77 cents (traders), 94 cents (local).

It is, however, unfair to the railway to take the rates charged between Chicago and St. Paul or in eastern Canada, as the criteria by which the rates at the North-west are to be judged. These sections have a much more dense settlement. Traffic is heavier and there is not sufficient similarity of conditions to warrant a comparison.

The following table, in which comparisons are made between the rates charged by the Canadian Pacific and the rates charged by the Great Northern and the Northern Pacific in contiguous United States territory, is filed by the Canadian Pacific. The table covers the rates on distances up to 840 miles. A reference to these rates will show that the Canadian Pacific rates are on a lower basis.

1-2 EDWARD VII., A. 1902

COMPARISON OF FREIGHT RATES ON MERCHANDISE.

Via Canadian Pacific Railway from Winnipeg.

Tariffs: No. 579, May 19, 1900; No. 580, May 26, 1900; No. 608, December 24, 1900, and No. 609, December 24, 1900.

Via Great Northern Railway from St. Paul and Duluth.

Tariffs: No. G.F.O. 5850, February 1, 1900, and No. G.F.O. 6060, April 5, 1900; No. G.F.O. 5750, February 1, 1900.

Via Northern Pacific Railway from St. Paul and Duluth.

Tariffs: No. 5724, January 24, 1900; No. 7800, February 15, 1901, and No. 7900, February 25, 1901.

CLASSES IN CENTS PER 100 LBS.												
From	To	Miles.	Via.	1	2	3	4	5	6 or A 7 or B	C	D	10 or E
Winnipeg.....	Rosser	15	C. P.....	18	16	13	11	9	3½	2	...	2
Duluth.....	Howell.....	16	N. P.....	19	16	13	11	5½	7	5½	3½	3
Winnipeg....	Reburn	35	C. P.....	18	16	13	12	9	4	3	...	3
Duluth.....	Mahtowas	33	N. P.....	28	25	22	17	8	9	8	7	5
Winnipeg....	Portage la Prairie.....	55	C. P.....	20	18	16	14	9	5½	3½	...	3½
Duluth.....	Willow River.....	54	N. P.....	35	30	23	17	8½	11½	10½	8½	5½
Winnipeg....	MacGregor.....	77	C. P.....	27	24	21	17	12	8½	5	...	5
St. Paul.....	Sartell Spur	78	N. P.....	27	24	21	17	12	8½	4½	...	4½
Duluth.....	Kimberley	79	"	38	32	26	20	17	17	15	12	8
Winnipeg....	Garberry	105	C. P.....	42	36	27	21	17	17	15	13	8
St. Paul.....	Little Falls.....	106	N. P.....	32	28	24	19	13	10	7	...	6½
Duluth.....	Deerwood	101	"	32	28	24	19	13	10	6½	...	5½
Winnipeg....	Brandon	133	C. P.....	46	39	30	23	18	16	14	12	9
			Merchandise	48	41	32	25	20	20	17	15	10
			Group A.....	37	32	27	22	16	12	8	...	7½
			" B.....	37	32	27	22	16	12	7½	...	6½
			" C.....	37	32	27	22	16	...	...	...	...
St. Paul.....	Reund Prairie.....	132	G. N.....	37	32	27	22	16	...	...	...	...
Duluth.....	Pillager	132	N. P.....	50	43	33	25	20	20	18	15	10
Winnipeg....	Griswold	157	C. P.....	51	43	33	26	20	20	18	15	10
			Merchandise	47	40	33	26	20	14	9	...	8½
			Group A.....	47	40	33	26	20	14	8	...	7½
			" B.....	47	40	33	26	20
			" C.....	43½	37	30½	23	17½

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St. Paul	Eagle Bend	155	G. N.		51	46	35	27	22	22	19	16	14	11
Duluth	Vermade	159	N. P.	Merchandise	55	47	36	28	22	22	19	17	14	11
Winnipeg	Virden	180	C. P.	Group A.	62	52	42	32	23	17	10			9 $\frac{1}{2}$
				" B.	60 $\frac{1}{2}$	51 $\frac{1}{2}$	41 $\frac{1}{2}$	30 $\frac{1}{2}$	23 $\frac{1}{2}$	16	9			8 $\frac{1}{2}$
				" C.	54 $\frac{1}{2}$	46 $\frac{1}{2}$	37 $\frac{1}{2}$	28	21 $\frac{1}{2}$					
Duluth	Benidji	181	G. N.		64	56	43	36	18 $\frac{1}{2}$	28	25	21	18	14
St. Paul	Perham	181	N. P.		63	54	41	32	25	22	19		16	13
Winnipeg	Moosomin	219	C. P.	Merchandise	71	59	49	36	29	19 $\frac{1}{2}$	12			11
				" B.	65	54	45	33	29 $\frac{1}{2}$	17 $\frac{1}{2}$	11			10
				" C.	58 $\frac{1}{2}$	49	41	30	24					
Duluth	Ellero	213	G. N.		50	42	35	26 $\frac{1}{2}$	20 $\frac{1}{2}$	32	28	24	20	16
St. Paul	Hillsdale	220	N. P.		73	63	49	40	32	30	26	22	18	14
Winnipeg	Barrows	243	C. P.	Merchandise	72	62	48	37	30	24	13			13
				" B.	81	68	58	40	35	21				12
				" C.	65 $\frac{1}{2}$	56	48	33 $\frac{1}{2}$	29	21 $\frac{1}{2}$	12			
Duluth	Mentor	246	G. N.		80	68	52	40	32	32	28	24	20	16
St. Paul	Wads	242	N. P.		79	67	51	40	32	32	28	24	20	16
Winnipeg	Broadview	264	C. P.	Merchandise	90	77	63	42	38	26	14			14
				" B.	82	70	57 $\frac{1}{2}$	38 $\frac{1}{2}$	34 $\frac{1}{2}$	23 $\frac{1}{2}$	12 $\frac{1}{2}$			12 $\frac{1}{2}$
				" C.	73 $\frac{1}{2}$	62	54	44 $\frac{1}{2}$	30 $\frac{1}{2}$	26 $\frac{1}{2}$				
Duluth	Barwell	264	G. N.		80	68	52	40	32	32	28	24	20	16
St. Paul	Davenport	268	N. P.		80	68	52	40	32	32	28	24	20	16
Winnipeg	Wolsley	285	C. P.	Merchandise	100	83	66	45	41	28	15			15
				" B.	91	73 $\frac{1}{2}$	60	41	37	25 $\frac{1}{2}$	13 $\frac{1}{2}$			13 $\frac{1}{2}$
				" C.	81 $\frac{1}{2}$	68	54 $\frac{1}{2}$	37 $\frac{1}{2}$	33 $\frac{1}{2}$					
Duluth	Grand Forks	297	G. N.		69 $\frac{1}{2}$	58	46 $\frac{1}{2}$	32 $\frac{1}{2}$	28 $\frac{1}{2}$	32	28	24	20	16
St. Paul	Oreoka	297	N. P.		80	68	52	40	32	32	28	24	20	16
Winnipeg	Qu'Appelle	324	C. P.	Merchandise	108	87	74	57	44	35	35	30	22	17
				" B.	98	82	65 $\frac{1}{2}$	45	40	31	18			16
				" C.	88	74	59	40 $\frac{1}{2}$	36					
Duluth	Donaldson	329	G. N.		74 $\frac{1}{2}$	63	50 $\frac{1}{2}$	35	30 $\frac{1}{2}$	40	35	29	23	18
St. Paul	Edgelson	323	N. P.		92	78	60	46	37	37	32	28	23	18
Winnipeg	Palgonie	341	C. P.	Merchandise	108	90	72	49	41	31	18			16
				" B.	98	82	65 $\frac{1}{2}$	45	40	28	16 $\frac{1}{2}$			
				" C.	88	74	59	40 $\frac{1}{2}$	36					
Duluth	Petersburg	344	G. N.		74 $\frac{1}{2}$	63	50 $\frac{1}{2}$	35	30 $\frac{1}{2}$	40	35	30	23	18
St. Paul	Eldridge	349	N. P.		97	83	65	42	42	40	35	30	25	19
Winnipeg	Regina	357	C. P.	Merchandise	112	92	74	51	46	32 $\frac{1}{2}$	19			17
				" B.	102	84 $\frac{1}{2}$	67 $\frac{1}{2}$	46 $\frac{1}{2}$	41 $\frac{1}{2}$	29 $\frac{1}{2}$	17			
				" C.	91	76	61	42	37 $\frac{1}{2}$	32				
					77 $\frac{1}{2}$	65	52	36 $\frac{1}{2}$						

NOTE.—Rates via Canadian Pacific Railway are subject to Canadian joint freight classification, and via Great Northern Railway and Northern Pacific Railway are subject to western classification.

COMPARISON OF FREIGHT RATES ON MERCHANDISE—Continued.

CLASSES IN CENTS PER 100 LBS.												
From	To	Miles.	Via	1	2	3	4	5	6 or A 7 or B	C	D	10 or E
Duluth, St. Paul, Winnipeg.	Lakota.....	358	G. N.	102	87	71	58	48	42	36	24	19
	Windsor.....	358	N. P.	99	82	63	50	41	39	34	25	20
	Belle Plaine.....	381	C. P.	116	97	77	52	47	34	30	20	18
	Merchandise Group A.....			165½	88	70	47½	44½	30½	18		
Duluth, St. Paul, Winnipeg.	" B.....			94½	79½	63	43	38½				
	" C.....			80	67½	54	37	32½				
	Devil's Lake.....	385	G. N.	108	92	75	64	54	43	37	24	19
	Farquer's Spur.....	381	N. P.	105	89	71	56	49	43	36	24	19
Duluth, St. Paul, Winnipeg.	Moosejaw.....	398	C. P.	120	100	80	54	49	36	22	21	19
	Merchandise Group A.....			169	91	73	49½	42½	32½	20		
	" B.....			97½	82	65½	44½	40				
	" C.....			82½	69½	56	38½	34				
Duluth, St. Paul, Winnipeg.	Penn.....	398	G. N.	110	94	77	66	55	41	38	24	19
	Steele.....	400	N. P.	110	93	74	63	50	45	39	27	22
	Secretan.....	443	C. P.	124	103	83	56	51	37½	23	22	19½
	Merchandise Group A.....			112½	93½	75½	51	46	31	21		
Duluth, St. Paul, Winnipeg.	" B.....			100½	84	68	46	41½				
	" C.....			85½	71½	58	40	35				
	Knox.....	428	G. N.	114	97	80	68	57	46	40	27	22
	Burleigh.....	436	N. P.	117	99	81	70	58	47	41	30	24
Duluth, St. Paul, Winnipeg.	Ernfold.....	461	C. P.	128	107	85	58	53	39	24	23	20½
	Merchandise Group A.....			116	97	77½	53	48	35	21½		
	" B.....			104	87½	69½	48	43½				
	" C.....			88	74	59	41	36½				
Duluth, St. Paul, Winnipeg.	Berwick.....	454	G. N.	115	99	81	70	58	46	41	28	22
	Sunnyside.....	452	N. P.	124	106	87	75	63	51	45	31	24
	Rush Lake.....	489	C. P.	132	110	88	60	54	41	25	24	21½
	Merchandise Group A.....			120	100	80	54½	49	37	22½		
Duluth, St. Paul, Winnipeg.	" B.....			107	90	72	49½	44				
	" C.....			90½	76	61	42½	37				
	Norwich.....	488	G. N.	115	99	81	70	58	46	41	28	22
	Almont.....	489	N. P.	131	109	91	78	66	55	49	36	29
Duluth, St. Paul, Winnipeg.	Swift Current.....	511	C. P.	136	113	90	62	56	43	27	25	22½
	Merchandise Group A.....			123½	102½	82	56½	50½	39	24½		
	" B.....			110½	92	73½	51	45½				
	" C.....			93½	78	62½	44	38½				
Duluth.....	Des Lacs.....	514	G. N.	127	107	89	76	65	52	45	32	25

