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|                                     |                                                        | In Sessional paper No. 10, Part II, General report of the Minister of Public Works ... 1 <sup>st</sup> July 1882, page 722 is incorrectly numbered page 72. |
|                                     |                                                        | In Sessional paper No. 10, Appendix No. 30, Part IV, page 897 is incorrectly numbered page 997.                                                             |
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# SESSIONAL PAPERS.

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OF THE

DOMINION OF CANADA

---

SESSION 1883.

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- No. 21... SUPERANNUATION :—Statement of name, &c., of each person superannuated, &c., in accordance with the Civil Service Act, 45 Vic., chap. 4, sec. 55, sub-sec. 3.
- No. 21a. Return of the names of the persons on the Superannuation List, as on 23rd February, 1883, together with the amount of the annual allowances paid each.
- No. 21b. Return (in part) to Order; Statement showing separately for each year since the establishment of the Superannuation Fund :—1. The number of persons on the list for the year as entitled to the benefit of the Act. 2. The number superannuated during the year under the Act. 3. The number retired during the year on a gratuity under the Act. 4. The total amount paid into the Fund from the beginning by those who were, during the year, superannuated or retired on a gratuity; distinguishing between those whose superannuation was caused by the abolition of office. 5. The number of persons on the list, for the year, who died in the service;—and 6. The total amount paid into the Fund from the beginning by those who, during the year, died in the service.
- No. 22... UNFORESEEN EXPENSES :—Statement of payments charged to, by Order in Council, from 1st July, 1882, to date, in accordance with the Act 42 V., chap. 2, schedule B.
- No. 23... INTERIOR :—Annual Report of the Department of, for the year 1882.
- No. 24... CENSUS AND STATISTICS :—Report, required by sec. 25, of the Census and Statistics Act, of 1879, of operations and expenses during the calendar year, 1882. (*Not printed.*)
- No. 25... BONDS AND SECURITIES :—Detailed statement of, registered in the Department of the Secretary of State of Canada, submitted to Parliament, in compliance with the Act 31 Vic., chap. 37, sec. 15. (*Not printed.*)
- No. 26... GOVERNOR GENERAL'S WARRANTS :—Statement of, issued since the last Session of Parliament, in accordance with the Act 41 Vic., chap. 7, sec. 32, sub-sec. 2, on account of the fiscal years, 1881-82, and 1882-83.

## CONTENTS OF VOLUME No. 11.

- No. 27... CANADIAN PACIFIC RAILWAY :—Return to Resolution; Report giving full information on all subjects affecting the Railway, up to the latest date: 1. The selection of the route; 2. The progress of the work; 3. The selection or reservation of land; 4. The payment of money; 5. The laying out of branches; 6. The progress thereon; 7. The rates of tolls for passengers and freight; 8. The particulars required by the Consolidated Railway Act and amendments thereto, up to the end of the previous fiscal year; 9. Like particulars up to the latest practicable date before the presentation of the Return; 10. Copies of all Orders in Council and of all Correspondence between the Government and the Railway Company, or any member or officer of either, relating to the affairs of the Company.
- No. 27a. Return to Resolution; Memorandum as to substitution by the Railway of Credit Valley Stock for \$1,000,000 cash deposit.
- No. 27b. Return to Resolution; Report of the Company, in account with the Government of Canada, viz. :—Rails Advance Account, Land Grant Bond Account, Current Account and Subsidy Account. (*Not printed.*)
- No. 27c. Return to Resolution; Schedule of Correspondence as to Canadian Pacific Land Grant Bonds.
- No. 27d. Return to Resolution; Memorandum of the progress of construction of the Railway, dated Montreal, 21st February, 1883. Also, a map of the country to be traversed by the Railway. (*Not printed.*)



- No. 27e. CANADIAN PACIFIC RAILWAY :—Return to Resolution ; Further Report giving full information, not contained in No 27 ; and also, a plan showing lands for expropriations of the Railway, extending from the south-westerly side of the village of Prince Arthur's Landing easterly to Current River.
- No. 27f. Return to Resolution ; Copies of communications of the Railway on the subject of the allotment and conveyance of lands, as they are earned under the contract.
- No. 27g.. Return to Order ; Statement, in detail, of all sums expended in connection with the Canadian Pacific Railway Commission, with dates and names of the persons paid, and particulars of the service in respect of which payment is made—copy of all correspondence, contracts, accounts or arrangements, not already brought down, as to the printing of the evidence or Report.
- No. 27A. Return to Resolution ; Map showing the Railway, as located for construction between Callander and Algoma Mills, 191 miles. (*Not printed.*)
- No. 27L. Copies of contracts for the Railway, in terms of section 19 of the Act 37 Victoria, chapter 14, as follows :—  
 Between Horton & Son and Her Majesty the Queen, etc.,—for the supply of 72 tons of iron bolts and nuts. (Contract No. 94.)  
 Between Bayliss, Jones and Bayliss and Her Majesty the Queen, etc.,—to supply bolts, nuts and spikes. (Contract No. 95.)  
 Between Guest and Company and Her Majesty the Queen, etc.,—for the supply of steel rails and steel fish-plates. (Contract No. 96.)  
 Between John McDonald and Her Majesty the Queen, etc.,—to construct six combined passenger and freight buildings on 42nd contract. (Contract No. 97.)  
 Between Colin Nichol Black and the Minister of Railways and Canals, etc., for the supply of 20,000 tammack ties, 9' x 6" x 6" at 25 cts. each. (Contract No. 98.)
- No. 27J. Return to Resolution ; Location eastern section, Current Creek to Nipigon, and freight tariff, western division.
- No. 27K. Return to Order ; Statement of the total quantity of land agreed to be sold by the Company, the total price agreed to be paid therefor, during each month up to the 1st day of March, 1882, distinguishing between the sales of farming lands and those of town, village or station lots, woodland, mineral, quarry lands and other special sales, and including the quantities and prices realized for lands in which the Company became interested by agreements in connection with the location of stations. (*Not printed.*)
- No. 27L. Return to Resolution ; Communication from W. C. Van Horne, General Manager, dated Montreal, 18th April, 1883, respecting additional information concerning the line proposed to be adopted through the Rocky and Selkirk Mountains.
- No. 27m. Return to Order ; Statement of duty paid by the Company on articles imported by them, from the date of their contract until 28th February, 1883, specifying the ports of entry of such goods, and the amount paid at each port. (*Not printed.*)
- No. 27n. Return to Address ; Copies of the official memorandum of the Company, dated 12th December, 1882, describing its position and prospects. The advertisement published thereafter by the Company asking for subscriptions for its increased capital stock ; and all memoranda in connection therewith.  
 Statement showing the amount of the subscribed stock of the Company prior to the increase of its capital stock from \$25,000,000 to \$100,000,000, and the amounts paid up on such subscribed stock, with the date of each payment in cash, and also the amounts (if any), satisfied by the acquisition of property or otherwise, specifying in such case the consideration therefor and the amount of stock given, and the date.  
 Statement of the facts as to the acquisition by the Company of the Canada Central Railway, the Montreal, Ottawa and Occidental Railway, and interest in the Credit Valley Railway and Ontario and Quebec Railway.  
 Statement of the various matters required to be returned under the Consolidated Railway Act, 1879, and amendments thereto.  
 Statement of the total sum expended up to the 1st of February, 1883, by the Company under their contract.

- No. 27o. CANADIAN PACIFIC RAILWAY:—Return to Order; Map or maps showing (1) the location of the railway so far as approved or constructed; (2) its location so far as proposed to Government, but not yet approved; (3) the location of any branches constructed and of any now contemplated by the Company, so far as the Government is advised; (4) the lands set apart for the Company but not yet granted; (5) the lands granted; (6) the lands applied for but not yet set apart. (*Not printed.*)
- No. 27p. Return to Order; Statement showing the reduction made by change of construction in Contracts A and B, and the amount involved by such change; also, the amount of each payment made to the respective contractors each month since the letting of the work; also, all claims made by the contractors on each of these contracts, and the date of each claim. (*Not printed.*)
- No. 27q. Papers in relation to Sections 14 and 15, Joseph Whitehead, Contractor. (*Not printed.*)
- No. 27r. Memorandum respecting Thunder Bay and River Kaministiquia.
- No. 28... DOMINION STATUTES:—Official Return of the distribution of, being 45 Victoria, 1882. (*Not printed.*)
- No. 29... PENITENTIARIES IN CANADA:—Report of the Minister of Justice on, for the year ended 30th June, 1882.
- No. 29d. Supplementary Return; Expenditure of the British Columbia Penitentiary, for the fiscal year ended the 30th June, 1882. (*Not printed.*)
- No. 30... RECEIPT AND EXPENDITURE:—Return to Order; Return of, in detail, chargeable to the Consolidated Fund, from 1st July, 1882, to 1st February, 1883. (*Not printed.*)
- No. 31... VETERANS:—Return to Order; Statement of the number of Veterans of 1812 now surviving; of the number who have died since 1875, and of the number of widows of deceased who have applied for assistance. (*Not printed.*)
- No. 31a. Return to Order; Statement containing the names and residences of all the militiamen of 1812 who received their pensions during the last fiscal year, as well as the sum given to each of them. (*Not printed.*)
- No. 31b. Return to Order; Copies of all tenders, accounts, &c., in connection with the purchase of blankets for the militia during the recess. (*Not printed.*)
- No. 31c. Return to Order; Return of all petitions and correspondence with respect to new guns for the Richmond Field Battery. (*Not printed.*)
- No. 31d. Return to Order; Copies of all correspondence relating to the application of John Stewart, of Woodbridge, one of the Volunteers of 1837-38, for assistance, for his services in defence of his country during those years. (*Not printed.*)
- No. 31e. Return to Order; Return showing the number of officers, non-commissioned officers and men who received instruction in "A" and "B" Batteries in each year since their establishment; the number awarded a certificate of qualification in each year, and the entire cost per annum of each battery for the same time.
- No. 31f. Return to Address (Senate); Copies of all tenders for work at the camp at Berthier, in 1882, stating the rates of the various tenders, and the names of persons to whom the contracts were awarded, etc. (*Not printed.*)
- No. 32... CANADIAN EXTRADITION ACT:—Return to Address; Correspondence, not already brought down, touching the Act, and the suspension of the Imperial Act within Canada.
- No. 33... RETURNING OFFICERS:—Return to Order; List appointed for the General Election, 1882, other than Registrars or Sheriffs, occupations and residences of such officers, and a list of the Sheriffs and Registrars for the Districts in which such officers were appointed.
- No. 34... BANQUE DE ST. JEAN:—Return to Order; Copies of the returns, annual and monthly, made by the Bank since 1875, to the Government; also, copies of the certificates granted by the Treasury Board to the said Bank on going into operation. (*Not printed.*)

- No. 35...** <sup>U A</sup> **CANADIAN TOBACCO**:—Return to Order; Return shewing: 1st. The number of licensed tobacco manufactories on 1st February, 1883, in which Canadian leaf is exclusively used; 2nd. The quantity of Canadian leaf used in tobacco manufactories since the passing of the Inland Revenue Act of 1880, to 1st February, 1883; and 3rd. The quantity of cigars and Cavendish produced, respectively, since 1st May, 1880, to 1st February, 1883, in manufactories in which Canadian Leaf is exclusively used. (*Not printed.*)
- No. 35a.** Return to Order; Copies of all documents, &c., relating to a seizure of tobacco on the premises of Mr. N. Bernatchez, and other merchants, of Montmagny. (*Not printed.*)
- No. 36...** **COAL**:—Return to Order; Return showing the quantity in tons of coal exported from each port in Nova Scotia for the year ending June 30th, 1882; Also, for the six months ending December 31st, 1882, and the countries to which exported; Also, quantities sent by railway, and by water (separately), to any ports of Quebec and Ontario, naming places sent to.
- No. 36a.** Coal Lands; Regulations for the disposal of, approved by His Excellency the Administrator of the Government in Council, on the 2nd March, 1883, substituted for those of the 17th December, 1881.
- No. 36b.** Return to Order; Copies for all applications for sales or leases, and all correspondence or reports touching all leases of coal lands in the North-West, not already brought down; and a statement of the payments made under any such leases.
- No. 36c.** Return to Order; Return giving a full statement of all coal entered ex-warehouse free or for exportation, during the years ending 30th June, 1881 and 1882.
- No. 37...** **FISHERIES**:—Copies of Orders in Council, instructions and forms for Fishing Bounty, submitted in compliance with the Act 45 Vic., cap. 18.
- No. 37a.** Return to Order; Return of leases or licenses to fish on rivers in New Brunswick and the annual rent received on each; Also, the number of leases or licenses cancelled or surrendered.
- No. 37b.** Return to Order; Return of the instructions issued to the Inspectors of the Fisheries, as to the enforcement of the Order in Council of 11th June, 1879, whereby fishing for salmon in Canada, excepting under authority from the Department of Marine and Fisheries, was prohibited, the number of seizures and informations laid before Justices of the Peace against parties fishing without such lease or license; the number of convictions obtained, etc.
- No. 37c.** Certified copy of a Report of the Hon. the Privy Council, on 2nd May, 1883, respecting an appropriation of at least \$50,000 for bounty to fishermen.
- No. 37d.** Return to Order; Return of all correspondence, etc., had from 1st January, 1877, to 31st March, 1883, between the Department of Marine and Fisheries at Ottawa and the Inspector of Fisheries for New Brunswick in reference to the claim of ex-Overseer Amos Perley, of Chatham, for services in connection with the Smelt Fishery of Miramichi, in the years 1876 to 1878.
- No. 37e.** Return to Address; Copies of all Orders in Council in force regulating the close season for Lobster Fishing, &c.
- No. 38...** **SEIZURES AND FINES**:—Return to Order; Statement showing the number of seizures made at each port of entry in the Dominion during the last fiscal year, and also during the six months ended the 31st December 1882, the fines exacted, and how disposed of. (*Not printed.*)
- No. 39...** **OCEAN MAIL SERVICE**:—Return to Address (Senate); Correspondence, &c., in the possession of any department or officer of the Government, relating to the mail service between Canada and the United Kingdom, or to the rates of freight charged by the line of steamships by which such mail service is performed.
- No. 39a.** Supplementary Return (Senate) to the preceding.
- No. 40...** **INTERCOLONIAL RAILWAY**:—Return to Order; Return showing rolling stock purchased during the year ended December 31st, 1882, &c.; also, a statement showing what has been built during the year in the Government workshops.

- No. 40a. INTERCOLONIAL RAILWAY :—Return to Order; Statement of the revenue and working expenses for the six months of each year, ended December 31st, 1880, 1881 and 1882, under the several divisions.
- No. 40b. Return to Address; Copies of all Orders in Council, correspondence, &c., and the Commission in connection with claims made on the Government, arising out of the construction of the railway; and statement of the matters referred to them so far; and of the remuneration to be paid to them and the Secretary of the Commission, &c.
- No. 40c. Return to Order: All correspondence in reference to the removal and dismissal of W. D. McCallum, Chief Train Despatcher at Truro. (*Not printed.*)
- No. 40d. Return to Order; Return of casualties on the railway, where no loss of life or personal injuries occurred, from March 1st, 1882, to March 1st, 1883, with the respective causes, &c.; of damage to property, and amount of compensation paid, as well as claims unsettled. (*Not printed.*)
- No. 40e. Return to Order; Copies of the accounts rendered by Doctors Lebel and Renouf, of St. Gervais, for attendance on an employé of the railway named Dionne; and a statement of the sums to them paid. (*Not printed.*)
- No. 40f. Return to Order; Return showing the nature of the rolling stock purchased for the railway, as contained in the item of \$153,853.84 in the Public Accounts of 1882; where such rolling stock was manufactured, and the price paid.
- No. 40g. Return to Order; Return of all tenders submitted for the construction of the freight sheds and warehouses at the railway depot, St. John, N.B.; the names of the several contractors, and the amount of each contract, the number and names of the superintendents and overseers, and the amount paid for their services. (*Not printed.*)
- No. 40h. Return to Order; Return of the amounts paid for lands taken on Mill and Pond streets, in St. John, N.B., for the railway; the names of the arbitrators appointed to appraise the land, the compensation paid to them and the awards made by them.
- No. 40i. Return to Order; Return showing the rolling stock purchased for each year since the 1st of July, 1878, the nature of such rolling stock, and the place where manufactured, &c.
- No. 40j. Return to Address; Copies of all correspondence between the Government of Nova Scotia and the Departments of Railways and Public Works, respecting the transfer of the branch railway between Truro and Pictou, and with the Halifax and Cape Breton Railway and Coal Company, respecting Eastern Extension Railway matters in Nova Scotia.
- No. 40k. Return to Order; Copies of all correspondence relating to the steamer running in connection with the railway between Campbellton, Gaspé and intermediate ports. (*Not printed.*)
- No. 40l. Papers in relation to H. G. C. Ketchum's claim for overcharge, for the conveyance of rails 1866-67 and '68, Intercolonial Railway. (*Not printed.*)
- No. 41... PUBLIC ACCOUNTS :—Return to Address; Copies of all Orders in Council affecting certain items in the Public Accounts, for the fiscal year ended 30th June, 1882. (*Not printed.*)
- No. 42... UNFORESEEN EXPENSES :—Return to Address; Copies of all Orders in Council affecting certain items in the statement of payments charged to Unforeseen Expenses, referred by the House to the Select Standing Committee on Public Accounts, on the 23rd February, 1883. (*Not printed.*)
- No. 43... GOVERNOR GENERAL'S WARRANTS :—Return to Address; Copies of all Orders in Council affecting certain items in the statement of the Governor General's Warrants, issued during the fiscal years 1881-82 and 1882-83, referred to the Select Standing Committee on Public Accounts by the House, on the 23rd February, 1883. (*Not printed.*)
- No. 44... BAPTISMS, MARRIAGES AND BURIALS :—General statements and returns of, for certain districts of the Province of Quebec, for the year 1882. (*Not printed.*)
- No. 45... DRAWBACK ON SHIPBUILDING MATERIALS :—Return to Order; Return of all claims presented for drawback on materials used for shipbuilding, for the year ended 30th June, 1882; also, for the six months ended 31st December, 1882. (*Not printed.*)

- No. 45a. DRAWBACK ON MANUFACTURED GOODS:—Return to Order; Return of all claims presented for drawbacks on goods manufactured for export since 2nd March, 1882, &c.; also, copies of all regulations made by the Department with reference to such claims, together with a copy of one allowed claim and the sworn declaration thereto of each exporter of boilers, machinery, sewing machines or other manufactures of iron.
- No. 46... WHARVES AND PIERS:—Return to Order; Copies of all correspondence with reference to the construction of an addition to the pier of St. Jean Port Jolie, County of L'Islet, &c, since the appropriation made for that object during the last Session of Parliament. (*Not printed.*)
- No. 46a. Return to Order; Completing the preceding return by furnishing the date of the memorandum closing the said papers. (*Not printed.*)
- No. 46b. Return to Order; Reports, &c., in relation to the construction of a wharf or pier at St. Anne, on the Saguenay, County of Chicoutimi. (*Not printed.*)
- No. 46c. Return (in part) to Address; Correspondence, &c., relating to any claim made by the Provincial Government of Prince Edward Island, for a refund of their expenditure upon public wharves and piers, and also in connection with the maintenance of short-term prisoners in that Province since its admission to the Union. (*Printed for Distribution.*)
- No. 46d. Supplementary Return to the preceding. (*Printed for Distribution.*)
- No. 46e. Return to Order; Copy of all reports, estimates, &c., made by the Government Engineers of Port Albert Harbor, and all correspondence with the Port Albert Pier Company respecting said harbor.
- No. 46f. Return to Order; Copies of all reports, &c., made by the Government Engineers of Bayfield Harbor.
- No. 46g. Return to Order; Copies of all correspondence, appropriations, &c., relative to proposed improvement of Morpeth Harbor, on Lake Erie.
- No. 47... ST. JOHN RAILWAY BRIDGE:—Return to Order; Copies of all correspondence with the Government during the year 1882, referring to the construction of a railway bridge over the St. John, at St. John.
- No. 47a. Telegram from Shadrach Holly, Mayor of St. John, N.B., with a copy of a memorial to the Governor General, in relation to the resolution respecting the proposed loan to the St. John Bridge and Railway Company.
- No. 48... STANDARD MERIDIAN:—Return to Address (Senate); A copy of the memorial from the Royal Society of Canada, the Canadian Institute of Toronto, and of any documents connected with the memorials, relative to the representation of Canada in the International Conference, to determine a standard meridian now contemplated by the Congress of the United States. (*Printed for Distribution.*)
- No. 49... CUSTOMS DEPARTMENT, MONTREAL:—Return to Order; Return of the names of persons in the employ of the Customs Department in the City of Montreal, as supernumerary clerks constantly employed for not less than six months previous to 1st July, 1882. (*Not printed.*)
- No. 50... DRILL SHED, IONA:—Return to Order; Copy of contract, &c., for the building of the drill-shed at Iona, Ont., with report of inspection of the same. (*Not printed.*)
- No. 51... DE LA CHEVROTIÈRE, O.C, DISMISSAL OF:—Return to Address; Copies of the Order in Council, &c., dismissing Mr. Octave C. de la Chevrotière from his position as keeper of a lighthouse situated in the Parish of Lotbinière, in the County of Lotbinière. (*Not printed.*)
- No. 52... BREAKWATERS:—Return to Order; Return of the advertisement for construction of the Breakwater at Port Lorne, N.S., and the several tenders therefor; the party to whom the contract was awarded, and the amount of such contract. (*Not printed.*)
- No. 52a. Return to Order; Copies of all papers, reports of engineers, &c., relating to the building of a breakwater at New Harbor, Guysboro' County, N.S. (*Not printed.*)
- No. 52b. Return to Order; Copies of all correspondence, &c., relating to the building of a breakwater on the west side of Liverpool Bay, from 1870 to 1882. (*Not printed.*)

- No. 52c. **BREAKWATERS** :—Return to Order; Copies of Engineer's report of survey made at Brae, Prince County, Prince Edward Island, during last summer, with a view to making harbor improvements. (*Not printed.*)
- No. 53... **MILLER, J. A., JUDGE** :—Return to Order; Copies of all correspondence with Mr. J. A. Miller, late Justice of the Court of Queen's Bench, Manitoba, prior to his appointment, relating to his becoming Justice of that Court, and subsequently to his appointment on the subject of the resignation of his office. (*Not printed.*)
- No. 54... **SUMMERSIDE HARBOR** :—Return to Order; Copy of the Engineer's Report of Survey made at Summerside Harbor, Prince County, Prince Edward Island, during the last summer, with a view to improving the navigation of said Harbor. (*Not printed.*)
- No. 55... **RECIPROCIITY BETWEEN CANADA AND U. S.** :—Return to Address; Copies of all correspondence between the Governments of Canada and the United States, or any Board of Trade in Canada or the United States, upon the question of Reciprocal Trade relations between the two countries, on the general basis of the Reciprocity Treaty of 1854, since 1878.
- No. 56... **ROYAL MILITARY COLLEGE** :—Return to Order; Return of the number of Cadets that have graduated at the Royal Military College since its establishment; the number who have obtained Commissions in the Imperial service; the number who have been appointed to the permanent Militia Corps; Also, names of any officers appointed to "A" and "B" Batteries of Artillery since February 6th, 1880, who have not graduated at the Royal Military College, and of those appointed who graduated at the College. (*Not printed.*)
- No. 56a. Return to Order; Return showing the name, salary and duty of each officer on the Instruction Staff of the Royal Military College, with the date of his appointment; also a Return showing the full staff of officers of "A" and "B" Batteries, respectively, with salary and date of appointment. (*Not printed.*)
- No. 57... **QUACO LIGHTHOUSE** :—Return to Order; Return of the tenders for the re-building of the Lighthouse at Quaco, New Brunswick, and to whom the Contract was awarded, and the amount of such Contract. (*Not printed.*)
- No. 58... **DISASTERS TO CANADIAN VESSELS IN THE GREAT LAKES** :—Return to Order; Return of all correspondence relating to the disasters which have occurred to Canadian vessels, navigating the Great Lakes and the Georgian Bay, within the past three years, &c. (*Not printed.*)
- No. 58a. **REGISTERED VESSELS** :—Return to Order; Statement showing the vessels registered in the Province of Quebec; also, the number of vessels sold and lost between 1st January, 1873, and 1st January, 1882. (*Not printed.*)
- No. 58b. **VESSELS IMPORTING SUGAR, SYRUP AND MOLASSES** :—Return to Order; Return showing the number of vessels with their tonnage, nationality and port of entry, in which sugar, syrup and molasses were imported into this country during the fiscal year ended 30th June, 1881; the quantity of sugar above 14 D.S., and of a lower grade by each vessel or steamship; also a like Return from 1st July, 1881, to 1st January, 1882. (*Not printed.*)
- No. 59... **INTOXICATING LIQUORS** :—Return to Order; Statement showing the quantities of distilled and fermented liquors, imported and manufactured for consumption in Canada, from 1868 to 1882, computed in Imperial gallons, each Province separately, the value of the same and duty paid thereon; the amount of materials used in brewing and distilling alcoholic liquors in the several Provinces of Canada during the same years.
- No. 59a. Return to Order; Copies of any petitions from the Province of Quebec, on the subject of proposed legislation, as to the sale of intoxicating liquors. (*Not printed.*)
- No. 59b. Return to Address; Copies of despatches, &c., on the subject of Canadian and Provincial Laws, as to the imposition of restrictions on the sale of intoxicating drinks. (*Not printed.*)
- No. 60... **FABRE, HON. HECTOR** :—Return to Address; Copies of all correspondence, &c., respecting the appointment of Hon. Hector Fabre to the position he now occupies in France; also, statement of his duties and the salary or commission paid or to be paid for such services, &c; also, all reports on the results of the mission. (*Not printed.*)

- No. 61... SALE OF LIQUOR:—Return to Order; Copies of all correspondence between any Member of the Government and any licensed victuallers, and of all petitions, &c., presented by any such person on the legislation affecting the sale of liquors. (*Not printed.*)
- No. 62... DOMINION BAILIFFS:—Return to Address; Copies of all correspondence with, and petitions from municipalities, referring to the appointment of, to convey prisoners from the county gaols to the Penitentiaries. (*Not printed.*)
- No. 62a. Supplementary Return to the preceding. (*Not printed.*)
- No. 63... SUPREME COURT, AMENDED RULE:—Statement of the Supreme Court of Canada, that Schedule D, annexed to the rules of that Court, be amended; and that an allowance shall be taxed by the Registrar to the duly entered Agent in any appeal, in the discretion of the Registrar, to \$20. (*Not printed.*)
- No. 64... HYDROGRAPHICAL SURVEY:—Return to Order; Copies of all correspondence between any person and the Government, in relation to the hydrographical survey of the great lakes, the River and Gulf of St. Lawrence, and the other maritime coasts of Canada.
- No. 65... SALT DUTIES:—Return to Order; Copies of all correspondence, &c., in the hands of Government, on the subject of duties on salt. (*Not printed.*)
- No. 66... FOG-WHISTLE, SHELBURNE:—Return to Order; Copies of all correspondence, &c., received by the Department of Marine and Fisheries since 1st January, 1881, in reference to the erection of a fog-whistle at Shelburne Harbor, Nova Scotia. (*Not printed.*)
- No. 67... COUNTY COURTS:—Return to Address; Copy of all correspondence between the Governments of New Brunswick and the Dominion, in relation to the creation of a new County Court in that Province, and the appointment of a Judge thereto. (*Not printed.*)
- No. 67a. Return to Address; Return of cases tried at each of the County Courts of the Counties of Kings and Albert, since 1st June, 1882, with the amount of verdicts and judgments entered thereon. (*Not printed.*)
- No. 67b. Return to Order; Copies of all correspondence between the Government and the County Court Judges of the Dominion, and others, respecting the resolution submitted to the House during last Session of Parliament, by the late Minister of Justice, on the subject of the proposed increase of the salary of such Judges. (*Not printed.*)
- No. 68... MARITIME COURT:—Return to Order; Return showing the cases disposed of, &c., by the Judge and several Surrogate Judges of the Maritime Court, since the creation of the said court, until the first day of February, 1882. (*Not printed.*)
- No. 68a. Return to Address; Return of all correspondence between the Judge or Judges of the Maritime Court of Ontario and the Government, respecting the rules, &c., of said court, and the simplification thereof; also, copies of any amended or proposed amended rules, since 1st January, 1882. (*Not printed.*)
- No. 69... CANADA CENTRAL RAILWAY—PEMBROKE BONUS:—Return to Address; Copies of all correspondence upon the subject of the assumption by the Government of the payment of the amount granted by the Town of Pembroke, in aid of the Canada Central Railway.
- CONTENTS OF VOLUME No. 12.
- No. 70... CONSTITUTIONS OF C.B., N.S., P.E.I., N.B., B.C., AND VANCOUVER ISLAND:—Return to Address; Copies of the charters or constitutions granted by the Crown or the Imperial Parliament, to the Provinces of Cape Breton, Nova Scotia, Prince Edward Island, New Brunswick, British Columbia and Vancouver Island; also, copies of all Acts, Charters, Royal Instructions, Commissions, Orders in Council or Despatches altering or amending the same, as originally granted, or conferring or withdrawing any political rights, or privileges, before or after the granting of such charters.
- No. 71... STEAMSHIP COMMUNICATION WITH GERMANY:—Return to Order; Copies of all correspondence between any Member of the House of Commons, or other persons, and the Government, in relation to the establishment of direct steamship communication between Montreal, Quebec, St. John, N.B., Halifax, and German seaports.

- No. 72... SAILORES' APPLICATION FOR RELEASE:—Return to Address; Copies of all correspondence between the Secretary of State and the Departments of Marine and Fisheries and of Justice, concerning the application of divers sailors in the port of Quebec, praying for a release from confinement, and to return to sea, &c., at the request of R. Temple, Master of the British vessel *Genai*. (*Not printed.*)
- No. 73... BRITISH CANADIAN LOAN AND INVESTMENT CO.:—Return (Senate)—A list of shareholders, and also a statement of its affairs on 31st December, 1882. (*Not printed.*)
- No. 74... SEMAPHORES, RIVER DU LOUP, AND BRANDY POTS:—Return to Address; Copies of all correspondence in relation to the erection of Semaphores on the wharf at River du Loup, in the County of Temiscouata, and on the Brandy Pots. (*Not printed.*)
- No. 75... WHARVES AT RIVER DU LOUP AND RIVIÈRE OUELLE:—Return to Order; Copies of all Reports made up to this date, respecting the movement of the ice at the wharves at River du Loup and Rivière Ouelle. (*Not printed.*)
- No. 76... GRAND TRUNK RAILWAY:—Return to Address; Copy of all correspondence between the Government of Canada and the Company, in relation to the purchasing of bonds and shares of the Wellington, Grey and Bruce Railway; also, certain stocks and shares of the Hamilton and North-Western Railway Company, and of the St. Lawrence and Ottawa Railway Company; also, all copies of correspondence in relation to the purchase or sale of the North Shore Railway Company, &c. (*Not printed.*)
- No. 76a... Return to Order; Return of all accidents and casualties which have occurred on the Railway, or any of its branches or railways under its control, involving either loss of life or injury to person or property, &c. (*Not printed.*)
- No. 76b... Return to Order; Copy of all correspondence between the Company and the Government, in reference to the purchase or sale of the Rivière du Loup Branch of the said railway, now owned by the Government; also, any correspondence showing the manner in which the said Company have expended or proposed to expend the money so received; and also, all correspondence concerning the Government lien for the debt of £3,111,500, and accrued interest.
- No. 76c... Supplementary Return to the preceding.
- No. 77... FIFTH GENERAL ELECTION:—Report on the Dominion elections of 1882, and also each election held subsequently thereto up to date.
- No. 77a... Return to Order; Return showing all sums paid to defray expenses of the late Dominion elections, in the different electoral districts.
- No. 78... HÉBERT, H., FRAUDULENT PRACTICES:—Return to Order; Copies of any complaint against Hubert Hébert, Chief Station Master at Montmagny, in relation to a charge of fraudulent practices affirmed against him by P. B. Casgrain, Esq., Member for L'Islet. (*Not printed.*)
- No. 79... WHARFAGE AT DIGBY, N.S.:—Return to Order; Statement of the amount collected for wharfage at the public pier at Digby, for each year from 1879 to 1882, inclusive. (*Not printed.*)
- No. 80... RUSSELL VS. THE QUEEN:—Return to Address; Copies of the judgments in the case of Russell and the Queen, in the Supreme Court of Canada and the Privy Council, and of the judgments in any Provincial courts of superior jurisdiction, or in the Supreme Court of Canada, in all cases raising the right of a Provincial Legislature to pass laws affecting the number or character of persons licensed to sell intoxicating liquors, or the times of such sale.
- No. 81... SHUSHWAP AND OKANAGAN CANAL:—Return to Address; Copies of all correspondence, &c., in connection with the surveys made in 1882 for the construction of a canal between Lakes Shushwap and Okanagan, British Columbia.
- No. 82... ORDNANCE LANDS AND NAVAL RESERVES:—Return to Order; Statement showing the gross amount of receipts from the sale or leasing of Ordnance Lands or Naval Reserves, in Ontario, Quebec, New Brunswick and Nova Scotia, from 1st July, 1856, to 1st July, 1882, and the purpose to which the sums so received have been applied; also a Statement showing the several properties of which portions have been sold or leased, and the number of acres in each case. (*Not printed.*)
- No. 82a... Supplementary Return to the preceding.



- No. 83... MURRAY CANAL:—Return to Address (Senate); Copies of all tenders received for the construction of the Murray Canal, and all correspondence, &c., concerning the same.
- No. 84... LAND FOR COLONIZATION:—Return to Order; Returns showing the total number of applications for land for colonization under plans Nos. 1 and 2 of the Land Regulations of 23rd December, 1881, up to 1st January, 1883, with the names of the applicants, the date of application, and the quantity of land in each case applied for.
- No. 85... O'CONNOR, HON. JOHN:—Return to Address; Statement of any sums paid, and the arrangement on which such were paid, to the Hon. John O'Connor, since his retirement from office. (*Not printed.*)
- No. 86... PRINCE EDWARD ISLAND RAILWAY:—Return to Order; Return of all reports, estimated cost, &c., bearing upon the survey of a proposed branch line of railway, between Harmony Station on the railway, to Elmira, east point of P.E.I.
- No. 87... BUOYS AND BEACONS, LAKE HURON:—Return to Order; Return of all correspondence with the Government within the past four years, copies of contracts and expenditure, in reference to buoys and beacons in the north channel of Lake Huron. (*Not printed.*)
- No. 88... TROOPS IN HALIFAX:—Return to Address; Copies of all despatches, Orders in Council and reports on the subject of the withdrawal of the troops from Halifax. (*Not printed.*)
- No. 89... COMMERCIAL RELATIONS WITH FRANCE, SPAIN, &c.:—Return to Address; Copies of all despatches, &c., between the Governments of the United Kingdom and Canada; and between the Government of Canada and the High Commissioner, touching negotiations for commercial arrangements with France, Spain or other countries.
- No. 90... LAKE ST. JOHN RAILWAY:—Return to Order; Copies of all correspondence between the Government and the Lake St. John Railway Company, in relation to the subsidy granted to the said company, and a statement of all sums paid to the said company, on account of the said subsidy. (*Not printed.*)
- No. 91... CUSTOM DUTIES REFUNDED AT TORONTO:—Return to Order; Return of the names and respective amounts of Customs duties refunded at the port of Toronto for the last fiscal year, and the articles or commodities upon which the duties were collected and refunded. (*Not printed.*)
- No. 92... IMPORTS AND EXPORTS:—Return to Order; Return showing the imports and exports from July 1st, 1882, to January 1st, 1883, and the countries from which imported and to which exported. (*Not printed.*)
- No. 93... IMMIGRATION:—Return to Address; Copies of all correspondence, &c., of recent date between the Governments of the Dominion and British Columbia, on immigration into that Province.
- No. 93a... Return to Order; Copies of all correspondence between the British Columbia and Dominion Governments respecting immigration to British Columbia; also, on the question of Chinese immigration.
- No. 93b... Return to Order; Return giving the number of Immigrant Agents (other than those on the regular and published lists) sent from Canada to Europe, who received pay from the Government during the Calendar years of 1881 and 1882; the names of persons so employed; the instructions given to them, &c.
- No. 93c... Return to Order; Copies of all correspondence, &c., in reference to the immigration of Jewish refugees from Russia into Canada, and the subsequent maintenance and disposal of such immigrants. (*Not printed.*)
- No. 94... QUEBEC PROVINCIAL SUBSIDY:—Return to Address; Copy of any representation by the Legislature of Quebec, on the subject of an increase of the provincial subsidy.
- No. 94a... Return to Address (Senate); All letters, correspondence, &c., which the Federal Authorities may have received from the Quebec Government or Legislature, asking for "better terms" or an increase of the Dominion Subsidy.