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St. Paul Winnipeg.	Eagle's Nest. Sidewood.	512 565	N. P. C. P.	Merchandise. Group A. " B. " C.	135 143 129½ 116 98 134 140 114 151 125 137 113½ 90 122½ 102 81 68½ 49 150 129 100 149 119 100 90 104 73 104 94½ 118 94½ 66½ 60½ 54½ 60 51 46	111 119 95 86½ 60 52½ 41½ 26	57 46 41½	51 29 26	44	38	32 26½ 23½
Duluth St. Paul Winnipeg.	Palermo. Gladstone. Cummings.	549 547 621	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	134 140 114 151 125 137 113½ 90 122½ 102 81 68½ 49 150 129 100 149 119 100 90 104 73 104 94½ 118 94½ 66½ 60½ 54½ 60 51 46	111 119 95 86½ 60 52½ 41½ 26	58 61 44½	50 53 29	44 47 41	38	30 34 28 25
Duluth St. Paul Winnipeg.	Williston. Beach. Medicine Hat.	624 623 660	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	103½ 86 103½ 150 129 100 149 119 100 90 104 73 104 94½ 118 94½ 66½ 60½ 54½ 60 51 46	111 119 95 86½ 60 52½ 41½ 26	70 69 53 61 44½	60 60 53 31 48 30½	55 55 49 15 13½	40 40 40 15 13½	
Duluth St. Paul Winnipeg.	Kilcoo. Glendive. Languevin.	662 666 695	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	107½ 89½ 152 122 102 135 126 106 94 83 73 63 55 35 31 15 13½	111 119 95 86½ 60 52½ 41½ 26	71 73 63 55 35 31½	61 63 57 60 54	56 57	41 42 42 44 33½ 30	
Duluth St. Paul Winnipeg.	Calais. Fallon. Southesko.	691 695 741	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	110 92 74 52½ 46½ 155 126 106 94 83 77 67 58 38 34½	111 119 95 86½ 60 52½ 41½ 26	73 77 67 58 38 34½	63 67 60 54	57 60	42 44 33½ 30	
Duluth St. Paul Winnipeg.	Wolf Point. Miles City. Gleichen.	731 743 785	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	115½ 97½ 130 110 97 86 43½ 107 94 84 74 65 36 32½	111 119 95 86½ 60 52½ 41½ 26	76 84 74 65 36	66 74 65	53 57	43 47 36 32½	
Duluth St. Paul Winnipeg.	Paisley. Forsythe. Langdon.	785 788 819	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	119½ 100 80 56½ 50 165 137 117 102 90 80 70 62 55 45	111 119 95 86½ 60 52½ 41½ 26	80 90 78 63 42 57 38	70 78 63 42 57 38	62 69 61	45 50 37 33	
Duluth St. Paul Winnipeg.	Saco. Myers. Calgary.	819 816 840	G. N. N. P. C. P.	Merchandise. Group A. " B. " C.	121½ 101½ 81 57½ 51 208 182 152 121 85 77 69½ 43 38 34	111 119 95 86½ 60 52½ 41½ 26	82 94 82 72 64	72 82 73	64 73	46 53 38 34	
Duluth St. Paul	Bowdin. Custer.	837 837	G. N. N. P.	Merchandise. Group A. " B. " C.	124 104 83 59 52½ 172 144 123 106 130	111 119 95 86½ 60 52½ 41½ 26	83 93 83 73	83 96	65 75	47 55	

COMPARISON OF FREIGHT RATES ON MERCHANDISE—Continued

CLASSES IN CENTS PER 100 LBS.

From.	To	Miles.	Via.	1	2	3	4	5	6 or A 7 or B	C	D	10 or E
Winnipeg.	Morris.	42	C. P.	16	14	12	10	9½	4	8		3
				16	14	12	10	9½	3½	3		3
				16	14	12	10	9½				
				16	14	12	10	9½				
Duluth.	Moose Lake.	43	N. P.	34	28	23	17	8	11	10	8	5½
Winnipeg.	Gretna.	69	C. P.	21½	17½	14½	12	11	4	3		3
				21½	17½	14½	12	11	3½	3		3
				20	17	14½	12	9½				
				18	17	14½	12	8½				
Duluth.	McGregor.	70	N. P.	38	32	25	19	15	15	13	11	8
St. Paul.	St. Cloud.	74	"	36	31	24	19	16	16	14	12	7
Winnipeg.	Morden.	80	C. P.	23	21	18	15	11	6	3		3
				23	21	18	15	11	5½	3		3
				23	21	18	15	11				
				23	21	18	15	11				
Duluth.	Kimberley.	79	N. P.	42	36	27	21	17	17	15	13	8
Winnipeg.	Manitou.	102	C. P.	32	28	24	19	13	10	6		5½
				32	28	24	19	13	9	5½		5
				32	28	24	19	13				
				31½	27½	24	19	13				
Duluth.	Deerwood.	101	N. P.	48	41	32	25	20	20	17	15	10
Winnipeg.	Clearwater.	133	C. P.	37	32	27	22	16	12	8		7½
				37	32	27	22	16	12	7½		6½
				37	32	27	22	16				
				37	32	27	22	16				
				37	32	27	22	16				
Duluth.	Hobart.	133	G. N.	51	41	34	27	22	22	19	16	11
"	Pillager.	132	N. P.	51	43	33	26	20	20	18	15	10
Winnipeg.	Boissevain.	182	C. P.	37	32	27	22	16	12	8		7½
				37	32	27	22	16	12	7½		6½
				37	32	27	22	16				
				37	32	27	22	16				
Duluth.	New London.	183	G. N.	61	52	40	30	24	24	21	18	12
St. Paul.	Portman.	181	N. P.	63	54	41	32	25	25	22	19	13
Winnipeg.	Napinka.	220	C. P.	47	40	35	26	20	16	10		9½
				47	40	35	26	20	15	9		8½
				47	40	35	26	20				
				46½	40	32½	24½	18½				

[illegible]

COMPARISON OF FREIGHT RATES ON MERCHANDISE—Continued.

CLASSES IN CENTS PER 100 LBS.													
From.	To.	Miles.	Via.	—									
				1	2	3	4	5	6 or A 7 or B	C	D	10 or E	
Duluth. Winnipeg.	Wheelock.	137	N. P.	52	44	34	26	21	21	18	16	13	10
	Sheel Lake.	171	C. P.	57	48	39	30	24	16	9	.....	.....	8½
			56½	47	38½	28½	22½	14	8	.....	.....	.....	7½
Duluth. St. Paul. Winnipeg.	Rosby.	175	G. N.	50½	42½	35	26	21	.....	.....	.....	.....	.....
	New York Mills.	171	N. P.	43½	37	30½	23	18	.....	.....	.....	.....	.....
	Pinearth.	210	C. P.	63	54	42	36	32	27	24	20	17	14
			61	52	40	31	24	24	21	18	15	12	11
			71	59	49	36	29	19½	12	.....	.....	.....	.....
Duluth. St. Paul. Winnipeg.				65	54	45	33	26½	17½	11	.....	.....	.....
				58½	49	41	30	24	.....	.....	.....	.....	.....
				50	42	35	26½	20½	.....	.....	.....	.....	.....
				73	63	49	40	32	32	28	24	20	16
				69	59	46	36	28	28	25	21	17	14
Duluth. St. Paul. Winnipeg.	Churchbridge.	245	C. P.	81	68	58	40	35	24	13	.....	.....	.....
				74	62	53	36½	31½	21½	12	.....	.....	.....
				66½	56	48	33½	29	.....	.....	.....	.....	.....
				56½	48	41	29	24½	.....	.....	.....	.....	.....
				80	68	52	40	32	32	28	24	20	16
Duluth. St. Paul. Winnipeg.	Mentor.	246	G. N.	79	67	51	40	32	32	28	24	20	16
	Ditworth.	245	N. P.	96	83	65	45	41	28	15	.....	.....	.....
	Yorkton.	279	C. P.	87½	75½	60	41	37	25½	13½	.....	.....	.....
				78½	68	54½	37½	33½	.....	.....	.....	.....	.....
				66½	58	46½	32½	28½	.....	.....	.....	.....	.....
Duluth. St. Paul.	Shirley.	278	G. N.	80	68	52	40	32	32	28	24	20	16
	Magnolia.	279	N. P.	85	72	55	43	34	34	30	26	21	17

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However, it must be remembered that the tariffs, effective in the Canadian North-west, from which the Canadian Pacific quotes in this table are the special proportionate tariffs out from Winnipeg under which the distributing business of Winnipeg is done. These tariffs are limited in their effect to Winnipeg wholesale houses doing business with traders at the points designated. If freight tariff No. 578, effective June 22, 1900, which covers the shipments other than those indicated in the special proportionate tariffs, is consulted—a copy of this tariff is included in the appendix to this report—it will be found that the rates of the Canadian Pacific are regularly higher than those charged on the two American lines.

There also exist disproportions in rates in the country further west. On a C. L. shipment of agricultural implements from Regina to Macleod, a distance of 441 miles, the rate was quoted at 87 cents while a similar shipment from Winnipeg to Macleod, a distance of 798 miles, the rate was quoted at 67 cents.

In the grain rates from the branch lines disproportions exist. From Prince Albert to Fort William, a distance of 1,038 miles, a rate of 29 cents is quoted on grain, while from Edmonton to Fort William, a distance of 1,483 miles, a rate of 30 cents is quoted. In regard to the Edmonton rate the point was brought out that while Edmonton looked to the Pacific coast for the dispersing of the grain, the rate to the coast, a distance of 834 miles, was 35c. as against 30c. to Fort William, a distance of 1,483 miles.

In the case of salt, a commodity of common consumption, the freight charges from Fort William to various points in the North-west are such as to amount to more than twice the original cost of the article. For instance, the rate on salt from Fort William to Saltcoats is 41c. In the complaint it is stated that salt costs \$1 a barrel at Fort William and it costs \$1.20 to lay it down at Saltcoats. In connection with this point the railway draws attention to the fact that the distance from Fort William to Saltcoats is 668 miles. It also states that the rate for a relative distance from Duluth to a point on the Great Northern Railway is 56c. per 100 pounds. The same point may be mentioned in connection with the shipments to Edmonton. The rate on salt from Fort William to Edmonton is 79c. Salt costs at Fort William 65c. per 200-pound bag and the freight on this amounts to \$1.58 per bag.

In one instance a bookseller found it more economical in connection with the shipment of books from Toronto to have them shipped by mail than by freight.

Both at Victoria and Vancouver complaint was made of the rates charged into the Yukon Territory over the White Pass Railway. According to the classification in use on this railway, goods are classed in four classes, A, B, C, D. The rate sheets, copies of which are filed with this report, show that the rates are based on the net ton of 2,000 pounds. The following extract from tariff G. F. O., No. 29 of 1901, indicates the arrangement followed:—

RATE PER TON OF 2,000 LBS.

On shipments of	Group A.	Group B.	Group C.	Group D.
	\$ cts	\$ cts.	\$ cts.	\$ cts.
Under 5 tons.....	135 00	145 00	160 00	230 00
5 tons and under 10 tons.....	125 00	135 00	150 00	270 00
10 " " 25 ".....	115 00	125 00	140 00	250 00
25 " " 100 ".....	110 00	120 00	131 00	240 00
100 " " 200 ".....	105 00	115 00	125 00	230 00
200 " " 500 ".....	100 00	110 00	120 00	220 00
500 " over.....	95 00	105 00	115 00	215 00

It is alleged that shipments have gone in by water for the Trading Co. at \$40 per ton, while this water rate is not available to the shippers from British Columbia. In a communication from the solicitors of the company following statements are submitted on behalf of the company:—

(a) The rates charged cover steamship freight from Pacific coast ports to Skagway, Alaska, wharf dues to the wharf company at Skagway; railway freight from Skagway,

Alaska to White Horse, Yukon Territory; and river steam freight from White Horse to Dawson.

(b) All these services are performed under conditions of high prices for everything including labour, traffic only moving one way and a heavy loss made during the winter months in keeping communication open, and which has to be made good out of the short season of profitable traffic.

(c) Railway portion of the service is over a heavy up grade and the cost of construction and equipment of the line was very great. High insurance rates are charged on the sea-going vessels, while it is impossible to obtain insurance on the river boats.

(d) On staple commodities the rates via St. Michael's and the Yukon are arranged on a basis of about 10 per cent less than the White Pass rate. The same classification is used by both.