- No. 95... **ONTARIO BOUNDARY AWARD**:—Return to Address; Copies of all correspondence between the Secretary of State and Lieutenant-Governor of the Province of Ontario, in relation to the award respecting the northern and north-western boundaries of that Province, not already communicated.
- No. 96... **PORTAGE ISLAND**:—Return to Address; Copies of all correspondence between the Canadian Government and the British Government, in reference to the transfer of Portage Island, at the entrance of the Miramichi River, to the Government of Canada, together with all reports, &c., in reference to that subject.
- No. 97... **STEAMER TO REPLACE THE "GLENDON"**:—Return to Order; Return of the advertisement for the contract of the building of a steamer to replace the "Glendon"; the several tenders therefor, to whom the contract was awarded, and the amount of such contract. (*Not printed.*)
- No. 98... **TRADE BETWEEN CANADA, WEST INDIES AND BRAZIL**:—Return to Order; Copy of the petition relative to the trade between Canada and the West Indies, and Brazil, signed by the principal fish merchants of the coast of Gaspé and Bay des Chaleurs, and addressed to the Hon. Minister of Finance, with a copy of the letter accompanying the said petition.
- No. 99... **CARTRIDGE FACTORY AT QUEBEC**:—Return to Order; Return showing the cost of the cartridge factory at Quebec, since its establishment, and the names and salary of all the officers and employes, with the value and quantity of ammunition manufactured. (*Not printed.*)
- No. 100. **GRAIN AND PRODUCTS OF GRAIN**:—Return to Order; Statement showing:—1st. The amount of duties collected between 15th March, 1879, and 1st January, 1883, on the cereals comprised under the head of "grain and products of grain"; also the total quantities imported. 2nd. The quantity imported and entered for consumption in Canada; also quantity exported during the years 1874 to 1882, inclusive.
- No. 101. **S.S. "NEWFIELD" AND "MORAVIAN"**:—Return to Order; Copies of all correspondence with the Minister of Marine and Fisheries concerning the employment of the Government steamer "Newfield" in aiding the wrecked steamship "Moravian." (*Not printed.*)
- No. 102. **MINING REGULATIONS**:—Copy of those governing the disposal of mineral lands other than coal lands. (*Not printed.*)
- No. 103. **AGRICULTURAL IMPLEMENTS, &c., IMPORTED INTO MAN. AND N.-W.T.**:—Return to Order; Statement of agricultural implements, waggons, sleighs and carriages, imported from 30th June to 31st December, 1882.
- No. 103a. Return to Order; Statement of all agricultural implements, carriages, waggons and sleighs shipped, in bond, to Manitoba from other Provinces of the Dominion, from 1st July to 31st December, 1882.
- No. 103b. Return to Order; Statement of all agricultural implements, carriages, waggons and sleighs shipped, in bond, to Manitoba from other Provinces of the Dominion, during the fiscal year ended 30th June, 1882.
- No. 104. **HUDSON BAY**:—Return to Address; Return of all information in reference to the duration of navigation, the soundings and the extent to which the Bay freezes over; also, all documents bearing on its probable resources; also, all reports on the mineral resources of the regions about the Bay and the islands therein.
- No. 105. **GRENVILLE AND CARILLON CANAL**:—Return to Order; Copy of the award of arbitrator on claim for damages put in by the contractor for the Grenville and Carillon Canal, under contract in force in 1871-72, with statement of sums paid thereunder.
- No. 105a. Papers in relation to the construction of two locks, and other works, at Greece's Point.
- No. 105b. Award of John Page, Esq., Chief Engineer, on the claim of Messrs. Heney, Stewart & Co., contractors for works at Greece's Point.
- No. 105c. Report of J. Page, Esq., Chief Engineer, on the Rapide Plat Canal.

- No. 106. **H. M. SHIPS ON BRITISH COLUMBIA COAST**:—Return to Address (Senate); Copies of all correspondence between the Dominion and Imperial Governments, and between the Dominion and British Columbia Governments, on the subject of having one or more of Her Majesty's ships of war stationed continuously on the coast of British Columbia. (*Not printed.*)
- No. 107. **GOVERNMENT SURVEY, LOT No. 133, MANITOBA**:—Return to Address (Senate); Copies of all correspondence between the Department of Crown Lands, at Winnipeg, or the Department of the Interior, and parties claiming lot No. 133 of the Government survey, or any right thereto, situated in the Parish of Ste. Agathe, County of Provencher, Manitoba; also, copies of all Orders in Council or of the Department of the Interior, relating to the said lot. (*Not printed.*)
- No. 108. **SUBSIDIES FOR MANITOBA**:—Return to Address; Copies of all correspondence, &c., since the commencement of last Session, in reference to subsidies or grants for Manitoba.
- No. 109. **PUBLIC DEBT INCURRED FOR RAILWAYS, CANALS, ETC.**:—Return to Order; Statement showing the amounts charged in the Public Debt Account of the Dominion of Canada, which were expended on railways, canals and navigation securities in British Columbia, Manitoba, Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia proper, and Cape Breton Island, up to 1st July, 1882, &c.
- No. 110. **MCMILLAN, J. D., DISMISSAL OF**:—Return to Order; Copies of all correspondence, &c., relating to the dismissal of John D. McMillan from his office as Fishery Overseer, and the appointment in his place of David Baker. (*Not printed.*)
- No. 111. **PILOTS AND PILOTAGE, BRITISH COLUMBIA**:—Return to Order; Copies of all correspondence, &c., between the Government and the Pilotage authorities of British Columbia, or any other parties in that Province, on the subject of Pilots and Pilotage.
- No. 112. **LIFE-SAVING STATIONS**:—Return to Order; Copies of correspondence, &c., relative to the establishment and management of Life-saving stations on coast of Lake Ontario, or other waters, together with such other reports upon the construction and operation of Life-saving stations in other countries as may be in the possession of the Government. (*Not printed.*)
- No. 113. **FRONTENAC TERRACE, QUEBEC**:—Return to Address; Copies of all documents in relation to the granting by the Imperial Government to the Dominion Government, and by the latter to the Provincial Government, of various lands, and more particularly of the land on which is located Frontenac Terrace, in the City of Quebec. (*Not printed.*)
- No. 114. **LAKE OF THE WOODS AND RAINY LAKE**:—Papers in relation to the construction of steamers for Lake of the Woods and Rainy Lake. (*Not printed.*)
- No. 115. **DAUPHÉNÉ, JAMES, CLAIM OF**:—Return to Order; Copies of all petitions, &c., in reference to the claim of James Dauphéné, of Bridgewater, Lunenburg, for payment of claim for refund of expenses incurred by him in discharge of his duties as a Fishery Warden of that County. (*Not printed.*)
- No. 116. **ORDNANCE FOR CANADA**:—Return to Order; Copy of contract, correspondence, &c., in connection with the manufacture of great guns for the Government of Canada. (*Not printed.*)
- No. 117. **COLONIZATION GRANTS**:—Return to Order; Return giving every form of patent arrangement or agreement, &c., between Companies and the Government in regard to colonization grants.
- No. 118. **TREES AND MINING LICENSES IN DISPUTED TERRITORY, ONTARIO**:—Return to Address; Copies of all correspondence, Orders in Council and papers not already brought down, relating to the cutting of timber or to mining on lands within the territory now in dispute with Ontario; also, all correspondence, &c., and all permits and licenses granted to make timber ties, telegraph poles and saw logs, within the district of Rainy Lake and River, and Lake of the Woods and tributary streams.
- No. 119. **ADMINISTRATION OF JUSTICE, CLAIMS OF THE PROVINCES**:—Return to Address; Copies of correspondence, from 1st July, 1867, to date, between the Dominion and the Provincial Governments respecting the claims of each of the said Provincial Governments, for the repayment of sums expended by them on account of the Dominion for the administration of justice; also, a statement in detail of the claims settled.

- No. 120.. H. M. S. "CHARYBDIS":—Return to Order; Copies of all correspondence, expenditure and reports relating to the "Charybdis", not already brought down. (*Not printed.*)
- No. 121.. SUBSIDIES TO CERTAIN RAILWAYS:—Report to Council, 14th May, 1883, recommending the grant of a subsidy of \$3,200 per mile, for 12 miles, in all \$38,400, towards the construction of a line of railway between Petitodiac and Havelock Corner, N.B.  
 Proposed subsidy, \$3,200 per mile for 80 miles from Canso to Louisburg or Sydney, in all \$256,000, to the Great American and European Short Line Railway Company.  
 Proposed subsidy, \$3,200 per mile for 49 miles, in all \$156,000, to the International Railway Company.  
 Proposed subsidy, \$3,200 per mile for 36 miles, in all \$115,200, to the Caraquet Railway Company, N.B.  
 Proposed subsidy, \$3,200 per mile, in all \$180,000, to the Gatineau Valley Railway Company.  
 Proposed subsidy, \$3,200 per mile first 50-mile section out of St. Jerome, in all \$160,000, to the Montreal and Western Railway Company.  
 Proposed subsidy, \$3,200 per mile for 28 miles, from Napanee to Tamworth, in all \$89,600, to the Napanee, Tamworth and Quebec Railway Company.  
 Proposed subsidy, \$3,200 per mile for 25 miles, from St. Raymond to Lake St. John, in all \$80,000, to the Quebec and Lake St. John Railway Company.  
 Proposed subsidy, \$3,200 per mile for 100 miles from Metapedia to Paspébiac, in all \$320,000, to the Baie des Chaleurs Railway Company.  
 Proposed subsidy, \$3,200 per mile for 32 miles (from the Intercolonial Railway to Mr. Laggan's Mills), in all \$102,400, to the Miramichi Valley Railway Company.  
 Proposed further subsidy at the rate of \$6,000 per mile, or a further sum, in all of \$660,000, from Gravenhurst to Callander, 110 miles, to such Company as shall be approved by the Governor in Council.
- No. 122.. ST. JOHN RIVER, N.B.:—Return to Address (Senate); Copies of all reports, letters, &c., since 1878, between the Department of Public Works and Mr. J. A. Lyon, or any other person, in reference to the removal of obstructions in the St. John River, N.B. (*Not printed.*)
- No. 123.. MANITOBA INDIAN AGENCY:—Return to Order; Report, with evidence, on the condition and management of the Manitoba Indian Agency under J. A. N. Provencher, the Indian Superintendent of the Manitoba District, made by the Government Commission of Enquiry; also vouchers dated 25th June, 1875, for \$180; 25th June, 1875, for \$1,290; and 26th December, 1875, for \$800, signed by one Tremblay, &c. (*Not printed.*)
- No. 124.. TELEGRAM EXPENSES, DEPARTMENT OF PUBLIC WORKS:—Return to Order; Statement of the expenditure for each month elapsed for the current fiscal year, on telegrams charged to various works in the Department of Public Works, and a like statement from November, 1881, to 30th June, 1882, inclusive. (*Not printed.*)

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GENERAL REPORT  
OF THE  
MINISTER OF PUBLIC WORKS

FROM  
30th JUNE, 1867,  
TO  
1st JULY 1882  
(IN TWO PARTS.)

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**PART II.**

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*Printed by Order of Parliament.*

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1883.

APPENDIX No. 19.

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REPORT

ON

LIGHTHOUSES, ROADS AND BRIDGES, ETC.

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## APPENDIX No. 19.

### REPORT ON LIGHTHOUSES, ROADS, BRIDGES, ETC.

#### LIGHTHOUSES.

Prior to Confederation the management of the lighthouses in the Province of Ontario, and in the Province of Quebec above Montreal, was vested in the Department of Public Works; and in the Province of Quebec below Montreal all matters relating to lights, buoys, etc., were managed by the Trinity Houses of Montreal and Quebec. In New Brunswick the lights were managed by a Board of Commissioners of Public Institutions, and in Nova Scotia by the Board of Works.

After Confederation the Department of Marine and Fisheries was established, and the duty of lighting, managing and furnishing supplies to lighthouses was transferred to that Department, while the building and keeping in repair of lighthouses remained with the Department of Public Works.

By an Order in Council dated 10th January, 1870, in addition to the management of and furnishing supplies to lighthouses, the further responsibility of the construction of these buildings, in cases where the estimated cost does not exceed \$10,000, was transferred to the Department of Marine and Fisheries.

The construction of lighthouses the cost of which is estimated to exceed \$10,000 still remains with the Department of Public Works.

The following is a list of the lighthouses which have been erected by this Department since Confederation; also of those on which expenditure was made for maintenance or repairs.

#### PROVINCE OF NOVA SCOTIA.

**AMET ISLAND, Straits of Northumberland.**—The lighthouse is situated in the centre of the island, and was erected in 1868 at a cost of \$224.00.

**BLACK ROCK POINT.**—This lighthouse is situated on the south side of Big Bras d'Or, Cape Breton County, and was erected in 1868 at a cost of \$2,843.85.

**CAPE ST. MARY.**—The lighthouse is situated on the east side of the bay, and was built in 1868 at a cost of \$4,795.44.

**MOSER ISLAND.**—This is one of the islands forming La Héve Harbour. The lighthouse is on the west side of the entrance to La Héve River, and was erected in 1868 at a cost of \$3,482.72.

**PEGGY'S POINT.**—The lighthouse is on the east side of the entrance to Peggy's Bay, and was first lighted in 1868. Expenditure \$3,093.32.

**POMQUET ISLAND.**—This island forms part of the protection of Bayfield Harbour, St. George's Bay. The lighthouse is on the north-east end of the island, and was erected in 1868 at a cost of \$1,634.00.

**LITTLE HOPE ISLAND.**—The lighthouse is nearly in the centre of the island and was built prior to Confederation. In 1871 and 1872 the sum of \$76.65 was spent for repairs; and in 1872 a sea wall was built to protect the island, for particulars of which see Appendix, 3, page

Expenditure for maintenance and repairs was also made by this Department, in 1868, on the following lighthouses in Nova Scotia which were established prior to Confederation:

Barrington .....	\$ 300 00
Bird Island.....	125 00
Boar's Head.....	142 10
Cape St. George.....	40 20
Devil's Island.....	318 64
Egg Island.....	333 50
Lunenburg .....	29 60
Meagher's Point.....	499 75
Parrsboro'.....	1,288 82
Port Hood.....	48 85
Port Medway.....	10 00
Pubnico.....	25 18
Ram Rock Beacon.....	41 06

#### PROVINCE OF NEW BRUNSWICK.

**CAPE JOURIMAIN.**—This lighthouse is on the Straits of Northumberland and was erected in 1870 at a cost of \$4,110.50

**ST. JOHN.**—The lighthouse at the entrance to the harbour was burnt on 7th January, 1867, and a temporary lighthouse was erected at a cost of \$322.78.

#### PROVINCE OF QUEBEC.

**CAP ROSIER.**—This lighthouse was erected in 1858; and in 1868 an expenditure of \$80 was made for repairs.

**MAISONETTE.**—This lighthouse was erected in 1870 at a cost of \$216.05.

**PASPEBIAC.**—This lighthouse is on a spit of land at the entrance of the harbour, Baie des Chaleurs, and was erected in 1870 at a cost of \$216.81.

**POINTE ST. LAURENT.**—This lighthouse is on a pier built for the purpose of carrying a light. It was commenced in 1866 and completed after Confederation. For particulars see Pointe St. Laurent, Island of Orleans, Appendix 3, page .

#### PROVINCE OF ONTARIO.

**BYNG INLET.**—This lighthouse was erected in 1870 on Gereaux Island at the entrance to Byng Inlet, Georgian Bay, by Messrs. Clarke, White & Co. and Messrs. Dodge & Co., under an agreement by which the Government engaged to pay half the cost. Expenditure by the Department \$357.69.

**CLAPPERTON ISLAND.**—This lighthouse was erected in 1868, on the north end of Clapperton Island, Lake Huron, at a cost of \$605.20.

**FALSE DUCKS.**—Lake Ontario. A lighthouse was erected here in 1828, and rebuilt in 1872 at an expense of \$800.

**GIBRALTAR POINT.**—The lighthouse is on the south-west side of the point, one and three-quarter miles south of Toronto. It was erected in 1820, and in 1868 the sum of \$55 was spent in repairs.



**GULL ISLAND.**—The island is four miles from Cobourg, Lake Ontario. A lighthouse was erected on a rock off the point of the island in 1840, and in 1868 the sum of \$192.80 was spent in repairs.

**KILLARNEY.**—Georgian Bay. Two lighthouses were erected here in 1867 at a cost of \$660.20.

**LITTLE CURRENT.**—Manitoulin Island, Lake Huron. Two lighthouses were erected here in 1867 at a cost of \$660.20.

**MICHAEL'S POINT.**—On the south side of Great Manitoulin Island, Lake Huron. This lighthouse was erected in 1870 at a cost of \$259.94.

**POINT PLEASANT.**—At the entrance to the Bay of Quinté. The lighthouse was erected prior to Confederation at a cost of \$2,819.42, and in 1868 the sum of \$357.72 was expended on it.

**ST. IGNACE ISLAND.**—In Lake Superior. This lighthouse was erected in 1867 at a cost of \$605.03.

**SULPHUR ISLAND.**—Lake Huron. The lighthouse is at the west end of the island, and was built in 1869, at a cost of \$2,359.20.

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## PROVINCE OF BRITISH COLUMBIA.

**CAPE BEALE.**—This lighthouse is situated on the Pacific Ocean, at the entrance to Barclay Sound, and was built in 1873 at a cost of \$8,753.53.

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## ROADS.

Prior to Confederation some of the public roads in the Province of Canada were maintained by the Government, some by municipalities and some by private corporations. The roads maintained by the General Government were the main highways or roads required for military purposes.

Since Confederation expenditure has taken place on the following roads :

**TEMISCOUATA.**—This road extends from Rivière du Loup to the boundary line between Quebec and New Brunswick, a distance of 67 miles, and prior to the completion of the Intercolonial Railway it was the main line of connection between Canada and the Maritime Provinces. The present road was built to replace an older one. It was commenced in 1856, and opened in September 1861, but was not completed until 1866, at which time its cost was \$204,376.01.

Since Confederation, \$5,855.14 has been spent in construction, and \$18,510.10 on repairs.

**METAPEDIAC AND RESTIGOUCHE ROAD.**—This road was originally laid out by Mr. G. F. Baillairgé, the present Deputy Minister of Public Works. The original avoided several objectionable hills which exist on the present line. The Metapediac Road leaves the St. Lawrence at Ste. Flavie, 201 miles below Quebec, and extends to the Sillars Farm on the Restigouche River, 100½ miles from Ste. Flavie. This was one of the military roads of Canada, and was commenced in 1857, and completed in 1867 at a cost of \$187,870.85.

The Restigouche Road, which is a continuation of the Metapediac Road, extends from the Sillars Farm to Cross Point Ferry, a distance of ten miles, where it connects with the road on the north shore of the Baie des Chaleurs leading to Gaspé, as well as with the New Brunswick Road, on the south side of the Baie des Chaleurs, leading to Halifax. The cost of the Restigouche Road is included in that of the Metapediac.

After Confederation, it being thought advisable that the road should be maintained for military purposes, a contract was entered into with Mr. D. Fraser, who had a contract for carrying the mails, to keep the central section of 82 miles in repair for five years for \$800 per annum. By an Order in Council, approved 4th May, 1868, the fourteen miles of road from St. Flavie to the residence of Pierre Ouellet were abandoned to the Municipality of Rimouski; and the 14½ miles of road from the residence of Daniel Fraser, on the 90th mile, to Cross Point Ferry, were abandoned to the Municipality of Bonaventure.

During the construction of the Intercolonial Railway a portion of this road, about three miles in length, near the confluence of the Metapediac and Restigouche Rivers, was needed for the road-bed of the railway, and was transferred to the Intercolonial Railway Commissioners by Order in Council. A new piece of road was constructed to replace that transferred to the Commissioners, and the cost charged to the Intercolonial Railway.

In 1867 the road was very seriously damaged by the extraordinary rise of the Metapediac River, which washed out about thirty-five acres of the road, carried away nineteen culverts and nearly destroyed the Causapscaal Bridge. In June, 1870, an extensive fire swept over a portion of the road—which, for the greater part of its length, runs through an unsettled country—and destroyed eight bridges, three culverts, large quantities of guard rails, etc.

On the completion of the Intercolonial Railway this road was abandoned to the municipalities through which it passes.

Total expenditure since Confederation (including Restigouche Road): on construction, \$34,041.43; on maintenance and repairs, \$13,650.09.

**PORT ST. LOUIS AND HUNTINGDON ROAD.**—This road leads from Port Louis, on Lake St. Francis, to Huntingdon, a distance of about eight miles. It was originally constructed by the Huntingdon and Lake St. Francis Road Company, organized in 1849 under the general Act for the formation of road companies. During the time of the Fenian excitement the Commander of Her Majesty's forces certified that this road should be maintained for military purposes, and it was accordingly acquired from the Road Company, under authority of an Order in Council, passed 9th April, 1869, and was subsequently put in thorough repair, the total expenditure on it being \$11,418.07 on construction, and \$570.18 for maintenance and repairs.

The road being no longer required was abandoned to the Municipal and Road Authorities.

**LIVERPOOL AND ANNAPOLIS ROAD.**—This road crosses the peninsula of Nova Scotia, connecting Annapolis, on the Bay of Fundy, with Liverpool, on the Atlantic Ocean.

In 1869 the sum of \$1,509.91 was spent for repairs.

**YORK ROADS.**—The roads known as the York or Toronto Roads consisted of:—

1. Lake Shore Road, from Toronto westward to River Humber.....	4	miles.
2. West York, or Dundas, from Toronto westward to Springfield.....	16½	“
3. East York, or Kingston, Road, from Toronto eastward to Rouge Mill.....	17	“
4. Yonge Street, from Toronto northward to Holland Landing.....	33½	“
Total.....	70½	miles.

The cost of these roads, according to the report of the Commissioner of Public Works, 1867, page 514, was \$563,940.37. They were sold to the Municipal Corporation of the United Counties of York and Peel on 4th April, 1865, for \$72,500, collaterally secured by debentures payable in twenty years, with interest at the rate

of 6 per cent. The materials, tools and plant connected with the roads were sold to the United Counties of York and Peel on 14th October, 1867, for the sum of \$7,167.

In 1870 an expenditure of \$1,170.91 was made in connection with these roads.

**SOUTH SHORE GULF ROAD.**—This road was originally laid out by Mr. G. F. Baillairgé, the present Deputy Minister of Public Works. The line however, was not adhered to throughout, which accounts for many very objectionable hills which had been avoided by the original line. It extends along the south shore of the St. Lawrence from Cape Rosier lighthouse westward to Metis, a distance of 179 miles. Of this distance 13½ miles at the eastern end, and 42½ miles at the western end were constructed by the Government, prior to Confederation, at a cost of \$58,955.63, and 13½ miles between Latourelle and Cap de Chatte were constructed by the settlers. This left a gap of about 120 miles between Fox River and Ste. Anne des Monts to be constructed; and, in 1870, the Dominion and Quebec Governments each appropriated \$10,000 for the purpose of completing the road, with a view to placing a line of telegraph along it, and of its utilization as a highway. The work was divided into two sections, the western, from Ste. Anne des Monts to Magdalen River, 64½ miles, and the eastern, from Magdalen River to Fox River 55½ miles. On the 8th June, 1870, Mr. Joseph Rosa was appointed by the Dominion Government to superintend the opening of the western section from Ste. Anne des Monts to Magdalen River; and, at the same time, Mr. P. Gauvreau was instructed by the Quebec Government to proceed with the opening of the eastern section from Magdalen River to Fox River. Work was commenced in June and continued until November, 1870, on the western section; and with the \$10,000 granted by the Dominion Government all the trees were cut down, to a width of 40 feet, and the roots and stumps removed, to a width of 12 feet, and ten miles of road were levelled and placed in condition to serve as a good summer road.

With reference to what was done on the eastern section by the Quebec Government in 1870, and since on the whole of the road, the following information is gathered from the reports of the Commissioner of Crown Lands for the Province of Quebec:—

1870-71, 48 miles of road fit for vehicles.....	\$10,000 00
1871-72, 26 miles of road made .....	4,929 00
1872-73, repairs.....	97 00
1873-74, completion.....	442 00
	<hr/>
Total expenditure by Quebec Government ...	\$15,468 00
Total expenditure by Dominion Government.	10,000 00
	<hr/>
Total since Confederation.....	\$25,468 00

**ILE AUX NOIX ROAD.**—This road runs from the public highway at the village of St. Valentine in St. John's County, P.Q., to the River Richelieu, and access to Ile aux Noix is then had by ferry. Extensive repairs were made in 1880-81 to a bridge, crossing a dry gully, which had become dangerous.

#### NORTH-WEST COMMUNICATION.

For many years previous to Confederation the question of the acquisition of the North West Territories, and more especially that portion of them known as the Red River Settlement, by the old Province of Canada, had been discussed, and some preliminary steps taken with a view to opening communication through British territory between the northern shores of Lake Superior and Lake Winnipeg, by means of the numerous small lakes and rivers which were known to exist in that region.

During the summer of 1857 the Provincial Government sent out what was known as "The Red River Expedition," which consisted at first of three distinct parties, and

an extensive exploration and partial survey was made of the region between Thunder Bay and the Red River Settlement, the route followed being that generally known as "the old canoe route," which had been adopted many years ago by the French voyageurs of the North-West Company. Two of these parties remained out only a short time; but the one of which Mr. Dawson, C.E., (now M.P. for Algoma), was in charge remained out for three summers and two winters, and made very thorough explorations. Attached to this party were Mr. Lindsay A. Russell, C.E., (now Deputy Minister of the Interior), Mr. J. F. Gaudet and Mr. Alex. W. Wells, Engineers, and Colonel C. de Salaberry, who had charge of the commissariat department. The labors of the expedition were brought to a close in 1859, and nothing further was done with a view to opening communication with the North-West until the last session of the old Parliament of Canada, when the sum of \$55,900 was placed in the estimates for colonization roads, for the purpose of opening a road from Fort William to Dog Lake, on the Kaministiquia River, twenty-four miles from Lake Superior.

Work on this road was commenced, in 1867, at a point called the "Depot," (now Prince Arthur's Landing), on Thunder Bay; and about six miles of the road was constructed, and some progress made with the building of a dam at Dog Lake. The amount so expended was about \$14,000.

The result of the examinations made by Mr. Dawson may be briefly stated as being that he found it would be practicable to obtain a route from Thunder Bay to the Red River Settlement, which would consist of a road about forty miles in length, about 310 miles of water communication broken into small stretches, and ninety miles of road from the north-west angle of the Lake of the Woods to Fort Garry.

Shortly after Confederation negotiations were opened with the Hudson's Bay Company for the acquirement of their interest in the North-West, and while these were pending steps were taken for the opening of communication. During the summer of 1868 further surveys were made by Mr. Dawson at the Thunder Bay end of the route, which resulted in the route by way of Dog Lake being abandoned, and the route changed so as to pass by way of Lake Shebandowan. Construction of the road from Fort Garry to the north-west angle of the Lake of the Woods was commenced in the fall of 1868, partly for the purpose of giving employment to the people of the Red River Settlement, who were suffering great distress on account of their crops having been destroyed by locusts.

In the summer of 1869 construction was recommenced at the Thunder Bay end of the route, and by the close of the season 25 miles of the road had been so far completed that waggons could pass from the depot to the Matawin River, and a quantity of lumber was being prepared for the bridges over the Matawin and Kaministiquia.

At the session of Parliament held in 1869, a Bill was passed providing a form of Territorial Government for the North-West, as soon as it should have become part of the Dominion; and the Hon. William McDougall was appointed Lieutenant-Governor of the Territory. The attempted transfer of the Territory by the Hudson's Bay Company, without consulting the wishes of the people, caused a vigorous protest on the part of the latter, a portion of whom prevented the entrance of Mr. McDougall; and the condition of the colony became so unsettled that it was determined by the Imperial Government to send a military expedition to the Red River territory in the spring of 1870, and preparations with that end in view were carried on during the winter of 1869-70.

Immediately on the opening of navigation in 1870, a large force of workmen, horses, etc., were forwarded to Fort William and work recommenced on the road, which it was desirable to have completed before the arrival of the troops. Several things, however, conspired to prevent this, and it was not accomplished.

The military expedition, under the command of Colonel Wolseley (now Lord Wolseley, of Egypt,) left Toronto on the 14th of May, 1870, and the first detachment embarked at Collingwood, in the steamer "Chicora", for Fort William on the same evening. On the 11th, the steamer, on attempting to pass through the Sault Ste. Marie Canal, was stopped by the American authorities, and the troops disembarked on the Canadian side of the Sault, where a portage road, about three miles long, was

made, and all the troops and stores carried over it and re-embarked on steamers on Lake Superior. This delayed the construction of the road from Thunder Bay to Lake Shebandowan, as a large proportion of the workmen who should have been employed on it were engaged in making the portage road at the Sault Ste. Marie, and in assisting in the transportation of the stores at that point.

On the 25th May, Colonel Wolseley and the first detachment of the 60th Rifles arrived at Thunder Bay. Up to this time the Thunder Bay terminus of the road had been known as "The Depot" or "Government Landing;" but shortly after his arrival Colonel Wolseley named the place "Prince Arthur's Landing," as a compliment to H.R.H. the Duke of Connaught who was at that time serving with his regiment in Canada.

Work on the road was prosecuted as rapidly as possible, but heavy rains, a fire, and the disabling of most of the horses by overwork rendered progress slow; and the Commander of the expedition decided that the construction of the road should be temporarily abandoned, and the boats taken up the Kaministiquia River, a work of great difficulty and one involving such hard usage on the boats that a force of carpenters had to be sent to Lake Shebandowan to repair them after they reached that point.

On the evening of the 16th July the first brigade of boats left McNeil's Landing, Lake Shebandowan, and from that date until the 4th August, when the last detachment embarked, departure took place daily. The whole number of men embarked at McNeill's Landing was, according to the official return of Deputy Commissary Meyer, 1,431, of whom 92 were officers, 1,051 non-commissioned officers and men, 274 voyageurs and 14 guides.

Passing, as it did, through an uninhabited wilderness everything necessary for the support of this large body of men for a journey of 600 miles had to be transported with them, and the resources of the Department were severely taxed to accomplish the transportation of so great a quantity of supplies. Colonel Wolseley, in his Report of the Expedition, says: "Every probable, indeed every possible, contingency had to be thought of and provided for; and it may be confidently asserted that no expedition has ever started more thoroughly complete or better provided for its work."\*

On the 4th of August the first detachment reached Fort Frances, situate on the right bank of the Rainy River, having accomplished 208 miles in nineteen days. In this 208 miles there were seventeen portages of an aggregate length of three miles seventy-six chains, and at each of these roads had to be constructed or improved. On the same evening the advance guard left Fort Frances and proceeded to Rat Portage, a distance of 131 miles of unbroken navigation, by way of Rainy River and the Lake of the Woods. Rat Portage was reached on the 29th; and from thence the expedition proceeded down the Winnipeg River, a distance of 149 miles, to Fort Alexander at the entrance to Lake Winnipeg, and from thence by way of Lake Winnipeg and the Red River to Fort Garry, which was reached on the 24th.

The military expedition has been thus referred to at length because it added very greatly to the cost of constructing the road; and somewhat delayed the completion of the road from Prince Arthur's Landing to Lake Shebandowan, the men who should have been engaged on that work being employed in facilitating the departure of the expedition. After the troops had left Lake Shebandowan, work on the road

\* To show the magnitude of the work of transportation the following list of articles carried, taken from the official return of Deputy Commissary Meyer, may be found interesting:—Biscuits, 953½ brls.; flour, 702 brls.; pork, 930 brls.; sugar 128 brls.; tea, 122 chests; beans, 196 bags; preserved potatoes, 194½ cases; pepper 187 lbs.; ammunition, rounds, 111,000; augurs, 3; felling axes, 244; pickaxes, 132; blankets, 25; fuze, 1; gimlets, 9; sledge-hammers, 3; small hammers, 3; hand hatchets, 218; Flanders kettles 180; field ovens, 1; frying pans, 146; bags of bedding, 8; kegs of powder, 2; coil lashing rope, 1; coil Manilla rope, 1; cross-cut saws, 7; hand-saws, 10; scales and weights, 1; shovels, 133; spades, 135; spikes and nails, 50 lbs.; measuring tape 1; tents, 155; large ropeslings, 317; small rope slings, 444; portage straps, 616; spare bags, 1,246; tins of musquito oil, 126; waterproof bags of blankets, 214; waterproof bags of accoutrements, 98; medical comforts and equipments, 41; tins, 547; canteens A. & B., 2; boxes linseed meal, 2; kegs of salt, 1; grindstones, 1; boxes of tobacco, 29; cases of soap, 1; bales of military clothing, 5.

was systematically carried on, and so much progress made that the regular troops, on their return from Red River in the fall, were able to pass easily and rapidly over the whole distance from Lake Shebandowan to Prince Arthur's Landing. The construction of the road from the North-West Angle of the Lake of the Woods to Fort Garry had also been resumed in the summer of 1870, and some of the regulars marched from Fort Garry to the North-West Angle on their homeward journey, while others returned by way of the Red River and the Winnipeg River, as they had come.

During the next year, 1871, the route was opened for the passage of immigrants; and very extensive improvements commenced, with the view of making an easy mode of access to the North-West through Canadian territory.

Prior to the opening of this road, the only routes for reaching the Canadian North-West were through the United States, and were both long and expensive. The objects to be attained by opening the Canadian route were to reduce the distance, lessen the cost of transportation, and avoid the danger of immigrants being seduced into settling in the United States by keeping them in Canadian territory on their way from the older Provinces to the Canadian North-West.

With this view the Red River Road, commonly known as "The Dawson Road," was opened for the use of immigrants on 15th June, 1871. By an Order in Council the rates were fixed as follows:—

TORONTO TO FORT WILLIAM,—Adults, \$5; children under 12 years, half price. 150 lbs. of personal baggage free. Extra baggage, 35 cents per 100 lbs.

FORT WILLIAM TO FORT GARRY,—Adults \$25; children under 12 years of age, half price. 150 lbs. of personal baggage free. Extra baggage, \$1.50 per 100 lbs. No horses, oxen, waggons, or heavy farming implements could be taken.

The mode of conveyance was:

Toronto to Collingwood by rail.....	96 miles
Collingwood to Fort William, by steamer.....	532 "
Fort William to Lake Shebandowan, by waggon.....	45 "
Lake Shebandowan, and chain of lakes, to North-West Angle of the Lake of the Woods, by open boats and steam launches.....	311 "
North-West Angle to Fort Garry, by cart or waggon .....	95 "
Total.....	1,079

The section between Lake Shebandowan and the North-West Angle of the Lake of the Woods was broken by ten portages, with an aggregate length of seven miles fifty-three chains, divided as follows :

SECTIONS.	Land carriage.			Navigable water.	
	Road.	Portage.		Miles.	Chains.
	Miles.	Miles.	Chains.		
From Thunder Bay to Shebandowan Lake .....	45				
Shebandowan Lake, Kashabowie Portage and Lake .....			60	27	
Height of Land Portage .....			60		
Lac des Mille Lacs .....				18	40
Baril Portage .....			20		
Baril Lake .....				8	
Brûlé Portage .....			21		
Windegoos Lakes .....				12	
French Portage .....		1	60		
Kaogassikok Lake .....				15	
Deux Rivières Portages, from Kaogassikok to Sturgeon Lake .....			62	1	18
Sturgeon Lake and River (2 lifts in river) .....				26	
Island Portage .....			5		
Lake Nequaquon .....				17	
Nequaquon Portage .....		2	60		
Naumekan Lake, from New Portage to Kettle Falls .....				15	
Kettle Falls Portage .....			15		
Rainy Lake, from Kettle Falls .....				44	
Fort Frances Portage .....			10		
Rainy River and Lake of the Woods .....				120	
Fort Garry Road—					
North-West Angle to White Birch River.....	25 miles.				
Birch River to White Mouth River.....	16 do				
White Mouth River to Oak Point Settlement	27 do				
Oak Point Settlement to Fort Garry .....	27 do				
	95				
Totals.....	140	7	53	303	58

## SYNOPSIS

	Miles.	Chs.
Thunder Bay Road.....	45	00
Navigable Sections and Portages.....	311	31
Fort Garry Road.....	95	00
	<u>451</u>	<u>31</u>

The boats used during the expedition of the previous year were utilized for the conveyance of immigrants, and several steam launches procured for the longest stretches of navigable waters. At various points along the route buildings or tents were erected for the accommodation of passengers, and works commenced at several places.

In June, 1871, the volunteers who had wintered in Winnipeg, returned to Ontario and Quebec by the Canadian route, and performed the journey comfortably, expeditiously and without accident or delay. In the fall of 1871 it again became

necessary to send a military force to the Red River Settlement on account of an attempted Fenian invasion. On the 12th October an Order in Council was passed providing for the immediate despatch of 200 men to Fort Garry. On the 20th the whole force, fully equipped and provisioned, assembled at Collingwood, and on the following day embarked for Thunder Bay, which was reached on the 24th. In *thirty-four hours* the entire force was transported from Thunder Bay to Lake Shebandowan, and the first detachment of boats left the latter place at midday on the 27th. The season was very far advanced, some of the boats and steam launches had been laid up for the winter, and thin ice had formed on some of the smaller lakes; but by great exertions the force was hurried forward and arrived within ten miles of the North-West Angle of the Lake of the Woods on the 12th of November. Here the ice had formed so solidly that it was impossible to get the boats through it, and the men had to march to the shore over the ice. The journey was accomplished, amid great difficulties, without loss or accident. This was the second time that the Department had been suddenly called on to transport a large body of men over the road, and on both occasions the arrangements were found equal to the requirements.

The whole number of persons transported over the road in 1871 was 604, of whom about 100 were immigrants, and the remainder mostly the military going to or returning from Fort Garry.

In January 1871, tenders were invited for the construction of two large steamers to be built at Fort Frances, one to ply on the Lake of the Woods and the other on Rainy River. The contract was awarded to Messrs. James Dick & Co., of Toronto, who bound themselves to "construct, complete, finish and have in every respect ready for use, by the 1st October following, two side-wheel steamboats, including machinery" for the sum total of \$35,100. The hull of the Lake of the Woods steamer was to be 120 feet in length of keel by 20 feet beam, and her machinery of the dimensions and power indicated by a 22-inch cylinder with 5 feet stroke of piston, and a steam-return tubular boiler of proportionate size. The Rainy Lake steamer was to have 100 feet length of keel, by 19 feet breadth of beam, and machinery in proportion. The contractors commenced to forward supplies, material and mechanics to Fort Frances early in the season of 1871, and laid the keel of one of the steamers; but they had evidently not fully taken into account the difficulties to be encountered in accomplishing their work; and, after a series of misfortunes, the contract had to be taken from them and the work completed by day labor by the Department under the supervision of an inspector. This delayed the completion of the steamers for a year; and they were not ready for use until the season of 1873.

During the winter of 1871-2 six open barges and three additional steam launches were built, and placed on the route immediately on the opening of navigation in 1872. Great improvements were also made on the Thunder Bay and Fort Garry roads. A small saw-mill was put in operation at the Height of Land, and with the boards thus obtained buildings for the accommodation of passengers were put up on the Thunder Bay road, and at the various portages as far as Brûlé. Immigrant huts were also erected at the Maligne, Nequaqon and Kettle Falls. At the North-West Angle of the Lake of the Woods a commodious house was put up, and some temporary houses and stables which had been put up at Birch River, White Mouth River and Oak Point Settlement were enlarged.

Throughout the summer of 1872 extensive works were carried on for the improvement of the inland navigation. Dams were built at various points, and the waters of the Shebandowan and Kashabowie Lakes, Lac des Mille Lacs, Windegoostegon, Kaogassikok and Sturgeon Lakes raised beyond their normal level and navigation greatly improved. At the Maligne Rapids a dam 320 feet in length was built, which raised the water in front of it nine feet, gave an additional depth of four feet in Sturgeon Lake, flooded the upper rapids of the Maligne, and rendered two miles of shallow water below Deux Rivières Portage, navigable. A wharf, 600 feet long, with a wing 200 feet in length, was built at Prince Arthur's Landing; and wharves for the accommodation of the steamers were built at Fort Frances, Kettle Falls and



the Long Sault. The portages were also greatly improved and the distances, in some instances, shortened by good roads.

The number of passengers carried in 1872 was 475.

In 1873 the complexion of travel on the route was greatly changed by the launching of two steamers, one of which commenced running on Rainy Lake on the 4th of July, and the other on the Lake of the Woods on the 14th of August. At the same time decked barges, fitted with cabins, were completed and placed on Shebandowan Lake, Kashabowie Lake, Lac des Mille Lacs and Baril Lake. The steam barges were distributed along the line so that there was a steam vessel, either large or small, on each of the navigable sections between Shebandowan and the North-West Angle of the Lake of the Woods, except for a stretch of ten miles on the Maligne River.

With the improved facilities thus afforded, passengers were transported from Prince Arthur's Landing to the North-West Angle of the Lake of the Woods in six days; and the rate of fare was reduced to \$10 from Prince Arthur's Landing to Fort Garry.

The traffic on the road, however, did not increase in proportion to the increased facilities, which was to be accounted for by the extraordinary rapidity with which railway construction had been prosecuted on the American lines. When the Red River route was commenced, there was no railway nearer Winnipeg than St. Paul; but by the summer of 1873 the Northern Pacific had been extended from Duluth, on Lake Superior, to Moorhead on Red River, from whence a line of steamers had been established to Winnipeg. Although this route was longer than the Red River route, it afforded greater facilities for travel, as by it the numerous transshipments were avoided which the broken navigation of the latter route necessitated.

It having become apparent to the Department that the work of transportation could be more economically effected by a private company, assisted by a subsidy, than by the Government, tenders were invited during the winter of 1873, and a contract entered into with Messrs. W. H. Carpenter & Co. for the season of 1874. The principal provisions of the contract were as follows:—

Contractors to have the use of plant, buildings, &c., belonging to the Government, and to maintain them in good order. Passengers and freight to leave Thunder Bay three times a week; and also to leave Fort Garry three times a week. Passengers to be conveyed through, at furthest, in ten or twelve days, freight in fifteen or twenty days. Contractors to have houses and tents in good condition, and supply meals at thirty cents. Intoxicating liquors strictly prohibited. Department not to be bound to complete works in progress. Contractors to make casual repairs to road or property in use for a bulk sum of \$1,000. Rate not to exceed \$10 from Thunder Bay to Fort Garry, and *vice versa*, for adults; \$5 for children under fourteen years of age; children under three years of age, free. Freight, (not including household furniture or machinery), \$2 per 100 lbs. Household furniture, at owner's risk, \$3 per 100 lbs. Cattle, sheep, &c., at special rates. Way passengers, five cents per mile; way freight, one and a-half cents per 100 lbs. per mile. Contract to be cancelled for good cause. The Government to pay a bonus or subsidy of \$75,000 in six equal monthly instalments commencing on 1st June.

This contract was continued during the seasons of 1874 and 1875, and cancelled on 29th April 1876. The number of passengers carried was, in 1874, 1,590; in 1875, 1,877; in 1876, 295. Freight carried in 1875, 968 tons; in 1876, 139 tons.

The total cost of the road from its opening to 30th June, 1882, was: \$209,195.38.

#### FORT FRANCES CANAL.

The Fort Frances Canal is situated on the north bank of Rainy Lake, nearly opposite the Grand Falls of the Rainy Lake, which forms part of the boundary between Canada and the State of Minnesota.

It is 237 miles north-west of Thunder Bay, and 215 south-eastward of Winnipeg; and the object in building the canal was to connect the navigation of Rainy Lake with that of Rainy River and the Lake of the Woods, giving an unbroken stretch of navigation from Kettle Falls to the North-West Angle of the Lake of the Woods for vessels not drawing more than 7 feet of water.

The design of the canal was that it should be 800 feet in length, by 36½ feet in width at the narrowest part. At the upper entrance, the northeast side to be wharfed for a distance of 174 feet, and the south-west side to be provided with a range of guide piers for the protection of vessels against the current, which might otherwise drift them towards the falls.

The construction of the canal was commenced in 1875, and that of the lock was commenced, according to the design of Mr. G. F. Baillairgé, the present Deputy Minister of Public Works, who laid it out, in 1876; it was nearly completed in 1878. Its length is 200 feet by a width of 36 feet, having 7 feet depth on the sills. The lift to vary from 22½ feet during high water to 24 feet during low water.

Owing to the abandonment of the Dawson route as a means of communication with the North-West, and the substitution of a continuous railway from Thunder Bay to Winnipeg, the canal was not completed.

Total expenditure, \$288,278.51.

## BRIDGES.

Prior to Confederation, the bridges built by the Government of the old Province of Canada were mostly in connection with roads which were handed over to the municipalities through which they passed, for maintenance after their construction.

After Confederation, most of the bridges which had not been previously transferred were given over either to the Provincial Governments or to the municipalities, and only a few remained under the control of the Federal Government.

To meet the claims made, from time to time, for assistance from the Government in the construction or repair of public bridges in various parts of the Dominion, and with the view of distinguishing those structures which, in a greater or lesser degree, subserve the general interest, from those of a strictly local character, an Order in Council was approved on 11th February, 1871, providing the following classification for all public bridges throughout the Dominion of Canada:—

**FIRST CLASS.**—Bridges built and maintained by the Dominion Government solely:—

1. Bridges on Government railways.
2. Bridges over Dominion public works, when such bridges have been built by Government as public improvements.
3. The Union Suspension Bridge at Ottawa, and other bridges built by Government as public works, and not transferred to local authority.

**SECOND CLASS.**—Bridges built or maintained partly by the Dominion Government and partly by local authority:—

1. Bridges over Dominion rivers.
2. Bridges over public works, whenever the cost of any such bridge is increased by the existence of any such public work.

**THIRD CLASS.**—Bridges in which the Dominion has no interest and should not contribute to:—

1. All bridges other than those comprised in the two above-mentioned classes, and which are therefore strictly local in character and purpose.

Since Confederation the Dominion Government has expended money on the following bridges:—

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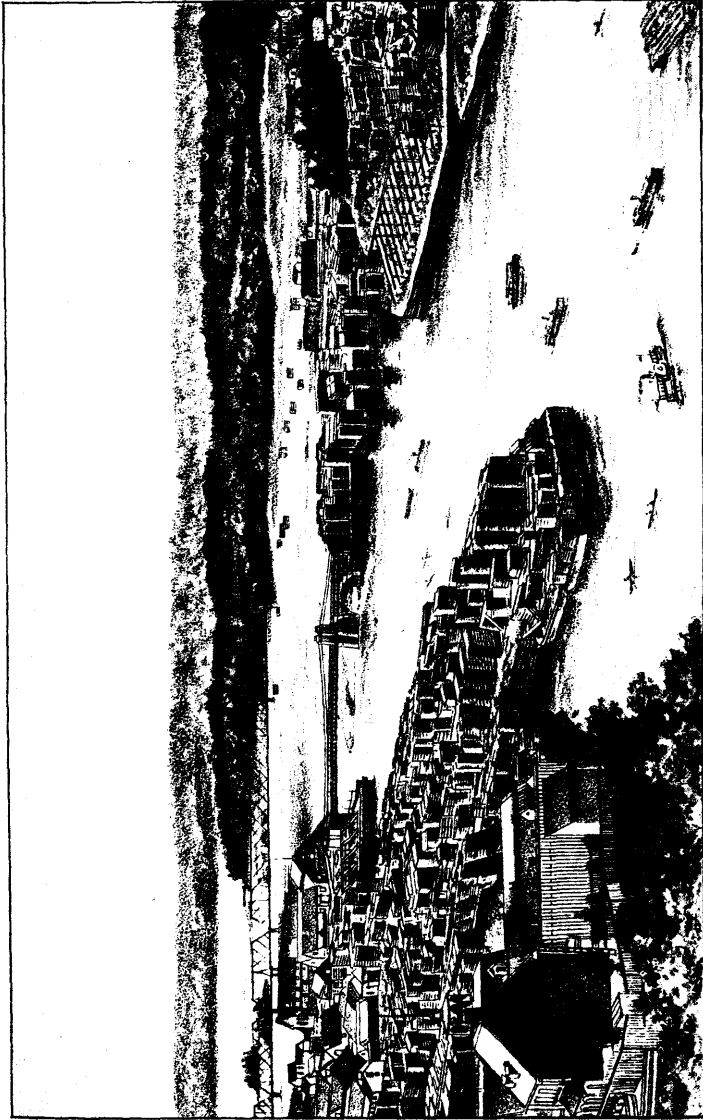


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 UNION SUSPENSION BRIDGE OTTAWA.

Des Joachim's Bridge, Ottawa River, construction.			
Bridges on Temiscouta Road, P.Q., renewals and repairs.			
St. Valentine Bridge,	"	"	"
Petite Nation "	"	"	"
Gatineau "	"	"	"
Portage du Fort "	"	"	"
Dunnville Bridge, Ont.,		"	"
Apohaqui Bridge, N.B.,		"	"
Fort Garry Bridge, Man.,			

J. A. PHILLIPS.



CHAUDIÈRE FALLS, RAILWAY BRIDGE & SUSPENSION BRIDGE & LUMBER YARDS.

APPENDIX No. 20.

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REPORT

ON THE

SLIDE AND BOOMS

IN THE

SAGUENAY RIVER DISTRICT,

BY

JOSEPH ROSA, *Superintendent.*

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## APPENDIX No. 20.\*

## REPORT ON THE SLIDE AND BOOMS, SAGUENAY DISTRICT.

By JOSEPH ROSA, SUPERINTENDENT.

QUEBEC, 27th December, 1882.

SIR,—The Government works are situated on the southern outlet of Lake St. John, known as the Petite Décharge, and extend over six miles from the foot of the lake downwards.

The works were constructed to facilitate the passage of timber and lumber from Lake St. John to the Saguenay River. They consist of a slide 5,026 feet long, 1,344 feet of booms and seven dams varying, in length, from 70 to 231 feet, and in height from 12 to 19 feet, three mooring piers each 12 feet square, and three large mooring posts.

The slide is 5 feet wide at the bottom, and  $5\frac{1}{2}$  to  $2\frac{1}{2}$  feet high on the inside. It is built partly on trestles and partly on crib-work. Wherever the slide is not more than 5 feet from the ground, it rests on crib-work; but when the space between the ground and the slide exceeds 5 feet, it is supported on trestles varying in height from 5 to 22 feet.

The works were begun in 1856 and completed in 1860. From 1856 to 30th June, 1867, they cost \$44,872.79.

During the time of high water in the spring of 1867, about 130 feet of the slide were carried away, and about 100 feet partly broken up. Dam No. 1, 145 feet long and 14 feet high, was also carried away. These damages were repaired in the summer of 1867 and the spring of 1868.

In June 1876, the waters of the lake rose 34 feet above their ordinary level, and dam No. 7 was carried away, as well as the upper portion of the bulkhead and 1,800 feet of the slide; of these latter, 936 feet were attached to the bulkhead, and 864 feet were at the lower end. These damages were temporarily repaired by the Price firm, there being no appropriation for their immediate execution.

In the summer of 1877, dam No. 1 was burned in consequence either of the malice or of the carelessness of some raftsmen. It was rebuilt in 1878-79.

In 1880-81, the control of these works was handed over to the undersigned, and in 1880-81 and 1881-82, 1,239 feet of slide were rebuilt; in 1881-82, dam No. 7 and the bulkhead were rebuilt, and 150 feet of boom with chains, etc., for the protection of the bulkhead, were reconstructed.

Expenditure from 1867 to 30th June, 1882 :

Construction.....	\$ 2,418 50
Repairs.....	36,371 73
Total .....	<u>\$38,790 23</u>

I have the honor to be, Sir,

Your obedient servant,

JOSEPH ROSA,

*Superintendent.*

H. F. PERLEY, Esq.,  
Chief Engineer, Dept. Public Works.

\* At page 276 the report on lighthouses, etc., is referred to as Appendix 20, should read Appendix 19.  
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APPENDIX No. 21.

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REPORT

ON THE

SLIDES AND BOOMS

IN

ST. MAURICE DISTRICT,

BY

*CHARLES LAJOIE, Superintendent.*

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 APPENDIX No. 21.
 

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## REPORT ON SLIDES AND BOOMS, ST. MAURICE DISTRICT.

(By CHARLES LAJOIE, SUPERINTENDENT.)

(Translation.)

THREE RIVERS, 1st December, 1882.

SIR,—I have the honor to transmit herewith the report asked for in your letter of the 14th ultimo. Hoping that it may tend to accomplish the end you have in view, and for which it has been ordered,

I beg to remain, Sir,

Your obedient servant,

CHARLES LAJOIE,

*Superintendent St. Maurice Works.*

F. H. ENNIS, Esq.,

Secretary, Department Public Works.

(Translation.)

OFFICE OF THE SUPERINTENDENT ST. MAURICE WORKS,

THREE RIVERS, 1st December, 1882.

SIR,—In conformity with your letter, No. 15,706, dated 14th November, I beg to submit, for the information of the Hon. Minister of Public Works, a description as detailed as possible of the St. Maurice Works under my superintendence, showing their position, their extent, the nature of the materials used in their construction, their state of repair, and also some general information as to the river and the works upon it.

I have not deemed it necessary to add to this report the plans of the works herein described, the Department being already in possession of the said plans in a report made by J. B. Normand, Esq., on 3rd December 1877, and no notable changes having been made since.

I may state at once that the St. Maurice Works are, generally speaking, in a good condition; nevertheless the many works on this river need, every year, at some one or other of the various stations, repairs, sometimes of considerable extent. The timber used in construction and repairs is usually hemlock and spruce, pine having become very scarce. In the making of booms, pieces of spruce have been used, but the result of the trial is that this timber is not suitable, that it does not last over seven years, and that it should not be used for this purpose.

Of all the works constructed prior to 1867, but little of the originals now remain, nearly all of them having since been renewed. At LaTuque Station, however, the original works are still standing. They were constructed in 1854, and have since undergone some repairs. For several years back these booms have not been set; they have, in fact, never been of any service to the lumber trade, and are now unserviceable. This station, and that of Iroquois on the Vermillion River, were abandoned in



1878, and the caretaker, Mr. Joseph Blondin, was superannuated on the 24th April, 1882.

As there is a considerable quantity of material remaining at LaTuque, I deemed it my duty to place it under the care of Francois Lacroix, who was out of employment, his station having been abandoned. All the materials left under his charge can be utilized at the various other stations.

Work has been done at this station in order to widen the channel of the Fall. Under my superintendence only \$768 have been expended for that purpose, but the results obtained have been satisfactory; the water has not risen nearly so high on the upper stretch of the Fall, and the quantity of logs grounded there has been far less. This is the object sought to be attained. Some more work is, however, needed in order to complete this improvement. There is here a good house, a storehouse and a stable, all in good order. They are located above the Fall.

#### MOUTH OF THE ST. MAURICE.

This station is of great importance, and must always be kept in the best condition possible, for if the booms were to break there would be no means of preventing the timber from going into the St. Lawrence, where it is considered as lost. The position and extent of the works at this station are the same as in 1867, and all the works are in good order.

On St. Christophe Island there is a storehouse, 30 x 50 feet, and a shed which also serves as a house, in pretty good condition. The properties consist of:—1st, St. Christophe Island, from the highway, say 30 acres; 2nd, Caron Island, 8 acres; and at the head of the boom, west side, about 6 acres.

The channel between St. Christophe Island and Caron Island was deepened in 1880; 4,500 yards of earth removed, in order to facilitate the passage of the timber held by the booms in the east channel.

The works properly so called may be described as follows: The booms measure 10,267 lineal feet, and vary from 2 to 6 feet in width; within the past three years they have been covered with three-inch deals for a length of 7,000 feet.

All the old piers have been rebuilt or repaired since 1867. In 1873-4 six new piers were constructed, and three in 1881-2, making the total number of piers forty-six, and all of them in pretty good condition. Five mooring piers, also in good condition; two boats, two barges, two scows, and the tools and outfit required for the station, all in good condition; about 118,000 lbs. of chain cable of various dimensions, varying from  $\frac{3}{8}$  to  $1\frac{1}{2}$  inch, and ten anchors.

#### CAP CORNEILLE.

The works at this station were commenced in 1871. These booms are of great importance. They sometimes hold over 200,000 logs. If this quantity were added to the number already held at the mouth, serious disaster and heavy loss would result; for if the boom at the mouth were to give way there is no means of stopping the timber. It would enter the St. Lawrence a few hundred feet further on, and there it is considered as lost to the lumbermen.

This station, Cap Corneille, is in good condition. The works may be described as follows: Twenty-four large piers, two of which were constructed in 1876; two others, having been undermined by the current, upset and destroyed, were replaced by new piers in 1873. There are six mooring piers. All these piers are in good condition. The booms are 7,650 feet in length and from 2 feet 8 inches to 5 feet in width, and are in good condition. About 91,000 feet of chain  $\frac{3}{8}$  to  $1\frac{1}{2}$  inch. Six piers have been repaired since 1878. Five anchors, weighing in all 3,000 pounds, one scow (unserviceable), two good barges, and a quantity of tools and gear in good condition.

#### SHAWENEGAN.

This station comprises Les Grès and the lower portion of Les Hêtres, an extent of over ten miles. The Bay of Shawenegan is in the centre, and here is situated

the house, 30x36 feet, with a store house, shed, stable, and blacksmith shop, etc., all in good order. At the Fall there is an old house in very bad condition, and store house in pretty good order. At Les Grès a small house 15x18 feet was built in 1881. Along this station are twenty large sloping piers, two of which are of no use whatever, and forty-two mooring piers. All these piers, except the two which are no longer used, are in good order. There are also four scows, six barges and one boat in good order. The quantity of chain is set down at 75,000 lbs. of various sizes, and eighteen anchors. The length of boom for the Bay and Fall is 14,007 feet—4,743 feet of 2 to 3 feet in width, 5,693 feet of 4 to 5 feet, 3,371 feet of from 3 to 9 feet, and 200 feet of single. At Les Grès, 3,848 feet of single and 3,300 feet of 3 feet. In 1880 a pier 124x15x12 feet was erected on the Grès Rock for the protection of the mills of Messrs. Baptist & Co. This pier is located at the same place as the old pier, of which hardly anything remained in 1880.

The booms at Les Hêtres measure 4,174 feet. They are all of one and two pieces and are in good condition.

#### LA GRANDE MÈRE.

The booms at this station start from Grande Mère Island, between the two Falls, and run up stream for a distance of 1,500 feet; their width is from 3 to 5 feet and they are in good order, except one piece of 200 feet which must be remade next spring.

Below the Fall a single boom, 4,200, and 600 feet at Les Hêtres. Nearly every year a certain number of pieces have to be removed, either through decay or breakage. There are six mooring piers in good condition. In 1878, at the head of the old slide a bulkhead 140 x 32 x 15 was erected to hold the timber at that point and prevent it from being broken up and accumulating there, as it did at times in large quantities. This bulkhead has stood the high water without any damage. Another bulkhead was erected in 1880 on Little Piles rock, in place of the old one erected in 1860, which was partially carried away in 1873, repaired in 1874 and entirely carried away in 1877. A new bulkhead, 110 x 7 feet in height, was severely tested but received no damage. It is very solid, and it serves to prevent the timber from being carried upon the rock where it is liable to be broken up and to accumulate, sometimes in large quantities.

There are here two scows, one of which is considered unserviceable; three good barges; about 24,000 lbs. of chain; four anchors weighing 4,300 lbs.; one house, one storehouse, one barn, one stable, one ice-house, and one blacksmith shop, all in good order; and also 20 acres of land.

#### LES GRANDES PILES.

The dam at Grandes Piles was finished in 1875-76. Since then a large part of it has been carried away. I do not think it necessary to make a more detailed report, the project of reconstructing it having, I believe, been abandoned.

The whole respectfully submitted,

CHARLES LAJOIE

*Supt. St. Maurice Works.*

F. H. ENNIS, Esq.,

Secretary, Department of Public Works, Ottawa.

APPENDIX No. 22.

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REPORT

ON THE

OTTAWA DISTRICT WORKS,

BY

G. P. BROPHY, Superintendent.

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 APPENDIX No. 22.
 

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## REPORT ON THE OTTAWA RIVER WORKS.

(By G. P. BROPHY, SUPERINTENDENT.)

OTTAWA, 23rd November, 1882.

SIR,—I have the honor to transmit to the Department, a description of the works under my charge, showing dimensions, &c.

I have the honor to be, Sir,  
Your obedient servant,

GEORGE P. BROPHY,  
*Superintending Engineer, Ottawa River Works.*

F. H. ENNIS, Esq.,  
Secretary of Public Works,  
Ottawa.

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*Sault au Recollet Station,*

Which is situated on the branch of the Ottawa River, known as Rivière des Prairies, back of Montreal, was improved by the construction of a boom at the head of the rapids immediately above Port Viau; this boom was placed there for the purpose of guiding the timber passing in bands or cribs and conducting the same through the proper opening of the bridge to a safe channel at the head of the Sault au Recollet Rapids.

This is a stiff 6-ply boom, in sections, 36x24x1,000 feet long, supported by four piers, 35 x 25 x 21 feet high, and was built in 1871-72.

*Carillon.*

At Carillon Station, which is about 68 miles below this city, an improvement for the running of square timber, sawed lumber and saw-logs was petitioned for by those connected with the trade in 1857. It had been found that at certain seasons of the year the water was so shallow on the rapids that the running of timber was attended with a great deal of danger and expense. To obviate such, a pier-dam, some 3,000 feet in length, was constructed at an expense of \$26,563, and it served a very good purpose until it was replaced by a dam recently constructed across the Ottawa by the Department of Railways and Canals, to furnish water for the new Carillon Canal. A crib slide has been cut through this dam, and it was first used for the passage of timber last May. To fully meet the requirements of the raftsmen however, an extension of the guide booms at the head is urgently needed.

This has been duly represented to the proper quarter, and no doubt will be promptly attended to by those controlling the construction of the new dam and slide.

*South Chaudière.*

At the South Chaudière Station, before the Government made any special improvement for the benefit of the lumber trade, Mr. George Buchanan, in 1832, con-

structed a slide between what is known as Albert and Victoria Islands on the one side, and Chaudière Island on the other; but as the trade increased, additional facilities were required, and the Government, in 1845, constructed the series of slides now used. Prior to Mr. Buchanan's enterprise, timber was passed over the Great Chaudière Falls, and collected in a retaining boom below, opposite the village of Bytown.

In 1851, applications were made to the Government of the day, for the privilege of using the water power at this station for manufacturing purposes, and a hydraulic survey was carried out by order of the Commissioners of Public Works. To afford and govern the necessary supply of water, dams and bulkheads were constructed in 1854. The purchasers of the water lots were principally those engaged in the manufacture of sawed lumber, and in no place in this Province can their mills be surpassed, either as regards the quantity and quality of the lumber cut, or their improved class of machinery.

As an evidence of the growth of this industrial branch of business, it may be stated, that in 1854, only about 500 saw-logs arrived at this station, whereas the supply for this season will not fall much short of a million pieces.

In addition to the saw-mills there are machine shops, grist mills and a variety of other manufacturing establishments.

An extensive system of boomage has also been carried out above the falls, which guarantees the running of timber on occasions on which it would be impossible to pass at all without these safeguards.

The *Union Suspension Bridge* between the Cities of Ottawa and Hull, and the line of wooden bridges forming its approaches from the main shore, were built in 1843-4 at a cost of \$65,448.79. This bridge is the third thrown across the river here; those which preceded it, having been defectively constructed, were not long in existence. The present structure was erected under the direction of Samuel Keefer, Esq., C.E., at that time Chief Engineer of the Board of Works, and is of such a permanent character as to warrant the conclusion that it will last for many years to come; the more especially as its principal parts consisting of suspension cables and wires have from time to time been overhauled and strengthened; iron girders substituted for wooden beams, and its superstructure of wood entirely renewed within the past year.

*List of Works at this Station.*

	Feet.
Guide booms for square timber (supported by six piers) aggregate length.....	3,234
Retaining booms for saw logs (seven piers).....length	4,389
First slide (26 feet wide).....	150
Second slide " .....	380
Third " " .....	278
Fourth " " .....	66
Hydraulic dam.....	2,607
Entrance bulkhead and pier dam.....	148
Three ply stiff booms at entrance to first slide.....	957
Booms and side piers between 1st and 2nd, 2nd and 3rd, and 3rd and 4th slides.....	1,732
Stone pier dam from Coffin to head of Victoria Island	346
Bulkhead with six gates from Albert to Chaudière Island, 14 feet high .....	82
Hydraulic dam (flat) 12 feet high, from Chaudière to Victoria Island.....	330
Union Suspension Bridge, 23 feet 6 inches wide.....	229

There are also a stone toll-house on Union Bridge reserve; a wooden frame house for slide master and a wooden store-house for ropes, chains, boats, tools, etc., on Amelia Island reserve.

*Hull Station.*

At the Hull or north side of the Great Chaudière Falls, the late Philemon Wright, Esq., settled about the beginning of the present century. He was the pioneer in the lumber business of this district and in 1829 constructed a slide at Hull for the passage of timber; and in the year 1849 it was thought desirable that a work of such importance should be the property of the Government, consequently Her Majesty, as represented by the Hon. E. P. Taché, Chief Commissioner of Public Works, became the purchaser of the slide and its appurtenances for the sum of \$40,000. As early as 1806 Mr. Wright lumbered in Ottawa County, and his was the first raft that floated down the river from these parts.

A few years ago this slide was narrowed and adapted to the passage of saw-logs exclusively. The booms and wing dams at this station are very extensive and serve the purpose of diverting the logs from the great falls in the immediate vicinity.

As at Ottawa on the south side of the river, the water privileges at Hull are made available for manufacturing purposes; they formed a portion of the property of the Wright estate, and the heirs have either developed them themselves or disposed of them to enterprising mill owners and manufacturers.

*Works at this Station.*

	Feet.
Guide boom for slide, supported by six piers..... length	2,376
Stone guard pier at entrance of slide, 10' x 18'.....	594
Flat wing dam (pine) from guard pier, 5 feet high..	346
Stone pier dam, laid in cement, forming side of canal leading to slide 8' x 8'.....	280
Six-ply boom, from stone dam to head of slide.....	173
Wing pier dam (pine) at head of slide.....	99
Slide (narrowed).....	443
Wing pier dam 9' x 10'.....	58
Stone dam from island to main shore, 10' x 18'.....	49

Also bulkhead with side piers at outlet of the channel or basin lying between the foot of the slide and the Ottawa River.

*Little Chaudière.*

To avoid delays which necessarily took place when the bulk of the timber from the Upper Ottawa arrived at the Deschênes Rapids, the channel on the northerly side of the river not being so favorable for the running of timber as that on the south-erly side, in consequence of which the greater part of the timber found its way into the South Chaudière slide, it was deemed advisable in 1857, in response to a numer-ously signed petition from the Ottawa lumbermen, to improve the northerly channel for the descent of timber and thus partially ease the traffic of the Ottawa slide. With that object in view, a crib slide was built along the side of the rapids adjoining the Township of Hull; and at a later date an excavation was made through the bed of flat rock above the slide, both of which improvements may be considered as feeders to the slide at Hull about a mile further down stream.

These works are now used exclusively in connection with the saw-log trade and consist of:—

	Feet.
Long guard pier (pine) above Islands, 8x10' feet.....	300
Single boom hanging from Island and supported by 2 piers....	400
Pier dam below Island 12x18.....	400
Crib slide, 26 feet wide.....	140
Wing flat dam 4 feet high from Island outwards.....	300

*Remous.*

The Remous boom and piers are situated in the Ottawa River, about four miles above this city. Their construction in 1857 became a matter of necessity on account of the frequent breaking loose of bands of square timber and parcels of saw-logs in dangerous proximity to the rapids below. The usefulness of these works, by way of saving valuable property, since they came into operation, has made itself apparent to those engaged in the Ottawa lumber trade.

This is a single boom supported by five piers its length is 7,920 feet.

*Chats.*

At the Chats Station, about 33 miles above this city, a crib slide was built by the late Mr. George Buchanan, to overcome a fall of 42 feet. The Government, for the same reason that prompted the purchase of the Hull slide, resumed possession of the slide channel at the expiration of a lease that had been given to Mr. Buchanan by the proper authorities; and since it came under the management of the Department the works have been rebuilt and very much extended and improved; and this is now one of the most serviceable slides in the Ottawa valley.

The works at this place consist of:—

	Feet in length
Pine guard pier on Island at entrance 10x12 feet.....	175
Flat dam, 12 feet high across timber channel, head of Victoria Island.....	250
Pine pier forming entrance bulkhead at upper end of canal, span 26 feet height 12 feet, canal leading to slide.....	1700
Crib slide, width 25 feet.....	350

In 1871 a dam 875 feet in length was built for the purpose of supplying water to the slide to facilitate the passage of late arrivals of timber; it is situated on a reef and constitutes a valuable low-water improvement.

*Head of Chats.*

At the head of Chats Rapids, about three and a-half miles further up the river than the last-mentioned station, three snubbing or mooring piers 18x20 feet were constructed in 1857. Rafts, preparatory to running the rapids, are moored to these piers, and the cribs are detached and passed through this reach of the river as occasion requires. Two of these piers have been wrecked and will have to be reconstructed this winter.

*Cheneaux.*

The Cheneaux boom is situated in the rapids at the head of the Chats Lake and about five and a-half miles below the village of Portage du Fort. It is kept in position by piers of ordinary construction, raised above water and by sunken or anchor piers. The growth of the staple trade of the Ottawa, in the direction of the manufacture of sawed lumber, in connection with the increased supply of square timber from the higher limits on this stream and its tributaries, compelled the construction of the Cheneaux boom in 1860.

The improvements at this station, with the various alterations, which from experience were found necessary in placing the booms, have been the means of holding in safety much valuable property that would otherwise have been wrecked and scattered over the whole expanse of the Chats Lake during the storms, that are of frequent occurrence there. About 1871, the business of this station, as regards the passage of saw-logs from the Upper Ottawa territory, had so increased as to demand the use of booms of very much greater strength and capacity than were in existence at that time; consequently the Government, in 1872-3, at a cost of about \$15,000, met

the views of the lumbermen and largely added to the extent and capacity of the works, which consist of:—

	Feet in length.
Double boom 15x30 inches.....	6,000
Single do do do .....	10,630
4 support piers 18x18x18 feet.	
22 sunken or anchor piers 16x16x10 feet.	
2 floating platforms, suitable heavy mooring chains and buoys.	

#### *Portage du Fort.*

At Portage du Fort station, about fifty-five miles above this city, there are rapids and a fall of twenty feet. At so important a point, the attention of the early lumberers on the river was directed to the removal of this obstruction, and in 1838-9 Mr. Hugh Bolton constructed a crib slide, with that object in view; but his efforts were not crowned with that degree of success that such a laudable enterprise would seem to have deserved, as I am informed that at no station on the river was there greater danger to life and property than at his slide.

The spring floods of 1840 displaced the works, but they were reconstructed by Mr. Poupore, sr., in 1841, and by him transferred to the Department, about the year 1845; but whether for a consideration or not I cannot say.

A new slide was built by the Government in 1852, and its working has been attended with the best results. It has been almost wholly reconstructed since that date.

Works at that station:—

Guide boom at entrance of slide, (100 feet of which is six-ply and 610 feet double timbers), supported by four piers 710 feet in length; crib slide twenty-six feet wide, 350 feet in length.

#### *Mountain.*

At the Mountain station, which is about six miles above Portage du Fort, an obstruction to the descent of timber, in the shape of falls and a rapid (twenty feet in height) presents itself. In 1843-4 a crib slide was made for the benefit of the lumber merchants. The principle on which it was at first constructed was very defective, and it has since had to be lengthened and improved. A second bulkhead was found to be a great desideratum in order to lessen the abrupt pitch, when the slide had only one of these appliances. A long guard pier was also built below the outlet of the slide to neutralize the effects of a strong eddy, or cross current, that materially interfered with the safe passage of timber. The difference between high and low water levels at this place is about thirteen feet. Since 1867 a large portion of the works have been built over again.

The works at this station are:—

	Feet.
Double guide boom at head of slide.....	297
Two pine piers 14x16, and bulkhead span.....	26
Crib slide, twenty-six feet wide.....	572

#### *Calumet.*

At the Grand Calumet Falls, about nine miles above Portage du Fort, and sixty-four miles distant from this city, a formidable difficulty in the way of passing timber existed prior to 1843-4; and the Government, about that period, at a heavy outlay, caused two crib slides and the necessary guide booms to be constructed in order that cribs might avoid the falls and intricate channels, where the difference of level is as much as fifty-six feet. Some miscalculations as to the placing of the entrance sills





*Rocher Capitaine.*

At this station, on the Ottawa River, about 160 miles above this city, there is a dangerous rapid, having intricate channels, eddying whirlpools, boulder deposits and rocky projections. Many raftsmen have lost their lives at this point, and frequently timber has been wrecked and detained. To ameliorate this state of things, the following improvements were consummated by the Government in 1873-74:—

	Feet in length.
Crib slide, 27½ feet wide.....	200
Pier on south side, 12 feet wide by 16 feet high.....	395
Pier on north side, 12 " " 12 " .....	180
Guide boom on north side (double timber) 34x17 inches.....	240
Support pier, 10x12x12 feet.....	.....
Bulkhead with suitable appliances at entrance of slide.....	.....

TRIBUTARIES OF THE OTTAWA.

*The South Nation River.*

The South Nation falls into the Ottawa from the south, about thirty-six miles below this city, and although not a large stream, it drains a comparatively well settled portion of country, furnishing principally for the Montreal market, considerable quantities of flatted timber of various descriptions, and cordwood, in addition to square timber for dimension and building purposes. The works are near the village of Plantaganet, within five miles of the mouth, and were built by the Government in 1880-81, and consist of—

	Feet in length.
A crib slide, 29 feet wide.....	80
A two-ply guide boom.....	450
Two support piers, 12x12x10 feet high.....	.....
Flat dam on south side, below slide, 2 feet high.....	150
"    north    "    "    5    "    .....	130

*Gatineau River.*

The Gatineau River is the largest tributary of the Ottawa, and their confluence is at a distance of about two miles below this city. It is a northern stream, about 400 miles in length, and it is estimated that about 9,000 square miles of territory are drained by it.

The Gatineau limits, during the early years of the present century, not only afforded large quantities of valuable square timber, but also immense numbers of saw-logs, for the supply of extensive mills on the stream itself; at Hawkesbury, on the Ottawa, and other places. The yield has been continued ever since, and the number of saw-logs, especially, has increased to such an extent that nearly 500,000 pieces of that description of timber are annually floated to the Government booms and works at the mouth of the stream, in addition to large numbers of pieces of cedar and railway ties, etc. The timber is floated in single pieces from the upper reaches of the river, and is guided through the Gatineau Canal into the safety pond, and thence through a creek to the rafting ground, on the northerly bank of the Ottawa.

The Government improvements are all situated within 1½ miles or so from the mouth of the Gatineau, and were originally constructed in 1848. Since that date, however, they have been, on several occasions, much enlarged and strengthened—notably in 1874, when the boom was enlarged and improved, and iron plates and links inserted, in order to keep pace with the rapid growth and extension of the trade on this very important tributary.

The works may be described as follows:—

Ten piers rising above water to support the main boom.

Eight anchor piers 12 feet by 12 feet by 10 feet, to support the main boom.

	Inches.	Feet in length.
New boom, 6-ply, plated.....	44x36	2,390
Old boom, 6-ply.....	45x27	1,338
Double boom.....	31x15	742
Double boom.....	27x20	626
Trip boom.....	24x20	410
Old trip boom.....	18x14	350
Division boom in pond attached to six anchor piers.....		2,000
Boom at mouth of creek.....		185
Length of old canal.....		2,191
Length of bridge at old canal, width 13 feet.....		
King truss, length of span between piers, 56 feet.....		150
Length of new canal.....		760
New canal bridge, span between piers, 51 feet.....		128

Anchor and floating stage at rafting ground, near junction of creek, and Ottawa River, also a camp and storehouse telephonically connected with this office, and those of the lumbering establishments in the vicinity.

#### *Madawaska River.*

The Madawaska River, a most important feeder of the Ottawa, falls into the latter, from the south, at that portion of it known as the Chats Lake, about 40 miles above this city, after a course of about 250 miles.

It drains an area of upwards of 400 square miles, and on its banks may be found some of the best white and red pine on the continent.

So vast have been the resources of this valuable territory, that although it has supplied the Quebec and other markets with very large quantities of lumber of first quality, for nearly fifty years, its limits or berths even now appear to be well stocked with merchantable timber.

The character of the river throughout a great portion of its length (especially when it is in a state of flood) may be said to be a succession of rapids, falls, swift currents and strong eddies. To enable them to take their timber to the Ottawa River, within a reasonable time and with as little damage to it as possible, the pioneer lumbermen on the Madawaska and the smaller streams emptying themselves into it, were under the necessity of constructing temporary improvements at their own expense.

With the view of having a more effective organization and better regulations, the Madawaska River Improvement Company was formed under the River Improvement Act. Their works for a considerable period, were found very serviceable on the upper reaches of the river; latterly, however, they have fallen into disrepair, and consequently into disrepute.

In the winter of 1843-4, the Government of the Province came to the relief of the trade, and commenced the slides and booms at High Falls, and the dams and piers at Ragged Chute, and made other arrangements for the passage of timber between this point and the mouth of the river, a distance of about thirty-five miles.

The slide at High Falls failed to produce any good result on the river driving for the first two years, as the bottom was too high to admit of timber being passed through. The Ragged Chute works also failed, and had to be abandoned.

In the winter of 1845-6, their reconstruction was commenced, and after raising the river 12 feet, by a dam at the head of High Falls, a flow of water was procured for the single stick slide, and this formidable obstruction to the descent of timber was overcome. A number of side dams have been constructed further down stream, to

flood out dangerous shoals and prevent the "jamming" of timber in "chenail." In 1854, a crib slide and system of booms were brought into use at Arnprior. Extensive works of reconstruction and repairs have been in progress at Ragged Chute, and High Falls stations, and will be completed before the opening of navigation in 1884. The timber and saw-logs coming down the Madawaska are floated in single sticks until they reach the large retaining boom at the mouth of the river, where the pieces of timber are collected, formed into cribs, and rafted; and the saw-logs put into booms for safe driving on the Ottawa, to their place of destination.

*The Opeongo Creek.*

The Opeongo Creek falls into the Madawaska River, at about 106 miles from its mouth. In the winter of 1865-6, this stream was improved by constructing three flat dams, with slides through them, and by repairing and placing of side dams, to afford an increased supply of water, and thus enable the limit holders and manufacturers of timber in this remote region to take the fruits of their industry to market. The improvements spread over a reach of the creek of about three miles, are situated between Victoria Lake and the mouth of the creek, and, on an average, are distant about 10 miles from the latter.