(e) The traffic is small in amount and must obviously be compensated for by a higher rate.

(f) It is alleged that whatever difficulty the coast merchants may experience in obtaining a share in Yukon trade is attributable to the fact that the Dawson merchants are purchasing direct from the manufacturers in Eastern Canada.

A considerable number of shipments have been made by way of St. Michael's and the Yukon. A sailing vessel can make about two trips to the mouth of the Yukon, and a steamer can make about three during the season. Vessels can make about ten round trips from St. Michael's to Dawson. A rate of \$54 a ton has been quoted by this route from Seattle to Dawson. It is found in general, however, that the movement of freight up the Yukon is subject to the control of the Trading company.

To sum up the matter which arises under this heading: Local rates in Ontario are in some instances so excessive as to lead to the movement of commodities by team. There also exist discriminations between localities. In the North-west there is a high basis of local rates. The ease of movement in the transportation across the prairie, coupled with the fact that this section is rapidly filling up would, in my opinion, justify some readjustment of local rates. The existing grain rates from branch lines in the North-west are on an anomalous footing.

V.—COMPETITIVE VERSUS NON-COMPETITIVE TRAFFIC.

It is an established position that there is little of efficient competition as regards rates. What competition exists is a competition of service rather than of rates. The competition does not normally lead to one railway underbidding another; it leads to an agreement upon rates. Through traffic, or traffic which has a long haul, is carried on a lower rate per ton per mile than local traffic. This difference is attributable in the main to the fact that the traffic which has to stand the long haul will not bear a very high ton mile rate. Short distance traffic, on the other hand, can stand a higher ton mile rate because this rate will not be such a large per cent of the value. In addition to this the difference in rate at which the two classes of traffic are carried is affected by the presence or absence of alternative methods of transportation.

On various commodities the local rates are heavy as compared with the through rates. In the shipment out of wire from Windsor this appears. While all those engaged in the wire business have to pay the high local rate it makes the commodity much more expensive when delivered at a non-competitive point.

Local rates are disproportioned to through rates. For example, the local rate on cordage from Stratford to Toronto is 22 cents, while the rate from Stratford to New York is 21 cents. A shipment of goods from Tottenham to Stratford, a distance of 89 miles, cost 26 cents per 100 lbs.; shipments of similar goods were made from Detroit to Stratford, a distance of 141 miles, for 24 cents per 100 lbs.; and from Chicago, a distance of 419 miles, for 30 cents. All these shipments were in less than car lots.

Disproportions exist also between the short distance rates themselves. On a less than car lot shipment from Chatham to Seaforth, a distance of 121 miles, a rate of 26 cents per 100 lbs. was charged; while from Glencoe to Seaforth on the same class of

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goods, also in less than car lot, a rate of 30 cents was charged. The latter distance is 87 miles. It will be noticed that in this instance the shorter distance was included in the longer. A shipment of goods from Stratford to Seaforth, a distance of 24 miles, cost 12 cents per 100 lbs., while goods in the same class from Sebringville to Seaforth, a distance shorter by five miles, cost 16 cents per 100 lbs. Both of these shipments were in less than car lots.

In the case of cattle shipment from Hensall the cattle were travelled by road from Hensall to Lucan. Hensall, which is on a branch line, has a rate of 32 cents on export cattle. Lucan, which is on the main line, has a rate of 25 cents. The distance from Hensall to Lucan is 18 miles. By shipping from Lucan instead of from Hensall a saving in freight of \$14 per car was effected. While such conditions exist in regard to the relation between rates on branch lines and on the main line the shipper is prevented from taking advantage of the difference in distance in the case of branch lines. From Walkerton to Owen Sound via Harriston is 87 miles. It is only a comparatively short drive across the country from Walkerton to Hanover. Hanover is 45 miles from Owen Sound. However, the rate from Walkerton to Owen Sound via Harriston, and from Hanover to Owen Sound on lumber are fixed at the same figure, viz., 28 cents.

Complaint is also made that the lumber rates on non-competitive business in the North-west are excessive as compared with competitive rates. For example, the rate from Rat Portage to Saltcoats, a distance of 394 miles, is 22 cents per cwt. From Birtle to Saltcoats, a distance of 68 miles, a rate of 94 cents is charged. Spruce lumber is cut at Birtle. The statement in rebuttal of this by the C.P.R. is: The rates on lumber from Rat Portage are on a distributing basis, as that is a heavy shipping point with several large mills, while little or no lumber is shipped from Birtle to Saltcoats, the local mileage, therefore, applying. If the same amount of business was offering from Birtle as from Rat Portage, a corresponding tariff would be adopted. There is a small saw-mill at Birtle, but it is a purely local business.

The following tables will serve to indicate on certain commodities the relation between competitive and non-competitive traffic:—

Article.	From—To.	Mileage.	C.L. Rate.	L.C.L. Rate.	
			Cts.	Cts.	
Iron (G. T. R. Commodity Tariff, 1900—G. B. Y. 3).	Toronto-Barrie.....	64	12	15	Non-competitive.
	" Windsor.....	230	17	21	Competitive.
	London-Seaforth.....	57	11	14	Non-competitive.
	" Windsor.....	110	13	16	Competitive.
	" St. Thomas.....	59	6	8	"
	Brantford-St. Thomas....	58	11	14	Non-competitive
	Guelph-Fergus.....	15	7	9	"
	Toronto-Fergus.....	63	11	14	"
	London-Berlin.....	58	10	13	"
	Guelph ".....	14	6	8	"
	Brantford-Berlin.....	48	9	11	"
	" Drumbo.....	16	7	9	"
	Toronto-Drumbo.....	83	12	15	Competitive.

Article.	From—To.	Mileage.	C.L. Rate.	L.C.L. Rate.
			Cts.	Cts.
Sugar (Special Freight Tariff, G. T. R., G. B. G-2 and Supplements).	Toronto-Barrie	64	12	18
	" Windsor	230	12	20
	London-Seaforth	57	12	18
	" Windsor	110	10	14
	" St. Thomas	59	8	10
	Brantford-St. Thomas	58	9	13
	" Fergus	48	11	14
	Toronto	63	12	15
	London-Berlin	58	11	15
	Toronto	62	10	13
	Brantford-Berlin	48	10	14
	" Drumbo	16	8	10
	Toronto	83	12	15

The following tables indicate the relation of through to local rates in some sections of Western Ontario :

Freight tariff on general merchandise from Hamilton and Dundas (G. T. R. G. B. L.-3).

From—To.	Distance.	Class.	Rate.
	Miles.		Cts.
Hamilton-Harrisburg	18	1st	16
" London	76	"	30
" Windsor	186	"	38

Local freight tariff between Owen Sound and stations in western and central districts (G. T. R. No. W. T. 1).

From—To.	Distance.	Class.	Rate.
	Miles.		Cts.
Owen Sound-Toronto	196	1st	34
" Berlin	134	"	32
" Harrison	65	"	24
" Hanover	45	"	20
" Allanford	16	"	14

It is true that shorter distance traffic cannot justifiably expect the same rate per ton per mile as longer distance traffic. It has to be recognized that the terminal charges are a constant in both classes of traffic, while the cost of movement tends to vary inversely as the distance. At the same time in a number of instances the discrepancy between the rates on the two classes of traffic is too great. There is not sufficient correspondence between the distance travelled and the rate, and regulative supervision is necessary.

VI.—AMERICAN RATES AND CANADIAN RATES.

The fact that the shortest rail journey between the north-western and northern central states and the eastern states lies across Canadian territory creates many inter-relationships between the railway systems of Canada and of the United States. From an early date the Canadian railways looked to replenishing their leaner traffic by a share in the carrying trade of the developing west. The bonding system as it exists to-day is one of great convenience to the north-western states. So much is the convenience recognized that an effort to limit the Canadian Pacific from participation in this traffic elicited the marked disapproval of the people of the north-western states.

If the Canadian carriers can in the open field, taking advantage of the geographical position of Canada, divert through American traffic to the Canadian lines, such action is the outcome of free operation of trade and should not rashly be hampered.

But in the moving of the American produce across the peninsula of Ontario there is to be considered not only the movement for export, but also the movement of American goods to points in Canada whereby competition is created for the Canadian producer. If the rates are so arranged as to give an advantage to the American over the Canadian producer, then there is matter for regulation.

The complaints which arise in Ontario as a consequence of the inter-relationships of the railway systems of the two countries fall under the following general headings:—

(a) Through rates on American products passing through Canada as compared with through rates on Canadian goods of the same description passing over the same line. This complaint is especially concerned with grain and live stock.

(b) Rates on American commodities brought into Canada as compared with rates on Canadian commodities of a like nature.

The complaint with reference to the relation which through rates on American goods bear to those on Canadian goods brings up the question which in one form or another has been intended to be dealt with by the 'long and short haul' clauses of various regulative acts. Where the condition exists that lower rates are charged for the same commodity carried for a longer distance over the same line in the same direction there is a *prima facie* cause for complaint. Where a higher rate is charged for the longer than for the shorter haul, the rate for the shorter distance is at the same time manifestly out of proportion to that charged for the longer haul, there is *prima facie* an injustice. Where the lower rate, whether absolutely or proportionally, is given to the American produce by a Canadian road there appears to be a manifest discrimination against Canadian interests.

Before entering upon the examination of the conditions underlying this condition it has to be recognized that many examples might be cited to show that a seeming discrepancy does exist. A few examples from the testimony and tariffs submitted will serve for the purpose of illustration.

Detroit rates and Chicago rates are throughout on a lower basis than rates in southwestern Ontario. Detroit has obtained a rate of 11½c. per 100 pounds on grain, flour and mill products to the seaboard, whereas Canadian millers had to pay 13½c. The latter rate is also the rate which was charged from Chicago, for export, during the summer of 1901. (Michigan Central L.C.C., No. 1,240, effective June 1, 1901.) The export rate on cattle from Chicago to St. John is 28c. (See Grand Trunk Lines West, G.F.D., No. 705, effective August 15, 1901.) The Canadian live stock rates for export may be obtained from Grand Trunk tariff, G.M. 7, effective January 22, 1900. Under this tariff the export rate from group A., which includes Sarnia to St. John, is 25c. In the case of the rates from the territory intermediate between Chicago and Detroit the rates are graded. In the case of the Canadian shipments the groups from which the rates are charged may be divided into two classes, A. to F., concerned with the rates on the main line, and G. to P., concerned with rates on the branch lines, the latter being on a higher basis. From A. to F., or from Sarnia to Dorval, a distance of 496 miles, a uniform rate of 25c. prevails, no gradation whatever being recognized.

As a result of the American rate base being lower, the complaint arising under the several headings has to be faced. Complaint is made that American goods are brought

into Canada at lower rates than are given for the movement of similar Canadian goods.

Examples bearing upon this may be obtained from different sections of Ontario.

The following table gives a comparative statement of the rates from Walkerville and Detroit of the rates on iron valves and hydrants.

Comparative rates quoted on iron valves and hydrants to Canadian points from Detroit, Michigan and Walkerville :

Rates from Detroit, Mich., C.L., L.C.L.			Rates from Walkerville, C.L., L.C.L.		
	Cts.			Cts.	
To London, Ont.....	11	16	To London, Ont.....	18	23
“ Toronto “	13	18	“ Toronto “	20	30
“ Montreal, Que.....	23½	31	“ Montreal, Que.....	25	38
“ St. John, N.B.....	35½	44	“ St. John, N.B....	45	59
“ Hamilton, Ont....	13	18	“ Hamilton, Ont....	19	29

While the Detroit winter rate on drugs to Montreal is 58½c., the Walkerville winter rate is 70c. The Detroit winter rate on drugs to Toronto is 36c., while the Walkerville winter rate is 40c.

In the shipment of materials used in the manufacture of organs, the materials can be obtained as advantageously from the longer distance American points as from the shorter distance Canadian points. The rate on small turnings from Southampton to Woodstock is 35c., while the same rate is charged from Chicago. Vencer costs from Toronto to Stratford 23c.; the same rate can be obtained from Cincinnati.

A complaint was lodged that the rate on wagon skeins from South Bend, Indiana, to Chatham cost 21 cents per 100 pounds L.C.L. : while from London to Chatham the same skeins cost 22½ cents per 100 pounds L.C.L. The railways state in rebuttal that the actual rate, South Bend to Chatham, after deducting cartage at Chatham, 2½ cents, is 18½ cents. From London to Chatham, after deducting cartage at both shipping point and destination, is 17½ cents. This leaves the net rates 18½ and 17½ respectively, or a difference of $\frac{1}{4}$ of a cent per 100 pounds.

The railway position in rebuttal will now be considered. The position of the Grand Trunk with reference to the lower rate base, from Detroit and other points west thereof, is as follows:— Rates from Detroit and other United States points west thereof are, to points in Canada west of the Niagara frontier, made on the basis of rates to Buffalo by the routes all within the United States territory, and in conformity with the requirements of the interstate commerce law. Buffalo rates are made as a maximum to Hamilton and other points in the direct line to the Niagara frontier. Toronto is conceded the same basis as Hamilton, and that governs the intermediate points to Toronto. Similarly Boston rates are the maximum to Canadian points east of Toronto. The United States territory east of Chicago is much more thickly populated, large towns or cities nearer together than in Canada, a much larger traffic available and carried by the United States railways, and they can therefore afford to haul freight for lower rates than Canadian railways, with a smaller tonnage, can afford to do. The climatic conditions in the winter months are not so severe in the United States as in Canada, and hence the expenses of operating not so great, so that the Canadian railways must of necessity have a higher scale of rates. Canadian shippers want, and are given, as good and often better service than prevails in the United States, and good and efficient service means an expenditure of money.

Some further points in the rebuttal statements of the railways are essential to the proper understanding of their position. In the case already referred to where a rate proportionally lower, when reduced to a mileage basis, was given on wagon skeins from South Bend to Chatham as compared with a shipment from a nearer Canadian point, attention is drawn to the fact that in the case of this particular commodity the official classification is lower than the Canadian joint freight classification. The Canadian Pacific states in rebuttal of the charge, that higher rates are charged from Canadian manufacturing and shipping points than from competing United States points. We

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claim that in making a comparison of the rates charged by the American and Canadian railways, due consideration must be given to the fact of the very much larger local traffic carried by the United States railways and to their cheaper cost of operation owing to the lower cost of fuel, material, equipment and supplies in the United States as compared with Canada. The low temperature and heavy falls of snow during the winter, in many parts of Canada, make the cost of transportation during that period of the year very high. The comparison on the part of the Canadian Manufacturers' Association is with railways operating in the States of New York, Pennsylvania, Ohio, Indiana, Michigan and Illinois. Each of the States of New York and Pennsylvania has a population more than equal to that of the entire Dominion of Canada. The present railway rates in the States mentioned have been gradually reduced, as the population increased, and the manufacturing industries multiplied. We submit, therefore, that it is neither fair nor equitable that the present rates charged by the railways in those States should be made a basis of comparison with the rates prevailing in Canada. The conditions in every respect are totally different and to the disadvantage of the Canadian railways as compared with the American lines. The tendency of Canadian rates to-day is steadily downward, while the service and facilities afforded by the railways are as steadily improving. It is neither to the interest of the shipper nor the railway that rates should be on an unremunerative basis. The railway companies ask only a fair return for the capital invested and the service rendered. It is to their interest to foster trade and increase commerce, and as the tonnage enlarges they are enabled to make reductions in the cost of transportation, from which the public derives the benefit.'

Dealing with the specific case of the lower rates given Detroit as compared with Windsor, the following positions are advanced by the railways:

(1) Dealing with the higher grain rate from Ontario points it is stated that the rates from Detroit to the seaboard are based on the rates from Chicago to the seaboard, and when, through the cutting of rates on the part of United States railways, the basis from Detroit is forced below $13\frac{1}{2}$ cents, the Canadian railways adopt $13\frac{1}{2}$ cents as their minimum on both United States and Canadian business as a measure of self protection.

(2) East-bound rates from Detroit under the ruling of the American railways are based on 78 per cent of the Chicago-New York rates which are on a low basis owing to the very large tonnage moved between these cities. The rates, from Detroit to Canadian points, while as high as can be consistently charged by the Canadian railways, are, owing to the difference in the rate basis and classification, in some instances lower than the rates from Windsor.

The low rate between Chicago and New York is undoubtedly attributable to the competing force of water competition. The railways position is, in substance, that this competition is such as to cause them to make rates which would not pay if applied to all of their business. Attention is devoted by the railways to the fact that this business is of advantage in that it adds to the prosperity of the railway, thereby enabling it to lower its rates in regard to local traffic.

The position that the Canadian railways must observe the present condition because of the compelling force of the Interstate Commerce Commission Law, is not final. The evidence shows that in a few instances at least this condition has not been recognized by the American railways. The Père Marquette Railway has quoted Detroit rate to Walkerville Junction and Fargo but would not quote this rate to Windsor. For a short time the Wabash gave Canadian points the advantage of an $11\frac{1}{2}$ cent export rate on grain. The Wabash cut the established rates to get business. This rate was a special rate for export. No tariff was published. An 11 cent rate has been also given for export from Canadian points over the Lake Erie and Detroit and Michigan Central. The tariff will be found in the appendix.

The Lake Erie and Detroit River Railway tariff known as L. E. & D. Ry. I. C. C. No. 131, was issued December 5th, 1899, effective December 12th, 1899. This was a tariff on general merchandise and commodities from stations on the Lake Erie and Detroit River. Supplement No. 1 to this tariff, issued March 16, 1900, effective March 22, 1900, gave a rate of $11\frac{1}{2}$ cents on car lot shipments of grain and flour from stations on the Lake Erie and Detroit River Railway to New York for export. One day later,

on March 23, 1900, supplement No. 2, effective April 2nd, 1900, was issued. This placed the export rate to New York at 13½ cents.

Evidence which it was impossible to corroborate and which I do not therefore regard as conclusive, states that the rate was raised at the instance of the Canadian roads. It is to be noted that no action either formal or informal was taken before the Interstate Commerce Commission or by the Commission as a result of which the increase was made.

In regard to traffic from American points into Canada the position taken by the railways minimizes the importance of such competition. It is considered that the complaint of Windsor with reference to lower rates being granted to Detroit is sentimental, since there is no active competition between Detroit and Windsor. The Canadian Pacific states in its statement in rebuttal, 'Our information goes to show that there is very little competition between Detroit and Windsor as far as actual shipments to Canadian points are concerned. If Detroit and Windsor were in active competition in the manufacture or shipment of any commodity it would be to the interest of Canadian railways to protect Windsor and this would be done.'

The Grand Trunk says, 'The Canadian shipper or manufacturer at Windsor simply locates there in order to avoid the customs tariff he would be subject to if shipments were made from Detroit, and the Canadian railways do not consider the rates Detroit to Windsor can be compared on a mileage basis.'

The claim of the railways that there is no effective competition between American merchants and Canadian merchants in Ontario is too sweeping. The evidence establishes that there is effective competition. Effective competition in hardware has been shown to exist as far east as London. This is attributable not so much to the classification as to the rate basis. General hardware is classed lower under the American Official than under the Canadian Joint Freight classification. At the same time on certain articles the two classifications are on the same footing. The following table will also indicate that on certain articles of general demand the classification is substantially the same :—

Canadian Joint Freight Classification.				American Official Classification.	
	Article.	L.C.L.	C.L.	L.C.L.	C.L.
	Putty.....	3	5	..... 4	5
	White lead.....	3	5	..... 3	5
	Shot.....	3	5	..... 3 less 20%	5
	Lead pipe.....	3	5	..... 3	4
	Lead.....	3	5	..... 4	6

On these articles the lower rate basis enables them to displace the goods of Canadian merchants.

On the longer hauls coming in from the United States, the ton mile rates will be lower than in the case of the shorter hauls from Canadian points. But where the Canadian shorter haul is treated entirely as a local haul the ton mile rate will be so high as to offset, when competition arises, the advantage that is given by proximity to the market. In an example given in an earlier connection it is shown that the rate from South Bend to Chatham on wagon skeins is on so low a basis as to practically offset the advantage London possesses from its proximity.

Public policy demands that when a low rate basis is given to American goods which come into competition with Canadian goods there should be regulation to see that the expansion of Canadian trade is not hampered. It should be seen to that Canadian goods are not given such a rate as to offset their geographical advantage.

With reference to the through export rates on American products as compared with those given to Canadian shippers it is manifest that the circumstances, both in regard to volume of traffic and water competition, under which the rates on the former are determined are not identical with those entering into the determination of the rates on the latter. The difference in point of condition will tend to give the American product a lower rate basis; and the rate charged by the Canadian carrier on American goods carried through Canada for export is the rate determined in the United States. At the

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same time it is obviously not in the public interest to allow the railway to determine unchecked what relation the Canadian export rate should have to the American export rates. Under existing conditions of trade the rate basis on American traffic is lower. But the determination of just how much higher the Canadian rates shall be than the American rates should be subject to regulative process.

VII.—MINIMUM WEIGHTS.

In determining the basis of rates on car lots the question of minimum weights is of importance.

The classification provides that in respect of the shipment of certain commodities certain minima shall obtain in connection with the car lot shipments.

A number of complaints to the effect that it was impossible to load up to the established minima were presented. The general live stock minimum is 20,000 pounds. Single deck shipments of hogs are carried on this minimum. Double deck shipments have a minimum of from 25,000 to 30,800, according to the length of the car.

In the United States, in the territory covered by the official classification there is a minimum of 18,000 pounds on single deck shipments of hogs and a minimum of 28,000 on double deck shipments. The average weight of Canadian hogs is much less than that of American hogs. Consequently there is greater difficulty in loading up to the minimum. It was shown that when eighty-nine hogs, weighing 15,815 pounds, were loaded into a car, they were so crowded that within an hour one of them died. On an average about 15,000 pounds can be loaded in summer time while about 16,000 can be loaded in winter time.

In the shipment of cattle there is not so great a disparity between the actual weight of the shipments and the minimum weight. It was shown in one particular case that 19,100 pounds were loaded in. However, on account of shrinkage, the net weight when the port of export was reached was 17,400.

At present trunks, when shipped in common cars thirty-five feet long or under are carried in third class on a minimum of 14,000 pounds. This is especially complained of in the North-west since at the outside about 10,000 pounds can be loaded. In the case of carriage shipments the weight actually loaded is at least one-eighth less than the minimum. Furniture is shipped on a minimum of 16,000 pounds in the case of cars thirty-five feet long, while in furniture or hay cars there is a minimum of 20,000 pounds. Furniture dealers in the North-west find that in order to take advantage of the 16,000 pound minimum they have to ship 'knocked down' the goods being put together at their destination. It is impossible to load in more than 14,000 pounds.

Anomalous conditions exist in regard to the relation between the minimum weights in different classes. For example, the sixth class rate from Chatham to Goderich is 14c. or \$28 for a 20,000 pound car; the fourth class rate is 21c. or \$29.40 for a 14,000 pound car, *i.e.*, the 14,000 pound car costs \$1.40 more than the 20,000 pound car. The explanations given of this condition by the railways are as follows:—

Grand Trunk.—'This comes about by making a special minimum weight on fanning mills, 14,000 pounds, to conform nearly to the actual weight loaded in a car instead of applying the usual machinery minimum of 20,000 pounds. On short distances, it does work out as stated, but on longer distances it works out in the reverse way. However, this is a matter which the classification committee can regulate, and it shall be referred to that body.'

Canadian Pacific.—'A few instances only can be found where this complaint is justifiable. It is only true in the case of short distances where the difference between fourth and sixth class rates is slight. The reverse is the rule on longer distances. The minimum weight on this class of freight is 24,000 pounds. An exception is made in the case of agricultural implements and vehicles, but the classification provides that in case the minimum weight at sixth class shall be lower than the minimum weight at fourth class, the former shall govern. (See pages 13 and 79 in the Canadian Classification).'