The dimensions of the works are as follows:—

*At Mouth of the River.*

Old piers, 18.	
New piers, 5.	
Anchor piers, 2.	
Ring bolts, 4.	
Large buoys, 2.	
	Feet in length.
Single boom.....	7,920
Double boom.....	1,500

*Arnprior.*

Safety boom, above bridge.....	400
Wooden bridge over river.....	182
Support pier, 26 x 26.....	377
Guide booms at head of slide.....	250
Dam across river.....	180
Crib slide, 26 feet wide.....	180
Guard pier, on west side, below slide.....	180

*Flat Rapids.*

Flat dam on north side.....	500
Flat dam on south side.....	300

*Balurer's Island.*

Flat dam.....	116
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*Burnstown.*

Boom, supported by three piers.....	700
-------------------------------------	-----

*Long Rapids.*

Dam, with waste weir for passing timber.

*Springtown.*

Boom, supported by four piers..... 740

*Calabogie Lake.*

Double boom, supported by two piers..... 3,040  
 Boom at foot of Lake..... 600

*High Falls.*

Main 10-ply guide boom, supported by four large piers..... 692  
 Dam across head of Falls..... 300  
 Single stick slide, 6 feet wide, with fall of 60 feet..... 1,200  
 Boom supported by piers, at foot of slide..... 355  
 Two dams, below foot of long slide..... 140  
 Six flat dams, at and near Barrett's Chute..... 790

*Ragged Chute.*

Dams on south side, at head of Falls..... 950  
 Boom, double, 200 feet single, 100 feet..... 300  
 Pier adjoining head of Falls..... 150  
 Boom pier, 16 x 16 x 15 feet.....  
 Flat dam adjoining pier..... 77  
 Flat dam on north side, at head of Falls..... 80  
 Eddy pier at foot of Falls..... 390  
 Boom between Ragged Chute and High Falls..... 1,050

*Boniface Rapids.*

Flat dam below rapids, 10 feet high x 70 feet in length.  
 " " at rapids 10 " " x

*Ducks' Island.*

Two flat dams, 10 feet high x 80 feet in length.

*Bailey's Chute.*

Flat dam on south side, 10 feet high x 180 feet in length.  
 " " " " 10 " " x 70 " "  
 " " north side, 10 " " x 150 " "

*Chain Rapids.*

Boom supported by four piers and three Islands, at head of  
 slide..... 3,960  
 Single stick slide, 6 feet wide..... 250

*Opeongo Creek.*

Dam with slide, 40 x 10 feet, 19 feet high x 80 feet in length.  
 " " " 10.9 " x 84 " "  
 " " " 16.6 " x 96 " "  
 Wing dam 5 " x 39 " "  
 " 6 " x 50 " "  
 " 5.6 " x 78 " "

*Coulonge River.*

The Coulonge River empties itself into the Ottawa, from the north side, about 80 miles above this city, after a course of 160 miles; it drains an area of about 1,800 square miles. It had been lumbered on for a number of years, but it was not until the single stick slide, 2,956 feet in length, was built, in the winter of 1864-65, at High Falls and Rapids, about five miles from the mouth of the stream, that it was possible to take timber of any description past this station, without a very large portion of it being damaged or lost. The local lumbermen have made certain improvements at High Falls, consisting of a single stick slide, which was badly located, and altogether too short; a guide boom and piers at the head of the slide, and certain dams in the rapids below the falls, but although these involved a large outlay, they were only in a very limited degree useful.

For a long distance above High Falls, the river is all that could be desired for timber driving purposes, but some chutes occur, which had to be dammed and improved by the lumbermen.

The system of driving in single sticks prevails on this river, as on the other tributaries described, and the timber is collected in the retaining boom at the mouth, where it is rafted.

Considerable quantities of very good white and red pine are taken from this river, and doubtless, will be for years to come, together with large quantities of saw-logs.

Feet in length.

The Coulonge works, consist of:—

Single stick slide, 6 feet wide .....	2,956
Flat dam at head of chute, average height of which is 6 feet.	173

Guide boom and piers at head of slide, and retaining boom and piers near mouth of river.

*The Black River,*

From the north, empties itself into the Ottawa, about nine miles above the mouth of the Coulonge, and near the foot of the Culbute Chenail, which is formed by the Allumette Island dividing the Ottawa River into two channels. Its length is 128 miles, and the territory drained by this stream is about 1,120 square miles.

The works on this stream were undertaken by the late Mr. Poupore, senior, for the purpose of conducting timber past High Falls, near the mouth, and were purchased by the Government from Mr. Poupore, M.P.P. The slide was renewed in 1870-71. The improvements consist of:—

Feet in length.

Retaining boom at mouth of river, single stick slide 6 feet wide	
at High Falls, about one mile from the mouth:.....	934
Glance pier, 8 feet high, 18 feet wide.....	346
Flat dam, 5 feet high.....	135
Single stick boom .....	877
“    “    “    across river, about half a mile above slide...	262

*Petewawa River.*

The Petewawa River, from the south side, has its confluence with the Ottawa, 110 miles above this city. Length, 138 miles; territory drained, 2,200 square miles.

Rapids, swift currents and chutes are met with on this river, at short intervals, from its head waters to the mouth. It had been lumbered on for many years, and, as was the case on the Madawaska, the manufacturers of timber, in the early history of the trade, had to construct such temporary dams, etc., as their then limited business required.

On the main stream of the Petewawa, within a distance of five miles from the mouth, four single stick slides, with the necessary dams and guide booms, were built at the chutes by the Government in 1867-8.

The north branch of the stream was afterwards improved at public expense, and two large reservoir dams built at Thompson's Rapids and Cedar Lake for the purpose of retaining the waters of the chain of large lakes in the neighborhood.

The peculiar formation of the bed and banks of the river rendered these steps necessary, and it was found that the Petewawa River, in its natural state, suddenly rose to flood height in spring, and as suddenly subsided; but with the regulating dams referred to, the water is retained and the supply for the raftsmen, at the lower reaches, is so regulated and controlled as to be let off when it is most required.

An excellent quality of white and red pine is obtained from this stream, but it is only on the upper limits that this description can be obtained in large quantities. Saw-logs are also a staple article of manufacture.

Single stick driving to the boom at the mouth is the rule here.

The works on the main stream are:—

*Mouth of River.*

Retaining boom supported by 6 piers.....	Feet. 4,000
------------------------------------------	----------------

*First Chute.*

Guide boom at head of slide, north side .....	248
" " " south " .....	541
Dam on north side of slide, 10 feet high.....	118
" south " " 10 " .....	359
Single stick slide, 6 feet wide.....	563

*Second Chute.*

Guide boom at head of slide, north side .....	332
" " " south " .....	1,169
Dam on north side of slide, 12 feet high.....	489
" south " " 10 " .....	287
Single stick slide, 6 feet wide.....	554

*Third Chute.*

Guide boom at head of slide, north side.....	243
" " " south " .....	586
Dam on north side of slide, 10 feet high.....	97
" south " " 10 " .....	101
Single stick slide, 6 feet wide.....	1,346

*Bois Dur Station.*

Flat dam .....	116
Pier dam .....	10x10x250
Single stick slide, 6 feet wide.....	250
Guide boom.....	950

ON THE NORTH BRANCH.

*Half Mile Rapids.*

Flat dam, 9 feet high x 160 feet.

*Crooked Chute.*

Flat dam, 12 feet high x 100 feet.  
 Single stick slide, 6 feet wide, 250 feet.  
 Guide boom at head of slide, 400 feet.

*Thompson's Rapids.*

Dam, 188 feet.  
 Chenail dam, north shore, 5 feet high, 26 feet.

*At upper end of Lake Traverse.*

Boom, 500 feet.  
 Support pier, 15 x 15 feet.  
 Flat dam, 8 feet high, 175 feet.  
 Single stick slide, 6 feet wide, 1,400 feet.

*Series of improvements between Lake Traverse Slide and High Falls as follows:—*

Flat dam, 6 feet high, 120 feet.  
 " 4 feet high x 86 feet.  
 Glance pier, 6x10x100 feet.  
 Dam, 12 feet high x 70 feet.  
 " 5 " x 130 feet.  
 Flat dam, 12 feet high x 100 feet.  
 " 5 " x 150 "  
 " 5 " x 100 "  
 " 11 " x 150 "  
 " 5 " x 100 "

	Feet.
Guide boom (single) at High Falls.....	400
Single stick slide " 6 feet wide.....	480
Flat dam " 10 feet high.....	260

*Sawyer's Bay.*

Boom..... 2,671

*Meno Rapids Lake.*

Flat dam, 9 feet high x 200 feet.

*Below Trout Lake.*

Flat dam, 9 feet high x 160 feet.

*Strong Eddy.*

Pier 8 feet 4 inches x 10 x 93 feet.

*Cedar Island.*

Pier, 5 x 10 x 108 feet.

*Foot of Devil's Chute.*

Pier, 5 x 8 x 40 feet.



*Devil's Chute.*

Wing pier, 8 x 12 x 90 feet.

*Elbow Rapids.*

Flat dam, 7 x 63 feet.

*Foot of Long Sault (north).*

Pier, 5 x 10 x 130 feet.

*Foot of Long Sault (south).*

Pier, 6 x 10 x 50 feet.

*Middle of Long Sault (north).*

Angle pier, 8 x 12 x 40 feet.

*Middle of Long Sault (south).*

Angle Pier, 8 x 12 x 60 feet.

*Head of Long Sault (north).*

Angle pier, 12 x 12 x 23 feet.

*Head of Long Sault (south).*

Angle pier, 12 x 18 x 39 feet.

*South Shore.*

Flat dam, 20 x 87 feet.

Pier at back of dam, 10 x 10 x 20 feet.

*North Shore.*

Side pier, 8 x 12 x 184 feet.

*South Shore,*

Side pier, 10 x 10 x 90 feet.

*Cedar Lake.*

Regulating dam main outlet of lake, 5 x 407 feet.

Pier dam at second outlet of lake, 8 x 6 x 300 feet.

*Rivière du Moine.*

The Dumoine River is the highest tributary of the Ottawa that has been improved at public expense; its mouth is 150 miles above this city. Length of river about 120 miles. Territory drained 1,600 square miles. Pine timber and saw-logs are obtained from its limits, and from present appearances, the saw-log trade will be largely increased. A joint-stock company in 1851-2 by the construction of single stick slide and booms improved the Dumoine, and somewhat



APPENDIX No. 23.

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REPORT

ON THE

SLIDES AND BOOMS

IN

TRENT DISTRICT,

BY

*THOMAS D. BELCHER, Superintendent.*

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## APPENDIX No. 23.

## REPORT ON SLIDES AND BOOMS, TRENT DISTRICT.

(By THOMAS D. BELCHER, SUPERINTENDENT.)

RIVER TRENT AND INLAND NAVIGATION WORKS,  
ENGINEER'S OFFICE, PETERBOROUGH, January 1883.

SIR,—In accordance with your request I have the honor to furnish the following detailed description of the works under my charge, as they at present exist, known as the Trent Navigation Works.

The waters on which these works are erected, with their branches, permeate through nearly every portion of Midland Ontario, and can only be equalled in magnitude by the Ottawa River and its tributaries.

They take their source in the County of Haliburton, in the township of Havelock, not more than half a mile from the head waters of the Madawaska, and a little more from the head water of the Muskoka rivers, and flow in a southerly direction—consisting in their course of numerous large lakes—for a distance of about ninety miles, reaching the summit level of the intended water connection between the Georgian Bay and the Bay of Quinté, *via* the Trent Canal Works (from their source to this summit level, Balsam Lake, they are known as the Gull River waters), they then flow in a south-easterly course and empty into the Bay of Quinté at Trenton.

The works are divided into two divisions, *viz.*: those erected exclusively for the descent of timber, logs, etc., and the benefit of the lumber trade, and those for the improvement of navigation. The former are controlled by this Department, but the latter are under the control of the Department of Railways and Canals.

The former comprises such works as slides, dams, booms, etc., and the latter locks, canals, dams, bridges, etc.

Proceeding upwards from the outlet into the Bay of Quinté, the following works occur at various stations taken in succession.

## WIDOW HARRIS' RAPIDS.

A stone dam 1,135 feet long, 10 feet base, extending across the river as far as an island in midstream which directs the river into one channel and thereby increases its depth. This dam was erected for the benefit of the lumber trade.

## CHISHOLM'S RAPIDS.

These rapids occur six and a-half miles above Widow Harris' Rapids, which distance is navigable for boats of 4 feet 6 inches draught at low water. The works consist of a canal 2,927 feet in length through limestone, of an average breadth of 40 feet.

A lock of good substantial masonry, 133 feet 2 inches in length and 32 feet 6 inches in breadth between the quoins, with a lift of 11 feet 1 inch and a depth of 4 feet 6 inches of water on lower sill.

A dam of truss-work 715 feet long, 32 feet base and 6 feet high, with two waste weirs. A slide 100 feet long and 50 feet wide with 2 feet draught, that is, when the water is level with apex of dam, there is a depth of two feet of water on stop-log sill at head of slide.

A grist-mill and a saw-mill are in operation here, the power being the surplus water, and I am not aware that the proprietor, Mr. Morgan, has a license from Government to use the surplus water. The water power here is not utilized as it should be. It was leased to Mr. James Cummings on the 14th November, 1853, and has not since been used by him or his executors.

There are enterprising men who would be glad to get a grant from Government, of a portion of surplus water running to waste, and erect some industry immediately, but are detained from so doing by Mr. Cummings' lease. I beg to draw the attention of the Department to this matter, which is, I presume, for the Department of Railways and Canals, and to state that I am sure it was not the intention of Government, when granting the lease to Mr. Cummings, that it should be locked up.

#### PERCY LANDING.

This station is 13 miles above Chisholm's Rapids, which distance is navigable for boats of 5 ft. draught.

The works erected here consist of five piers, each 16' x 12' x 12', and a single chain retaining boom 2,415 feet long; the boom is in a decayed condition, and requires to be renewed.

#### RANNEY'S FALLS.

The works erected here were in the year 1845 all swept away by the freshet of 1870, and have not been rebuilt owing to the lumberers having ceased to run their timber in cribs.

#### CAMPBELLFORD.

The works here consist of a three stick guide boom to slide 1,188 feet in length and a single chain boom 606 feet in length with seven piers.

The dam and slide are the property of the mill owners.

#### MIDDLE FALLS.

These falls occur about  $2\frac{3}{4}$  miles above Campbellford, and proved a great impediment to the running of timber until the year 1844 when the Government constructed the following works:—

Two dams of truss-work, lower and upper, extending from the east bank of the river in a westerly direction towards the centre, and connected by a retaining wall of crib-work, thus forming a basin.

The lower dam is 97 ft. in length, 25 ft. broad at base, and 13 ft. in height.

The upper dam is 96 ft. in length, 20 ft. broad at base, and 7 feet high.

Two slides one in lower dam and the other in upper dam; the lower slide is 455 ft. in length and 33 feet wide; the upper 60 ft. long and 33 ft. wide.

There is also a wing dam of crib-work 637 ft. in length, 5 ft. in height and 8 ft. wide, reaching from the upper dam to an island at the head of the Falls.

#### *Crow Bay.*

At the head of Middle Falls, improperly so called, it being a lake.

The works consist of a retaining boom 12' x 14" 2,600 feet long, with two piers each 23' 0" x 23' 0". The timber, logs, &c., are collected in this boom previous to running over Middle Falls. It is in a decayed condition, and requires to be replaced by an entire new one.

#### *Heeley's Falls.*

These falls occur five miles above Middle Falls on Lots 14 & 15, Con. 12, Township of Seymour. The works constructed by the Government in the year 1844 were very extensive; they at present consist of a dam, slide, piers and boom.

The dam on which the navigation of the upper division is in part dependent is built of truss work, on flat rock bottom and is 448' 0" in length, 8' 0" in height and 33' 0" wide at base.

The slide, piers and boom were erected for the benefit of the lumber trade, and are of the following dimensions :—

Length of slide, 52' 6", breadth, 33' 0" with 2 feet draught.

A guide boom of two sticks 379' 0" in length.

Piers two in number 16' 0" x 16' 0."

A dam 116' 6" x 16' 10," and built across head of lower slide.

A glance of framed timber 283' 0" x 4' 0" at head of falls.

Previous to the year 1870 there were heavy guide booms, and a lower slide 360' 0" in length and 33' 0" wide with extensive retaining walls, but these were swept away by the freshet which occurred in the spring of that year, and were not re-built. The upper slide is the only one used for the passage of timber.

The dam is the means of affording navigation for boats of 4' 6" draught of water to "Crook's Rapids," now called "Hastings," a distance of 12 miles, which is navigated by several steamers, the boats of the Cobourg, Peterborough and Marmora Mining and Railway Co., at present engaged in transporting iron ore from their mines in Marmora to Harwood on Rice Lake, from whence it is conveyed by rail to Cobourg, and there shipped to its destination in the States.

The Government owns twelve acres of land on the south side of the river below the dam, five acres on north side between the slide and falls, and 2½ acres also on north side adjoining old slide.

Here what may be termed the Trent division terminates, and the second or island navigation commences.

The works on the Trent division, including the slide and booms, at "Crook's Rapids," and excepting the canal and lock at Chisholm's Rapids, were placed under the management of a company called the "Trent Slide Committee," in the year 1855, who undertook to keep the slides, piers, booms, etc., in working order. They were authorized to levy tolls on timber passing down the river at Heeley's Falls, Middle Falls and Ranney's Falls.

In the year 1870 the spring freshet, as stated above, destroyed the works at Ranney's Falls and a portion of the works at Heeley's Falls and Middle Falls, and since then the bulk of square timber is not taken down the Trent, it being towed up the island navigation waters to the town of Lindsay or Port Perry, and conveyed by rail to ports on Lake Ontario.

The number of saw-logs, railway sleepers and telegraph poles taken annually down the Trent has increased to a very great extent.

#### INLAND NAVIGATION.

This division extends from Heeley's Falls up to Port Perry, at the head of Lake Scugog, a distance of 148 miles of which 127 are navigated by steamers and barges drawing four feet of water; it comprises the following works at the various stations which occur in regular succession.

#### CROOK'S RAPIDS.

This station now called Hastings, is distant from Heeley's Falls 12 miles.

In the year 1837, the Government commenced to construct the following works, which were not completed until the year 1844.

A Canal 610' 0" in length, breadth at bottom 40' 0". A Lock of good masonry 134' 0" x 33' 0" with lift of 6' 9", depth of water on lower mitre sill 6' 0" obtained by the dam at "Heeley's Falls," and solid wooden gates, opened and shut by means of winches similarly constructed to those used on the Rideau Canal.

A Swing Bridge across Lock 68' 0" in length and 13' 6" wide reconstructed on the Howe Truss principle and swinging by means of a mechanical contrivance.

A dam built of truss work 253'0" in length, 7'6" in height and 33'0" breadth of base. A saw-log slide 60'0" in length and 33'6" wide.

Guide booms and piers.

A three stick guide boom 813'0" x 3'6."

A single stick boom 660'0" x 1'2."

Piers seven in number.

A lock house 24'0" x 32'0" built of cut stone masonry.

These works were for a number of years unused until 1866, when the Marmora Iron Mines commenced to be worked, and thereby a new traffic was opened up, the iron ore having to be conveyed through the canal.

#### WHITLAW'S RAPIDS.

After passing through the canal at "Crooks Rapids" we proceed up the Trent Rice Lake, and River Otonabee, a distance of 40 miles, when we reach "Whitlaw's Rapids" one mile below the town of Peterborough, (see accompanying map of navigable waters in Newcastle District.)

The works erected here consist of a canal 726'0" in length, and 40'0" wide.

A lock 133'9" x 33'0" between quoins, built of first-class masonry, lift 6'6" and 4'0" water on lower sill.

A wing dam of truss work 323'6" in length, 12'6" high and 27'0" breadth of base extending up stream, and connected with a cross dam 32'0" in length, 9'0" high and 20'0" broad at base.

A slide 25'6" x 29'0".

Waste weir, 23'0" x 31'0".

Guide booms, 200'0" x 2'4".

Piers 3, in number, each 12'0" x 12'0".

A stone house, 21'0" x 12'0".

By means of this lock, steamboats surmount the Rapids, and pass up to the town of Peterborough.

#### Little Lake.

On this lake, which is one-half mile above Whitlaw's Rapids, there are three piers, each 30'0" x 25'0", and one pier 15'0" x 10'0", and a single stick chain boom 1050'0" in length; this boom is used as a retaining boom for logs previous to running through the rapids; it is a great protection to the works at Whitlaw's Rapids, inasmuch as it prevents the ice, which is formed on Little Lake, from descending on the works in one solid mass.

#### Lakefield.

The work here consisting of a dam 198'0" in length and 7'0" high.

A slide 25'0" in length and 30'0" wide, have this year been assumed by the Government of the Dominion.

The dam maintains navigation up to Young's Lock, a distance of eight miles.

#### Buckhorn.

This station is situated at the foot of Buckhorn Lake, and the works consist of—

A dam of truss work 387'0" in length, 5'0" in height, and 25'0" broad at base;

A dam of stone 173'0" long and 6'0" high;

A slide 95'0" in length and 33'0" wide, with piers and single guide booms. The length of boom is 600'0".

This dam is the means of retaining the water on Buckhorn, Chemong and Pigeon Lakes, up to Bobcaygean Lock, at a required depth.

The navigation of those lakes is free from any obstruction, and the traffic is yearly increasing, as will be seen by the Lock-master's Reports.

*Bobcaygean.*

This station is at the foot of Sturgeon Lake, and head of Pigeon Lake. The works erected by the Government are the means of affording navigation for boats of 4' 0" draught, from Buckhorn to Lindsay, a distance of 36 miles.

The works consist of:—

A canal 973' 0" in length.

A lock of good masonry, built in the year 1858—134' 0" x 33' 0" between quoins lift, 7' 3" and 4' 9" depth of water on lower sill.

A dam of truss work 481' 0" in length, 4' 0" in height, and 25' 0" broad at base.

A dam of crib-work 510' 0" in length, 6' 0" in height, and 15' 0" broad at base.

A slide 33 feet in length and 32 feet wide.

A swing bridge across canal, 85 feet in length and 13 feet broad, constructed on the Howe Truss principle.

A storehouse, 30' 0" x 20' 0", built of lumber.

A mill-race to grist-mill, 141' 0" in length, and 12' 0" in breadth. The grist-mill is fed from the canal.

The traffic through the lock is very great, there being as many as 286 lockages made in one month.

## FENELON RIVER.

The navigation of this river was the cause of litigation between the lumber merchants and the steamboat owners previous to the year 1873, when the Government, to obviate the difficulty, erected booms and piers, so as to divide the river into two channels.

The boom is a good single chain boom, 3,090' 0" in length, with an upper pier 30' 0" x 22' 0", and a lower pier 18' 0" x 24' 0", and anchored at intervals of 300' 0" by heavy anchor stones and chain cables.

A slide 326' 0" x 33' 0".

The Government are constructing a canal and lock here, for the extension of navigation to the Georgian Bay.

## LINDSAY.

This station, formerly known as Purdy's Mills, is now a thriving town of some six or seven thousand inhabitants; distance, by water, from Bobcaygean, 20½ miles.

In the year 1844 the Government erected a lock and dam. The lock was of wood, 131' 0" in length and 32' 6" wide, but in the year 1859 it was converted into a slide for the descent of timber, and timber having ceased to be conveyed down the River Scugog, the slide became useless.

In the year 1870 the Ontario Government erected the present wooden lock having the same dimensions as the original lock, and a swing bridge below the lock.

The dam is a frame truss, 280' 0" in length, 9' 0" in height, and 30' 0" broad at base.

The lock and swing bridge is maintained by the Local Government, and the dam by the Dominion Government.

There is a lot of land adjoining the lock, the property of the Dominion Government.

The dam is the means of retaining the water on the River Scugog, from Lindsay to Port Perry, at head of Lake Scugog, a distance of 28¾ miles, which is navigated by boats of 4' 6" draught of water.

I have the honor to be, Sir,

Your obedient servant,

THOS. D. BELCHER,

*Superintendent.*

F. H. ENNIS, Esq.,  
Secretary Department Public Works,  
Ottawa.



APPENDIX No. 24.

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**TABULAR STATEMENT**

OF THE

**SLIDES, DAMS, PIERS AND BOOMS OF CANADA**

**DESIGNED FOR THE PASSAGE OF TIMBER TO SEA PORTS**

**SHOWING THE SITUATION, DIMENSIONS, COST, ETC., OF THESE  
WORKS, CONSTRUCTED, IN PROGRESS OF CONSTRUCTION,  
OR MANAGED BY THE DEPARTMENT OF  
PUBLIC WORKS.**

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APPENDIX

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHOWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>RIVER SAGUENAY WORKS.</b>								
Flat dams.....	On one of the branches of the River Saguenay, called "La Petite Décharge," from Lake St. John.	105 to 111	7 to 111	7	930		16	
Pier dam.....					60	10	14	
Glance piers.....					40 to 50	8-14	14	
Bulkhead.....					50	26	38	
Slide for single sticks.....					5,028	5 1/2 to 2 1/2	21	
Anchor piers.....					12	12	12	
Booms.....					1,344	2 1/2	1 1/2	
Storehouse and Superintendent's dwelling.					150	1 1/2	1	
				1	40	24		
<b>RIVER ST. MAURICE WORKS.</b>								
<i>(River about 300 miles long.)</i>								
Office of the Superintendent.....	In the City of Three Rivers, a short distance W. from mouth of St. Maurice.							
<b>AT STATION No. 1.</b>								
Booms (glance and retaining).....	At mouth of River St. Maurice.				10,258	4		
Mooring piers.....	do			49	e'ch 25	25	25	
Anchor piers.....	do			5	" 15	15	8	
Storehouse.....	do			1				
<b>AT STATION No. 2.</b>								
Booms (retaining).....	Cap Corneille			1 1/2	7,650	4		
Mooring piers.....	do			1 1/2	24	25	25	
Anchor piers.....	do			1 1/2	6	10	10	6
Wharf.....	do			1 1/2		400	15	15
Storehouse.....	do			1 1/2	1			
<b>AT STATION No. 3.</b>								
Boom (glance).....	Grès Falls	44	16		6,000	3		
Mooring pier.....	do	44	16	1	25	25	25	
Anchor piers.....	do	44	16	6	e'ch 15	15	8	
Side dam.....	do	44	16	1	200	25	25	



TABULAR Statement of the Slides, Dams, Piers, and Booms of Canada, designed for the

NAME OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.				
					Length.	Breadth.	Height.	Draught of Water in Slides.	
<b>RIVER ST. MAURICE WORKS—</b>									
<i>Continued.</i>									
AT STATION No. 4.									
Slide for single sticks .....	Shawenegan Falls .....	150	20	1	600	.....	.....	.....	
Booms (glance and retaining) .....	do .....	150	20	.....	18,000	3to6	.....	.....	
Dams .....	do .....	150	20	.....	1,315	25	25	.....	
Mooring piers .....	do .....	150	20	20	e'ch 25	25	25	.....	
Anchor piers .....	do .....	150	20	42	" 15	15	8	.....	
Storehouses .....	do .....	150	20	2	.....	.....	.....	.....	
Dwelling houses .....	do .....	150	20	2	.....	.....	.....	.....	
AT STATION No. 5.									
Slide for single sticks .....	Grand-Mère Falls .....	40	29	.....	.....	.....	.....	.....	
Booms (glance) .....	do .....	40	29	.....	6,300	.....	.....	.....	
Dam .....	do .....	40	29	1	140	32	15	.....	
Mooring piers .....	do .....	40	29	6	e'ch 25	25	25	.....	
Anchor piers .....	do .....	40	29	10	" 15	15	8	.....	
Dwelling house .....	do .....	40	29	1	.....	.....	.....	.....	
Storehouse .....	do .....	40	29	1	.....	.....	.....	.....	
AT STATION No. 6.									
Side dam .....	Little Piles Falls .....	6	31½	1	110	23	7	.....	
AT STATION No. 7.									
Booms (retaining) .....	La Tuque Falls .....	50	100	.....	3,500	3	.....	.....	
Side dams and piers .....	do .....	50	100	.....	1,291	25	25	.....	
Mooring piers .....	do .....	50	100	4	e'ch 25	25	25	.....	
Anchor piers .....	do .....	50	100	11	" 15	15	8	.....	
Dwelling house .....	do .....	50	100	1	.....	.....	.....	.....	
Storehouse .....	do .....	50	100	1	.....	.....	.....	.....	
AT STATION No. 8									
Mooring piers .....	Plamondon's Eddy, above La Tuque. ....	.....	106	2	25	25	25	.....	
<b>VERMILION RIVER WORKS.</b>									
<i>(Tributary of the St. Maurice—about 90 miles long.)</i>									
AT STATION No. 9.									
On a Tributary from N.W.—									
Booms .....	Iroquois Falls, 6 miles above mouth of Vermilion. Works commence 1 mile above mouth, and extend from 6 to 7 miles up the river	40	Ver., 116. Iroq's, 122.	.....	.....	2,677	2	.....	
Mooring piers .....					2	e'ch 25	25	25	.....
Slide .....					1	550	.....	.....	
Anchor pier .....					1	15	15	8	.....
Dam and side pier .....					.....	662	25	25	.....
Dwelling house .....					1	.....	.....	.....	
Storehouse .....					1	.....	.....	.....	

passage of Timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
1852	1854.....					<p><i>Slide for single sticks.</i>—Reconstructed from 1878 to 1882.  <i>Booms.</i>—Half of the booms were renewed from 1872 to 1882.  <i>Dams.</i>—Of which 240 feet were constructed in 1879-80.  <i>Mooring piers.</i>—Of which 14 were reconstructed from 1873 to 1881.  <i>Anchor piers.</i>—Of which 4 were constructed in 1872-73 and 10 in 1876-77.</p>
1878	1879.....			do	do	<p><i>Booms.</i>—Of which 4,800 feet of single chain booms and 1,500 feet from 3 to 5 feet in width; they were almost entirely renewed from 1870 to 1881.</p>
1879...	1880.....					<p>A dam had also been constructed in 1875-76, but has since been almost entirely destroyed, as well as the dam at the Grandes Piles, which seems to have been since abandoned.</p>
1854	1855.....			do	do	<p>Abandoned. However, in 1880, in order to enlarge the channel of La Tuque Falls, some blasting has been done.</p>
		950	92			Abandoned.
		5,167	08			<i>Anchor pier.</i> —Abandoned.

See memorandum at end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>RIVER OTTAWA WORKS.</b>								
On the Main Trunk of the Ottawa.— (River about 700 miles long).....								
<b>AT STATION No. 1.</b>								
Stiff six-ply boom, supported by 4 piers.	Rivière des Prairies, back of Montreal; Head of Sault au Recollet.				1,000			
<b>AT STATION No. 2.</b>								
Pier dams.....	Carillon, on south side of the Ottawa.		27		3,000			
New dam across River Ottawa .....								
					1,781	46	at bottom in deep water, and about 24½ in 4 ft. water.	
Slide—* Pier on N. side.....					640	25		
do S. do.....					575	25		
Between piers.....						28		
<b>AT STATION No. 3.</b>								
(North Side of River.)								
On the Main Trunk of the Ottawa.—								
Guide boom for slide (supported by 6 piers).....	Hull, on N. side of the Ottawa.	40	98		2,376			
Guard pier, at entrance of slide....	do	40	98	1	594			
Wing dam from guard pier, extending towards falls. ....	do	40	98	1	346		5	
Stone pier dam laid in cement, from bulkhead to lower side of bridge, forming side of canal leading to slide.....	do	40	98		280	8	8	
Six-ply boom from stone dam to head of slide.....	do	40	98		173			
Wing dam at head of slide. ....	do	40	98		99			
Slide.....	do	40	98		443	12		
Wing dam at head of 2nd slide....	do	40	98		58	9	10	
Stone dam from island to main shore (10 x 18).....	do	40	98		49			
Bulkhead, with side piers, at the outlet of the channel or basin, between the foot of the slide and the Ottawa River.....	do	40	98					

The average depth of water in a crib slide, during the running season, is from 18 to 20 ins., and in single-stick slide, from 2 to 4 ft.

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average yearly Cost for last 15 years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1871	1872					{ The River Ottawa drains an area of about 57,800 square miles.  { <i>Sault au Recollet Boom, at Station No. 1</i> —This boom was built at the head of the Sault au Recollet, with the view of guiding timber through the proper opening at the bridge and to a safe channel leading to the rapids below.  <i>Carillon Dam, at Station No. 2</i> .—Old pier dams were erected in 1860-61. Recently a large dam, extending across the river, was built by the Department of Railways and Canals in connection with the new Carillon Canal. This dam has a slide through it for the passage of cribs, and has had the effect of flooding out the old dams, which, of course, are now abandoned. The new slide is on the south side of the River Ottawa.  Expenditure on account of new dam and slide to 30th June, 1882, \$382,170.71. (See Letter No. 32,727). * There is a third pier further south. It was constructed when it was intended to give to the slide a breadth of 120 ft.; when that breadth was reduced, another pier, 575 ft. long, was built between the two existing ones. (See No. 32,777.)
1857	1859	28,458 13		do	do	
1873	In pr'gs.	382,170 71		do	do	
1829	1854	45,270 00				{ <i>Hull Slide, at Station No. 3</i> .—The slide, originally built at Hull, on the north side of the Chaudière Falls, was constructed in 1829 by the late Philemon Wright, Esq. It was purchased, together with the right of way along the north bank of the river, by the Government, for a sum of \$40,000, on the 6th of October, 1849. In 1861 and 1862 the old slide was removed, and two new slides, sufficiently large to admit cribs, were constructed. Since the last mentioned date, however, the slide has been narrowed to 12 feet, and is now used exclusively for the passage of saw-logs or timber in single sticks.

See memorandum at end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>RIVER OTTAWA WORKS—Con.</b>								
AT STATION No. 4.								
On the Main Trunk of the Ottawa.—								
<i>On south side of river or the South Chaudière Works, viz. :—</i>								
Guide booms for square timber, supported by 6 piers.....	At the City of Ottawa, on the south side of the Chaudière Falls.	.....	98	.....	3,234	.....	.....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stack slide, from 2 to 4 feet.
Retaining booms for saw-logs, supported by 7 piers.....	do	.....	98	.....	4,389	.....	.....	
1st slide.....	do	.....	98	.....	150	26	.....	
2nd do .....	do	.....	98	.....	380	26	.....	
3rd do .....	do	.....	98	.....	278	26	.....	
4th do .....	do	.....	98	.....	66	26	.....	
Main hydraulic dam from head of Chaudière Island to Russell Island.....	do	.....	98	.....	1,254	.....	.....	
Continuation of hydraulic dam from Russell Island to Mary Island.....	do	.....	98	.....	1,221	.....	.....	
Continuation of hydraulic dam from Mary Island to Amanda Island.....	do	.....	98	.....	132	.....	.....	
Entrance bulk-head and pier dam for slide (12 x 18) .....	do	.....	98	.....	148	.....	.....	
Stiff booms at entrance to 1st slide.....	do	.....	98	.....	957	.....	.....	
Booms and side piers between 1st and 2nd, 2nd and 3rd, 3rd and 4th slides and stone dam at head of 4th slide.....	do	.....	98	.....	1,732	.....	.....	
Dam from Coffin to Albert Island..	do	.....	98	.....	66	.....	.....	
Stone pier dam from Coffin to head of Victoria Island.....	do	.....	98	.....	346	.....	.....	
Bulk-head from Albert to Chaudière Island.....	do	.....	98	.....	82	.....	14	
Hydraulic dam from Chaudière to Victoria Island.....	do	.....	98	.....	330	.....	12	
Station-house, wooden frame work	do	.....	98	1	20	30	.....	
Store-house do do	do	.....	98	1	23	17	.....	
AT STATION No. 5.								
Guard pier above islands (8 x 10)	At the Little Chaudière, about two miles above the City of Ottawa.	.....	100	.....	300	.....	.....	
Boom hanging from islands, supported by two piers.....	do	.....	100	.....	400	.....	.....	
Pier dam below island (12 x 18) ...	do	.....	100	.....	400	.....	.....	
Crib slide.....	do	.....	100	.....	140	26	.....	
Span of bulk-head over slide.....	do	.....	100	.....	26	.....	.....	
Wing flat dam, extending into the river.....	do	.....	100	.....	300	.....	4	



passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, from 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1844	1866.....	58,839 36		do	do	<p><i>City of Ottawa Slides, at Station No. 4.—</i>                      The works on the south side of the Great Chaudière Falls, constructed prior to the Union of the Provinces, by the late George Buchanan, Esq., under a Government license of occupation, dated 7th September, 1835, for 10 years, consisted of one slide; it occupied the channel which passed between Chaudière Island on one side and Albert and Victoria Islands on the other. The Government assumed possession of the works at this station after the expiry of the lease in 1845. In the same year Government added four new slides in this place; dams, head gates, booms, &amp;c., have been added since, to facilitate the use of the water power.                      The four new slides are all brought into use during the low water and only two during high water.</p>
1857	1866.....	17,816 93	See memorandum at end of this appendix.	do	do	<p><i>Little Chaudière, at Station No. 5.—</i>The crib slide was built in 1857, on the northerly shore of the Little Chaudière Rapids, adjoining the Township of Hull; and at a later date an excavation was made through the rock above the slide, both of which works may be considered as feeders to the slide at Hull.</p>

Tabular Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.				
					Length.	Breadth.	Height.	Draught of Water in Slides.	
<b>RIVER OTTAWA WORKS—Cont'd.</b>									
AT STATION No. 6.									
On the Main Trunk of the Ottawa— Boom, supported by 5 piers. ....	At the Remous, 4 miles above City of Ottawa, stretching nearly across the Ottawa River.	.....	102	.....	7,920	.....	.....	The average depth of water in a crib slide during the running season, is from 18 to 20 inches, and in a single stack slide from 2 to 4 feet.	
AT STATION No. 7.									
On the Main Trunk of the Ottawa— Dam on reef at head.....	Chats Rapids, about 33 miles above the City of Ottawa.	42	131	.....	875	.....	.....		
Guard pier on Island at entrance... Dam across timber channel, at head of Victoria Island.....	do	42	131	.....	175	.....	.....		
Entrance bulk-head at upper end of Canal (pine pier).....	do	42	131	.....	250	.....	12		
Canal leading to slide.....	do	42	131	.....	26	.....	12		
Crib slide.....	do	42	131	.....	1,700	.....	.....		
Station house.....	do	42	131	1	350	25	.....		
Store house.....	do	42	131	1	40	32	.....		
	do	42	131	1	48	38	.....		
AT STATION No. 8.									
On the Main Trunk of the Ottawa— Piers for snubbing rafts, preparatory to running rapids.....	At the head of Chats Rapids.	.....	134	3	20	18	.....		
AT STATION No. 9.									
On the Main Trunk of the Ottawa— Double boom, 15x30 inches.....	At the foot of Chenaux Rapids.	.....	152	.....	6,000	.....	.....		
Single boom.....	do	.....	152	.....	10,630	.....	.....		
4 Support piers.....	do	.....	152	4	18	18	18		
22 Sunken or anchor piers.....	do	.....	152	22	16	16	10		
2 Floating platforms with heavy mooring chains and buoys.....	do	.....	152	.....	.....	.....	.....		
AT STATION No. 10.									
On the Main Trunk of the Ottawa— Stiff guide boom at entrance of slide 100 ft. of 6 and 610 ft. of 2 sticks in width.....	On south side of the Ottawa, a short distance above Village of Portage du Fort, about 58 miles above the City of Ottawa.	{	.....	{	.....	{	.....		
Anchor piers to support boom...			20		156		4	710	
Crib slide.....			.....		.....		.....	350	26

Passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date		Cost of Construction from the Union, 10th Feb., 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.			\$ cts.
1857	1858.....	4,767	76	.....	.....	<i>Remous Boom and Piers, at Station No. 6:—</i> These works were constructed for the purpose of preventing the breaking loose of bands of square timber and booms of saw logs, on account of the dangerous proximity of the rapids below.
Old works 1835						} <i>Chats Rapids, at Station No. 7:—</i> The slide at this Station is one of the best constructed and most serviceable on the Ottawa. A great quantity of timber passes through it annually. A crib slide was formerly built at this Station by the late Mr. George Buchanan, under a Government license of occupation, during pleasure, dated 18th Feb., 1835; it was assumed by the Government at the expiration of the lease in 1845, since when the works have been rebuilt, extended and improved
New works 1845	1855...	23,355	04	do	do	
		See memorandum at end of this appendix.				
1857	1857.....	935	67			<i>Head of Chats Rapids, at Station No. 8:—</i> These piers are for the purpose of snubbing rafts preparatory to their being run down the Chats Rapids.
1860	1871.....	4,412	76			} <i>Chenaux Rapids, at Station No. 9:—</i> This boom is for the purpose of diverting saw logs, &c., from the steamboat channel, and of holding in a place of safety much valuable timber that would otherwise be wrecked or scattered over the Chats Lake during storms. The growing business of the lumbermen in connection with their Upper Ottawa saw log drives, necessitated the extension of this boom in 1871-2, so that its capacity is very much greater than when originally brought into use
Old works 1838	1839					
New works 1852	1863...	8,467	77			} <i>Portage du Fort Slide, at Station No. 10:—</i> At this Station the first crib-slide was erected in 1838-9, by Mr. Hugh Bolton; it was destroyed by the spring freshet of 1840, and was reconstructed in 1841 by Mr. Poupore, senior, who sold it to the Government on the 16th April, 1845, for a sum of \$1,700. A new slide was built by the Government in 1852, and its working has been attended with the best results.

TABLEAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>RIVER OTTAWA WORKS—Con.</b>								
AT STATION NO. 11.								
On the Main Trunk of the Ottawa—	At the Mountain, a short distance below Grand Calumet.	{	20	161	297	26	.....	.....
Guide boom at head of slide.....								
Bulk-head.....								
Crib slide.....					572	26	.....	.....
AT STATION NO. 12.								
On the Main Trunk of the Ottawa—	At the Calumet, which is about 65 miles above the City of Ottawa.	.....	56	163	.....	360	.....	.....
Stiff 6-ply boom at entrance of slide (supported by pier and heavy anchor)								
Canal through solid rock.....								
Entrance bulk-head centre of canal (spau).....								
Large basin and by-wash.....								
Stiff guide boom in basin, leading to head of long slide.....								
Upper crib slide.....								
Guard pier from foot of upper to head of lower slide.....								
Stiff guide boom, 2-ply.....								
Lower slide.....								
Guard pier on south side from foot of slide.....								
Guard pier on north side from do...								
Station house.....								
Middle or long slide.....								

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th Feb., 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1843	1854.....	21,866 67				<p><i>Mountain Slide, at Station No. 11</i> :—The slide that was constructed here in 1843 was afterwards found to be too short; it was lengthened and improved between the years 1845 and 1848; further improvements were made in 1852. The difference between high and low water levels, at this place, is about 13 feet. Since 1867, extensive renewals of large portions of the works at Portage du Fort and Mountain Stations have been effected.</p>
				do	do	
			See memorandum at end of this appendix.			<p><i>Calumet Slides, at Station No. 12</i> :—Before the present slides were constructed, the late Mr. David Moore, senr., by permission of the Government, built a slide prior to 1843, in the Rocher Fendu Channel, on the opposite or south side of the Grand Calumet Island. This gentleman obtained a Government license, dated 31st August, 1835, which in consideration of his building and maintaining the slide, secured him possession of the same for 10 years at a yearly rent of \$4, with the privilege of collecting a toll of 5s upon every crib of timber that passed down the slide. This work having been rendered useless by new works constructed by the Government, a compensation of \$6,000 was awarded by arbitration to the heirs of Mr. Moore, on 15th October, 1861. This is one of the principal stations on the Ottawa, as the timber from the upper portions of the main river and rafts from such important tributaries as the Matawan, Du Moine, Petewawa, Black River and Coulonge, escape the Grand Calumet Falls by passing through the works at this Station. The new slides were constructed in 1843, and improved in 1845. The lower slide was reconstructed in 1862. Since that date such alterations and additions have been made to the works as occasion required.</p>
1843	1862.....	43,805 17			do	

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>RIVER OTTAWA WORKS—Con.</b>								
AT STATION No. 13.								
On the Main Trunk of the Ottawa—								
North dam of upper slide 12 x 16...	At the Joachim Rapids, about 151 miles above the City of Ottawa.	28	249	.....	140	.....	.....	The average depth of water in a crib slide during the running season is from 18 to 20 inches, and in a single stick slide from 2 to 4 feet.
Upper slide.....	do	28	249	.....	37	26	.....	
South dam of upper slide.....	do	28	249	.....	107	.....	12	
Boom between upper and lower slides, supported by 4 piers.....	do	28	249	.....	990	.....	.....	
Anchor piers to support boom.....	do	28	249	.....	.....	.....	.....	
North side dam of lower slide.....	do	28	249	4	157	.....	.....	
Lower slide.....	do	28	249	.....	297	26	.....	
South side dam of lower slide.....	do	28	249	.....	206	.....	12	
Guard pier at lower end of lower slide on north side 10 x 12.....	do	28	249	.....	123	.....	.....	
Guard pier at lower end of lower slide on south side.....	do	28	249	.....	41	.....	.....	
AT STATION No. 14.								
On the Main Trunk of the Ottawa—								
Crib slide.....	At Rocher Capitaine Rapids, about 20 miles above Joachim.	.....	269	.....	200	27½	.....	
Pier on south side.....	do	.....	269	.....	395	12	16	
do north side.....	do	.....	269	.....	180	12	12	
Guide boom on north side, double timber 34 x 17 inches.....	do	.....	269	.....	240	.....	.....	
Support pier.....	do	.....	269	.....	12	12	10	
Bulk-head with suitable appliances at the entrance of slide.....	do	.....	269	.....	50	10	.....	
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA.</b>								
THE SOUTH NATION RIVER.								
(About 80 miles long.)								
A Tributary from the South—								
Crib slide.....	Near Village of Plantagenet, with in five miles of mouth of South Nation River.	.....	.....	.....	80	29	.....	
2-ply guide boom.....		.....	.....	.....	450	.....	.....	
Support piers.....		.....	2	.....	12	12	10	
Flat dam on south side.....		.....	1	.....	150	.....	2	
do north side.....		.....	1	.....	130	.....	5	

passage of timber to Sea Ports ; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1843	1848 to 1861 inclu.	25,132 90	See memorandum at end of this appendix.	do	do	<p><i>Joachim Slides, &amp;c., at Station No. 13.—</i>A slide and dam were built in 1843, but were partly carried away by the current in the spring of 1844; they were rebuilt in the winter of 1844-45; another portion was destroyed by the spring freshet of 1845; the works remained in this state until the winter of 1846-47, when they had to be rebuilt and were completed in the spring of 1847. From 1854 to 1861 the entrance to the slides was improved by excavating a channel through the rock; and since then the foundations of the slides have been strengthened, and the side or guard piers improved.</p>
1873	1874.....	.....	See memorandum at end of this appendix.	do	do	<p><i>Rocher Capitaine, at Station No. 14.—</i>There is a very dangerous rapid at this place, studded with crooked channels, eddying whirlpools, boulder deposits and rocky projections. Many raftsmen have lost their lives here and frequently timber has been wrecked and otherwise damaged and detained. To ameliorate this state of things certain rock excavation was undertaken by the Government about 30 years ago; and in 1873-74, the crib slide, boom and piers were built.</p>
1880	1881.....	.....	See memorandum at end of this appendix.	do	do	<p><i>Works on the South Nation River.—</i>This stream falls into the Ottawa about 6½ miles above its mouth at Ste Anne. The works on the South Nation River were constructed with the view of facilitating the descent of flatted timber, cordwood, and lumber suitable for dimension and building purposes, principally for the Montreal market. Considerable quantities of such materials are still available, although lumbering operations have been carried on for many years.</p>

Tabular Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA.—Continued.</b>								
<b>THE GATINEAU RIVER.</b>								
<i>(About 400 miles long.)</i>								
A Tributary from the North—								
New boom (6-ply), iron plated, 44 x 36 inches.	At about 1½ miles above the mouth of the Gatineau, which flows from the north and discharges into the Ottawa at a point about 96 miles from the mouth of the Ottawa at Ste. Anne, and at about 2 miles below the City of Ottawa.				2390			
Old boom (6-ply) 45 x 27 inches....					1338			
Double boom, 31 x 15 inches.....					742			
do do 27 x 20 do .....					626			
Trip do 24 x 20 do .....					410			
Old trip do 18 x 14 do .....					350			
Division boom in pond.....					2000			
Boom at mouth of creek.....					185			
Old canal from river to pond.....					2191			
do bridge .....				1	150	13		
New canal.....					760			
do bridge .....				1	128	13		
Support pier over water, main boom				1	20	20	27	
do do .....				1	27	26	21	
do do .....				1	25	15	21	
do do .....				1	32	26	20	
do do .....				1	48	27	30	
do do .....				1	45	23	28	
do do .....				1	45	23	26	
do do .....				2	45	23	27	
do do .....			1	45	23	25		
Anchor piers (main boom).....			8	12	12	10		
do (pond).....			6	12	12	10		
Floating stage at rafting ground...			1	16	16	14		
Sorting platform .....			1	100	6	24		
Floating do .....			1	33	17	2		
Camp or station house.....			1	24	16	8		
Store house .....			1	24	16	8		
Natural pond connected with Gatineau river by 2 canals. and with Ottawa river by a creek.							About 70 acres in area.	



passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1848	1848 to 1874 inclu.	31,967 83		do	do	<p><i>Works on the Gatineau River.</i>—In ascending the Ottawa, this is the second tributary having Government works.</p> <p>The Gatineau is the largest tributary of the Ottawa, and falls into it from the north side at a distance of about 2 miles below the City of Ottawa. It is about 400 miles in length, and drains upwards of 9,000 square miles of territory. The timber berths on the Gatineau and its tributaries are very extensive, and some of them were worked upon by the first settlers at the beginning of the present century.</p> <p>The timber from this river is taken out principally in the shape of saw logs, and lately the average number has been about 500,000 annually. Square timber of good quality is also manufactured to a limited extent.</p> <p>The timber is diverted from the strong current at the mouth of the river by the guide booms, into a safety pond of about 72 acres in area, and thence it passes through a creek or outlet to the rafting station on the north side of the Ottawa.</p> <p>The old canal leading from the boom on the Gatineau to the safety pond, not having been located properly, a new canal was made from a point further up the stream, in 1864 and 1865, which has effected a great improvement in the driving of the saw logs and promoted the safety of the main guide boom.</p> <p>In 1874 the trade of the river had grown to such an extent that the strengthening of the main boom was imperative. In that year new timbers were provided for a large section of it and heavy iron plates and connecting links inserted to resist the immense strain put on this boom by a large body of logs being held in a strong current; and about the same time a sand bar was dredged from the bed of the river alongside of the boom to admit of the passage of steamboats and barges to and from the shipping grounds, situated a short distance above the works at this station.</p> <p>The upper 4 support piers of the boom are built of full size to the top, while the lower 8 are battered on the up-stream side that they may offer a better resistance to floating ice and drift wood in the spring.</p>
			See memorandum at end of this appendix.	do	do	

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA—Continued.</b>								
<b>THE MADAWASKA RIVER.</b>								
<i>(About 240 miles long.)</i>								
<b>A Tributary from the South—</b>								
<b>AT STATION No. 1.</b>								
<i>(At mouth of River.)</i>								
Old piers.....	Mouth of the Madawaska, on the south side of the River Ottawa.	.....	136	18	.....	.....	.....	.....
New do .....	do .....	.....	136	5	.....	.....	.....	.....
Anchor piers.....	do .....	.....	136	2	.....	.....	.....	.....
Ring bolts planted in rock.....	do .....	.....	136	4	.....	.....	.....	.....
Large buoys.....	do .....	.....	136	2	.....	.....	.....	.....
Single boom.....	do .....	.....	136	.....	7,920	.....	.....	.....
Double do .....	do .....	.....	136	.....	1,500	.....	.....	.....
<b>AT STATION No. 2.</b>								
Support pier.....	At the Village of Arnprior.	.....	.....	1	26	26	.....	.....
Safety boom above bridge.....	do .....	.....	.....	.....	400	.....	.....	.....
Wooden bridge over river.....	do .....	.....	.....	.....	182	.....	.....	.....
Guide booms at head of slide.....	do .....	.....	.....	.....	377	.....	.....	.....
Dam across river.....	do .....	.....	.....	.....	250	.....	.....	.....
Crib slide.....	do .....	.....	.....	.....	180	26	.....	.....
Guard pier on west side, immediately below slide.....	do .....	.....	.....	.....	180	.....	.....	.....
<b>AT STATION No. 3.</b>								
Flat dam on north side.....	At Flat Rapids.....	.....	.....	.....	500	.....	.....	.....
do south do .....	do .....	.....	.....	.....	300	.....	.....	.....
<b>AT STATION No. 4.</b>								
Flat dam.....	At Balmer's Island.....	.....	.....	.....	116	.....	.....	.....
<b>AT STATION No. 5.</b>								
Boom.....	At Burnstown.....	.....	.....	.....	700	.....	.....	.....
Piers supporting boom.....	do .....	.....	.....	3	.....	.....	.....	.....
<b>AT STATION No. 6.</b>								
Dam with water weir for passing timber.	At Long Rapids.....	.....	.....	.....	.....	.....	.....	.....
<b>AT STATION No. 7.</b>								
Boom.....	At Springtown.....	.....	.....	.....	740	.....	.....	.....
Piers supporting boom.....	do .....	.....	.....	4	.....	.....	.....	.....

The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	cts.	\$ cts.	
	1854...					
	1852...			do	do	
	1853...	76,727	37			<p><i>Works on the Madawaska River.</i>—This is the third tributary in ascending the Ottawa, where Government has constructed works for the descent of timber.</p> <p>This important tributary flows into the Ottawa from the South, at 136 miles above its mouth at the Village of Ste. Anne, which is about 22 miles above Montreal.</p> <p>The Madawaska is about 240 miles in length, and drains a country of about 4,100 square miles in extent; upon this lumbering has been extensively carried on for about half a century, and a very large quantity of valuable timber has been exported from it.</p> <p>Many of the principal lumbermen have turned their attention to the getting out of saw-logs, as well as to the manufacture of square timber.</p> <p>The greater part of the Madawaska limits has still an abundant supply of red and white pine.</p> <p>Since 1864 the works have been put in a thorough state of efficiency.</p> <p>The resources of the territory of the Madawaska are so great, that although it has supplied the Quebec and other markets with large quantities of timber of the first quality for nearly fifty years, its limits or berths, for a considerable extent of their areas, appear to be still well stocked with a valuable class of merchantable timber that will, in all likelihood, keep up the lumber supply from this section of the country for years to come.</p>
	1855...			do	do	
	1861...					
	1855...					
	1859...					

See memorandum at end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA—Continued.</b>								
<b>THE MADAWASKA RIVER—Continued.</b>								
<b>A Tributary from the South—</b>								
<b>AT STATION No. 8.</b>								
Double boom .....	At Calabogie Lake.....				3,040			
Piers supporting double boom .....	do .....			2				
Boom at foot of lake.....	do .....				600			
<b>AT STATION No. 9.</b>								
Main 10-ply guide boom.....	At High Falls.....				692			
Piers supporting do .....	do .....			4				
Dam across head of falls.....	do .....				300			
Single stick slide with a fall of 60 feet .....	do .....				1,200			
Boom at foot of slide.....	do .....				355			
Pier supporting boom at foot of slide.....	do .....			1				
Dams below foot of long slide.....	do .....			2	140			
Flat dams, at about a quarter of a mile further down stream, at and near Barrett's Chute.....	do .....			6	790			
Station house.....	do .....			1	30	18		
Work shop.....	do .....			1	18	12		
<b>AT STATION No. 10.</b>								
Dams on south side at head of falls.....	At Ragged Chute.....				550			
Pier adjoining head of falls .....	do .....			1	150			
Flat dam adjoining pier.....	do .....				77			
Flat dam on north side at head of falls.....	do .....			1	80			
Eddy pier at foot of falls.....	do .....			1	300			
Boom between Ragged Chute and High Falls.....	do .....				1,050			
<b>AT STATION No. 11.</b>								
Flat dam at rapids.....	At Boniface Rapids.....			1	100			10
do below rapids.....	do .....			1	70			10
<b>AT STATION No. 12.</b>								
Flat dams.....	At Duck's Island.....			2	80			10

The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide from 2 to 4 feet.

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
	1866			do	do	<p>The character of the river, throughout a great portion of its length, is a succession of rapids, falls, swift currents and strong eddies. The works on the Madawaska were commenced, prior to the Union, by lumbermen, and continued afterwards by a Joint Stock Company, incorporated by Act of Parliament, under the name of the "<i>Madawaska River Improvement Company</i>," 17th December, 1853; their works are located on the upper section of the river; they were found very useful for a considerable period, but they are now in a state of disrepair. In the winter of 1843-44, the Government commenced the slides and booms at the High Falls, and the dams and piers at Ragged Chute, together with other improvements for the passage of timber between this station and the mouth of the river, a distance of about 35 miles.</p> <p>The slide at High Falls was of little use during the first two years, as the bottom of it was placed at too high a level for the passage of timber; the Ragged Chute works failed and had to be abandoned. In the winter of 1845-46 they were rebuilt; the river was raised 12 feet above its former level by a dam at High Falls, to increase the flow of water through the single stick slide, in order to overcome this formidable obstruction to the descent of timber. Side-dams were constructed further down stream to flood out dangerous shoals and prevent the jamming of timber in the channel. In 1854, a crib slide and series of booms were brought into use at Arnprior Village, near the mouth of the Madawaska.</p> <p>Extensive works of re-construction and repairs are now in progress at Ragged Chute and High Falls, and when they are completed—say by the opening of navigation in 1884—the running of the various descriptions of timber at these stations will be greatly facilitated.</p> <p>The timber and saw-logs coming down this stream are floated in single sticks until they reach the large retaining boom at its mouth; here they are collected, formed into cribs and rafted, and the saw-logs are put into booms for safe driving on the Ottawa, down to their places of destination.</p>
	1852	Expenditure shown at page 701.	See memorandum at end of this appendix.	do	do	

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.				
					Length.	Breadth.	Height.	Draught of Water in Slides.	
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA.—Continued.</b>									
<b>THE MADAWASKA RIVER.—Continued.</b>									
<b>A Tributary from the South—</b>									
<b>AT STATION NO. 13.</b>									
Flat dam on south side.....	At Bailey's Chute.....		Above outlet of the Madawaska.		180			10	
do do .....	do .....				70			10	
do north side.....	do .....				150			10	
<b>AT STATION NO. 14.</b>									
Boom supported by three islands and by piers.....	At Chain Rapids.....				3,960				
Piers supporting boom.....	do .....			4					
Single stick slide at lower end of boom.....	do .....			1	250	.6			
<b>AT STATION NO. 15.</b>									
Dam (with slide { 40 x 10 feet)....	On Opeongo Creek.....		106	1	80			19	
Dam (with slide { 40 x 10 feet)....		do .....		106	1	84			10½
Dam (with slide { 40 x 10 feet)....		do .....		106	1	96			16½
Wing dam.....		do .....		106	1	39			5
do .....		do .....		106	1	50			6
do .....		do .....		106	1	78			5½
			Distributed over a reach of 3 miles in extent and situated about 10 miles above mouth of creek.						
<b>THE COULONGE RIVER.</b>									
<b>(160 miles long.)</b>									
<b>A Tributary from the North—</b>									
Single stick slide.....	High Falls and rapids, on the Coulonge River, a tributary from the north.		Above outlet of the Ottawa, 184. Above outlet of the Coulonge, 6.	1	2,956	6			
Flat dam at head of chute to opposite side of river.....	do .....			1	173				
Station house.....	do .....			1	31	32			
Guide boom and piers at head of slide.....	do .....								
Retaining boom and piers near mouth of river.....	do .....								

The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
	1852 and 1857			do	do	<p><i>Works on the Opeongo Creek, a Tributary of the Madawaska.</i>—This creek falls into the Madawaska at about 106 miles from its outlet. In the winter of 1865-6, this stream was improved by means of three flat dams with slides through them, and by the construction and improvement of side-dams, so as to afford an increased supply of water and thus enable the limit holders and manufacturers of timber in this remote region to send their lumber to market. The improvements embrace a reach of about 3 miles; they are situated between Victoria Lake and the mouth of the creek, above which the average distance to the works is about 10 miles.</p> <p><i>Works on the River Coulonge.</i>—This is the fourth tributary, in ascending the Ottawa that has been improved by the Government. This river falls into the Ottawa from the north side, at about 184 miles above the junction of the Ottawa with the St. Lawrence, at the Village of Ste. Anne. It is about 160 miles in length, and drains a thickly wooded country having an area of about 1,800 square miles. The Coulonge limits have not been overrun by fire, and are well stocked with valuable white and red pine, so that they will probably supply large quantities of timber for years to come. Prior to May, 1865, the descent of timber was greatly obstructed at the High Falls and Rapids, at about five miles above the mouth of the river; the running of a raft of timber through this dangerous gorge is now performed with safety in the course of a few hours, since the completion of the single stick slide, in May, 1865. This slide, at some places, is carried along precipices at a height varying from 50 to 60 feet above the water of the Coulonge; as the rapids are hemmed in by steep rocks towering to great heights above their seething waters, the placing of the foundation of the slide was a work of great difficulty. Certain old works built by private parties, and necessary to the working of the new slide, were purchased by Government, under an award of 20th Feb., 1867, for a sum of \$4,342.18. There are other works belonging to private parties above the new slide.</p>
	1866.....			do	do	
	1864 1865.....			do	do	
	1866 1866.....					

Expenditure shown at page 701.

See memorandum at the end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA.—Continued.</b>								
<b>THE BLACK RIVER.</b>								
<i>(128 miles long.)</i>								
<b>▲ Tributary from the North—</b>								
Retaining boom at mouth of river.	High Falls and rapids, on the Black River.	.....	193	.....	.....	.....	.....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
Single stick slide at High Falls, about 1 mile from the mouth.....	do	.....	193	1	934	.....	.....	
Glance pier.....	do	.....	193	1	346	18	8	
Flat dam.....	do	.....	193	1	135	.....	5	
Single stick boom.....	do	.....	193	.....	877	.....	.....	
do across the river, ½ mile above slide.....	do	.....	193	.....	262	.....	.....	
<b>THE PETEWAWA RIVER.</b>								
<i>(Main Trunk, 138 miles long.)</i>								
<b>Main Trunk of the Petewawa, a Tributary of the Ottawa from the South—</b>								
<b>AT STATION NO. 1.</b>								
Retaining boom.....	At the mouth of the Petewawa.	.....	218	.....	4,000	.....	.....	
Piers to support boom.....	do	.....	.....	6	.....	.....	.....	
<b>AT STATION NO. 2.</b>								
Guide boom, north side of head of slide.	At the First Chute of the Petewawa.	.....	.....	.....	248	.....	.....	
Guide boom, south side of head of slide.	do	.....	.....	.....	541	.....	.....	
Dam on north side of slide	do	.....	.....	.....	118	.....	.....	
do south do	do	.....	.....	.....	359	.....	.....	
Single stick slide	do	.....	.....	.....	563	6	.....	
<b>AT STATION NO. 3.</b>								
Guide boom, north side of head of slide.	At the Second Chute of the Petewawa.	.....	.....	.....	332	.....	.....	
Guide boom, south side of head of slide.	do	.....	.....	.....	1,169	.....	.....	
Dam on north side of slide	do	.....	.....	.....	489	.....	12	
do south do	do	.....	.....	.....	287	.....	10	
Single stick slide	do	.....	.....	.....	554	6	.....	



passage of timber to Sea Ports ; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1837	1870 and 1871.	12,500 00				<p><i>Works on the Black River.</i>—Ascending the Ottawa, this is the fifth tributary upon which Government works have been placed. This river flows from the north and empties into the Ottawa at a point about 193 miles above Ste. Anne; its length is about 128 miles, and the area drained by it is about 1,120 square miles. The slides here were constructed by the late Mr. Poupore about 30 years ago, and were renewed by him at various times. These works were purchased by Government in 1867, at a price of \$12,500 (fixed upon by arbitration), from Mr. Poupore, M.P.P. The slide was renewed in 1870-1, but on account of the great traffic through it, an extensive outlay is now required to maintain it in a state of efficiency.</p>
				do	do	
				do	do	<p><i>Works on the Petewawa River.</i>—This tributary is the sixth in ascending the Ottawa upon which Government works, for the descent of timber, have been constructed. It flows from the south into the Ottawa, 218 miles from the outlet of the latter into the St Lawrence, at the Village of Ste. Anne. It is 138 miles in length, and it drains about 2,200 square miles of country. Rapids, swift currents and chutes, are met with on this river, at short intervals, from its head waters to its mouth. Lumbering operations were carried on for many years on this river by the manufacturers of timber, who at their own expense, constructed such temporary dams and other works as their limited means would allow. In 1857-58, the Government constructed 4 single stick slides with the necessary dams and guide booms at the various chutes along the main stream of the Petewawa, within a distance of 5 miles from the mouth of the river.</p>
1857	1858.....	67,634 01				

See memorandum at the end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA—Continued.</b>								
<b>THE PETEWAWA RIVER—Continued.</b>								
<b>A tributary from the south—</b>								
<b>AT STATION No. 4.</b>								
Guide boom, north side of head of slide.	At the Third Chute of the Petewawa.	.....	.....	.....	243	.....	.....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single wack slide, from 2 to 4 feet.
Guide boom, south side of head of slide.	do	.....	.....	.....	586	.....	.....	
Dam on north side of slide.	do	.....	.....	.....	97	.....	10	
do south do	do	.....	.....	.....	101	.....	10	
Single stick slide.	do	.....	.....	.....	1,346	6	.....	
<b>AT STATION No. 5.</b>								
Flat dam	At the Bois Dur Station of the Petewawa.	.....	.....	.....	116	.....	.....	
Pier dam, 10 x 10	do	.....	.....	.....	250	.....	.....	
Single stick slide	do	.....	.....	.....	250	6	.....	
Guide boom	do	.....	.....	.....	950	.....	.....	
<b>North Branch.</b>								
<b>AT STATION No. 1.</b>								
Flat dam	At Half Mile Rapid.	.....	.....	.....	160	.....	9	
<b>AT STATION No. 2.</b>								
Flat dam	At the Crooked Chute.	.....	.....	.....	100	.....	12	
Single stick slide	do	.....	.....	.....	250	6	.....	
Guide boom at head of slide	do	.....	.....	.....	400	.....	.....	
<b>Station No.</b>								
3—Dam	Thompson's Rapids at upper end of Lake Traverse.	.....	.....	1	188	.....	.....	
Chenail dam, north shore	do	.....	.....	.....	26	.....	5	
4—Boom	do	.....	.....	.....	500	.....	.....	
Support pier	do	.....	.....	1	15	15	.....	
Flat dam	do	.....	.....	.....	175	.....	8	
Single stick slide	do	.....	.....	.....	1,400	6	.....	
5—Flat dam	Between Lake Traverse slide and High Falls.	.....	.....	.....	120	.....	6	
Flat dam	do	.....	.....	.....	86	.....	4	
Glance pier	do	.....	.....	.....	100	10	6	
Dam	do	.....	.....	.....	70	.....	12	
do	do	.....	.....	.....	130	.....	5	
Flat dam	do	.....	.....	.....	100	.....	12	
do	do	.....	.....	.....	150	.....	5	
do	do	.....	.....	.....	100	.....	5	
do	do	.....	.....	.....	150	.....	11	
Single guide boom (high falls)	do	.....	.....	.....	400	.....	.....	
Single stick slide	do	.....	.....	.....	480	6	.....	
Flat dam	do	.....	.....	.....	260	.....	10	

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1857	1858.....	Expenditure shown at page 707.	See memorandum at the end of this appendix.	d	do	<p><i>Works on the Petewawa River—Continued.</i>                      The north branch of the stream was afterwards improved by the Government, and two large reservoir dams were built at Thompson's Rapids and Cedar Lake, for the purpose of retaining the waters of the chain of large lakes in the neighbourhood. The peculiar formation of the bed and banks of the river, rendered these works necessary, as it was found that the Petewawa, in its natural state, suddenly rose to flood height in the spring and suddenly subsided afterwards. By means of the regulating dams referred to, the water is retained, and the supply for the raftsmen, on the lower reaches, is so regulated and controlled, as to be furnished when most required.</p>
...	{ Works extended in 1859.			do	do	
1863	1864					
1873	1874					
1861	1862					

**TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the**

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE TRIBUTARIES OF THE OTTAWA—Concluded.</b>								
<b>THE PETEWAWA RIVER—Concluded.</b>								
North Branch of the Petewawa River, a Tributary from the South—								
Station								
No.								
6—Boom.....	At Sawyer's Bay.....				2,671			
7—Flat dam.....	Meno Rapids.....				200		9	
8— do .....	Below Trout Lake.....				160		9	
9—Pier.....	At Strong Eddy .....				93	10	8½	
10— do .....	At Cedar Island .....				108	10	5	
11— do .....	At foot of Devil's Chute .....				40	8	5	
12—Wing pier.....	At Devil's Chute.....				90	12	8	
13—Flat dam.....	At Elbow Rapids.....				63		7	
14—North pier.....	At foot of Long Sault.....				130	10	5	
South do .....	do .....				50	10	6	
15—North do .....	At middle of Long Sault .....				49	12	8	
South do .....	do .....				60	12	8	
16—Angle pier, north .....	At head of Long Sault.....				23	12	12	
do south.....	do .....				39	18	12	
17—Flat dam, south shore.....	On S. shore between Long Sault and Cedar Lake.				87	20		
Pier at back of dam.....	do .....				20	10	10	
18—North shore side pier.....	On N. shore do .....				184	12	8	
South do .....	On S. shore do .....				90	10	8	
19—Cedar Lake dam, total length 407 x 5 high, as follows, viz:								
North shore pier.....	At Cedar Lake.....				127	8	5	
do dam.....	do .....				25	23		
Bulkhead piers, N. Channel.....	do .....			3-12	=36	14½	12	
do or by-washes.....	do .....			2-20	=40			
South shore dam.....	do .....			1	34			
Island pier.....	do .....			1	95	8	5	
South Channel piers.....	do .....			2-15	=30			
By-wash.....	do .....			1	20			
20—Pier dam.....	Second outlet at Cedar Lake.				300	8	6	
<b>THE RIVER DU MOINE.</b>								
<i>(About 120 miles long.)</i>								
<b>A Tributary from the North—</b>								
Retaining booms.....	On the River du Moine, for 15 miles from mouth, and at 45 miles from mouth.		Above outlet of Ottawa at Ste. Anne, 256	2	800			
Cascade dams.....	do do .....			2	186		8	
Flat and side dams .....	do do .....			5	445		8	
do do .....	do do .....			5	493		10	
Flat dam, head of slide.....	do do .....			1	200		5	
Single-stick slide.....	do do .....			1	3304	6		
Piers to support booms.....	do do .....			2	16	16	16	
do do .....	do do .....			3	12	12	12	
Side piers at slide.....	do do .....			2	30	10	7	

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c. —*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.		
Commenced.	Completed.			Repairs.	Management.			
		\$ cts.	\$ cts.	\$ cts.	\$ cts.			
1863	1864	Expenditure shown at page 707.	See memorandum at the end of this appendix.	do	do	<p><i>Works on the Petewawa River—Continued.</i></p> <p>The Government works on the Petewawa were commenced in 1857, and have since been gradually extended; several important works have been constructed since 1863, especially in 1873-4, when the long slide and works near the head of Lake Traverse and the dam at the second outlet of Cedar Lake were built.</p> <p>An excellent quality of white and red pine is obtained from this tributary, but it is only on the upper limits that this description can be obtained in large quantities.</p> <p>Single-stick driving to the boom at the mouth, is the system practised on this river, and the timber comes out in the shape of square and flatted pieces and saw-logs.</p>		
1873	1874			do	do			
Joint Stock Company		8,802 00		do	do	<p><i>Works on the River du Moine.</i></p> <p>This is the seventh and last tributary ascending the Ottawa, with Government improvements. It enters the Ottawa from the north, at about 256 miles from its mouth at Village of Ste. Anne</p> <p>The River du Moine drains about 1,600 square miles of territory, which supplies a considerable quantity of white pine timber and saw-logs.</p> <p>The first slide and booms were constructed in 1851-2, by a joint stock company, incorporated on the 25th January, 1851, under the name of "The Rivière du Moine Boom and Slide Company."</p> <p>In 1862-3 the Government enlarged and improved the works, built dams upon the river, where required, and placed a retaining boom and piers at the mouth of the stream. The system of single-stick driving is the one followed on this river.</p> <p>In 1871-2 the Government built a new slide at High Falls, of a greater length than any that had been constructed as a public work in the Ottawa Valley, viz., 3,384 feet. This new slide is used for the passage of square timber, and has been successfully operated in the interests of the lumbermen.</p>		
1851	1852.....							
1862	1864.....							
1871	1872.....							

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE RIVER TRENT.</b>								
On the main Trunk of the River Trent—								
<b>AT STATION NO. 1.</b>								
Booms.....	At Trenton Town, at the mouth of Trent, on the Bay of Quinté, north side of Lake Ontario.							
Piers.....	do							
<b>AT STATION NO. 2.</b>								
Stone dam of boulders across part of river at the head of an island.	At Widow Harris' Rapids	116	9	{ 1 1	1135 130	10 10	6 6	..... .....
<b>AT STATION NO. 3.</b>								
Dam of truss-work.....	At Chisholm's Rapids below Wilson's Isl'd.	116	15½	1	715	.....	6	.....
Crib slide.....	do	116	15½	1	100	50	.....	2
Saw-log slide.....	do	116	15½	1	50	30	.....	.....
<b>AT STATION NO. 4.</b>								
Boom.....	At Percy Landing.....	125	28½	1	2,415	1-33	.....	.....
Piers.....	do	125	28½	5	16	12	12	.....
<b>AT STATION NO. 5.</b>								
Dam.....	At Meyer's Island.....			1	167	.....	.....	.....
<b>AT STATION NO. 6.</b>								
.....	At Ranney's Falls.....							.....
<b>AT STATION NO. 7.</b>								
<i>Guide Booms and Piers.</i>								
Three stick boom.....	Village of Campbellford			34½	1	1,118	3½	.....
Single do chain.....	do			34½	1	606	1½	.....
Pier No. 1.....	do			34½	1	25	14	.....
do No. 2.....	do			34½	1	30	15	.....
do No. 3.....	do			34½	1	30	15	.....
do No. 4.....	do			34½	1	25	15	.....
do No. 5.....	do			34½	1	20	14	.....
do No. 6.....	do			34½	1	30	15	.....
do No. 7.....	do			34½	1	21	16½	.....

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
		3,121 45				The booms and piers here are maintained by the corporation of the town, who collect tolls on timber, logs, &c., passing in the Bay of Quinté.
..... 1843 ...	..... 1844 ...	6,588 65				The dam at this station renders the river navigable to the foot of Chisholm's Rapids for boats drawing 4½ feet of water at low water.
..... 1839 ...	..... 1843 ...	Expenditure comprised in Station of Lock and Canal. No. 1.	See memorandum at the end of this appendix.	do	do	The dam here renders the river navigable for boats of 4½ draught of water up to "Percy Landing," a distance of 13 miles. The saw-log slide was built in 1871.
..... 1843 ...	..... 1871 ...					
..... 1844 ...	Rebuilt in '72					
..... 1843 .....				do	do	The boom here is a single chain boom, and was built by the lumber merchants. The piers, 5 in number, were rebuilt by the Slide Committee in 1872.
.....		47,107 55				The dam here is private property.
.....						The works at this station were all swept away in 1870, and have not been rebuilt; they are not required for the running of timber, logs, &c.
..... 1844	..... 1844 .....					The piers and booms at this station are maintained by the Slide Committee.

**TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the**

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.				
					Length.	Breadth.	Height.	Draught of Water in Slides.	
<b>WORKS ON THE RIVER TRENT—Continued.</b>									
<b>On the Main Trunk of the River Trent—</b>									
<b>AT STATION No. 8.</b>									
Wing dam.....	At Fiddler's Island.....		36	1	300	14	6	.....	
Cross dam.....	do.....		36	1	100	14	12	.....	
<b>AT STATION No. 9.</b>									
Slide.....	At Middle Falls.....	229.33	37½	1	60	33		.....	
First lower dam.....	do.....			1	97	25	av. 13	.....	
Second dam.....	do.....			1	48	20	av. 7	.....	
Third dam.....	do.....			1	48	20	av. 7	.....	
Wing dam.....	do.....			1	637	8	5	.....	
Guide boom.....	do.....								.....
Three-stick boom.....	do.....					1	153	3½	.....
Dam of crib work, constructed across head of slide.....	do.....			1	61	12	.....		
<b>AT STATION No. 10.</b>									
Single stick retaining boom.....	At foot of Crow Bay and head of Middle Falls.....		38	1	2,600	1r½		.....	
Piers.....	do.....		38	2	23	23		.....	
<b>AT STATION No. 11.</b>									
Slide for saw logs.....	Heely's Falls, above junction of Crow Bay.....	275.55	42½	1	52½	33		2	
Dam of truss work.....	do.....			1	448	33	av. 8	.....	
Guide boom.....	do.....			1	379	2r½		.....	
Pier No. 1.....	do.....			1	24	16		.....	
Pier No. 2.....	do.....			1	16	16		.....	
Glance pier at river wall of slide.....	do.....			1	45	8		.....	
Dam across head of lower slide.....	do.....			1	116½	161r	61½	.....	
Glance of framed timber at head of falls.....	do.....					1	283		4
<b>AT STATION No. 12.</b>									
Dam of truss work.....	At Crooks' Rapids, Village of Hastings, 6½ miles below foot of Rice Lake.....	352.51	54½	1	253	33	7½	.....	
Saw log slide.....	do.....			1	60	33½		2	
Guide boom.....	do.....			1	813	3r½		.....	
do.....	do.....			1	660	1r½		.....	
Pier No. 1.....	do.....			1	25	12		.....	
do 2.....	do.....			1	12	12		.....	
do 3.....	do.....			1	13½	9		.....	
do 4.....	do.....			1	20	18		.....	
do 5.....	do.....			1	20	av. 16		.....	
do 6.....	do.....			1	26	17½		.....	
do 7.....	do.....			1	12	19		.....	



passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th Feb., 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1848....	1848.....	} 883 05				The works at this station are not maintained by Government.
1848...	1848.....					
1844	1845	} 20918 08		do	do	The lower slide at this station was destroyed in 1870 by the freshet, and has not since been used; it is abandoned. The entire of the works here were erected for the benefit of the lumber trade. No new works of any consequence were erected since their original construction, and since cribs have ceased to run the expenditure required for repairs amounts to a small sum. The works are not kept in the state of repair they should.
1844	1844					
1844	1845					
1844	1844					
1844	1844					
1844	1844					
Renewed in 1871.						The piers at this station were renewed by the Slide Committee in 1871.
.....	.....	} 38985 67		do	do	The lower slide at this station was partly swept away by the freshet in 1870 and rendered useless for the running of timber, saw logs, etc.; it is abandoned. The guide booms to slide were extended 190 feet, and a new pier, No 2, erected by the Department this year. The glance of framed timber was erected by the Slide Committee in 1873. The dam across head of lower slide was constructed in 1871.
.....	1882					
.....	1871					
.....	1873					
Partially reb't 1879 to 1882.		} Comprised in expenditure of Lock.				The slide was reduced 19 feet in length in 1880 by the Department, and a new side wall built; the north half of the dam was also rebuilt in 1880. Piers Nos. 2, 4, 5, 6, 7 were rebuilt by the Department in 1879. The Department also built a three-stick boom 234 feet long in 1873. The head work of slide was rebuilt in 1881-82.
.....	.....					
.....	.....					

See memorandum at the end of this appendix.

TABULAR Statement of the Slides, Dams, Piers and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE RIVER TRENT—Continued.</b>								
<i>On the River Otonabee—</i>								
AT STATION No. 13.								
Wing dam.....	At Whitlaw's Rapids, about 12½ miles above mouth of Otonabee, or head of Rice Lake, and 1 mile below Town of Peterborough	369.50	93	1	323½	27	av. 12½	.....
Cross dam.....	do			1	32	20	av. 9	.....
Saw log slide	do			1	25½	29	.....	.....
Waste weir.....	do			1	23	31	.....	.....
Glance pier below slide	do			1	52	9	11½	.....
Glance pier below waste weir	do			1	34	8	.....	.....
Guide booms.....	do			1	242	2½	.....	.....
Pier No. 1	do			1	12	12	.....	.....
do 2	do			1	12	12	.....	.....
do 3	do			1	12	12	.....	.....
AT STATION No. 14.								
Pier No. 1.....	At Little Lake, near Town of Peterborough	94	1	30	25	.....	.....	
do 2.....	do	94	1	30	25	.....	.....	
do 3.....	do	94	1	30	25	.....	.....	
do 4.....	do	94	1	15	10	.....	.....	
Boom.....	do	94	1	1,050	1½	.....	.....	
AT STATION No. 15.								
Cross dam	At Lakefield, a village 9 miles above the Town of Peterborough	.....	1	198	.....	7	.....	
Saw-log slide.....	do	.....	1	25	30	.....	.....	
AT STATION No. 16.								
<i>Between Pigeon Lake and the River Otonabee—</i>								
Dam of stone.....	Halls Bridge (Buck-horn).	549.17	125	1	173	.....	6	.....
do truss work.....	do			1	387	25	av. 5	.....
Slide.....	do			1	95	33	.....	2
Waste weir.....	do			1	16	26	.....	.....
Single boom	do			1	600	1½	.....	.....
Pier	do			1	16	8	.....	5
AT STATION No. 17.								
<i>Between Lake Scugog and Pigeon Lake—</i>								
Upper dam	At Bobcaygean Rapids, at upper end of Pigeon Lake.	555.33	140½	1	481	.....	av. 4	.....
Lower dam.....	do			1	510	.....	av. 6	.....
Slide.....	do			1	33	32	.....	2

passage of timber to Sea Ports; showing the Situation, Dimensions, Cost, &c.—*Con.*

On what Date.		Cost of Construction from the Union, 10th February 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1837	1843	Comprised in expenditure of Lock.	See memorandum at the end of this appendix.			The waste weir on the east side was built in 1878, and the glance pier below it in 1879. The guide booms and pier No. 1 were built in 1876 and extended in 1878, and piers No. 2 and 3 built in 1878. The saw-log slide and glance pier below it were built in 1880.
.....	1843					
.....	1880					
.....	1878					
.....	1880					
.....	1879					
.....	1876					
.....	1876					
.....	1878					
.....	1878					
Rebuilt in 1880				do	do	{ Piers Nos 1, 2 and 3 were rebuilt in 1880. Pier No. 4 was erected in 1881
do	1880					
do	1880					
.....	1881					
.....	1852					
Assumed by Government in 1882.				do	do	{ The dam and slide here were assumed by Government in 1882. No works of improvement have been executed yet at this station.
do	.....					
.....						{ The dam of truss work was rebuilt in 1881. The slide was rebuilt in 1877, and extended 30 feet. The bulk-heads were rebuilt in 1881, and the waste weir rebuilt in 1881. The double boom was carried away in 1873, and has not been replaced. The single boom is being rebuilt. New pier was built in 1881.
Rebuilt in 1881						
do	1877					
do	1881					
In progress	.....					
.....	1881					
1837	1839	Comprised in expenditure of old Lock.				{ The slide is not generally used now; it was rebuilt in 1878; it has no flooring, the bottom being flat rock. The saw-logs run through Little Bob Channel, where there is a slide erected by the mill owner for that purpose, and maintained by him, according to agreement with the Department.
1837	1839					
Rebuilt in 1878						

TABLE Statement of the Slides, Dams, Piers, and Booms of Canada, designed for the

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above Outlet of River.	No. of Piers, Dams, Slides and Booms.	Dimensions in Feet.			
					Length.	Breadth.	Height.	Draught of Water in Slides.
<b>WORKS ON THE RIVER TRENT—Concluded.</b>								
On the River Scugog—								
AT STATION No. 18.								
Dam .....	At Town of Lindsay, on River Scugog.	562.28	161½	1	280	30	9	.....
AT STATION No. 19.								
Slide.....	At Fenelon Falls.....			1	326	33	.....	.....
Boom .....	do .....			1	3,090	1½	.....	.....
Pier No. 1.....	do .....			1	30	22	22	.....
do 2.....	do .....			1	24	18	21	.....

For expenditure on construction, repairs and management from 1st July, 1867, to 30th June, 1882,

passage of timber to Sea Ports ; showing the Situation, Dimensions, Cost, &c.--*Con.*

On what Date.		Cost of Construction from the Union, 10th February, 1841, to 30th June, 1867.	Cost of Construction from Confederation, 1st July, 1867, to 30th June, 1882.	Average Yearly Cost for last 15 Years.		REMARKS.
Commenced.	Completed.			Repairs.	Management.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1837	1844	Comprised in expenditure of old Lock.	Sec memorandum at the end of this appendix.	do	do	The slide that existed here was done away with, and a lock built in its place by the Ontario Government in 1871.
Assumed by Government in 1873.	1873			do	do	
.....	1873					
.....	1873					

and remarks, see next page.—G. F. B.

SLIDES AND BOOMS.

MEMORANDUM.—Statement showing cost of construction up to 30th June, 1882; also cost of Staff and Repairs for the fifteen years from 1st July, 1867 (date of Confederation), to 30th June, 1882, with yearly average during that period.

Number.	Construction.			Repairs.			Staff.		
	1841-67.	1867-82.	Total.	Total. 1867-82.	Yearly Average.	Total. 1867-82.	Yearly Average.	Total. 1867-82.	Yearly Average.
	\$ cts.	\$ cts.	\$ dts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	269,043 03	168,515 25	437,958 28	95,667 39	6,377 82	217,311 31	14,487 42		
2	290,904 11	48,300 86	339,204 97	124,813 45	8,320 89				
3	3,037 35	10,466 48	13,503 83	2,885 73	223 81				
4	.....	488 45	488 45	b 650 85	325 43				
5	.....	29,526 44	61,494 27	25,399 95	1,693 33				
6	31,967 83	5,667 81	82,395 18	63,977 68	4,265 17				
7	76,727 37	318 00	29,350 78	17,942 09	1,196 14				
8	29,032 78	2,500 00	12,500 00	20,329 58	1,355 30				
9	10,000 00	7,713 00	75,347 01	31,721 10	2,114 74				
10	67,634 01	19,478 54	28,280 54	14,536 66	969 11				
11	8,802 00	6,279 58	234,636 63	61,163 24	4,077 55				
12	c 228,347 05					19,488 45	1,299 23		

(a) For twelve years.  
 (b) For two years.  
 (c) Cost of Stations Nos. 3, 12, 16 and 17, included with that of locks.

O. DIONNE,  
 Accountant.

NOTE.—The information prior to July, 1867, contained in the foregoing tabular statement, is based on the statement previously prepared by me and published up to that date. The details of construction, repairs and management since 1867, have not been given, the amounts for the same not having been kept separately in the books of the Department

G. F. BAILLAIRGÉ,  
 D.M.P.W.

APPENDIX No. 25.

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PROCLAMATIONS

RESPECTING

TOLLS AND REGULATIONS

ON

PUBLIC WORKS.

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APPENDIX

PROCLAMATIONS RESPECTING TOLLS

	NAME OF WORKS.	When and where Proclamation of His Excellency								
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	
<b>CANALS AND RIVERS.</b>										
Tolls .....	Canals (in general).....	1846	3104	1851	10429	1852	12143 12360	1853	623 1043	1856
Regulations.	do do .....	1845	2182	1846	3114 8769	1857	1252	1860	1572	1867
Tolls .....	Lachine Canal.....	1845	1750	1846	2955 3104	1847	4366	1848	5401	1860
do .....	do (basin).....	1846	3113	1847	4366	1878	216			
do .....	do (sheds).....	1846	2955	1847	3717	1880	1747			
do .....	Beauharnois Canal.....	1846	2955	1848	5401 3104	1879	5 103	1881	197	
do .....	Cornwall do .....	1846	2955							
do .....	St. Lawrence do .....	1848	5242 5465 5385	1849	6411	1850	8296	1851	10430	1852
do .....	do do .....	1863	1153 1510	1869	82 843	1872 1873	1159	1877	119 1703	1881
do .....	Rideau and Ottawa Canal, or Ord- nance Canals.....	1842	258 259	1846	2654	1851	11243	1860	1159	1863
Regulations.	do do .....	1845	1919	1847	4629	1857	1252	1867	3127	
Tolls .....	Ste. Anne Lock. ....	1843	1036	1845	1757	1846	3110	1850	8296 8769	1863
do .....	St. Ours do .....	1846	3110	1849	7052	1850	8239 8572 8296	1851	10430	1852
do .....	Chambly Canal.....	1843	780	1845	1750	1846	3104	1847	4221	1848
do .....	do do .....	1851	11430	1852	12360	1853	432	1859	1479	1863
Regulations.	do do .....	1843	779	1857	1252					
Tolls .....	Burlington Bay Canal.....	1843	928	1845	1750	1846	3104	1848	5241 5385	1863
Regulations.	do do .....	1855	1283	1857	1252					
Tolls .....	Welland Canal.....	1845	1754	1846	2839 3104	1847	4851	1848	5385 5465	1849
do .....	do do .....	1852	12360	1853	432	1859	1479	1860	1024	1861
do .....	do do .....	1865	1307	1864	1083	1868	711	1869	820	1870
Regulations.	do do .....	1847	4851	1857	1252	1860	2350	1879	70	1882
Tolls.....	Locks, Newcastle District. ....	1845	1757	1846	3110	1874	213	1874	263	1876
Regulations.	do do .....	1860	1575 1875	1874 1875	212	1874 1875	325			
Tolls .....	Lake Erie to Lake Champlain. ....	1850	8296	1851	10430	1859	1479			
do .....	Lake St. Peter, 13 and 14 Vic., c. 97.	1852	12267							
do .....	River St. Maurice.....	1854	791	1874 1875	532	1878	1059	1878	342	
do .....	Gatineau River works .....	1848	5266	1852	12359					
do .....	Coulouge.....	1865	3351	1882	1760					



No. 25.

AND REGULATIONS ON PUBLIC WORKS.

the Governor General in Council, is published in the Canada *Gazette*, respecting the same.

Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.
1367	1857	2584	1860	1522	1863	2901	1864	1137	1866	2153	1872	1159	1875	179	1877	1703
			abolished.			1510					1873	1206				119
3127	1872	1313	1879	103	1881	1152										
	1873			70		1830										
				328		473										
1573	1862	916	1878	216	1879	283	1880	1073	1880	1225	1881	83	1881	197		
2350														257		
12360	1853	432	1859	1479	1860	1572										
1418	1882	782														
1510	1865	1307	1869	820	1872	1159	1877	1703	1877	119						
				843	1873	1205										
1510	1869	820	1872	1159	1877	1703	1877	119								
		843	1873													
12360	1853	432	1859	1479	1869	820	1877	1703								
						843										
5385	1849	6411	1850	8239	1869	820	1872	1159	1877	1703	1877	119	1881	197		
		6906		8572		843	1873		1878							
				8296												
1510	1857	1252														
1510	1868	491	1869	820	1872	1158	1877	1703								
2512				843	1873	1159										
6411	1850	8296	1851	10430												
		8572														
932	1862	1857	1863	1510	1864	1083										
864	1872	1159	1874	1421	1877	1703	1881	1418	1882	782						
	1873					119										
1081																
350																

APPENDIX No. 25.—PROCLAMATIONS RESPECTING TOLLS

	NAME OF WORK.	When and where Proclamation of His Excellency							
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.
<b>CANALS AND RIVERS—Continued.</b>									
Regulations.	Lachine Canal (basin).....	1847	4366						
do	Rideau do (basin and wharves)..			1874	116	1875	1488		
				1875					
Tolls	St. Peter's Canal.....	1871	17	1872	1115				
		1872		1873					
do	Lake Erie to Montreal.....	1872	1159	1877	1703	1877	119		
		1873							
do	Ottawa to St. John.....	1872	1159	1877	1703	1877	119		
		1873							
do	River du Moine.....	1864	1498						
do	do Moira.....	1870	33 V.,	1879	42 V.,				
			c. 46.		c. 51.				
do	Beauharnois Canal. Horses for towing	1879	1647						
<b>WHARVES.</b>									
Tolls or rates	Rondeau wharf.....	1881	704						
do	Pointe au Platon wharf.....	1863	2117						
do	Lotbinière wharf.....	1865	1918						
do	Delap's Cove, Annapolis, N.S.....	1880	1560	1881	704				
do	Clifton wharf.....	1880	265	1881	704				
<b>HARBOURS.</b>									
Tolls	Toronto Harbour.....	1840	3						
do	Port Stanley Harbour.....	1845	1750	1846	3107	1880	1600		
do	Port Maitland Harbour.....	1845	1750	1846	3107	1863	1509		
do	Port Dover do.....	1845	1750	1846	3107	1872	1094		
do	Port Colborne do.....	1845	1750	1846	3107	1863	1509		
do	Port Dalhousie do.....	1845	1750	1846	3107				
do	Windsor do.....	1845	1750	1846	3107	1847	4362		
do	Rondeau do.....	1846	3107	1873	1257				
do	Port Burwell do.....	1846	3107						
do	Harbours (in general).....	1846	3108	1847	4852				
Regulations.	do.....	1846	3117	1880	1780	1872	1313		
			2385			1873			
do	Montreal Harbour.....	1875	1259						
do	Richibucto do.....	1871	17						
			27						
do	Port Bridgewater Harbour, N.S.....	1874	537						
do	Goderich do.....	1877	1537	1878	796	1878	1149	1881	705
do	Inverhuron do.....	1878	313	1881	704				
do	North Sydney do.....	1880	1777						
Tolls	Montreal do.....	1879	406	1880	1466	1881	1303		
Regulations.	Quebec do.....	1879	2	1880	257				
Tolls	Bridgewater do N.S.....	1874	537						
do	Goderich do.....	1877	1537	1878	1149				
do	Oakville do.....	1874	472						
do	Cow Bay do.....	1875	1256	1881	705				
do	Bathurst do.....	1869	34	1880	1507				
do	Richibucto do.....	1869	34						
do	House do Mag. Islands.....	1869	866						
		1870							
do	Amherst do.....	1869	867						
		1870							
do	Cap de Chatte.....	1871	1006						
do	Digby Harbour, N.S.....	1879	2	1881	704				



APPENDIX No. 25.—PROCLAMATIONS RESPECTING TOLLS

	NAME OF WORK.	When and where Proclamation of His Excellency									
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	
<b>HARBOURS—Continued.</b>											
Tolls.....	Port Greville, N. S. ....	1881	870	.....	.....	.....	.....	.....	.....	.....	
do .....	Port Hawkesbury, N.S. ....	1881	871	.....	.....	.....	.....	.....	.....	.....	
do .....	Port Sydney.....	1881	1561	.....	.....	.....	.....	.....	.....	.....	
do .....	Port Moncton.....	1881	6	.....	.....	.....	.....	.....	.....	.....	
do .....	Port Mulgrave.....	1881	84	.....	.....	.....	.....	.....	.....	.....	
do and Regulations.	Port Arichat.....	1879	65	.....	.....	.....	.....	.....	.....	.....	
Tolls.....	Pictou Harbour.....	1881	969	.....	.....	.....	.....	.....	.....	.....	
do .....	Victoria and Esquimalt Port.....	1880	983	.....	.....	.....	.....	.....	.....	.....	
Regulations.	Cow Bay.....	1880	987	.....	.....	.....	.....	.....	.....	.....	
do .....	Nanaimo and Departure Bay, B.C.....	1882	1081	.....	.....	.....	.....	.....	.....	.....	
Tolls.....	Brooklyn, N.S.....	1882	706	.....	.....	.....	.....	.....	.....	.....	
<b>TELEGRAPHS.</b>											
Tolls.....	Telegraphs, B.C.....	1878	1290	1878	107	1880	986	.....	.....	.....	
Oaths.....	do Operators.....	1881	117	.....	.....	.....	.....	.....	.....	.....	
.....	Preservation of peace near public works.	1870	563	1871	1086	1878	730	1879	404	1883	
									324		
									440		
<b>SLIDES AND BOOMS.</b>											
Tolls and Regulations.	Provincial slides.....	1847	4048	1852	12311	1860	1572	1865	1684	.....	
do .....	Saguenay slides, &c., Chicoutimi booms.	1860	1158	1860	1523	1860	2935	1865	1304	1874	
Regulations	do do do .....	860	2935	1865	1304	.....	.....	.....	.....	1875	
Tolls.....	Ottawa slides.....	1844	1253	1845	1753	1846	3112	1847	4048	1860	
do .....	Carillon slides.....	1860	1158	.....	.....	.....	.....	.....	.....	.....	
do .....	Petewawa slides.....	1858	1247	1858	1354	1860	1158	1860	1574	1862	
do .....	Madawaska slides.....	1844	1253	1845	1753	1846	3112	1847	4596	1860	
Regulations and Tolls.	do .....	1847	4048	1860	1574	1865	3351	.....	.....	.....	
Tolls.....	Black River slides.....	1867	1611	1882	1760	.....	.....	.....	.....	.....	
do .....	Newcastle district slides.....	1845	1753	1846	3112	1866	*4820	1870	934	1874	
Regulations.	do do .....	1845	2186	1846	3116	1871	934	1871	.....	1875	
Tolls.....	Chaudière, Chenaux and Gatineau booms.	1860	1574	.....	.....	.....	.....	.....	.....	.....	
Regulations.	Crown Timber.....	1866	250	.....	.....	.....	.....	.....	.....	.....	
do .....	Gatineau booms.....	1873	1487	.....	.....	.....	.....	.....	.....	.....	
do .....	St. Maurice slides.....	1874	791	1865	1686	.....	.....	.....	.....	.....	
Tolls.....	Ottawa slides, <i>via</i> Lake Traverse and Rocher Capitaine.	1873	1335	.....	.....	.....	.....	.....	.....	.....	
do .....	Rivière du Moine.....	1872	1096	1873	600	1876	350	1882	1760	.....	
do .....	Gatineau booms.....	1873	.....	1880	1641	1882	1760	.....	.....	.....	

\* The locks and works at Crooks' and Chisholm's Rapids, in the Newcastle District, having been considered unjust to levy tolls on timber passing at those places, and for this reason they were not through the Public Works at Crooks' and Chisholm's Rapids.



APPENDIX NO. 25.—PROCLAMATIONS RESPECTING TOLLS

	NAME OF WORKS.	When and where Proclamation of His Excellency								
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	
<b>PIERS.</b>										
Tolls .....	Rimouski, Rivière du Loup, Rivière Ouelle, Malbaie, Eboulements, L'Islet and Berthier Piers.	1870	562	1870	929	.....	.....	.....	.....	.....
do .....	Oak Point Pier, N.S. ....	1876	1562	1876	1566	1882	1129	.....	.....	.....
do .....	Mainland do .....	1876	1598	1882	1129	.....	.....	.....	.....	.....
do .....	Jordan Bay do .....	1876	181	.....	.....	.....	.....	.....	.....	.....
<b>OTHER PUBLIC WORKS.</b>										
Tolls .....	Public works .....	1849	6411	1863	1510	1869	820	.....	.....	.....
Regulations and Tolls.	Lighthouses .....	1846	3117	.....	.....	.....	843	.....	.....	.....
<b>ROADS.</b>										
Tolls .....	Roads in general .....	1847	4364	1849	6412	.....	.....	.....	.....	.....
Regulations.	do do .....	1845	2185	1846	3117	1847	4366	.....	.....	.....
Tolls .....	West Gwillimbury Road .....	1841	147	.....	.....	.....	.....	.....	.....	.....
do .....	Cascades and Côteau Road .....	1845	1748	1846	3111	1847	4364	1849	6412	.....
do .....	Brantford and London do .....	1845	1748	1846	3111	1847	4364	1849	6412	.....
do .....	London and Port Stanley Road .....	1845	1748	1846	3111	1847	4364	1849	6412	.....
do .....	Hamilton and Port Dover .....	1845	1748	1846	3111	1847	3795	1849	6412	1864
do .....	Windsor and Scugog .....	1845	1748	1846	3111	1847	4364	1849	6412	.....
do .....	Port Hope and Rice Lake .....	1845	1748	1846	3111	1847	4364	1849	6412	.....
do .....	Main road from Quebec to Sandwich.	1846	3111*	.....	.....	.....	.....	.....	.....	.....
do .....	Quebec to Cap Rouge .....	1846	3111	.....	.....	.....	.....	.....	.....	.....
do .....	Montreal to Bout de l'Île .....	1846	3111	.....	.....	.....	.....	.....	.....	.....
do .....	Kingston to Napanee .....	1846	3111	1847	4364	1849	6412	.....	.....	.....
do .....	East York, 18 miles; West York, 16 miles.	1846	3111	1847	4364	1849	6412	.....	.....	.....
do .....	Hamilton and Brantford .....	1846	3111	1847	3795	1849	6412	.....	.....	.....
do .....	North Toronto to Holland Landing...	1846	3111	1847	4364	1849	6412	.....	.....	.....
do .....	Lake Shore Road .....	1847	4364	1849	6412	.....	.....	.....	.....	.....
do .....	Queenston and Grimsby .....	1847	4439	.....	.....	.....	.....	.....	.....	.....
do .....	St. Athanase .....	1848	5375	.....	.....	.....	.....	.....	.....	.....
do .....	Chamby and Granby .....	1849	7027	.....	.....	.....	.....	.....	.....	.....
do .....	Chemins des Caps .....	1854	526	.....	.....	.....	.....	.....	.....	.....
do .....	Huntingdon and Port Louis .....	1870	144	.....	.....	.....	.....	.....	.....	.....
<b>BRIDGES.</b>										
Tolls on.....	Bridges in general .....	1847	4507	1848	5213	1849	6412	1851	10729	1853
Regulations.	do do .....	1845	2184	1846	3111	.....	.....	.....	.....	.....
do .....	Bridges on Chippewa River .....	1860	2157	1860	2350	.....	.....	.....	.....	.....
Tolls on.....	Chaudière Bridge .....	1845	1748	1846	3112	1849	6412	1851	10729	.....
do .....	Cap Rouge .....	1845	1748	1846	3112	.....	.....	.....	.....	.....
do .....	Ste. Anne de la Pérade .....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Batiscan .....	1845	1748	1846	3112	1847	4365	1849	6412	1851

\* The main road from Quebec to Sandwich comprises the roads from : Quebec to Cap Rouge, Mon  
miles; Hamilton and Brantford and Brantford and London roads.

The branch roads are : London and Port Stanley, Hamilton and Port Dover, South Toronto to Holland



APPENDIX No. 25.—PROCLAMATIONS RESPECTING TOLLS

	NAME OF WORK.	When and where Proclamation of His Excellency								
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.
<b>BRIDGES—Continued.</b>										
Tolls on.....	St. Maurice.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Union Suspension, Ottawa.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Trent.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Narrows.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Dunnville.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Caledonia.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Paris.....	1845	1748	1846	3112	.....	.....	.....	.....	.....
do .....	Brantford.....	1845	1748	1846	3112	1847	4365	1849	6161	1851
do .....	Delaware.....	1845	1748	1846	3112	1847	4365	1849	6412	1851
do .....	Chatham.....	1845	1748	1846	3112	1850	8296	.....	6412	.....
do .....	Chateaugay.....	1847	4229	1849	6412	1851	10729	.....	.....	.....
do .....	Etchemin.....	1847	4507	.....	.....	.....	.....	.....	.....	.....
do .....	Bécancour.....	1848	5376	1849	6412	1851	10729	.....	.....	.....
do .....	Duchêne.....	1848	5376	1849	6412	1851	10729	.....	.....	.....
do .....	Godfroy.....	1848	5376	1849	6412	1851	10729	.....	.....	.....
do .....	Jacques Cartier.....	1848	5376	1849	6412	1851	10729	1853	2	1859
do .....	Melbourne.....	1848	5376	1849	6412	1851	10729	.....	.....	.....
do .....	Nicolet.....	1848	5376	1849	6412	1851	10729	.....	.....	.....
do .....	Rimouski River.....	1848	6009	1849	6412	1851	10729	.....	.....	.....
do .....	Clifton Suspension.....	1869	663	.....	.....	.....	.....	.....	.....	.....
do .....	Peat.....	1869	711	.....	.....	.....	.....	.....	.....	.....
<b>RAILWAYS.</b>										
Regulations.	Government of Canada.....	1876	182	.....	.....	.....	.....	.....	.....	.....
do .....	European and North American.....	1868	408	1869	916	1870	275	1872	771	.....
do .....	Nova Scotia Railways.....	1869	916	1870	221	1871	1253	1873	.....	.....
do .....	Intercolonial.....	1870	1253	1872	771	.....	.....	.....	.....	.....
do .....	Champlain and St. Lawrence.....	1871	1871	1873	.....	.....	.....	.....	.....	.....
do .....	Industry Village and Rawdon.....	1848	5567	.....	.....	.....	.....	.....	.....	.....
do .....	Brockville and Ottawa.....	1852	13723	.....	.....	.....	.....	.....	.....	.....
do .....	Brockville and Ottawa.....	1863	1443	.....	.....	.....	.....	.....	.....	.....
do .....	St. Lawrence and Ottawa.....	1869	499	.....	.....	.....	.....	.....	.....	.....
Tolls.....	Nova Scotia.....	1869	281	1871	1097	1871	1029	.....	.....	.....
do .....	European and North American.....	1870	487	1872	733	1872	.....	.....	.....	.....
do .....	Intercolonial.....	1867	408	1869	232	1870	1250	1871	7	.....
do .....	Windsor and Annapolis.....	1868	1870	.....	.....	1871	1872	752	.....	.....
do .....	Brockville and Ottawa.....	1870	1250	1871	7	1873	192	1873	474	1873
do .....	St. Lawrence and Ottawa.....	1871	1871	1872	101	1874	1874	.....	.....	1874
do .....	St. Lawrence and Ottawa.....	1873	502	1873	1121	.....	.....	.....	.....	.....
do .....	Brockville and Ottawa.....	1874	1874	.....	.....	.....	.....	.....	.....	.....
do .....	St. Lawrence and Ottawa.....	1863	1443	.....	.....	.....	.....	.....	.....	.....
do .....	St. Lawrence and Ottawa.....	1869	479	1872	889	.....	.....	.....	.....	.....
do .....	Canada Central and Brockville and Ottawa.....	.....	.....	1873	949	.....	.....	.....	.....	.....
do .....	Canadian Pacific Railway Co.....	1879	1461	1881	1560	.....	.....	.....	.....	.....
do .....	Traffic returns.....	1881	581	.....	.....	.....	.....	.....	.....	.....
do .....	Ontario and Pacific Junction Ry. Co. of Canada.....	1871	32	.....	.....	.....	.....	.....	.....	.....
do .....	Ontario and Pacific Junction Ry. Co. of Canada.....	.....	.....	1879	806	.....	.....	.....	.....	.....





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—	NAME OF WORK.	When and where Proclamation of His Excellency								
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.
	RAILWAYS— <i>Continued.</i>									
	Portage, Westbourne and North-Western Railway Co's. Act put in force.	.....	.....	1882	438	.....	.....	.....	.....	.....
	RAILWAY TUNNELS.									
	Tunnel, C P.R., Brockville .....	1882	1444	.....	.....	.....	.....	.....	.....	.....
	do under Welland Canal .....	1882	1081	.....	.....	.....	.....	.....	.....	.....

OTTAWA, 30th July, 1867.





APPENDIX No. 26.

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TABULAR STATEMENT

SHOWING THE NUMBER OF

LOGS OR PIECES OF TIMBER

WHICH HAVE PASSED THROUGH THE SAGUENAY, ST. MAURICE,  
OTTAWA AND TRENT SLIDES; WITH THE GROSS  
REVENUES, DEDUCTIONS, NET REV-  
ENUES AND DEFICITS.

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## APPENDIX No. 26.

STATEMENT No. 1.—Showing the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., and the Net Revenue on the Government Slides, from 1st July, 1867, to 30th June, 1882.

## SAGUENAY SLIDES.

Year.	Number of Logs or Pieces of Timber.	Gross Revenue Accrued.	Deduct.			Total Deductions.	Net Yearly Revenue.	Deficit.
			Repairs.	Management	Collection of Tolls.			
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1868		1,371 24	3,297 01	838 16		4,135 17		2,763 93
1869		1,233 92	165 35	712 05		877 40	356 52	
1870		1,188 40	119 20	690 80		810 00	378 40	
1871			83 90	752 39		836 29		836 29
1872			818 28	691 05		1,509 33		1,509 33
1873	89,770	4,522 62	541 50	684 05		1,225 55	3,297 07	
1874	73,883	1,677 59	3,455 44	684 03		4,139 47		2,461 88
1875	87,688	2,038 09	1,372 81	932 80		2,305 61		267 52
1876	33,246	765 19	4,025 20	716 05	400 23	5,141 48		4,376 29
1877	34,690	724 90	518 08	741 05		1,259 13		534 23
1878	10,885	224 90	597 60	882 85		1,480 45		1,255 55
1879	71,256	1,517 31	5,491 02	753 05		6,244 07		4,726 76
1880	39,712	796 93	4,611 74	710 05		5,321 79		4,524 86
1881	79,939	1,599 79	6,210 39	853 68		7,064 07		5,464 28
1882	38,000	880 00	5,064 21	1,438 58		6,502 79		5,622 79
	559,119	18,540 88	36,371 73	12,080 64	400 23	48,852 60	4,031 99	34,343 71

## STATEMENT NO. 2—ST. MAURICE SLIDES.

1868	264,970	7,635 98	6,351 81	9,914 15		16,265 96		8,629 98
1869	434,693	7,151 25	3,258 51	9,668 64		12,927 15		5,775 90
1870	230,037	15,706 89	7,258 72	9,166 67	577 40	17,002 79		1,295 90
1871	326,949	9,430 42	5,183 99	11,489 30	382 51	17,085 80		7,625 38
1872	335,418	11,297 15	5,522 19	12,311 53	398 33	18,232 05		6,934 91
1873	264,598	12,188 41	7,092 43	16,356 60	428 00	23,877 03		11,688 62
1874	411,037	11,108 12	9,560 48	17,767 31	443 60	27,771 39		16,663 27
1875	387,334	15,363 80	9,036 50	17,851 96	571 60	27,460 07		12,096 27
1876	291,183	13,900 16	4,490 87	18,251 84	568 00	23,310 71		9,410 55
1877	220,635	11,338 48	5,892 27	13,675 26	618 00	20,185 53		8,847 05
1878	207,810	7,913 40	6,232 87	12,759 60	550 00	19,542 37		11,628 97
1879	160,414	6,136 94	4,291 19	13,355 19	559 00	18,205 38		12,068 44
1880	23,508	1,023 26	8,497 07	14,823 10	773 52	24,093 69		23,070 43
1881	93,836	7,592 62	3,831 27	14,993 41	578 50	19,403 18		11,810 56
1882	329,978	11,939 64	9,167 21	17,768 48	710 00	27,645 69		15,706 05
	3,984,406	149,726 50	95,667 38	210,152 94	7,158 46	312,978 70		163,252 28

## STATEMENT No. 3.—Showing the Gross Revenue, the Expenditure for Repairs, &amp;c.—Continued.

## OTTAWA RIVER SLIDES.

Year.	Number of Logs or Pieces of Timber.	Gross Revenue Accrued.	Deduct.			Total Deductions	Net Yearly Revenue.	Deficit.
			Repairs.	Management	Collection of Tolls.			
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1868	1,395,636	62,326 41	10,910 35	13,991 65	See Note at end of this Appendix.	24,902 00	37,424 41	.....
1869	1,158,486	55 618 50	17,135 38	14,419 70		31,555 08	24,063 42	.....
1870	2,208,340	75,888 74	24,288 74	15,931 20		40,219 94	35,668 80	.....
1871	1,455,538	74,259 35	28,960 31	17,185 00		46,145 31	28,114 04	.....
1872	1,963,515	101,924 56	32,128 54	15,203 94		47,332 48	54,592 08	.....
1873	2,338,248	111,897 55	18,753 31	14,295 58		33,048 89	78,848 66	.....
1874	2,544,516	119,786 64	29,206 34	21,786 98		50,993 32	68,793 32	.....
1875	2,205,154	105,947 46	60,060 76	21,826 70		81,887 46	24,060 00	.....
1876	1,993,084	87,202 75	33,340 09	20,104 79		53,444 88	33,757 87	.....
1877	1,577,503	103,029 87	20,525 65	21,168 36		41,694 01	61,335 86	.....
1878	1,292,201	74,762 51	4,556 98	19,908 37		24,465 35	50,297 16	.....
1879	1,280,395	60,930 69	6,087 78	18,587 76		24,675 54	36,255 15	.....
1880	1,340,260	53,734 84	10,444 90	17,465 29		27,910 19	25,824 65	.....
1881	2,364,901	67,210 79	11,454 85	19,086 06		30,540 91	36,669 88	.....
1882	2,420,789	85,065 80	18,481 76	22,103 22	40,584 98	44,480 82	.....	
	27,528,566	1,239,586 46	326,335 74	273,064 60		599,400 34	.....	
Total net Revenue up to 30th June, 1882 .....							640,186 12	

## STATEMENT NO. 4—TRENT RIVER SLIDES.

1868	.....	91 00	4,377 61	844 61	See Note at end of this Appendix.	5,222 22	.....	5,131 22	
1869	.....	58 00	3,249 49	486 00		3,735 49	.....	5,677 49	
1870	.....	.....	2,935 49	507 28		3,442 77	.....	3,422 77	
1871	.....	41 00	6,987 21	994 50		7,981 71	.....	7,940 71	
1872	.....	.....	7,664 08	621 65		8,285 73	.....	8,285 73	
1873	.....	.....	5,393 23	690 18		6,083 41	.....	6,083 41	
1874	.....	.....	5,969 47	1,976 28		7,945 75	.....	7,945 75	
1875	.....	.....	2,716 26	2,250 52		4,966 78	.....	4,966 78	
1876	.....	100 34	2,302 75	2,300 82		60 00	4,663 57	.....	4,563 23
1877	.....	1,477 99	3,540 89	2,325 03		7 20	5,873 12	.....	4,395 13
1878	152,446	390 65	5,963 11	2,366 45		16 22	8,345 78	.....	7,955 13
1879	279,640	787 27	5,984 78	2,238 21		.....	8,222 99	.....	7,435 72
1880	321,211	795 47	1,050 34	614 07		.....	1,664 41	.....	868 94
1881	275,878	925 70	.....	529 00		.....	529 00	396 70	.....
1882	42,868	107 17	3,028 53	582 50	77 93	3,688 96	.....	3,581 79	
	1,072,043	4,774 59	61,163 24	19,327 10	161 35	80,651 69	396 70	76,273 80	
Deduct net Revenue .....								396 70	
Total deficit up to 30th June, 1882.....								75,877 10	

STATEMENT No. 5.—Abstract from Statements Nos. 1, 2, 3, 4, showing the Number of Logs, Pieces of Timber, the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., on the

Names of Slides.	Number of Logs or Pieces of Timber.	Gross Revenue accrued.	Deduct.			Total Deductions.	Net Revenue.	Deficit.
			Repairs.	Management.	Collection of Tolls.			
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Saguenay Slides.....	559,119	18,510 88	36,371 67	12,080 64	400 23	48,852 60	30,311 72	
St. Maurice do .....	3,984,406	149,736 52	95,687 39	2,015 85	7,158 46	312,978 70	163,352 18	
Ottawa do .....	27,528,566	1,239,586 46	326,335 74	273,084 60	.....	599,400 34	640,186 12	
Trent do .....	1,072,043	4,774 59	61,163 24	19,327 10	161 35	80,651 69	76,377 10	
Total .....	33,144,134	1,412,628 45	519,538 10	514,625 19	7,720 04	1,041,883 33	269,441 00	
Deduct deficits.....		.....						
Total net Revenue up to 30th June, 1882 .....		269,441 00						
		370,745 12						

NOTE.—OTTAWA SLIDES AND BOOMS.