The railway position with reference to the question of minimum weights is that the bulky nature of the shipment must also be considered. It will be noticed that the articles to which reference has been made are such as are in proportion to the weight comparatively bulky. It is also stated that the question of minimum weights is not decided by the weight that can be loaded on a car, but what may be considered as fair minimum compared with the capacity of the car, which at the rate indicated in the tariff will give a fair revenue. It is further stated that while a 35 foot car will carry 60,000 pounds weight, when it is loaded with pianos and organs the charge is based on a minimum of 12,000 pounds weight, or a reduction of 80 p. c. in the capacity of the car.

The testimony indicates that there are certain arbitrary features in connection with the question of minimum weights. It also indicates that in various cases the weight actually falls short of the minimum by a considerable margin. The statement quoted from the Grand Trunk's position shows that on one line of shipments the actual weight was at least 6,000 pounds short of the established minimum. The ability to determine the minimum means the power to determine the rate. Where the actual weight falls short of the minimum it means that the rate charged per 100 pounds is in reality higher than the rate contained in the tariff. While no deduction is made where the weight actually loaded falls below the minimum, where there is a surplus over the minimum it is charged.

While recognizing the pertinency of a considerable portion of the arguments advanced by the railways, it does not invalidate the conclusion that the regulation of minima is essential to the proper regulation of rates.

VIII.—REBATES.

Trustworthy information in connection with the question of rebates, is always difficult to obtain. It is natural that the individual, who is obtaining the advantage of the secret rate, should be unwilling to divulge any information concerning it. It is only when there is a dispute between the railway and the favoured shipper, that exact information may be obtained. It has also to be recognized that some of the charges with reference to rebates are the outcome of the fact that an individual when underbid in some enterprise attributes the advantage obtained by his competitor to more advantageous freight rates rather than to a finer shading of profit. Complaints were presented affecting a number of lines of shipments, the principal ones being coal and cattle. The contention was made that American shippers of cattle passing through Canada are given rebates. There was not sufficient evidence of a conclusive nature presented, to uphold this contention. It is alleged by some of the smaller cattle shippers that rebates are granted to many of the larger cattle shippers. These statements rest simply on surmises and inferences. It was shown, however, by the testimony of individuals who had been favoured by rebates, that rebates had been granted. The bills of lading of the individuals so favoured, showed on their faces the same rates as were charged to other shippers. The rebates were paid over in money.

It is shown in evidence that three years ago—no testimony is submitted to show that this condition still continues—Canadian consumers of American corn could have the corn laid down for \$10 less per car for freight charges, when orders were placed through large dealers in Canada instead of being made direct by the consumers themselves.

In regard to business on other lines it is asserted, that certain favoured dealers in groceries and in hardware on the Pacific Coast have the advantage of rebates of from 10 p. c. to 15 p. c. It must be stated in this connection that this information comes from representatives of American competing railways.

It has to be recognized that in some cases at least a rebate where granted is granted as a result of the urgency of the shipper. This renders the work of regulation in this regard exceedingly difficult. The provisions of the Railway Act, as it stands at present, with reference to rebates are sufficiently explicit. There is needed, however, a more efficient supervisory control.

IX.—SETTLEMENT OF CLAIMS.

A point of considerable importance to shippers is concerned with the readiness of the railway companies to make good claims attributable to the action of the companies' agents. The conditions under which such claims may arise are too numerous to itemize. To cite but one case, a shipment of whiskey from Walkerville, Ontario, to Kamloops, British Columbia, was charged the intermediate rate, although it happened that the rate to the coast plus the local back was less. Under the rules governing the movement of trans-continental traffic Kamloops was entitled to this lower rate. A claim was put in for a refund of the difference. The claim had to be passed upon in Montreal with the result that some four months elapsed before the refund was made. Complaints with reference to the dilatoriness of the railway companies in the settlement of claims were met in all sections of the country and in all lines of industry. In some cases a period of two years elapsed before the claims were settled by the railways. It will readily appear that the shippers are, under such conditions, subjected to very great inconvenience. In addition there is a loss for pending the refund, the shippers are deprived of the use of a portion of their capital.

X.—CHANGES IN RATES.

The policy of the Railway Act with reference to the regulation of rates proceeds from the fixing of maxima. These maxima are fixed so high that the traffic will not bear them. The class rates enforced by the companies are within these maxima. The fact that the class rates so imposed by the companies are within the limits of the maxima approved by the Governor in Council is considered by the railway companies as an argument in favour of their reasonableness. In many cases the traffic will not stand the established class rates, and concessions have been made by adopting commodity tariffs which take specified commodities out of the official classification. The granting of these commodity rates has not proceeded upon any definite principle. Sometimes they have been granted to meet American competition. In other cases they have been granted because of urgent representations that the traffic will not bear the established class rates. But where such concessions have been made it has required a considerable amount of pressure on the part of the shippers. And the ultimate determination as to whether the rates should or should not be granted has rested with the railway—one of the parties to the rate contract.

Another disadvantage in connection with the existing rate system is that there is no obligation to give notice of change. When notice is given it is given simply as a matter of courtesy. Owing to the lack of notice, changes in rates have in some cases entailed losses upon shippers. The same condition exists in regard to commodity tariffs; the commodity tariff may be rescinded at the discretion of the railway, and the class rate hitherto existing may again be enforced without any notification to the shipper of the intention to make such change. It has also sometimes occurred that through lack of notification, a shipper has shipped his goods at the established class rate, although these goods had been taken out of the class rates and placed in a commodity tariff.

A particular example of the effect of changes in rates is furnished in connection with the question of the difference between summer and winter rates; the latter being on a high basis. The shippers complain that the winter rates are from 20 per cent to 25 per cent higher than the summer rates. There is no rule as to notification of the time when the winter rate goes into force. There is no fixed rule in regard to the time when summer rates are to be replaced by winter rates. Special representation to the railways resulted, in 1899, in the summer rates being kept in force until December 1st of that year. The railway position may be briefly summarized. The winter rates normally go into force about the 15th November and cease about April 1st. While November 15th is taken as the date of the beginning of these rates the actual date depends upon the condition of navigation. The representative of one of the railways states that the agents of his company are instructed to give as much notice as possible with reference to the time when the winter tariff becomes effective. He endeavours to

give the same notice as required under interstate commerce regulations. But sometimes on account of delays in printing a notice, a period of no longer than six or seven days is given.

Another phase of the controversy with reference to the enforcement of the winter rate is concerned with the reasons advanced for the higher rate basis in the winter time. The shippers consider that the difference between summer and winter rates should be done away with. In earlier days when there were no appliances for disposing of snow there was a reason for a difference in rates. Sometimes after the winter rates are enforced there is no snow for a couple of months. It is considered that if winter rates have to be enforced because of the increased cost of operation during the winter months, then the railways would be sufficiently recompensed if the higher rates were charged during the period from January to March. The answer of the railways to this position shows that the increased cost of movement during the winter time is regarded as having a very slight influence on rates. The gist of their position is the reason for the higher basis of rates in winter is the absence of competition. It is true that it is more expensive to handle traffic in winter, but the great point is water competition.

The railway position is that the summer rates are based on St. Lawrence River, Lake Ontario and Lake Erie water competition, the direct boat line rates regulating the maximum which all rail lines can charge during the summer months. The rates so forced upon the railways are frequently not remunerative, but they have to accept them for the time being, or go out of business, which they cannot afford to do. The basis of summer rates is extended to many interior manufacturing points, thus giving them also the benefit of water competition.

The general argument concerning the regulative policy advisable in connection with the question of changes in rates may be developed from this particular case. If the reason for the advance in winter is based on water competition, it is a question of fact, whether all of the goods affected were, during the summer, moved to any appreciable extent by water. The railway may, as to certain traffic, so lower its rates during the summer time, as to prevent the water carrier being an effective competitor. A question of fact would, under such conditions, have to be determined before the general increase on all lines would be justified. If the matter depends upon the increased cost of movement in winter this puts the matter on a different basis. As soon as the proportionate difference in cost of movement was established to the satisfaction of the regulative body, a proportionate increase of rate would be justified.

It is in the interest of the public that all changes in rates should be made subject to a definite requirement as to notice. When the power to change rates is left in the untrammelled and arbitrary discretion of the railway it opens the door for abuses.

XI.—THROUGH RATES.

Difficulties have arisen with reference to through rates from a point on one line of railway to a point on another line of railway. In shipments out of machinery and furniture from Stratford to certain local points on the Canadian Pacific east of Toronto the shipments have had to pay the sum of the locals. A complaint was presented stating that the rates on lumber from Winnipegosis, on the Canadian Northern, to points on the Canadian Pacific west of Gladstone and Portage la Prairie had been increased as follows:—

Portage la Prairie to Sidney.....	Advance of 6c. per 100 lbs.
“ Carberry.....	“ 6c. “
Gladstone to Ogden.....	“ 4c. “
“ Shoal Lake.....	“ 7½c. “

When this matter was brought to the attention of the Canadian Northern and an explanation asked for, it was stated that the advance of rates complained of had taken place; but that this was attributable to the cancellation by the Canadian Pacific of the through rate arrangements hitherto existing. Joint circular C. P. R. No. 1100, issued

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January 23, 1901, a copy of which will be found in the appendix, provided that freight traffic interchanged between the Canadian Pacific Railway Company and the Canadian Northern Railway (except from and to points provided with through traffic) would be through-billed between stations named at the through-mileage rates for the distance carried, as shown in tariffs of the Canadian Pacific Railway Company. On July 25, 1901, the C. P. R. cancelled this arrangement. This was done without consultation with the Canadian Northern and without its consent. The producer of spruce lumber at Winnipegosis found that this increase of rate interfered very seriously with his disposing of his lumber in his former markets. He had been carrying on the manufacture at a close margin, which was seriously trenched upon by the increased freight rates.

There should be regulation and effective control of all matters relating to interchange of traffic between railways, as well as with regard to a rate charged from a point on one railway to a point on another railway.

XII.—RATES TO THE NORTH-WEST.

Complaint is made by the fruit shippers of western Ontario that rates on fruit to the North-west are excessive. Especial complaint is made concerning the fact that if fruits taking different classes are included in the same car, the car has to take the rate of the highest class. It is shown in evidence that the fruit shipments from western Ontario to the North-west are in the development stage. If shipments are made at all, they have to be made in car lot shipments since the less than car lot shipments in addition to having a higher rate, are too slow. One difficulty with the arrangement, which charges on the mixed car the rate of the highest classed article in the car, is that it limits the direct trade between western Ontario and North-western points to the distributive centres. Such larger points as Winnipeg and Brandon can take single car lots of one line of fruit, and dispose of them to advantage. It happens, however, at points further west, that while there may be a demand for a car lot of mixed fruits, there is not sufficient demand for a car lot of a single line of fruit. The result is that great difficulty is experienced in making fruit shipments west of Brandon.

The practice followed by the railway is in accordance with the provisions contained in the official classification. It must at the same time be recognized, that the existing arrangement enures to the advantage of the larger and to the disadvantage of the smaller point.

In the interest of developing the trade some concession should be made. If it were allowed to carry a car-lot of mixed fruits, the car-lot rate on each commodity being charged instead of, as at present, charging the rate of the highest classed commodity on all, then the expansion into the western country of the fruit trade of Ontario would be facilitated. It has to be recognized that in the country around Regina, north and west, that the fruit of the state of Washington is obtaining a foothold. The concession outlined would tend to secure a greater share of the business to the Canadian fruit producer.

The concession urged would not be so contrary to the accepted practice of the railway as to be classed as arbitrary. Westbound Special Freight Tariff C. P. No. 563, effective February 15th, 1900, contains the following provision:—

‘Groceries classed 5th class and dried fruit classed 4th class in Canadian Joint Freight Classification, where shipped in mixed carloads will take C. L. rate on each commodity at actual weight, subject to minimum weight of 24,000 pounds. If total weight be less than 24,000 pounds, dried fruit will be charged on the basis of 4th class actual weight, groceries 5th class for remainder of weight necessary to make up full minimum weight.’