Cost of collection included in Suspense Account, Ontario and Quebec "Crown Timber Offices," has not yet been apportioned between the respective Governments of the Dominion and the Provinces of Ontario and Quebec. The cost to the Dominion will probably average from \$5,000 to \$6,000 per annum.

TRENT SLIDES AND BOOMS.

Collection of Tolls not ascertained. These works were partly transferred to a company in 1855 and resumed by Government as per O. C. No. 30,360 of 21st December, 1882.

For details respecting the various Slides and Booms prior to 1st July, 1867, see Appendices Nos. 15 and 68 in General Report on Public Works published in 1867.

G. F. BAILLAIRGÉ, D.M.P.W.



APPENDIX No. 27.

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TABULAR STATEMENT

OF THE

FOREST WOODS OF NORTH AMERICA,

GIVING THEIR BOTANICAL, ENGLISH AND FRENCH NAMES, THE  
PLACES WHERE THEY ARE CHIEFLY GROWN, THEIR  
DIMENSIONS, QUALITIES, AND THE PURPOSES FOR  
WHICH THEY ARE GENERALLY USED.

COMPILED BY C. TACHÉ.

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NOTE.—Mr. Taché has compiled this tabular statement of the Forest Trees of North America, chiefly from André Michaux' "Arbres Forestiers de l'Amérique Septentrionale," published at Paris, in 1813, and from the catalogue of the Forest Trees, of Canada, prepared for the universal exhibition of Paris, in 1867, by the late Rev. Ovide Brunet, Professor of Botany, at the Laval University, of Quebec.

G. F. B.

APPENDIX No. 27.  
THE FOREST WOODS OF NORTH AMERICA.

Botanical Name.	English Name.	French Name.	Native Place or where chiefly Grown.	Dimensions.		Qualities, Uses, &c.
				Height in feet.	Diameter in inches.	
<i>Pinus rubra</i> .....	Red or Norway pine .....	Pin rouge ou de Norvège.	Canada and U. States	70 to 80.....	20 to 24.....	Ships and building.
<i>Pinus resinosa</i> (Nova Scotia) .....	Yellow pine (Nova Scotia) .....	Pin jaune.	Canada	8 to 10.....	.....	Medicine.
<i>Pinus rupestris</i> .....	Scrub pine .....	Pin chétif ou Cypres .....	Canada and U States	50 to 60.....	15 to 18. ....	Medium; yellow; building, furniture, &c.
<i>Pinus mitis</i> .....	Grey pine .....	Pin gris .....	United States .....	30 to 40.....	12 to 15. ....	.....
<i>Pinus inops</i> .....	Yellow pine .....	Pin de Jersey ou pin chétif.	do .....	40 to 50.....	.....	.....
<i>Pinus pungens</i> .....	Spruce pine .....	Pin de la montagne de la Table .....	do .....	60 to 70.....	15 to 18.....	.....
<i>Pinus australis</i> .....	Table Mountain pine .....	Pin jaune .....	do .....	35 to 40.....	15 to 18.....	.....
<i>Pinus serotina</i> .....	Yellow pine .....	Pin à goudron .....	Canada and U. States	12 to 15.....	.....	Turpentine.
<i>Pinus rigida</i> .....	Pitch pine .....	Pin à longues feuilles. ....	do .....	20 to 28.....	.....	Building.
<i>Pinus taeda</i> .....	Long leaved pine .....	Pin à balais .....	do .....	80.....	24 to 36.....	Principal timber of North America.
<i>Pinus strobus</i> .....	Broom pine .....	Pin des marais .....	do .....	150 to 200.....	76.....	Various.
<i>Pinus jeffreyana</i> .....	Pond pine .....	Pin à goudron, ou résineux .....	California .....	50.....	.....	.....
<i>Pinus glabra</i> .....	Pitch pine .....	Pin blanc .....	United States (South)	25 .....	.....	.....
<i>Pinus banksiana</i> .....	Loblolly pine .....	Pin podron .....	Canada .....	70 to 80.....	15 to 20.....	Medium; carpentry and bridge.
<i>Abies nigra</i> .....	White pine (Canada) .....	Pin baliveau .....	do .....	50 to 80.....	12 to 15.....	Medium; bridge, carpentry, masts, &c.
<i>Abies alba</i> vel <i>Picea alba</i> .....	Sapling pine .....	Pin jaune .....	Canada .....	70 to 80.....	6 to 9 ft. circ.	Railway ties, agriculture, &c.
<i>Abies canadensis</i> .....	Yellow pine .....	Pin gris .....	Canada and U. States	.....	.....	.....
	Grey pine .....	Sapin rouge .....	do .....	.....	.....	.....
	Red spruce .....	Sapin noir .....	do .....	.....	.....	.....
	Black (double) spruce .....	Epinette noir à la bière... ..	do .....	.....	.....	.....
	White or single spruce .....	Sapin blanc .....	do .....	.....	.....	.....
	Hemlock spruce .....	Epinette blanche (Canada) .....	do .....	.....	.....	.....
		Sapin hemlock .....	do .....	.....	.....	.....
		Pérusse (pruche) .....	do .....	.....	.....	.....

<i>Abies cinerea</i>	Grey spruce	Epinette grise	Canada	.....	Tough; masts, &c.
<i>Abies Douglasii</i>	Black spruce	Epinette noire	Siera, Nevada	.....	Hard; ship building.
<i>Abies Engelmanni</i>	Engelman's spruce	Epinette rouge, Mélége.	Rocky Mountains	.....	Soft; carpentry.
<i>Abies balsamifera</i>	Balsam fir	Sapin baumier	Canada	40 to 80	
<i>Abies grandis</i>	Silver fir	Sapin argenté	California	.....	
<i>Abies amabilis</i>	Golden red fir	Sapin rouge doré	Sierra, Nevada	60 to 70	Medium; dark; furniture, ornaments, gun stocks.
<i>Juglans nigra</i>	Black walnut	Noyer noir	Canada and U. States	36 to 48	Soft; cabinet works.
<i>Juglans cathartica</i>	Butternut	Noyer tendre	do	50 to 100	
<i>Carya aquatica</i>	Water bitter nut hickory	Noyer tendre	United States	40 to 50	
<i>Carya tomentosa</i>	Mocker nut hickory	Noyer blanc, noix douces	Canada and U. States	60	.....
<i>Carya squamosa</i>	Shell bark hickory	Noyer oseilleux	United States	80 to 90	.....
<i>Carya porcina</i>	Pig nut hickory	Noix à cochon	Canada and U. States	36 to 48	.....
<i>Carya myristiciformis</i>	Nutmeg hickory nut	Noyer à muscade	United States	.....	
<i>Carya alba</i>	Eastern shell bark hickory	Noyer dur	Canada and U. States	100	.....
<i>Carya amara</i>	Bitter nut hickory	Noyer amer (Canada)	.....	60 to 70	.....
<i>Carya laciniosa, vel compressa, et microcarpa</i>	White hickory	Noyer blanc	United States	About 80	.....
<i>Carya olivæformis</i>	Thick shell bark hickory	Noyer écailleux à coque épaisse	.....	.....	
<i>Carya sulcata</i>	Gloucester nut hickory	Noyer de Gloucester, en Virginie	.....	.....	
<i>Quercus alba</i>	Springfield hickory	Noyer de Sprungfeld	Louisiana	60 to 70	.....
<i>Quercus muscosa</i>	Pucane nut hickory	Pacanier	Mississippi Valley	.....	.....
<i>Quercus macrocarpa</i>	Western shell bark hickory	Noyer dur	Canada and U. States	70 to 80	.....
<i>Quercus obtusiloba</i>	White oak	Chêne blanc	United States (West)	60 to 70	.....
<i>Quercus lyrata</i>	Mossy cup oak	Chêne à capsule chevelue	do	Over 60	.....
<i>Quercus prinus discolor</i>	Over cup white oak	Chêne frisé à gros glands	Canada	.....	.....
<i>Quercus prinus palustris</i>	Oak bar	Chêne à pieux	Maryland & Virginia	40 to 50	.....
	Post oak	Chêne buis blanc	Caroline & Georgia	70 to 80	.....
	Box white oak	Chêne de fer	North America	Over 70	.....
	Iron oak	Chêne à dindons	Georgia and Florida	80 to 90	.....
	Turkey oak	Chêne à gland renfermé	.....	.....	
	Over cup oak	Chêne à pieux des marais	.....	.....	
	Swamp post oak	Chêne blanc d'eau	.....	.....	
	Water white oak	Chêne blanc des marais	.....	.....	
	Swamp white oak	Chêne blanc châtaignier	.....	.....	
	Chestnut white oak	Chêne châtaignier des marais	.....	.....	
	Swamp chestnut oak	Chêne blanc	.....	.....	
	White oak	Chêne blanc	.....	.....	

APPENDIX No. 27.—THE FOREST WOODS OF NORTH AMERICA—Continued.

Botanical Name.	English Name.	French Name.	Native Place or where chiefly Grown.	Dimensions.		Qualities, Uses, &c.
				Height in feet.	Diameter in inches.	
<i>Quercus prinus monticola.</i>	Rock chestnut oak.....	Chêne châtaignier des rochers.....	Pennsylvania and Virginia.....	25 to 60.....	10 to 20.....	Fine tree; ship building, carriage, &c.
<i>Quercus acuminata.</i>	Yellow oak.....	Chêne jaune.....	United States (West).....	70 to 80.....	20 to 24.....	Very fine tree; but not much employed in industry.
<i>Quercus prinus chinacpin.</i>	Chincapin oak.....	Chêne de chinacpin, (Georgie).....	United States.....	2 to 3.....	.....	Not useful.
<i>Quercus virens.</i>	Small chestnut oak.....	Chêne châtaignier petit.....	United States.....	50 to 60.....	20 to 24.....	Not useful.
<i>Quercus phellos.</i>	Green oak or live oak.....	Chêne vert.....	do (West).....	40 to 50.....	12 to 15.....	do
<i>Quercus imbricaria.</i>	Willow oak.....	Chêne saule.....	do (South).....	15 to 20.....	4 to 5.....	do
	Laurel oak.....	Chêne laurier.....	do do.....	1 to 2.....	.....	Important only for botanist.
	Black jack oak.....	Chêne à lattes (Illinois).....	do do.....	About 30.....	About 8.....	Very scarce.
<i>Quercus cinerea.</i>	Upland willow oak.....	Chêne saule des landes.....	do (South).....	40 to 45.....	12 to 18.....	Not useful.
<i>Quercus pumila.</i>	Running oak.....	Chêne traçant.....	U. States (W. and E.).....	20 to 30.....	.....	Only proper for fuel.
<i>Quercus heterophylla.</i>	Bartram's oak.....	Chêne hétérophylle ou Bartram.....	do (N. and W.).....	3 to 4.....	About 1.....	Not useful.
<i>Quercus aquatica.</i>	Water oak.....	Chêne aquatique.....	United States (South).....	About 80.....	40 to 60.....	Used for carriage making, barrels, &c.
<i>Quercus ferruginea.</i>	Black Jack oak.....	Chêne ferrugineux.....	North America.....	80 to 90.....	40 to 60.....	Hard; red; building, shingles, &c.
	Barrens' oak.....	Chêne des prairies.....	do.....	About 80.....	36 to 48.....	Hard; building.
<i>Quercus banisteri.</i>	Bear oak.....	Chêne d'ours.....	do.....	40 to 60.....	12 to 18.....	Boxes for merchandise and knees for ship building.
	Black scrub oak.....	Chêne noir chétif.....	U. States (N. and W.).....	70 to 80.....	36 to 48.....	Tree of pyramidal form; only used for ornaments.
<i>Quercus catesbeii.</i>	Dwarf red oak.....	Petit chêne rouge.....	do.....	.....	.....	
<i>Quercus facalta.</i>	Rarens' scrub oak.....	Chêne chef des prairies.....	do.....	.....	.....	
	Spanish oak.....	Chêne faqué d'Espagne.....	do.....	.....	.....	
	Red oak.....	Chêne rouge.....	do.....	.....	.....	
<i>Quercus tinctoria.</i>	Black oak.....	Chêne noir.....	do.....	.....	.....	
<i>Quercus coccinea.</i>	Scarlet oak.....	Chêne scarlate.....	do.....	.....	.....	
<i>Quercus ambigua.</i>	Grey oak.....	Chêne gris.....	do.....	.....	.....	
	Lake oak.....	Chêne à chevilles.....	do.....	.....	.....	
<i>Quercus palustris.</i>	Pine oak.....	Chêne d'Espagne des marais.....	U. States (N. and W.).....	70 to 80.....	36 to 48.....	
	Swamp Spanish oak.....	Chêne d'Espagne des marais.....	do.....	.....	.....	



<i>Quercus rubra</i> .....	Chêne rouge.....	Canada and U. States	About 80.....	36 to 48.....	Hard; red; building, shingles, &c.
<i>Quercus ilex</i> .....	Chêne yeux ou chêne verd.	North America.....	40 to 50.....	.....	Hard; building.
<i>Quercus castanea</i> .....	Bouleau blanc à canot.....	Canada.....	About 70.....	About 36.....	Used for canoes and paper.
<i>Betula papyracea</i> .....	Bouleau à papier.....	do	.....	8 to 9.....	Hard; furniture.
<i>Betula populifolia</i> .....	Bouleau blanc à feuilles de peupliers.....	Canada and U. States	About 70.....	24 to 36.....	Not very useful.
<i>Betula pumila</i> .....	Bouleau rouge.....	Canada.....	25 to 35.....	.....	.....
<i>Betula rubra</i> .....	Bouleau à balais.....	Canada and U. States	About 70.....	.....	.....
<i>Betula nana</i> .....	Bouleau-saïn.....	Canada.....	1 to 2.....	.....	.....
<i>Betula lenta</i> (vel nigra).....	Bouleau noir.....	Canada and U. States	About 70.....	24 to 36.....	Good quality for industries.
<i>Betula lutea</i> (vel excelsa).....	Acajou de montagne.....	do	60 to 70.....	24.....	Hard; furniture.
<i>Castanea vesca</i> .....	Bouleau odorant.....	do	80.....	36.....	Take a good polish; furniture and turnery.
<i>Castanea pumila</i> .....	Bouleau merisier.....	United States(South)	20 to 30.....	10 to 12.....	Not useful.
<i>Carpinus americana</i> .....	Bouleau jaune.....	Canada.....	12 to 15.....	4 to 6.....	Hard; various.
<i>Fagus sylvestris</i> .....	Châtaignier ou marronnier d'Amérique.....	Canada and U. States	80 to 100.....	30 to 48.....	Inferior to red-beech for industries.
<i>Fagus ferruginea</i> .....	Châtaignier chincaïpin.....	do	80 to 100.....	30 to 48.....	Hard; yellow; framing, planes, tool-handles and turnery.
<i>Chamaecyparis palmeto</i> .....	Charme.....	U. S. (ocean coast)...	40 to 50.....	.....	Employed in hydraulic works.
<i>Ilex opaca</i> .....	Hêtre blanc.....	Florida & Louisiana.	About 40.....	12 to 15.....	Furniture and articles of small industry.
<i>Diospiros virginiana</i> .....	Hêtre rouge.....	United States(South)	40 to 60.....	12 to 20.....	Hard; not very useful.
<i>Acer eriocarpum</i> .....	Hêtre d'Amérique.....	United States.....	.....	12 to 15 f. cir.	Not useful.
<i>Acer populosum</i> .....	Palmier (chou palmiste).....	Canada, &c.....	80.....	30.....	Furniture.
<i>Acer crispum</i> .....	Houx d'Amérique.....	do	About 70.....	36 to 48.....	do
<i>Acer rubrum</i> .....	Plaqueminier.....	North America.....	.....	.....	(1) Also called <i>plaine</i> by the Canadians. That tree gives sugar; good for small industry.
<i>Acer saccharinum</i> .....	Erable blanc.....	do	60 to 80.....	12 to 20.....	(2) Soft and less useful than the sugar maple.
	Erable tendre.....				Hard; sugar, carving, gun-stocks, framing timber, furniture, &c.
	Erable dur.....				
	Erable à sucre.....				
	Erable des rochers.....				
	Erable dur.....				

APPENDIX NO. 27.—THE FOREST WOODS OF NORTH AMERICA—Continued.

Botanical Name.	English Name.	French Name.	Native Place or where chiefly grown.	Dimensions.		Qualities, Uses, &c.
				Height in feet.	Diameter in inches.	
<i>Acer nigrum</i> .....	Black sugar tree..... Black maple.....	Erable noire à sucre..... Erable noire.....	North America.....	Very high.....		Hard; sugar, carving, framing timber, &c.
<i>Acer spicatum</i> .....	Mountain dwarf maple.....	Plaine batarde, ou bois boc.	Canada.....	15.....	3.....	Not useful.
<i>Acer striatum</i> .....	Moose wood..... Striped maple.....	Bois d'élan..... Erable jaspé, ou bois barré	Canada, &c.....	8 to 10.....		
<i>Acer Pennsylvanicum</i> .....	Moose wood or striped maple.....	Bois barré, ou bois noir	Canada and U. States	12 to 15.....	3.....	Hard; used for engraving. Not useful in the industry.
<i>Acer dasycarpum</i> .....	White or silver maple.....	Plaine blanche.....	Canada, &c.....	30 to 50.....	15 to 20.....	(1) Also called "érable à figurère," par les Français des Illinois.
<i>Acer negundo</i> .....	Box elder..... Ash leaved maple (1).....	Aulne blanc..... Erable à feuilles de frêne.....	United States(South)	12 to 15.....		Swamp tree; not useful.
<i>Acer montanum</i> .....			do.....			Not useful.
<i>Acer coccineum</i> .....	Sour tupelo.....	Tupelo à fruits saigres	do.....			
<i>Nyssa capitata</i> .....	Large tupelo.....	Grand tupelo.....	do.....			
<i>Nyssa grandidentata</i> .....	Water tupelo.....	Tupelo d'eau.....	do.....	70 to 80.....	15 to 20.....	
<i>Nyssa sylvatica, vel multiflora</i> .....	Wild olive..... Black gum..... Yellow gum..... Sour gum.....	Olivier sauvage..... Gommier noir..... Gommier jaune..... Gommier sur.....	United States.....	60 to 70.....	18 to 20.....	Tree of pyramidal form; wood used in furniture, carriages, &c.
<i>Liquidambar styraciflua</i> .....	Sweet or red gum.....	Gommier rouge sucre.....	U. States (Eastern)...	About 30.....	12 to 24.....	Not useful.
<i>Nyssa aquatica</i> .....	Tupelo..... Gum tree..... Sour gum..... Peperidge.....	Tupelo aquatique..... Gommier..... Gommier sur.....	United States.....	40 to 45.....	15 to 18.....	
<i>Gymnocladus dioica, vel canadensis</i> .....	Coffee tree..... Stump tree (Canada).....	Arbre à café..... Chicot..... (Gros-favier ou fouganes)	Canada and U. States	50 to 60.....	12 to 15.....	Furniture, &c.
<i>Picea pubens</i> .....	Georgia bark tree.....	Quinquina de la Georgia.....	United States (South)	20 to 25.....	5 to 6.....	Medicinal tree.
<i>Cupressus disticha</i> .....	Cypress..... Bald cypress..... Black and white cypress.....	Cyprès..... Cyprès chauve..... Cyprès noir et blanc.....	do.....	About 120.....	25 to 40 f. cir.	Soft; carpentry, shingles, &c.

<i>Cupressus thyoides</i> .....	White cedar.....	Cèdre blanc.....	United States.....	70 to 80.....	30 to 36.....	Building, fencing, &c.
<i>Thuja occidentalis</i> .....	Juniper (virginia).....	Genévrier.....	Canada and U. States.....	45 to 50.....	8 to 10 f. cir.	Various; agricultural.
<i>Larix americana</i> .....	White cedar.....	Cèdre blanc.....	do.....	80 to 100.....	24 to 36.....	Hard; shipbuilding, rail- way ties, carpentry.
<i>Larix occidentalis</i> .....	American larch.....	Mélèze d'Amérique.....	Oregon.....	.....	.....	Durable; various uses; source of Venice turpen- tine.
<i>Juniperus virginiana</i> .....	Tamarack.....	Epinette rouge.....	Canada and U. States.....	40 to 45.....	12 to 13.....	Soft; pencil, furniture, ci- gar boxes, &c.
<i>Libocedrus decurrens</i> .....	Western larch.....	Mélèze.....	California.....	.....	.....	Yellow; lasting; various.
<i>Juniperus californica</i> .....	Red cedar.....	Cèdre rouge.....	Utah to Pacific.....	.....	.....	Cigar boxes.
<i>Juniperus hispans</i> .....	Bastard cedar.....	Cèdre bâlard.....	South America.....	45 to 50.....	10 to 12.....	Various; agriculture.
<i>Juniperus occidentalis</i> .....	Rock or yellow cedar.....	Cèdre jaune.....	Virginia.....	30 to 35.....	12 to 15.....	do
<i>Olea americana</i> .....	Hispanic cedar.....	Cèdre Espagnol.....	U. States (Eastern).....	35 to 40.....	.....	Hard; cog-wheels, mill- frames, &c.
<i>Bumelia lycioides</i> .....	White cedar.....	Cèdre blanc.....	Jamaïca.....	.....	.....	Dyeing.
<i>Carpinus ostrya</i> .....	Devil wood.....	Bois du diable.....	Carolina and Georgia.....	3 to 4.....	7 to 8.....	} Hard; light; red; turnery. Hard; used for engraving.
<i>Erythroxylon aucolatum</i> .....	Iron wood.....	Bois de fer.....	Canada and U. States.....	25 to 40.....	.....	
<i>Hopea tinctoria</i> .....	Iron wood.....	Bois de fer.....	Canada.....	5 to 18.....	6.....	} Dyeing.
<i>Malus coronaria</i> .....	Lever wood.....	Bois à lever.....	United States.....	20 to 25.....	.....	
<i>Cratægus tomentosa</i> .....	Red wood.....	Bois de fer.....	Canada.....	20 to 25.....	.....	} Hard; light; red; turnery. Hard; used for engraving.
<i>Cratægus punctata</i> .....	Sweet leaves.....	Feuilles douces.....	United States.....	20 to 25.....	.....	
<i>Cratægus coccinea</i> .....	Crab apple.....	Pommier sauvage.....	Canada.....	20 to 25.....	.....	} Turning, carving, blocks for calico printers, &c.....
<i>Cratægus crus galli</i> .....	Apple thorn.....	Pommier jaune.....	do and U. States.....	10 to 12.....	.....	
<i>Mespilus arborea</i> .....	Pear.....	Pommier.....	do.....	10 to 12.....	.....	} Medium; turnery, orna- mental cabinet work.
<i>Pyrus arbutifolia</i> .....	Thorn.....	Senellier.....	do.....	10 to 12.....	.....	
<i>Pyrus communis</i> .....	Scarlet fruited thorn.....	Pommier rouge.....	do.....	10 to 12.....	.....	} Soft; carpentry.
<i>Amelanchier canadensis</i> .....	Cock spur thorn.....	Senellier.....	do.....	10 to 13.....	.....	
<i>Pyrus americana</i> .....	June berry.....	Poirier sauvage.....	do.....	35 to 40.....	.....	} Soft; carpentry.
<i>Pyrus malus</i> .....	Wild pear.....	Gueule noire.....	America.....	40 to 50.....	.....	
<i>Magnolia grandiflora</i> .....	Choke berry.....	Pear tree.....	United States.....	60 to 70.....	24 to 36.....	} Soft; carpentry.
<i>Magnolia glauca</i> .....	Pear tree.....	Petit pommier.....	do.....	2 to 3.....	.....	
<i>Magnolia acuminata</i> .....	June shad bush berry.....	Petites poires.....	do.....	12 to 14.....	.....	} Soft; carpentry.
<i>Magnolia cordata</i> .....	Ash mountain.....	Cormier (Masquabina).....	do.....	20 to 30.....	.....	
	Apple tree.....	Pommier.....	Canada and U. States.....	2 to 4.....	.....	} Soft.
	Large magnolia.....	Grand magnolia.....	Georgia.....	80.....	36 to 48.....	
	Big laurel.....	Grand laurier.....		40 to 50.....	12 to 15.....	
	Small magnolia.....	Laurier tulipier.....		.....	.....	
	Swamp sassafras.....	Petit magnolia.....		.....	.....	
	Beaver wood.....	Sassafras des marais.....		.....	.....	
	Cucumber tree.....	Bois de castor.....		.....	.....	
	Heart leaved magnolia.....	Arbre à concombre.....		.....	.....	
		Magnolia à feuilles en cœur.....		.....	.....	

APPENDIX NO. 27—THE FOREST WOODS OF NORTH AMERICA—Continued.

Botanical Name.	English Name.	French Name.	Native Place or where chiefly Grown.	Dimensions.		Quantities, Uses, &c.
				Height in Feet.	Diameter in inches.	
<i>Magnolia tripetala</i>	Umbrella tree.	Arbre parasol.	United States(South)	30 to 35.	5 to 6.	Soil.
<i>Magnolia auriculata</i>	Ear leaved magnolia	Magnolia à feuilles auriculées	Carolina and Virginia.	40 to 45.	12 to 15.	do
	Long leaved cucumber tree	Arbre à concombre à longues feuilles.	North Carolina.	35.	4 to 5.	Very soft.
<i>Magnolia macrophylla</i>	Large leaved magnolia	Magnolia	Canada and U. States	about 80.	about 36.	Hard; white; carpentry, agriculture, implements, wagons.
<i>Fraxinus americana</i>	White ash.	Frêne blanc.				Carpentry, agriculture, &c. About same as other, but small size; there are few used.
<i>Fraxinus tomentosa</i>	Red ash	Frêne rouge	do	50 to 60.	15 to 18.	Hard; white; lasting same as white ash.
<i>Fraxinus viridis</i>	Green ash	Frêne vert	Maryland & Virginia	20 to 25.	4 to 5.	Hard; very lasting hoops, splints, &c.
<i>Fraxinus quadrangulata</i>	Blue ash	Frêne bleu	Kentucky and Ohio.	60 to 70.	18 to 20.	Not very useful.
<i>Fraxinus sambucifolia</i>	Black ash.	Frêne noir	Canada, &c.	60 to 70.	18 to 20.	Used in medicine.
<i>Fraxinus platycarpa</i>	Carolinian ash.	Frêne de la Caroline	Carolina.	30.	small	Tannery.
<i>Fraxinus palustris</i>	Ash rim.	Frêne de savaire	United States	10 to 12.		
<i>Zanthoxylum</i>	Prickly ash.	Frêne piquant	Canada.	60.	18 to 20.	
<i>Gordonia lasyanthus</i>	Loblolly bay	Loblolly bay	Florida & Louisiana.	30.	6 to 8.	
<i>Gordonia pubescens</i>	Franklinia.		United States (South)	30.	6 to 8.	
<i>Cornus florida</i>	Dog wood.	Bois de chien	Canada and U. States	30 to 35.	9 to 10.	Hard; red; turnery.
<i>Cornus strobilata</i>	Round leaved cornell	Bois de fièches bâlard	Canada, &c.	6 to 10.		
<i>Cornus stolonifera</i>	Dog wood (red ozier)	Bois de calumet	do	3 to 10.		
<i>Cornus sericea</i>	Kinnikinnik	Kinnikinnik	do	3 to 10.		
<i>Piscidia crythrina</i>	Dog wood	Cornouiller	Jamaica.			
<i>Rhododendron maximum</i>	Swamp laurel	Laurier des marais	Canada and U. States	20 to 25.	4 to 6.	Hard; wheels, carriages, &c.
	Great laurel	Grand laurier				Hard; red; turnery.
	Sheep laurel	Laurier à mouton	Pennsylvania and southward.	18 to 20.		Hard; for tool handles and musical instruments.
<i>Kalmia latifolia</i>	Mountain laurel.	Laurier des montagnes.	Canada and U. States	30 to 40.	8 to 12.	Hard; furniture.
	Callico tree.					
	Wild cherry.	Cerisier sauvage				
<i>Cerasus virginiana</i>	Choke cherry.	Cerisier à grappe.				

<i>Cereus caroliniana</i> .....	Wild orange.....	Carolinian and Georgia	40.....	10 to 15.....	Hard; rose furniture.
<i>Cereus borealis</i> .....	Red cherry.....	Canada.....	25 to 30.....	5 to 8.....	Hard; red, furniture; takes a fine polish.
<i>Prunus serotina</i> .....	Wild black cherry.....	do.....	80.....	40.....	
<i>Cereus rubra</i> .....	Red cherry.....	do.....	.....	.....	
<i>Prunus pumila</i> .....	Dwarf cherry.....	Canada and U. States	2.....	10 to 12.....	Soft; not useful.
<i>Prunus pennsylvanica</i> .....	Wild red cherry.....	do.....	25.....	6 to 8.....	Hard; fencing.
<i>Annona triloba</i> .....	Papaw.....	Canada and U. States	30.....	about 36.....	Not useful.
<i>Gleditsia triacanthos</i> .....	Honey locust.....	North America	about 40.....	12 to 24.....	
<i>Gleditsch a monosperma</i> .....	Water locust.....	U. States (South).....	60 to 80.....	.....	
<i>Laurus sassafras, vel sassa-</i>	<i>Sassafras</i> .....	North America.....	18 to 20.....	.....	Turning; cabinet works and medicine.
<i>Iras officinalis</i> .....	.....	Georgia and Florida.....	60 to 70.....	15 to 20.....	Medicine; takes fine polish; furniture.
<i>Laurus carolinienis</i> .....	Red bay.....	.....	.....	.....	
<i>Plantanus occidentalis</i> .....	Plane wood.....	Canada and U. States	80 to 70.....	10 to 12 ft. c	Medicine; takes fine polish; red; furniture and musical instruments.
<i>Lyrodendron tulipifera</i> .....	Button wood.....	do.....	.....	.....	
.....	Water beech (Virginia).....	do.....	.....	.....	
.....	Hêtre d'eau.....	do.....	.....	.....	
.....	Sycamore (Ohio).....	do.....	.....	.....	
.....	Loton tree (Canada).....	do.....	.....	.....	
.....	Poplar.....	do.....	.....	.....	
.....	Tulipier.....	do.....	.....	.....	
.....	Yellow or white poplar.....	do.....	.....	.....	
.....	White wood.....	do.....	.....	.....	
.....	Bois blanc (Canada).....	do.....	.....	.....	
.....	Bois jaune (Illinois).....	do.....	.....	.....	
.....	Arbre des Catawbas.....	do.....	.....	.....	
.....	Sorrel tree.....	do.....	.....	.....	
.....	American nettle tree.....	do.....	.....	.....	
.....	Hoop ash.....	do.....	.....	.....	
.....	Hackberry tree.....	do.....	.....	.....	
.....	Black elder.....	do.....	.....	.....	
.....	Aune noir.....	do.....	.....	.....	
.....	Red mulberry.....	do.....	.....	.....	
<i>Morus rubra</i> .....	.....	do.....	.....	.....	
<i>Morus tinctoria</i> .....	Fustic.....	do.....	.....	.....	
<i>Pavia lutea</i> .....	Buck eye.....	do.....	.....	.....	
<i>Esculus ohicensis</i> .....	Yellow pavia.....	do.....	.....	.....	
<i>Robinia pseudo accasia</i> .....	American horse chestnut.....	do.....	.....	.....	
.....	Ohio buck eye.....	do.....	.....	.....	
.....	Locust.....	do.....	.....	.....	
.....	Yellow locust.....	do.....	.....	.....	
.....	Red locust.....	do.....	.....	.....	
.....	Black locust.....	do.....	.....	.....	
.....	Rose flowering locust.....	do.....	.....	.....	
.....	Yellow wood.....	do.....	.....	.....	
.....	White elm.....	do.....	.....	.....	
<i>Ulmus americana</i> .....	.....	do.....	.....	.....	
<i>Ulmus alata</i> .....	Wahoo.....	do.....	.....	.....	

APPENDIX No. 27.—THE FOREST WOODS OF NORTH AMERICA—Continued.

Botanical Name.	English Name.	French Name.	Native Place or where chiefly Grown.	Dimensions.		Quantities, Uses, &c.
				Height in feet.	Diameter in inches.	
<i>Ulmus rubra, vel fulva</i> .....	Red elm.....	Orme rouge.....	United States (East).....	60 to 60.....	15 to 20.....	Medium; red; carpentry.
	Slippery elm.....	Orme d'elan.....	Canada.....	.....	.....	.....
	Moose elm.....	Orme gras (Illinois).....	America.....	.....	.....	.....
		Orme liege.....	Canada.....	.....	.....	.....
<i>Ulmus racemosa</i> .....	Cork elm.....	Orme gris.....	Canada.....	.....	.....	.....
<i>Ulmus americana</i> .....	Grey elm.....	Orme dur (Charme).....	Georgia.....	35 to 40.....	12 to 15.....	Very scarce.
<i>Ulmus procera</i> .....	Rock elm.....	Tremble d'Amérique.....	Canada and U. States.....	30.....	5 to 6.....	Soft; not useful
<i>Planera ulmifolia</i> .....	Planer tree.....	Grand tremble d'Amérique.....	do.....	40 to 45.....	10 to 12.....	do white; carpentry.
<i>Populus tremuloides</i> .....	American aspen.....	Peu lier.....	North America.....	70 to 80.....	24 to 36.....	do yellow; not useful.
<i>Populus grandidentata</i> .....	Large toother aspen.....	Arbre à coton.....	Canada and U. States.....	30 to 40.....	12 to 15.....	.....
<i>Populus argentea, vel gossipium, xylum</i> .....	Cotton tree.....	Peuplier noir d'Amérique.....	Virginia, &c.....	60 to 70.....	30 to 36.....	.....
<i>Populus hudsonica</i> .....	American black poplar.....	Peuplier de la Virginie ou Liard.....	Canada & Louisiana.....	70 to 80.....	36 to 40.....	Medium; white.
<i>Populus monilifera</i> .....	Virginian poplar.....	Bois à coton.....	United States.....	80.....	36.....	Soft; white.
<i>Populus canadensis</i> .....	Cotton wood.....	Peuplier ou Liard.....	Canada and U. States.....	80.....	36.....	do colored; carpentry.;
<i>Populus angulata</i> .....	Balm.....	Peuplier de la Caroline.....	United States.....	40 to 50.....	18 to 20.....	Very soft.
<i>Populus balsamifera</i> .....	Carolinian poplar.....	Peuplier baumier.....	Canada and U. States.....	70 to 80.....	36 to 40.....	Soft; white; flexible.
<i>Populus canadensis</i> .....	Balsam poplar.....	Baumier à feuilles en cœur.....	Canada and U. States.....	40.....	18.....	.....
<i>Populus caroliniana</i> .....	Heart-leaved balsam poplar.....	Baumier ou Balsamier.....	United States.....	30 to 35.....	7 to 8.....	.....
<i>Balsamina fulva</i> .....	Balsam.....	Tilleul.....	Canada and U. States.....	25.....	.....	.....
<i>Tilia americana</i> .....	Bass wood.....	Bois blanc.....	do.....	18 to 20.....	.....	.....
<i>Tilia alba</i> .....	White wood.....	Bois blanc.....	Canada, &c.....	6 to 12.....	.....	.....
<i>Tilia pubescens</i> .....	White lime.....	Tilleul blanc.....	Canada.....	.....	.....	.....
<i>Alnus serrulata</i> .....	Downy lime tree.....	Tilleul à feuilles velues.....	.....	.....	.....	.....
<i>Alnus glauca, vel incana</i> .....	Common alder.....	Tilleul à feuilles velues.....	.....	.....	.....	.....
	Black alder.....	Aulne commun.....	.....	.....	.....	.....
	Black willow.....	Aulne noir.....	.....	.....	.....	.....
	Champlain willow.....	Sauie noir.....	.....	.....	.....	.....
	Shining willow.....	Sauie du lac Champlain.....	.....	.....	.....	.....
	Willow weeping.....	Sauie luisant.....	.....	.....	.....	.....
	Sweetbriar.....	Sauie pleureur.....	.....	.....	.....	.....
	Bush "spice".....	Eglantier odorant.....	.....	.....	.....	.....
	Deal.....	Faux benjoin.....	.....	.....	.....	.....
		Bois blanc.....	.....	.....	.....	.....

<b>Sambucus nigra</b> .....	<b>Elder</b> .....	<b>Sureau</b> .....	<b>America</b> .....	.....	<b>Soft ; turnery ; rules, shuttles, ssp, spiles.</b>
<b>Sambucus canadensis</b> .....	Common elder.....	Sureau blanc.....	Canada.....	5 to 10.....	
<b>Sambucus pubens</b> .....	Red berried elder.....	Sureau rouge.....	do.....		
<b>Corylus rostrata</b> .....	Beaked hazelnut.....	Noisetier.....	do.....	2 to 5.....	
<b>Corylus americana</b> .....	Wild hazelnut tree.....	Noisetier.....	Canada, &c.....	4 to 8.....	
<b>Tanus baccata</b> .....	Ground hemlock.....	Petit buis 'if'.....	Canada.....	6.....	
<b>Viburnum lantanoides</b> .....	Hobble bush.....	Bois d'original.....	do.....	12.....	
<b>Viburnum opulus</b> .....	High cranberry.....	Pimbina.....	do.....		
<b>Cercocarpus ledifolius</b> .....	Mountain mahogany.....	Acajou de montagne.....	Rocky Mountains.....		Hard ; dark red ; ornamental.
<b>Maclura aurantiaca</b> .....	Osage orange.....	Bois d'arc.....	Arkansas, &c.....		Hard ; yellow ; very lasting ; waggons and implements.
<b>Prunus americana</b> .....	Wild yellow plum.....	Prunier sauvage.....	America.....	20.....	
<b>Prunus maritima</b> .....	Wild red plum.....	Prunier rouge sauvage.....	Canada, &c.....	2 to 4.....	
<b>Sesquioria gigantea</b> .....	Beach plum.....	Prunier maritime.....	California.....		
<b>Dalbergia</b> .....	Redwood.....	Bois rouge.....	America.....		Moderately hard ; pianos, furniture, turnery, &c.
<b>Amelanchier sorbus canadensis</b> .....	Rosewood.....	Rosier.....	Canada and U. States.....		Red ; hard and lasting ; tool handles, &c.
<b>Rhus glabra</b> .....	Service tree.....	Sorbier.....	Canada.....	2 to 10.....	Dyeing.
<b>Rhus typhina</b> .....	Smooth sumac.....	Vinaigrier.....	do.....	30.....	Marquetry.
	Staghorn sumac.....	Vinaigrier.....			