The lighter traffic to the North-west precludes the acceptance of the same rate base as in the more settled portions of Canada. The long rail haul necessary to place goods in the west makes the freight charge play a very important part in the determination of the price. On shipments of furniture to the North-west the freight charges amount on the average to one-third of the original cost of the goods. In the case of the construc-

tion of flour mills in the west, one-third of the cost of the completed mill is represented by freight charges. The freight charge on soap from Toronto to Edmonton—4th class at \$2.07—is \$1.65 for an 80-pound-box. The selling price is \$3.65 per box. The freight therefore amounts to 44 per cent of the value of the goods. In the case of soap shipments from Toronto to Kamloops the rate is \$2.01, this gives a freight charge of \$1.61 or nearly 50 per cent of the value of the goods.

As has been stated it cannot be expected that the rates in the West will, for some time, be on identically the same basis as those in the East. But some comparisons of rates throw light on the nature of the charges. For example the 4th class rate from Toronto to Kamloops, a distance of 2,770 miles, is \$2.01, from Toronto to Halifax, a distance of 1,170 miles, the rate is 54c. That is while the distance to Kamloops is a little less than $2\frac{1}{2}$ times as great, the rate is $3\frac{1}{2}$ times as great. In view of the fact that the railway has the advantage of the long haul throughout, the disproportion would appear to be too great. The rates into the North-west as they at present exist, interfere with the expansion of the trade of Eastern Canada in the North-west.

A complaint which is contained in the statement of the Winnipeg Board of Trade viz., that the Canadian Pacific discriminates at Fort William against independent lake carriers, is one of long standing. The following extract from the complaint indicates the nature of the grievance complained of :—

‘The Government of the Dominion of Canada has made the enlargement of our canals and the deepening of the main water ways a settled policy, this policy having for its object the cheapening of transportation, with a view to the benefit of the whole people. But the Canadian Pacific Railway for some years in defiance of Canadian public policy has enforced and is at present enforcing a system of discrimination by exacting an increased charge for freight on goods consigned to Winnipeg and other points in Manitoba when delivered to it at Fort William by other than certain favored lines of boats. This discrimination, as practised, tends to restrict the amount of vessel tonnage coming to Fort William from Eastern Canada, and besides preventing competition in rates on the Great Lakes in westbound freight, restricts the amount of vessel tonnage eastbound available for grain and other produce, and thereby effects the value of the same in the farmers’ hands. This Board has on several occasions protested against such discrimination. The following rates actually in force are given to illustrate this injustice :—

RATE—FORT WILLIAM TO WINNIPEG.

Freight from favored lines.

Class.				
1st.	2nd.	3rd.	4th.	5th.
93 cents.	79 cents.	65 cents.	56 cents.	47 cents.

Freight from outside lines.

Class.				
1st.	2nd.	3rd.	4th.	5th.
\$1.16	98 cents.	80 cents.	68 cents.	57 cents.’

The history of this condition goes back to 1896. It was in the spring of this year that this policy which amounts to putting on the local rates from Fort William to Winnipeg on all shipments received from independent lines, was enforced. Up to and including the season of 1895 no such distinction was made.

In a letter written on May 4, 1896, by Sir William Van Horne to Mr. E. B. Osler, President of the Board of Trade, Toronto, the text of this letter will be found in the annual report of the Winnipeg Board of Trade for 1897, pp. 44—45, the following explanation of this condition is given: ‘I find that taking advantage of the special rates which prevailed from Fort William and Duluth to Winnipeg for lake business,

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outside and tramp boats have for the past few years so badly cut into the business that the regular lines have not sufficient business left to support them, and it has become a question of protecting the regular lines running in connection with the Canadian Pacific and Grand Trunk or allowing the regular lines to drop out, leaving the business to the tramp boats and to chance. It should be remembered that the regular boats have to start at the beginning of the season, and make regular trips throughout the season without regard to the ups and downs of the traffic. Consequently, for a considerable part of each season the boats are run at a loss, and if the tramp boats are allowed to come at times when business is good and make such rates as they please, and take the business away from the regular lines, any business man should readily see what the effect must be. The railways interested have found it necessary to take the action complained of by the Winnipeg Board of Trade, in order to keep the regular lines going, and we believe this to be in the public interest, as well as in the interest of the railways.'

The position taken by the Canadian Pacific in rebuttal of the complaint against it, during the recent investigation, is in substance as follows:—

1. The charge that there is discrimination is erroneous. The Canadian Pacific and the Grand Trunk Railways publish certain through rates from Eastern Canada to points in Manitoba and the North-west, which allow the steamship lines up to Fort William, who charge the established rates, a fair basis of divisions. These steamship lines are maintained at large expense for the purpose of giving Manitoba and the North-west a prompt and satisfactory rate service, which is certainly to the interest of the western merchant.

2. Complaint that the action of the company restricts the amount of vessel tonnage eastbound available for grain and other produce is incorrect. The vessels that go to Fort William require grain cargo, and what little westbound merchandise they might bring would not in any way affect the situation. The large cargo carriers going to Fort William will not carry merchandise, as the delay in handling that class of freight would more than offset the revenue received. These vessels are grain carriers only, many of them American bottoms, which cannot carry freight from Eastern Canada to Fort William, and would not desire or care for what little merchandise might be available.

3. Statement that this arrangement prevents competition in rates on westbound goods is incorrect. The arrangement as to rates via Fort William, while it insures stability of rates and prompt and efficient service, does not cost the Manitoba merchant once cent extra and does not debar a single vessel from going to Fort William. As a matter of fact, the rates on the basis of \$1.16 first class, which are mentioned, have not been charged on a single pound of freight from Fort William for several years.

The practice complained of is also made use of by the Grand Trunk on shipments via Owen Sound to Sault Ste. Marie. Shipments from local points via Owen Sound are not given a through rate when they are to be carried by independent lines. They are charged the local rate to Owen Sound.

The lowest rate, as established in evidence, quoted by independent lake carriers to Fort William is 15 cents. This does not, however, establish a grievance. On shipments from Fort William to Winnipeg the local rate of \$1.16 first-class is charged, when these are brought to Fort William by independent carriers. When the rate of 15 cents is charged to Fort William it would be available to points in Western Ontario which are touched by water competition. On this basis their goods could be placed in Winnipeg at \$1.31 first-class. The lake and rail rate first-class to Winnipeg is \$1.43. As long then as the established through lake and rail rate is maintained, and the local rates from Fort William are retained unchanged, then any cut in lake rates which would bring the joint rate below \$1.43 would be open to the Winnipeg merchants. It cannot be argued that the lake and rail rates should be changed to meet every change in the lake rate. This would be justifiable if the lake rates themselves, as distinct from the lake and rail rates, were subject to the regulation of Parliament. But as the law stands, this is not the case. If the lake and rail rate had to adapt itself to every change in the lake rate, it would upset the regulative process and interfere with stability of rates. At the same time it must be remembered that while a cut on lake rates, which might be of short duration, would not serve as a reason for the immediate reduction of the lake and rail

rates, yet a continued low basis of lake rates would be one reason, which, under the powers given by the Railway Act to regulate freight shipments carried on a through rate partly by rail and partly by water, would lead to a revision of the through rate. In doing this all the circumstances of the case would have to be considered.

XIII—COMPLAINTS IN CONNECTION WITH TRANSCONTINENTAL TRAFFIC.

In the movement of traffic from eastern Canada or from Europe to British Columbia the influence of ocean transportation as well as of the alternative service offered by the American railway enters. Both of these factors are urged as reasons for some apparently anomalous conditions which exist in connection with this traffic.

The complaints which were presented under this heading are of two classes, (*a.*) the question of the rates charged to interior points as compared with the rates to the Pacific Coast, (*b.*) higher charges on goods to British Columbia coast points than to adjacent United States points.

RATES TO BRITISH COLUMBIA INTERIOR POINTS.

The substance of the complaint made by the interior towns in British Columbia is that on the shipments of goods they receive from the east the rate to the interior point is made up of the rate to the coast plus the local rate back to the interior point. The complaint with reference to the existing rate arrangement on transcontinental traffic is strongly urged by the town of Kamloops. The position occupied by Kamloops is also that of other interior towns.

A quotation from the explanatory statement submitted in rebuttal by the Canadian Pacific will serve to indicate the railway position with reference to the basis of the existing rate arrangement. 'The basis of rates from the east to the coast is lower than the basis to Kamloops, from the fact that coast rates are based on water competition via the Isthmus or Cape Horn from the eastern seaboard. If the Canadian Pacific were to withdraw from the coast trade Kamloops would, in no way, be benefitted, but in fact suffer a distinct loss by the reason of the impossibility of maintaining as satisfactory and efficient service if bebarred from the haulage of through traffic.'

The tariff of the Transcontinental Freight Bureau, arrived at by agreement of the railways concerned in the movement of transcontinental traffic contains the general regulations with reference to this species of traffic. It distinguishes between 'terminal' and 'intermediate' points. The latter are defined as points located on roads mentioned in the tariff, and on the direct line over which traffic passes in reaching any of the 'terminal' points indicated in the tariff. The following extract from the tariff indicates the arrangement whereby the rate basis to the intermediate points is obtained—'When the "terminal" class or "terminal" commodity rates. . . . plus the local rates from the nearest "Pacific Coast Terminal" are less than the "intermediate" class or "intermediate" commodity rates. . . . the sum of the "terminal" class or "terminal" commodity rates and the local rates from the nearest "Pacific Coast Terminal" will govern as the through rate.' (See I. C. C., No. 142, No. 1—D., effective January 18, 1900, p. 1.)

The position of the merchants of Kamloops is in substance that it is unjust to charge a higher rate to this shorter distance point than to Vancouver, as was stated in evidence, Kamloops does not want to pay more than Vancouver. It would be perfectly willing to pay as much but not more. The complaint was put on the ground that it was a simple demand for justice in a business like way.

It will be noticed, under the ruling quoted from the tariff, that as regards part of the rate the 'intermediate' point obtains the advantage of the coast rate to meet ocean competition. Ocean competition is effective on many lines of shipments to the coast and

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if the railway is to obtain traffic the rates fixed by ocean carriers will have to be met. The railway will have to accept on these goods rates so low that they would not yield a sufficient profit if applied on all the business of the railway. It is physically impossible to regulate the rates of the ocean carriers. To require the railways to maintain rates proportioned to distance on coast shipments, where these have to be taken in competition with ocean carriers, would mean that the railway would be cut out of the traffic entirely.

The contention of Kamloops that it should in general obtain the same level of rates as is granted to coast points is not sustained. Where there is an entire dissimilarity of circumstances the difference in rates cannot be construed as a discrimination.

But while in general the rates to the coast are affected by water competition, it does not follow that it applies on all lines of shipments. The tariffs on transcontinental shipments are based on the assumed operation of ocean competition in regard to all lines of shipments. It is admitted by the Canadian Pacific that there are no doubt many cases where shippers would not send by water no matter what the water rates were. It is contended, however, that in making up the tariff these conditions cannot be taken into consideration. There has to be a public tariff made up on the basis of water competition. It is admitted that in many cases on account of time, shippers do not move the goods by water.

In the case of the shipments by water, there is the question of the time taken up in the transportation, and the interest on the capital locked up in the shipments, as well as the cost of insurance. All these tend on certain lines to give the railways an advantage in competition. I should at the same time mention that I am informed by the railways that at times the ocean freights are on so low a level as to warrant the shipper sending the goods earlier, so as to take advantage of the ocean rate. The Canadian Pacific has to face this in connection with the question of certain shipments from the Eastern States to China. While it takes a longer time to ship by way of the Suez Canal, the lower ocean freights attract goods that way. While I recognize the value of this contention I am of opinion that it is mainly on the larger shipments that time is a more negligible quantity.

To quote the decision of the Interstate Commerce Commission in the Spokane Falls case:—The Merchants' Union of Spokane Falls *vs.* Northern Pacific Railroad Company and the Union Pacific Railway Company, there should be, in order to justify the railway in disregarding the element of distance in fixing its rate to the seaboard, 'competition of controlling force, and in respect to traffic important in amount, of water-carriers reaching the same terminals.' Consideration should also be devoted to the question whether the railway has by its own act cut off the efficiency of water competition.

Where the water competition is not of 'controlling force and in respect to traffic important in amount,' or where the railway by its own act or by its superior facilities has precluded the effective competition of the water carrier, there is no justification for disregarding the element of distance in determining the rate.

There yet remains the question of the charging of the local rate back to the 'intermediate' point. It is stated in evidence by the Canadian Pacific that the extent of territory eastward, to which the systems of charging the rate to the coast plus the local back extends, terminates about Kamloops. Mr. Bosworth in his testimony stated that he had never known the practice to apply east of Kamloops. The extent of the territory depends on how low the rate is from the seaboard to the interior points. If the rate was very low to the interior it would work back further east.

The application of the full local back to Kamloops makes a very heavy pressure on the goods. In one instance on a shipment of earthenware the charges from England to Vancouver were \$25.62, while from Vancouver to Kamloops they were \$16.86.

I am of opinion that there should, in the rate to Kamloops, be some reduction from the full local rate.

While it is contrary to the regulations in regard to the movement of transcontinental traffic to charge a rate higher than the coast rate plus the local, Kamloops has in some instances been charged rates higher than the rates to the coast plus the rate back. I inclose in the appendix to the report, bills of lading containing the particulars.

HIGHER CHARGES TO BRITISH COLUMBIA POINTS THAN TO ADJACENT UNITED STATES
POINTS.

Under the regulations of the Transcontinental Freight Tariff (p. 3) it is stated that 'Traffic destined to the following points in British Columbia, viz., Ladner's Landing, Nanaimo, New Westminster, Vancouver and Victoria, will be subject to the rates applicable to Seattle, Washington, as provided in this tariff plus an arbitrary of 5 cents per hundred pounds.' Objection is made to this arrangement on the ground that it entails an extra freight charge of \$15 on a 30,000 pound-car. It is stated by the Canadian Pacific in rebuttal: 'We submit the fact that the volume of traffic to the United States Pacific coast points is very much greater than to British Columbia coast points, and the cost of transportation is considerably less owing to the fact that the American lines have easier grades and a lower cost of operating. The net revenue to the Canadian Pacific on the slightly higher rates to British Columbia points is considerably less than the American roads receive on the lower rates.' It is also stated that it costs more to haul to Vancouver than to Seattle.

The Canadian Pacific has, as to a number of articles removed this arbitrary. The following table submitted by the Canadian Pacific, compares the rates on certain articles to Vancouver and to Seattle :—

MEMO. COMMODITY RATES, CARLOADS.

	From Eastern Canada to			From Chicago to	
	Van- couver.	Seattle.		Van- couver.	Seattle.
	\$	\$		\$	\$
Beans in bags.....	0 70	0 70	Beer.....	1 00	1 00
Canned Goods.....	1 00	1 00	P. H. Products.....	1 70	1 70
Stoves.....	1 15	1 25	Butter, eggs, cheese.....	2 00	2 00
Butter, eggs, cheese, poultry, pork, mutton.....	2 00	2 15	Apples and cider.....	1 30	1 30
Ale, beer and cider.....	1 10	1 10	Fresh Fruits.....	1 55	1 55
Evaporated apples.....	1 03	1 13	Mineral water.....	0 55	0 55
Whiskey, in wood.....	0 95	1 05	H. H. Goods.....	1 12½	1 12½
Iron, steel, nails, horse shoes, pipe.....	0 70	0 70	Furniture.....	1 25	1 25
Biscuits, confectionery.....	1 89	1 99	Cereals.....	0 80	0 80
			Oils.....	0 78½	0 78½

It is further stated by the Canadian Pacific that the only business in which there is competition between the Canadian and the American merchants, is in the Yukon trade, and the rates charged by the Canadian Pacific railway to Vancouver and Victoria on this particular traffic are exactly the same as charged by the American lines to Seattle, so that the merchants in these cities are on an exact parity.

It is argued that the merchants in the British Columbia Coast points do not come into competition with the Seattle merchant, because the duty is sufficient to protect the former, and that therefore the 5c. arbitrary does not hurt them.

I am of opinion that the evidence submitted does not justify the British Columbia coast rates being placed on a higher level, by the 5c arbitrary, than the Seattle rates. If the determining element in the tariff to the Coast is water competition then, in view of the fact that the distance by water between Seattle and Victoria is so slight, there would appear to be, in virtue of the position advanced by the railway, no justification for putting the British Columbia rate on a higher level.

The following complaint was submitted by the New Westminster Board of Trade 'The particular grievance that the New Westminster Board of Trade desires to call

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your attention to, will be found upon p. 99 of the Transcontinental Freight Association Tariff, dated January 18, 1900. There you will find :—

' Division A.

CLASS.

1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
20 cts.	18 cts.	15 cts.	13 cts.	10 cts.	8 cts.	8 cts.

Division B.

CLASS.

1st.	2nd.	3rd.	4th.	5th.	6th.	7th.
30 cts.	26 cts.	20 cts.	18 cts.	15 cts.	13 cts.	13 cts.

These you will notice are arbitraries charged upon Canadian freight. '

Division A, includes Montreal ; Division B, includes Halifax.

Under the arrangement of this tariff these arbitraries are to be added, on shipments from points in eastern Canada to North Pacific Coast terminals, to the rates from Chicago and common points, in order to obtain the through rate. This covers British Columbia points since they take the Seattle rates plus the 5 cent arbitrary.

The Canadian Pacific statement in rebuttal says, 'The arbitraries it should be explained are added to the rates from Chicago to the coast, and actually represent the difference in distance between Chicago and the Pacific coast, as compared in Division A with Montreal an additional distance of 700 miles and Halifax in the case of Division B, an additional distance of 1,500 miles. It cannot be considered that the arbitraries as stated represent a high cost of transportation for the mileage given.'

The justification for the arbitraries is based by the railway on the difference in mileage.

In the tariff (North Pacific coast lines), territory No. 5 covers Pittsburg, Buffalo and common points. Territory No. 6 covers New York and common points, these rates applying to Boston and New England. (For details see pp. 7—8 of Tariff of Transcontinental Bureau). These two 'territories' cover the same general section of territory in the United States as is included in the adjacent territory in Canada covered by divisions A and B.

In the case of these territories there is no difference made in the rate on account of the added distance from Chicago. With only a few exceptions the commodity rates in the territory from Chicago and eastward on shipments to the Pacific Coast terminals are covered by a blanket rate. The class rate in the territory from Chicago and eastward on shipments to Pacific Coast terminals are also covered by a blanket rate.

The difference in rates as between the shipments from points in eastern Canada to British Columbia, and the shipments from the Eastern States to Pacific Coast terminals, is attributable not to a difference in the length of the haul but to the enforcing, with the consent of the Transcontinental Freight Bureau, of a higher rate basis.

XIV.—REGULATION OF RATES.

In the regulation of rates an attempt should be made to obtain stability and certainty. With this end in view, all changes in rate, either increases or decreases, should be made subject to the assent of the body organized to supervise the regulation of railways. The policy pursued by the state railway commissions of the 'strong' type in the United States has been, to draw up tables of maximum rates, which may be revised from time to time. In England, in recent years, the railways have been required to submit revised schedules of maximum rates. The system of revision through maximum rates has a number of difficulties attached to it. While the compact territory of such a State as Iowa or Illinois presents a similarity of transportation problems,

which lends itself with fair facility to a policy of regulation through maximum rates ; in Canada the conditions are different. Any attempt on the part of any regulative body to draw up tables of maximum rates applicable to the diverse conditions of a country occupying such a geographical extent would be doomed to failure. The policy adopted in Canada has been a policy of regulation through maxima, these maxima being submitted in the first instance by the railways. A difficulty in connection with such a system has been that the maxima have been fixed sufficiently high to allow a wide margin. The maxima have been fixed so high that the traffic will not bear them, and in consequence the rates actually charged have been within these maxima. The fact that the maxima have been approved by the Governor in Council, although the approval has been, in the necessity of the case, in most cases *pro forma*, and that the rates actually charged have been within these maxima, has been advanced by the companies as an argument in favour of the reasonableness of the rates charged. But the reasonableness of a rate depends upon the circumstances under which it is charged, and will vary as the conditions vary. It is well nigh impossible, therefore, for any body in drawing up or accepting a general table of maximum rates to say before complaint has arisen, whether these maxima are reasonable or not, and any argument in favor of the reasonableness of the rates charged within these limits is also subject to the same criticism. Under the system which has existed the railway companies have claimed the right to change the rates with or without notice. This is clearly not in the interest of the people. In general the body interested with the regulative power should give up reliance upon maxima, and should desire the company to file with it the rate actually to be charged in respect of the traffic denominated. The same formalities in respect of publication might attach as at present, and if any preliminary objections should be presented to any phase of the tariff, these might be considered. But in the great majority of cases these rates would be subject to revision only when it appeared in the cause of a complaint, that rectification of some grievance was required. By this procedure the regulative body would be enabled to focus its attention upon a special case.

The objection to this arrangement of rate regulation, namely, that it would not be sufficiently elastic to permit the railways to obtain competitive traffic, where the conditions change rapidly, has to be considered. As has already been stated stability and security of rates is essential. All changes should be made subject to the approval of the regulative body. The requirement that the railway should file the rate actually to be charged and not deviate from this unless authorized or required by the regulative body so to do, would work no hardship in regard to non-competitive traffic. In regard to competitive traffic there would be an opportunity for this to work a hardship. But this would be avoided by requiring in such a case, that the tariff should be filed and provided that it would thereafter be immediately effective, and that the rate so fixed might be changed as often as was desired by filing new rate sheets, each of which would be effective as soon as filed. The regulative body would have reserved to it a supervisory power in regard to all rates charged under such rate sheets. Every such rate charged would be subject to the revision of the commission. In this way the elasticity of procedure necessary, would be obtained, while at the same time the supervisory power of the Commission would be maintained.

XV.—THE RAILWAY COMMITTEE.

The culmination of the movement which led to the handing over of all the regulative features of the Railway Act to the control of the Railway Committee was attributable to the fact that it had been recognized that a large body, whose duties were political, was unfitted to deal with matters which were essentially administrative. Now, the body to which the exercise of this control has been handed over, is also political in organization and thus again the question of duality of function is brought up. The political duties of the Cabinet Ministers are too engrossing to permit of devoting themselves to all the intricate details of the transportation problem. When the Royal Commission recom-

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mended the placing of the regulative powers in the hands of the Railway Committee, it recognized that there were grave difficulties in the way. To quote the words of the report—'At the same time the Commission admits that serious objection may be taken to the selection of the Railway Committee of the Privy Council as the general railway tribunal'. The members cannot leave their duties at Ottawa, and must therefore delegate to subordinates much very important work. * * * They hold their office on a political tenure, and are liable to sudden change, whereby the value of their experience is lost. They can scarcely be regarded by the public as absolutely removed from personal or political bias as independent members of a permanent tribunal. They cannot possibly give their exclusive attention to their railway duties, and in taking upon themselves the duties which would necessarily devolve upon them, they would in fact be performing judicial functions * * *. The argument contained in this quotation is as pertinent to-day.

As the Railway Committee is organized to-day, there is a lack of technical qualifications of fitness. While the Railway Act associates with the Minister of Railways and Canals certain members of the Cabinet, it will of necessity happen, that on matters of technical detail the Minister will be the only one fitted to pronounce. In strictness the Minister of Railways and Canals is the Railway Committee and the regulative policy pursued will vary as his interest in the matter of railway regulation varies. When a Minister of Railways and Canals is chosen, he does not necessarily come to the Cabinet as a man technically qualified on railway matters. In the administration of the affairs of this department, the duties are so multifarious that even when technical knowledge is acquired there is but little time to devote to the details of regulation. Coupled with this is the fact that, the exigencies of politics do not always permit of those who have acquired technical knowledge of railway affairs, in the administration of the department, continuing in such a position. In the matter of railway regulation there is a tradition, as well as a continuity of policy which is essential. While the Royal Commission did not provide the machinery to enforce its view, it was of the opinion that a body concerned with matters of regulation should be so organized as to permit of the sessions being held at different points. As the committee is organized to-day it is necessary for all complaints to be dealt with in Ottawa, and the expense and delay contingent on this method of procedure tend to defeat the remedy. Where an organization is concerned with the enforcement of a regulative policy in a stretch of country extending from the Atlantic to the Pacific it is necessary that provision should be made for sessions being held in the different provinces. But the political organization of the committee prevents such an arrangement.

The defects in the committee as regards the question of railway regulation may be summed up as follows :—

- (1.) It has a dual function—political and administrative.
- (2.) There is not continuity of tenure.
- (3.) There is a lack of technical training for the work.
- (4.) The lack of migratory organization renders it impossible to deal effectively with smaller complaints.
- (5.) The distance to be travelled by the complainants makes the expense great.

The fact that it was deemed expedient to take the work of regulation out of the hands of parliament and place it in the hands of a smaller body showed an appreciation of the necessity of a unified and coherent policy. The review just given indicates the difficulties in the way of this being obtained in the work of the railway committee. All experience points to the advantage of the work of regulation being in the hands of a body sufficiently large to insure a deliberative procedure; sufficiently small to insure rapidity of action. And experience further points to the conclusion that it is unwise to confuse political and administrative duties.

XVI.—RAILWAY COMMISSION IN CANADA.

The work of railway regulation is concerned with administrative not political problems, and should be placed in the hands of a body specially organized for the purpose, and independent of political conditions.

In committing the work of regulation to a body especially organized for this purpose, Canada has the advantage of having the experience of England and the United States to draw upon. When the Canadian Royal Commission made the recommendations which resulted in the regulative machinery of the Railway Act, as it now stands, the railway rate regulation policy both in England and the United States was in a transitory condition. The commission regulation provided for by the English Act was amended by the act of 1888. The legislation, under which the Interstate Commerce Commission operates, had just become effective. While the Royal Commission thought that both of these ventures were too much in the experiment stage to warrant the provisions in either case being applied to the conditions existing in Canada, a sufficient period has since elapsed, to bring out in clear relief, not only the results but also the defects in connection with commission legislation. It has been made clear, and no sane advocate of commission regulation ever held otherwise, that the commissions have not been able to bring about absolutely satisfactory conditions between the railways and the shippers. A rate which will be absolutely satisfactory to both shipper and railway exists nowhere short of Utopia. Railway rates are based on compromises. There have also been various matters which the commissions have been unable to settle. But what has been gained is, that there is an effective regulation which does not permit the determination of the rate and of matters pertaining to it, to be wholly in the hands of one party to the rate contract. Conditions are undoubtedly better in England and in the United States than they were before the commission regulation was adopted.

In applying the principle of commission regulation in Canada, cognizance must also be taken of the defects manifested in the operation of the legislation both in England and in the United States. The consideration of these defects will show a number of pit falls which the Canadian legislation should avoid.

The especial difficulties which the Commission have met, in so far as these are the outcome of defects, in the legislation, are, (a) lack of clear-cut statement, (b) question of relation to the courts, (c) qualifications for office, (d) tenure of office. Dealing with these matters in their order the essential points may be summarized. The details have been indicated in an earlier report presented by me to the department.

Lack of Clear-cut Statement.—In both England and the United States legislation, sufficient care was not taken in granting powers to define them with exactness. For example, in the Act to Regulate Commerce provision is made that rates were to be reasonable. When the commission came to the actual enforcement of this provision it found that the position taken by the courts was that the only amendatory power possessed by the Commission related to past rates not to future rates. The consequence of this is, that the decision of the Commission in regard to a particular rate does not establish any rule of action binding in future upon the carrier against whom the decision is given. It will readily appear that this tends to defeat the remedy intended to be given under the provisions of the act. In England the difficulty has been that archaic provisions of the English railway law are in conflict with the provisions in regard to rates contained in the laws conferring regulative powers upon the Commission. For example, under the earlier theory of the railway law, which still has force, the railways occupied a position analogous to that of canals. They might engage in the transportation business themselves, or they might allow others to use the tracks on due payment of certain tolls. This opened a wide way of evasion. If the rectification of a grievance was desired, the railway, by claiming that it was not transporting goods but simply rendering the services of its tracks in return for the payment of tolls, might bring such pressure to bear on the individual desiring to have goods transported, since the majority of individuals desiring transportation do not possess cars and engines, that he would find the payment of the obnoxious rate the lesser evil. This was helped on by a technical defect in the phrasing of the act of 1888. Section 24, which makes provision for the submitting by the rail-

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way of a revised schedule of its rates to the Board of Trade, makes no mention of the word 'tolls.' The Board of Trade took the position that it had no control over tolls; and so the railways in taking the attitude, above outlined, were strictly within their legal rights.

Question of Relation to the Courts.—The example cited in the preceding section with reference to the powers of the Interstate Commerce Commission in regard to 'reasonable rates' indicates that the powers of the commission in this regard have been subject to judicial construction. Many other examples might be cited to illustrate the fact, that the powers conferred upon the commission have been lessened by decisions of the federal courts. To cite but one point which goes to the bottom of the jurisdiction of the Commission, the Commission, if its decisions are not acted upon, has to institute proceedings in the federal courts to have its decisions enforced. The enabling act provides that in such proceedings the findings of the Commission are to be *prima facie* evidence. In many cases the courts have proceeded *de novo*. As a result of this the defendants have often shown but scant courtesy to the process of the Commission; instead of submitting all their evidence before the Commission, they have waited until the matter has come up before the courts. When the offending carrier introduces some evidence before the Commission, it is often the custom to introduce much additional evidence before the courts. Under such a condition the efficiency of the remedy provided by the Commerce Act is practically abolished. If the Commission gave a decision, the responsibility of instituting suit before the courts to enforce it will, under existing circumstances, fall upon the Commission. There is no finality until the court of last resort is reached. Under such conditions when a case is taken to the courts, a period of from three to four years will elapse between the initial decision of the Commission and the final decision by the courts. In one case a period of seven years elapsed before the decision was given by the supreme court. In the case of the English railway commission the process has not been so dilatory. The same difficulty has, however, existed. While the Commission has final power in regard to questions of fact it may be required to 'state a case' which will be taken up on appeal to the higher courts. While it is essential that arbitrary action should be provided against, it is at the same time manifest, that long delays consequent upon judicial interposition defeats the remedy.

Whenever the courts have taken up the question of railway rate regulations on appeal from the Commission, they have dealt with the matter from the standpoint of technical legal interpretation. In matters of railway regulation questions of policy are involved, but of these the courts have for the most part been oblivious. In Canada, however, this difficulty will not exist. At present the decisions of the Railway Committee are subject, on appeal, to the final action of the Governor in Council. This gives sufficient appeal and at the same time prevents the matter being looked at from a purely legal standpoint.

Qualifications for Office.—The legislation under which the Interstate Commerce Commission is organized, does not specify any requirements in respect of technical qualifications. The result has been that the personnel of the Commission has been predominately legal. This is an essential defect in the organization of the Commission. While questions of legal interpretation arise, the matters to be determined require technical knowledge of railway administration. The courts under the common law have power to deal with matters pertaining to common carriers. But it is just because the courts fail in practical knowledge of railway administration, and at the same time attempts to deal with the problem on technical lines of legal procedure, that the remedy is not sufficient. The record of the way in which the federal courts in the United States have dealt with the matters which have come up on appeal from the Interstate Commerce Commission, indicates the inability of the courts to deal with the matter of railway regulation. The same objection attaches to any tribunal whose personnel does not include technical knowledge of railway administration. The work of the Interstate Commerce Commission has undoubtedly suffered from this defect. The English legislation dealing with railway regulation has provided against such a defect. The legislation of 1873 provides that of the three assistant commissioners one should 'be of experience in the law and one of experience in railway business.' The Act of 1888

provides that of the two appointed commissioners one should be of experience in railway business.

Tenure of Office.—The provisions in regard to the tenure of office in the United States legislation are very defective. The obtaining of the knowledge requisite to deal with the thousand and one problems presented, is, even with previous qualifications, a work of time. The Commission must, of necessity, have a tradition of its own. And to obtain this a much longer term than six years is requisite. It is true that a member may be reappointed: but, owing to the fact that the organization of the Commission is to be partisan, it being required that no more than three members shall belong to the same political party, there is manifestly, under the changing conditions of politics, an obstacle in the way of reappointment. The argument for the lengthening of the term is further strengthened by the fact, that the shorter the term, the larger the salary that must be paid to attract a sufficiently high type of ability. In 1899 one of the members of the Interstate Commerce Commission resigned because the salary received, \$7,500 per annum, was much less than he could make in the private practice of law. It is reported that at present negotiations are under way as a result of which the present chairman of the Interstate Commerce Commission will be offered a railway position paying twice the salary he at present receives. In the case of the English legislation the appointed commissioners hold 'during pleasure.' The experience of both England and the United States points to the conclusion, that the most efficient work would be obtained from the Commission if the members were appointed on the same tenure as the judges. A life tenure would mean a continuity of regulative tradition. It would also mean that the dignity and security attaching to the life tenure would permit the commission to obtain a high order of ability, which could be obtained only in the case of the shorter tenure by the payment of a salary much higher than Canada could afford to give.

Summarizing the foregoing discussion the following conclusions applicable to conditions in Canada would appear:

(1.) There must be great care in the definition of the powers conferred upon the Commission.

(2.) The matters to be dealt with are concerned with administration and policy, rather than formal judicial procedure.

(3.) Subject to an appeal to the Governor in Council the decision of the Commission should be final.

(4.) There should be requirements in regard to technical qualifications for office, one commissioner should be skilled in law and one in railway business.

(5.) The commissioners should hold office on the same tenure as the judges.

One part of the argument made by the Royal Commission in favour of putting the regulative provisions of the Railway Act under the control of the railway committee was concerned with the question of responsibility to Parliament. To quote the words of the reports, 'the political constitution of Canada recognizes direct ministerial responsibility to Parliament much more than in the United States, and therefore as a railway tribunal is necessarily tentative it seems.....undesirable to remove its operation to its inception beyond the direct criticism and control of Parliament.' The caution here expressed is essential. Ministerial responsibility to Parliament must be recognized. In the Commission legislation of England, this is provided for by giving the Board of Trade a supervisory control in regard to the Commission. If in Canada the decisions of the Commission may be reviewed by the Governor in Council either on appeal or of his own motion, ample provision will be made to safeguard the principle of responsibility.

While the provisions of the legislation organizing the Commission would necessarily give it compelling power, yet the experience of England and of the United States leads to the conclusion that in the solution of its details it will increasingly occupy the position of either a mediator or of an arbitrator. Many matters somewhat trivial in themselves may in default of rectification become serious grievances. Troubles may arise from misapprehension. In the working of the Illinois Commission it has been found in recent years that the commission has in many cases been able to enforce the power of its

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enabling act, without having recourse to formal procedure. During the year 1900, while the Interstate Commerce Commission dealt with formal proceedings in twenty cases, it dealt with informal complaints in 619 cases.

With the progress of settlement in Canada the problem of transportation will become of continually increasing importance, and there must be a consecutive policy; Canada is today in the early stage of its transportation development. It has an opportunity to lay down broad lines of policy. To the Commission could be entrusted the regulative features of the Railway Act as well as the duty of seeing that the provisions of the legislation, general and special, under which the railways operate are obeyed. In the performance of these duties, and because of its continuity of office and policy, the Commission would be able to form wider views in regard to railway policy. The experience and knowledge of the Commission would continually be available to the Minister of Railways and Canals and to Parliament. The Commission would be a permanent advisory body.

While the argument for a commission has been made on the ground that it will make for bettered conditions, it must at the same time be borne in mind that no species of regulation can remove all the complaints that have arisen. Some of them are the outcome of economic forces which are superior to legislative enactment. But it should not be argued on this account, that there exists a general reason for exemption from regulation. The grounds upon which governmental regulation of railways is based, are too well established to require argument. The Commission regulation will create a process more readily responsive to the difficulties which arise, and at the same time will insure a more efficient and supervisory control. The regulation will be in the interest not only of the shipper, but also of the railway. Equipped with an efficient and commanding personnel, the Commission will stand as an arbiter. It will have responsibilities to both parties. A policy which obtains low rates at the expense of depreciated securities and passed dividends, is as detrimental to a country as a policy which permits high rates to be charged with a view to earning dividends on an inflated capitalization.

I have the honour to be, sir,

Your obedient servant,

S. J. McLEAN.

January 17, 1902.

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