APPENDIX No. 28.

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REPORT

ON THE

TELEGRAPH AND SIGNAL SERVICE

OF THE

DOMINION OF CANADA,

GIVING AN HISTORICAL ACCOUNT OF ITS ESTABLISHMENT,  
COST OF MAINTENANCE, &c.,

BY

F. N. GISBORNE, Superintendent.

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## APPENDIX No. 28.

THE TELEGRAPH AND SIGNAL SERVICE OF THE DOMINION  
GOVERNMENT OF CANADA.

## HISTORICAL.

*British Columbia.*

On the 12th of March, 1864, the Government of this Province granted an Act of incorporation to the California State Telegraph Company, which entitled them to build and operate land lines, and lay cables during a term of twenty-five years, with exclusive rights for twenty years, upon condition that within eighteen months Victoria should be connected telegraphically with the United States, and that full and accurate accounts of all receipts and expenditures should be made to and audited by the Colonial Secretary annually.

On the 22nd of February, 1865, an ordinance was passed repealing the monopoly clause granted to the California State Telegraph Company, and their land lines and cables were acquired by the Western Union *Extension* Company. At the same date, an Act of incorporation was granted to P. M. Collins and associates, whose immediate object was to construct a line from California, *via*. British Columbia and Alaska to Behring's Straits, and thence by submarine cable to Russian Asia, and by land lines to Europe. This charter was to remain in force for thirty three years with a proviso that the city of New Westminster was to be connected by telegraph with the United States, and that a continuous connection should be maintained with Russia.

Under such charter, a line was constructed from Washington Territory to the boundary line of British Columbia, near Matsqui, to New Westminster, and from Matsqui, *via* the Fraser River route to Quesnelle, and thence northerly some distance beyond Fort Stager, upon the Skeena River, when the work was suspended, and that portion, north of Quesnelle, was finally abandoned in consequence of the successful submergence of the Atlantic cables of 1865 and 1866. It is said that nearly \$2,000,000 were sunk in this attempted enterprise.

These lines were also acquired by the Western Union Extension Company, and an ordinance was passed April 15th, 1865, sanctioning such acquirements.

On January 30th, 1866, an Act of incorporation was granted to the Western Union Telegraph Company, which confirmed their purchase of the Western Union Extension Company's lines and privileges.

Finally, on the 27th September, 1880, the Dominion Government of Canada became possessed, by purchase from the Western Union Telegraph Company, of all their lines, cables and privileges within the Province of British Columbia, and on the 1st day of January, 1881, such transfer was duly consummated by delivery.

By such acquirement, the Government of Canada became possessed of 450 miles of land lines, and sixteen miles of cable, for the very moderate sum of \$24,000, and effected a further annual saving of:

- \$4,000 subsidy heretofore paid to the Western Union Telegraph Company;
- \$2,500 cost of maintaining land line through Washington Territory; and
- \$6,000 average cost of maintaining the San Juan route cables.

They also gained \$1,200 subsidy paid by the Western Union Telegraph Company, for transfer of business service at the boundary line; plus from \$10,000 to \$12,000 annual receipts from Victoria Station, while at the same time the through

tariff between Victoria and San Francisco was reduced from \$2.00 to \$1.50 for ten words, fifty cents of which amount is now credited to the Canadian Government lines. The total advantage thus gained by the Government of Canada already, amounts to over \$25,000 per annum, irrespective of the saving in tariff rates to the general public; and judging by two and a-half years' experience to date, such gain will be rapidly progressive in amount.

Since the foregoing transfer was consummated, the Government have abandoned the old cable route *via* the rocky bottoms and swift water channels of the San Juan Island route, and under the management of their superintendent, Mr. F. N. Gisborne, whose appointment dates from May 1st, 1879, have laid new, or repaired cables, entirely through British waters, between Vancouver Island *via* Nanaimo and Point Gray on the mainland to New Westminster, and they now contemplate laying an alternative cable direct from Victoria to Point Angelos, Washington Territory, thus affording to the Province a second cable connection in case of any temporary derangement of the through Canadian territory route.

The following table is explanatory of the lines in present operation:—

*Cables.*

	Nautical Miles.
Across Saanich Arm, Vancouver Island.....	2
Vancouver Island to Gabriola Island .....	1
Valdes Island to Point Gray.....	20
Across the Fraser River (two cables one-half mile each).....	1
	—
Total.....	24
	—

*Land Lines.*

	Statute Miles.
Victoria <i>via</i> Nanaimo to New Westminster.....	139
New Westminster <i>via</i> Matsqui to Cache Creek .....	217
(New Westminster to boundary line, second wire 36 miles.)	
Cache Creek to Barkerville Cariboo.....	272½
“ to Kamloops.....	48
	—
Total (including above cables) .....	676½
	—

*Manitoba and North-West Provinces.*

When the Government of Canada, 1872-73, decided upon the construction of the Pacific Railway, it was deemed advisable to erect a temporary or pioneer telegraph line between the west coast of Lake Superior *via* Selkirk and north of Lake Manitoba to Fort Edmonton, and thence *via* the Yellow Head Pass and the North Thompson River to Cache Creek, British Columbia, and there connect with the established Government telegraph lines of that Province. The entire distance was estimated at 1,779 miles, and the cost, per contracts subsequently entered into, at \$1,024,640, plus an annual expenditure for operating and maintenance of \$47,720. The following table will best explain such contracts and the final results obtained therefrom:—

Synopsis of Canadian Pacific Railway Telegraph Contracts.

Contractors	Oliver, Davidson & Co.	Sifton, Glass, & Co.	R. Fuller.	F. J. Bernard.	Totals.
Sections.....	Fort William—Selkirk.....	Selkirk—Livingston.....	Livingston—Edmonton....	Edmonton—Cache Creek.	1,779 miles.
Distances.....	410 miles.....	295 miles.....	517 miles.....	557 miles.....	N.B.—1,300 miles only being erected.
<i>Construction.</i>					
Date of contract.....	February 9th, 1875.....	October 17th, 1874.....	October 30th, 1874.....	November 9th, 1874.....	
Contract prices per mile.....	\$590 through woods; \$436 through prairie (maintenance included).	\$492 through woods; \$189 through prairie.	\$213.18.....	\$495.00.....	
Time for completion.....	December 31st, 1876.....	October 13th, 1875.....	July 1st, 1876.....	October 2nd, 1876.....	
When completed.....	August 28th, 1878.....	August 1st, 1876.....	July 15th, 1876.....		
<i>Maintenance.</i>					
Contracts for maintenance.	\$10 per mile additional for operating; \$4,100 plus tariff profits.	\$16 per mile, \$4,720 plus tariff profits.	About \$25.16 per mile, \$13,000 plus tariff profits.	\$46.50 per mile, \$25,900.50 plus tariff profits.	
Maintenance and operating.	August 28th, 1883.....	August 1st, 1881.....	July 15th, 1881.....		
Contracts to expire.....	Cancelled June 30th, 1882.				
Probable amount involved in contracts for construction, maintenance, operating, etc., vide C. P. Ry Report, 1879, page 137.	\$268,050.00.....	\$146,020.00.....	\$197,353.00.....	\$413,217.00.....	\$1,024,640.00
Amount paid in full settlement of all claims.				(Cancelled after part payment.) Deduct.....	\$ 338,538.00
	\$254,468.62.....	\$140,760.00.....	\$200,261.03.....	\$74,679.16.....	\$ 686,102.00
					\$678,543.60 ; including \$106,483.50 for maintenance and operating from July '76 to July '82.

MEMO.—Of the 1,300 miles of telegraph line erected, 465 miles in the North-West and 30 in British Columbia have been abandoned, and, including 48 miles in British Columbia, 835 miles are now being permanently operated.

On the 1st of July, 1882, the above lines were transferred from the Department of Railways and Canals to that of Public Works, and are now incorporated with the Government Telegraph and Signal Service

Consequent upon the change of route adopted by the Canadian Pacific Railway authorities, and from the cost and physical difficulties in maintaining the line north of Lake Manitoba in working order, the section of route between Selkirk and Humbolt (435 miles) has been entirely abandoned, and connection with Battleford and Edmonton will, in future, be maintained by a line erected between Humbolt *via* Touchwood and Qu'Appelle (Fort) to Qu'Appelle Railway Station, on the Canadian Pacific Railway, and thence *via* the Railway Company's wires to Winnipeg and eastern Provinces.

#### THE MARITIME PROVINCES AND ST. LAWRENCE RIVER AND GULF.

During the Parliamentary Session of 1876, a Select Committee was appointed to enquire into the feasibility and consequent advantages to be derived from the establishment of a submarine and land telegraph service throughout the larger islands and on sea coasts of the Dominion.

The minutes of evidence and statements submitted by the Honourable Théodore Robitaille, Chairman, may be epitomized as follows:—

That during the six years between 1869 and 1875, 144 vessels of 57,599 tons, valued at \$1,533,902, and 98 lives were lost in the St. Lawrence and upon Anticosti and the Magdalen Islands;

That a large proportion of such losses might have been prevented if prompt assistance could have been obtained by means of telegraphic communication;

That many deaths and great suffering could have been prevented by such means for procuring aid, and transport from the scenes of disaster;

That the rates of shipping insurance would be thereby reduced;

That 6,000 vessels of 3,000,000 tons, valued at \$140,000,000 and carrying nearly 100,000 men passed up and down the River and Gulf of St. Lawrence annually;

That valuable meteorological observations, storm warnings and ice reports would be thus obtainable;

And, finally, that daily bulletins in reference to fish strikes and local presence of bait, etc., would greatly conduce to the prosperity of the fishermen.

The foregoing conclusive and valuable evidence was pressed upon the attention of the Government by the Boards of Trade of Montreal and Quebec, and also by the honourable member for Gaspé, Dr. Fortin.

During the Session of 1879 a grant of \$15,000 per annum was voted for the establishment of telegraphic communication with the Island of Anticosti and the Magdalen Group, including Bird Rock; and Mr. Frederic Newton Gisborne, an experienced engineer and electrician, was appointed Superintendent of the Telegraph and Signal Service for the Dominion of Canada.

The above grant, however, was found to be insufficient to induce any incorporated company to construct, lay and maintain the sub-marine cable and land line necessary for the service, and during the following Session, 1880, the above grant was capitalized by a vote of \$200,000, and active operations were commenced. Meanwhile, however the Government had granted a bonus of \$16,000 to the Montreal Telegraph Company for constructing a shore line telegraph between Métis and the Restigouche, and subsequently a grant of \$20,000 for the erection of a shore line between Canso and Dartmouth, Nova Scotia.

During the spring of 1880 Mr. Gisborne was despatched to London, England, for the purpose of procuring tenders for the required cables, etc., and also to supervise the equipment of the Government steamship *Newfield* as a cable laying and repairing ship, a contract being finally entered into with the "Indian Rubber, Gutta Percha and

Telegraph Works Company," London, for the following sub-marine cables, all of which were successfully submerged during the ensuing months of October and November:—

	Nautical Miles.
Gaspé, Province of Quebec, to Anticosti.....	44·27
Cape Breton, Nova Scotia, to Magdalen Islands.....	54·90
Grosse Isle, Magdalen Islands, to Bird Rock.....	18·26
Across the Big Bras d'Or entrance, Cape Breton .....	0·50
" House Harbour Gut, Magdalen Islands.....	0·14
Eastport to Campo-Bello Island, New Brunswick.....	1·90
Campo-Bello to Grand Manan.....	7·28
Across the Saguenay River.....	1·25
Total .....	128·50

And during 1880-81 and 1882 the following land line telegraphs were established:

	Statute Miles.
Upon the Island of Anticosti.....	214
Connection with Gaspé Basin.....	28
Upon the Magdalen Group.....	83½
Connection between Meat Cove and North Sydney, Cape Breton.....	126½
Connection between Low Point and Lingan.....	5
Upon Campo-Bello Island, New Brunswick.....	8
" Grand Manan .....	21
Between Canso and Dartmouth, Nova Scotia.....	208½
Baie St. Paul to Chicoutimi, Province of Quebec.....	92
Murray Bay to Bersimis .....	147½
Total .....	934

#### Summary:

Cables .....	128½ nautical miles.
Land lines .....	934 statute miles.
Total.....	1,062½

MEMO.—The subsidized lines upon the south shore of the River and Gulf of St. Lawrence, and also between Cape Ray and Port au Basque Newfoundland, are not included in the Government service or enumerated distances.

#### SIGNAL SERVICE.

In connection with the foregoing lines signal stations have already been established at the following points and are now being added to:—

L'Islet.	Cape Despair Lighthouse.
Rivière-du-Loup.	Point Maquereau "
Brandy Pots.	West Point "
Rimouski.	South-West Point "
Father Point Lighthouse.	South Point "
Little Metis "	Heath Point "
Matane "	Amherst Island "
Cape Chatte "	Grosse Isle "
Martin River "	Bird Rock "
Cape Magdalen "	Meat Cove, C.B.
Fame Point "	Low Point "
Cape Rosier "	Cape Ray Lighthouse, Newfoundland.

The International code of signals is in use at the above stations :—

Daily fishery bulletins giving particulars and the supply and kind of bait available in different locations; the number of boats employed; strikes and catch of fish with the weather and shipping reports are posted up and published, free of all cost and charges, at all stations where such information can be utilized. The above service has lately been transferred to the Department of Marine and Fisheries.

The Dominion Government lines now comprise :—

13 sub-marine cables in length.	-	-	-	-	152 miles.
8 systems of land lines.	-	-	-	-	2,566 "
Total.	-	-	-	-	<u>2,718</u> miles.

In conclusion, I have the honour to submit a sphere map of the world's cables and main route telegraph lines, a reference to which will demonstrate the advantageous geographical position possessed by the Dominion for through cable and land line communication between Great Britain, her Australian colonies, China and Japan. X

F. N. GISBORNE,  
*Superintendent*  
*Telegraph and Signal Service.*

OTTAWA, 15th December, 1882.

X in reports come.





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APPENDIX No. 29.

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LETTERS FROM HON. P. FORTIN, M.P.,  
ON THE  
TELEGRAPH AND SIGNAL SERVICE SYSTEM  
IN THE  
GULF OF THE ST. LAWRENCE,  
AND ALSO ON THE  
NORWEGIAN TELEGRAPH SYSTEM,  
SHOWING ITS IMPORTANCE IN CONNECTION WITH THE DEVELOP-  
MENT OF THE SEA FISHERIES OF NORWAY.

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## APPENDIX No. 29

LETTERS FROM HON. P. FORTIN, M.P., ON THE TELEGRAPH AND SIGNAL SERVICE SYSTEM IN THE GULF OF ST. LAWRENCE; AND ON THE NORWEGIAN TELEGRAPH SYSTEM.

## THE GULF SYSTEM.

(Translation.)

OTTAWA, 28th November, 1881.

No. 19591.

SIR,—In the early part of the month of May, 1875, six large steamers carrying over one thousand persons and valuable cargoes in addition, were considerably delayed, some of them for several weeks, in their course through the Gulf of St. Lawrence. They were of course the vanguard of the fleet of steamers which enter our ports of Quebec and Montreal every year.

Great anxiety resulted in Canada, in the United States and in Europe, as may well be fancied. There were no means of communication whatsoever with the coasts or islands near which these vessels might be. Had they foundered on the high seas? Had they been driven ashore by the ice? Or were they simply detained by an impassable ice barrier, at the entrance of the gulf? No one knew, no one could know.

The idea of a telegraphic system for our coasts and the islands of the gulf, was mooted in consequence of the commotion caused in maritime circles by fears for the safety of those vessels. I must add that it then became evident that a powerful auxiliary was needed for the navigation of the St. Lawrence. The press received the suggestion with favor, and the ship-owners and seamen gave it their best support, for they saw that it was a new means of developing the navigation of that magnificent river.

In 1876, a Committee of the House of Commons, after an examination of the proposed system of telegraphs, its advantages and probable cost, reported strongly in favor of the establishment of the system.

The Government soon took the matter in hand, for public opinion evidently demanded it; and in 1879, a sum of \$35,000 was voted by Parliament, of which \$20,000 was for a coast line between Halifax and Canso. The remaining \$15,000 was to be an annual permanent grant offered in order to induce capitalists to construct and work the telegraphic system of the Magdalen Islands and Anticosti.

But the attempt did not succeed, for the undertaking seemed to be a hazardous one, though it was not so in reality.

In the following year, 1880, \$10,000 of the grant of \$15,000 was capitalized at 5 per cent, which gave (\$200,000) two hundred thousand dollars; and so soon as that amount had been voted by Parliament, the Department of Public Works began the work in earnest. A special service was organized in that Department, called "The Telegraph and Signal Service," and it was placed under the superintendence of Mr. F. N. Gisborne, whose acquirements and skill in all matters relating to land or marine telegraphy are well known.

I have recurred to these facts in this letter for the purpose of showing that it was only after five years of work and enquiry that the idea of coast telegraphs as an adjunct to the navigation of the Gulf and River St. Lawrence was put in execution.

Since then the work of constructing the land lines and laying the electric cables has been carried on with reasonable rapidity. The work has been well and economically done, and the materials used are of the best quality. The Magdalen Islands and Anticosti systems estimated at (\$200,000) two hundred thousand dollars, have cost in fact only (\$180,000) one hundred and eighty thousand dollars, and with the balance, most useful coast lines have been constructed in Nova Scotia and New Brunswick, besides among others the system of Grand Manan Island.

I give below a statement for which I am indebted to the kindness of Mr. Gisborne, showing the lines in operation and the number of miles of land telegraph in operation, and the number of miles of submarine cable laid.

## I.

## MAGDALEN ISLANDS AND CAPE BRETON SYSTEM.

The system consists of:—

83½ miles of line on Magdalen Islands.

54 $\frac{19}{100}$  miles of electric cable between Magdalen Islands and Cape Breton, and the line from Meat Cove to Sydney 113½ miles, to which must be added 13 for the Baddeck line, making a total of 126½ miles.

There are (9) nine stations in operation on the Magdalen Islands and in Cape Breton.

## II.

## THE ISLAND OF ANTICOSTI.

This system consists of the following:—

Line from Gaspé Basin to Anse à Fougère, 28 miles.

Electric cable between Anse à Fougère and the Island of Anticosti, 44 miles;

Line on the Island of Anticosti, 213½.

There are (7) seven telegraph stations, of which four are also signal stations, in full operation on the island of Anticosti.

## III.

## NORTH SHORE OF THE RIVER AND GULF OF ST. LAWRENCE.

This system includes the following:—

A line between Baie St. Paul and Chicoutimi; this is a branch line for the Saguenay navigation.

The principal line starts from Malbaie (Murray Bay). It was commenced last year, and this fall, reached the village of Mille Vaches.

A cable one mile in length was laid across the Saguenay.

Line from Murray Bay to Mille Vaches, 86 miles.

There are (8) eight stations in operation.

## IV.

## COAST LINE FROM HALIFAX TO CANSO, N.S.

This system consists of a line erected along the coast, which will hereafter be placed in communication with the lighthouses erected on the islands bordering the coast, by means of semaphores.

Length, 210 miles.

There are (17) seventeen stations in operation.

## V.

## GRAND MANAN ISLAND SYSTEM.

This system consists of a line crossing the island at its greatest width, a length of  $28\frac{1}{2}$  miles, with a cable  $9\frac{1\frac{3}{8}}{1\frac{6}{8}}$  miles connecting the island with the mainland opposite.

There are (6) stations in operation.

This gives for the Province of Quebec :

502 $\frac{1}{2}$  miles of land line,  
74 " electric cable.

For the Province of Nova Scotia:

364 $\frac{1}{2}$  miles of land line,  
36 " electric cable.

For the Province of New Brunswick :

28 $\frac{1}{2}$  miles of land line,  
 $9\frac{1\frac{3}{8}}{1\frac{6}{8}}$  " electric cable.

Total.

Telegraph lines on land, 895 $\frac{1}{2}$  miles.

Submarine electric cables, 119 "

Total number of Stations, 47.

## GULF OF ST. LAWRENCE.

## PROPOSED LINES.

The Magdalen Islands and Anticosti systems being completed and in full operation, we must deal with the line on the north shore.

At first it was considered impossible to reach the Strait of Belle-Isle, in view of the apparent difficulty of such an undertaking, at certain points on the coast. But, in 1878, after further examination, the idea of extending the line to Forteau Bay, in the Strait of Belle-Isle, was mooted and received with favor by the press and the public. The more the matter is looked into the more it becomes evident that, inasmuch as the whole of the steam fleet and many sailing vessels have adopted the Strait of Belle-Isle as the most direct and shortest route from the Atlantic to Quebec and Montreal, they should be afforded facilities in the form of telegraphic communication with the coasts, harbours and bays of that Strait.

Now at the present moment, these coasts, which are almost uninhabited, and which are sterile and afford no resource except the fisheries, are still entirely without communication either by postal service or by telegraph, with the rest of the country. And if an accident happens to a vessel on these coasts, there are no means whatever of promptly making known her dangerous position and of summoning help in time.

The interests of commerce, then, urgently call for the extension of the telegraph line on the north shore as far as Forteau Bay, or rather to Point Amour (which is east of that bay and where there is a lighthouse and fog-whistle) to meet the requirements of navigation.

But we shall gain something more by the opening of this line, for when we have a telegraph station at Point Amour lighthouse, which will then be in constant connection with Canada, the United States, and in fact the whole world, it will be possible to land at Forteau Bay, which is easy of access at all times during the season of navigation, despatches, lists of passengers, private messages, &c., &c., after a run of five days only from Moville, Ireland. This would then be the most rapid route for the transmission of news from Europe to America by steamer, and in that respect it

would confer an undoubted superiority on Canada. It would be in a sense a realization of the greatly desired five-days journey between Europe and America.

As a matter of fact the sea voyage can only be said to last so long as you are on the wide seas, and, as it were, cut off from the world, and utterly unable to communicate with the land, that is to say, during the ocean voyage between Merville and Forteau. Once that port made, vessels would once more be in communication with the whole world by means of the telegraph. What is still more, between Forteau and Quebec other means of communication would be available, viz. :—

1st. The telegraph stations and signal stations of the Island of Anticosti, nine in number ;

2nd. The stations on the south shore of the St. Lawrence from Gaspé to Quebec, numbering ten, being a total of nineteen.

It seems to me that this is a national work, that it forms part of the system of coast telegraphs, which should be put in operation as soon as possible, if we desire to keep pace with our neighbors or compete with them successfully in the important matter of the carrying trade between Europe and America.

But I have been looking at the project under one of its aspects only. See what useful and profitable service this telegraph line would render to the vast and well-known fisheries of Labrador, and to vessels in distress on those remote and isolated coasts.

#### NORTH SHORE TELEGRAPH LINE CONSIDERED AS AN AUXILIARY TO THE FISHERIES.

The Government has been (and I think still is) negotiating with the Montreal Telegraph Company for the extension of this line, next spring, from Milles Vaches to Pointe des Monts.

Moreover, as there are no maritime fisheries, or very few, in this locality, the remarks I am about to make on the Labrador fisheries will apply only to the coast line extending from Pointe des Monts to Anse aux Blancs Sablons, the eastern limit of Canada, and Forteau is only twelve miles further east than Blancs Sablons.

I shall divide the coast into two parts :—The first extends from Pointe des Monts to Esquimaux Point, the latter point being an incorporated village with over fifteen hundred inhabitants, all fishermen.

Extent of coast, 190 geographical miles.

Number of harbours and fishing stations.....	25
“ fishing schooners .....	44
“ fishing boats .....	445
“ men employed in the fisheries .....	2,113

The second part extends from Esquimaux Point to Anse aux Blancs Sablons, the eastern limit of Canada, and thence to Fortean Bay, which is only 12 miles further.

Extent of coast in geographical miles .....	290
Number of harbours and fishing stations .....	25
“ fishing schooners .....	22
“ fishing boats .. .. .	298
“ men employed in the fisheries .....	820

Value of products of the various fisheries of this coast in 1880, \$1,401,288.95.—One million, four hundred and one thousand, two hundred and eighty-eight dollars, ninety-five cents.

I take the following from the report, 1880, of the officer in charge of the expedition for the protection of the fisheries in the Gulf of St. Lawrence, Dr. Wakeham :—

In the chapter headed “Cod,” page 76 of his report, the Doctor says, speaking of the north shore :

" This fishery has been one of unusual abundance. The season was far advanced before the fishing began, but there seemed to be no limit to the quantity of fish. The various fishing establishments were taxed to the utmost to handle the fish, and in some cases there was a scarcity of salt for curing purposes. Had we had telegraphic communication with the north shore, as I trust we will have before very long, many of our south shore fishermen would have abandoned the fishing on the south shore, and taken themselves and appliances across to the north shore, where the fishing was so good.

\* \* \* \* \*  
 " There must have been at least 500 schooners cod-fishing off St. Augustine and Bonne Espérance Divisions."

Dr. Wakeham estimates at 175,000 cwts. the quantity of cod taken by these schooners, most of which belong to the Maritime Provinces.

Thus, Dr. Wakeham does not hesitate to assert that with a telegraph line on the north shore, the south shore fishermen who, for whole months took hardly anything, might have been notified by means of the electric telegraph, to go to the north shore, a distance of only one day's sail, there to gather an abundant harvest in the vast field cultivated by the hands of Providence itself, without the help of man, and take their share of the rich and varied yield of cod, herring, and every species of smaller fish upon which the former prey, which furnish an article of food so wholesome and so easily shipped to foreign countries.

But this is not all. On the eastern part of this coast, that is to say, from Esquimaux Point to Anse aux Blancs Sablons, the fishing schooners go from harbour to harbour, from fishing post to fishing post, seeking for cod and herring; but they are as it were, groping in the dark, and when they are in one harbour they do not know what is taking place on the rest of the coast. They are simply "trying their luck."

Sometimes they succeed. But have I not, myself, during the sixteen years that I commanded the service for the protection of the fisheries in the Gulf of St. Lawrence, many a time seen from twenty-five to fifty schooners anchored for weeks in some harbour, waiting for cod or herring? But the shoals of fish had struck the coast elsewhere, and while in neighbouring harbours, great takes were being made, these vessels were waiting their chance, not knowing, and quite unable to know, what was taking place at other points of the coast on either side of them. The unfortunate fishermen were meantime a prey to depression and weariness during those days of enforced idleness, which destroyed their brightest hopes.

But the telegraph would completely alter the face of things in these waters, since the fishermen whether residents of the coast or belonging to schooners, frequenting them yearly for the purpose of fishing, would know on what part of the coasts, near what harbour, the shoals of fish abound, and where the bait run in. In short, they would follow the trail of the fish as the hunter follows game on land.

I may say moreover, that all who are well acquainted with the north shore and the coast of Labrador are firmly convinced of the utility or rather the necessity, of a telegraphic line on this coast.

Now with regard to the erection of this line, I leave it to those who are skilled in such matters to say whether we can or cannot reach Forteau, all the way by means of lines erected on land along the coast. I may say, however, that between Esquimaux Point and Forteau there are many serious difficulties in the way of erecting a line of the kind, on account of the islands and rocks bordering the coast; at some points the islands extend as far out as twelve miles from the shore. Now, telegraph or signal stations can only be of use when located on the islands in the offing, where the harbours used by the fishermen are located.

Within the last few years great improvements have been made in sub-marine cables, and the cost has been much reduced, so that sub-marine lines might be used for a great portion of this telegraphic system. From Pointe des Monts to Esquimaux Point there can be no serious difficulty whatever in the way of erecting a land telegraph the whole way along the coast, so that telegraph and signal stations can be placed at all the chief harbours and fishing stations.

Between Esquimaux Point and Forteau, if sub-marine electric cables have to be used, as will probably be the case, the cables may be submerged along the coast, in many places inside the outer islands and rocks, and be made to connect one important harbour or fishing place with another.

As the result of my own study of the matter, of the information I have gathered, and of my experience derived from sixteen years of cruising on this coast, I would point out the following as the harbours or fishing stations where the submarine cables should touch, and where there should be telegraph or signal stations :

	Miles.
1. Esquimaux Point.....	0
2. Nataskuan (the harbour) .....	65
3. Coacoachou.....	65
4. Little Mecatina.....	48
5. Great Mecatina.....	18
6. La Tabatière.....	5
7. St. Augustin.....	25
8. Bonne Espérance.....	36
9. Bradore Bay.....	15
10. Anse aux Blancs Sablons.....	8
11. Bay of Forteau.....	12
	297

12. A station at Nataskuan Point connected with the harbour of Nataskuan.

#### SHORT DESCRIPTION OF THE SEVERAL HARBOURS ABOVE MENTIONED.

1. Esquimaux Point is an excellent harbour, capable of sheltering two hundred or more vessels of any tonnage. The village has over 1,500 inhabitants, all fishermen, owning twenty-three (23) schooners and a large number of fishing boats, all employed in catching seal, cod and herring in the Gulf of St. Lawrence.

2. The Harbour of Nataskuan is capable of affording perfect shelter to two hundred fishing schooners. There is also an anchorage for vessels of the largest tonnage.

Along the Nataskuan coast, in the vicinity, and on the banks in the offing, cod is always to be found in abundance. Nataskuan has always been considered one of the best fishing grounds of the whole north shore. It is in consequence resorted to each year by a large number of fishing schooners, chiefly from the Maritime Provinces.

There are several fishing establishments in the harbour, and the population consists of some fifteen families. At a distance of three miles towards the south is the well known Nataskuan River, one of the most productive salmon rivers of the north shore.

3. Coacoachou, at the entrance of the river of that name, is one of the best harbours on this coast. It is capable of sheltering a whole fleet of large vessels. It is situated a few miles west of Cape Whittle, which is at the entrance of the Strait of Belle Isle. Though there are no important fisheries in the vicinity of this harbour, still it would be an advantage to connect it with the telegraphic system, for it might serve as a port of refuge for the large steamers navigating these waters in case of their being disabled.

4. Little Mecatina Island has two good harbours for fishing schooners, and there are good cod fishing grounds in the vicinity. Moreover, it stands high out of the sea and is visible from a long distance, and vessels navigating the strait may require to run in there for shelter.

5. Great Mecatina is also a lofty island easily identified from a distance off, and in its vicinity is the harbour of Baie des Moutons, one of the best and most frequented of the whole coast.

A large number of schooners from the Province of Quebec and the Maritime Provinces resort to it every year, and the fishing banks of the vicinity are excellent and easy of access. Bait is also, generally speaking, abundant.

6. La Tabatière (Fish Harbour) is one of the best seal fishing grounds of the whole coast. It is also inhabited by several families.

7. St. Augustin consists of a group of islands lying off the mouth of the river of that name, and not less than twelve miles from the mainland. It has always been an important centre for the seal, salmon, cod and herring fisheries. There are several good and well known harbours in this group of islands.

8. Bonne Espérance is one of the best known and most frequented harbours of the coast, like Baie des Saumons, whose waters flow into it. It lies off the mouth of the River St Paul or Quitzaqui, a river of considerable magnitude, and renowned as a salmon river ever since the discovery of Canada.

In former days large numbers of Esquimaux and Indians lived on this part of the Labrador coast, and when Jacques Cartier visited it for the first time, the French had already a stone fort erected and mounted with cannon to meet their assaults. This fort had been built at the head of a large bay, which was then called "Port de Brest." It is now "Old Fort Bay," and is situated a few miles to the west of the St. Paul River.

The cod fisheries of Bonne Espérance and Baie des Saumons are about the most productive on the north shore.

9. Bradore Bay has long been celebrated for its seal, herring and cod fisheries. The Spaniards had large fishing establishments here before the French entered these waters.

Bradore has always been an important centre. There are here two harbours for vessels of every class. A large number of fishing vessels resort to this locality every year for the cod and herring fisheries, the latter being the well known Labrador herring. In the vicinity of Bradore, at Anse des Dunes, I have seen as many as six hundred (600) barrels of herring taken in one haul with a seine.

10. Anse aux Blancs Sablons is a celebrated and well known locality.

There are several large fishing establishments there, and it is the yearly resort of some two or three hundred fishing schooners attracted by its cod and herring fisheries, which are, generally speaking, most productive.

Blancs Sablons Bay is sheltered by two islands, Ile à Bois and Ile Verte. At this place I have often seen boats, manned by two men only, take as many as two thousand cod and even more in a single day. A large number of fishing schooners gather in this harbour every year.

The eastern boundary line of Canada is at the head of this bay, near the mouth of a small river. Beyond is Labrador, under the jurisdiction of Newfoundland.

11. Forteau Bay is one of the finest on the whole coast, it offers great facilities for the cod and herring fisheries. There are a number of residents engaged in fishing and hunting. The largest vessels can run in here at all times, day or night, while the navigation is open in the Strait of Belle-Isle. There is a good anchorage and good shelter from all winds. On the east side is Point Amour, on which stands one of the finest lighthouses in America. It is a lofty tower built of stone, brick and cement, furnished with a Fresnel dioptric light, which is visible from the other side of the strait, a distance of over 15 miles. It is also furnished with a steam whistle for the guidance of vessels in foggy weather.

This is the point I recommend as the terminus of the North Shore telegraphic line.

Before concluding I would point out that the whole network of sub-marine cables starting from Esquimalt Point and extending towards Forteau, and in its course connecting all the harbours and fishing stations I have enumerated, can nearly everywhere, be submerged inside the outer islands, and will therefore be sheltered from the ice which sometimes grounds on the coast.



It may not be out of place to mention here that on the 30th June, 1862, when on board the "Napoleon III," I found an iceberg aground at the entrance of Forteau Bay, where it lay for over a month, in twenty-five fathoms of water. It stood at least seventy (70) feet above the water. Its total height was therefore two hundred and twenty feet. I climbed the iceberg with four of my crew.

The telegraphic system above mentioned on the island of Anticosti, the Magdalen Island and Grand Manan Island, were commenced, completed and put in operation under your administration. To you, sir, also should fall the honour of completing, by the extension of the north shore line to Forteau, the coast telegraphic system of the Gulf of St. Lawrence, which will be of such vast service to shipping, to trade, and to the fisheries of Canada. You will doubtless have no difficulty in obtaining from Parliament the means for prosecuting energetically the work of construction already begun on this north shore line, so that it may reach Forteau within a few years.

I cannot conclude without calling your attention to a number of short telegraphic lines which should be erected in order to connect several important points on the sea coasts of the Provinces with the telegraphic system of Canada.

I would mention specially :

1. A line about sixteen miles in length, to connect the east point of Prince Edward Island with the telegraphic system of that island.
2. A line one-tenth of a mile in length, to connect Cape North Lighthouse on that island with the same system.
3. A line of twenty miles in length, to connect the lighthouse at Point Escuminac, the southern point of Miramichi Bay, with the telegraphic system of New Brunswick.
4. Another line of about sixteen miles in length, to connect the extreme eastern point of Cape Sable Island with the port of Barrington, Nova Scotia.

COAST LINE TELEGRAPHS IN THE UPPER LAKES.

I have not spoken as yet of the great lakes, that unbroken chain of inland seas, which enables us to penetrate to the heart of the continent of North America, as a field to which the system of coast telegraphs might be applied with advantage.

It is not that I am unwilling to admit their usefulness for our inland navigation, but it is hardly two years since the Government began the erection of coast telegraph lines, and it seemed to me to be proper that the coasts of the Gulf of St. Lawrence, our great commercial highway, should receive, above all others, the benefit of this powerful agent, which annihilates time and distance. But now that the telegraphic systems of the Gulf of St. Lawrence have been in good part constructed—and we are in hopes of seeing the whole completed within a few years,—it is natural that public attention should be directed towards the great lakes, the inland and not least important portion of the great highway of the St. Lawrence.

Canada holds the north shore of the following great lakes: Erie, Ontario, Huron, and Superior. Now, the following is the approximate length of the Canadian coast of each of these lakes, in English miles:—

	Miles.
Lake Ontario.....	250
“ Erie.....	290
“ Huron, including Georgian Bay.....	620
“ Superior.....	400
Total.....	1,560

I must say that I have not as yet fully informed myself as to the real requirements of navigation on these lakes, as to coast telegraphs; but I can at least recommend what is most urgent and necessary, namely, telegraphic lines starting from the lighthouses erected on the most prominent points, and their connection with the

nearest telegraph line, thus placing these lighthouses, which would serve as points of observation, in permanent connection with the telegraphic system of Canada.

I would mention specially Long Point, Rondeau Point, and Point Pelée in Lake Erie; Salmon Point on Lake Ontario, &c., &c.

Once the system of coast telegraphs is put in operation on the shores of the lakes, the signal system will follow of itself, and in a short time the whole lake fleet will at last adopt the international code of signals. Thus vessel owners, on the one hand, will be enabled to follow their vessels from point to point, and the vessels themselves will be enabled to call promptly for all needed assistance in case of accident, grounding, &c., &c.

I append to this letter a testimonial in favor of the coast telegraph system and its further extension along the north coast of the Gulf of St. Lawrence, signed by all the agents of the Maritime Insurance Companies at Montreal, and two others, one from J. B. F. Painchaud, Collector of Customs of the Magdalen Islands, and the other from Messrs. Ritchie & Co., relating to services rendered to shipping by the telegraph system of the Magdalen Islands.\*

I have the honour to be, Sir,

Your obedient servant,

P. FORTIN.

To the Honorable

Sir HECTOR L. LANGEVIN, K.C.M.G., C.B.,  
Minister of Public Works.

(Translation.)

OTTAWA, 8th December, 1881.

SIR,—The coast-line telegraphic system of the Gulf of St. Lawrence, and the shores of the Maritime Provinces, has already been made use of for the purposes of great consequence to the mercantile navy, the commerce and of the fisheries of Canada. But there is still another previously mentioned which is of no less importance.

Many foreign and home vessels set out every year, in ballast, from foreign ports and often very distant ones in order to enter our waters seeking for cargoes of timber especially at Montreal, Quebec, Miramichi, St. John, and other ports of less importance.

The larger proportion of them arrive in the gulf without knowing where they can procure freight.

Some of the vessels stop at Sidney, C.B., others go to Gaspé, while others again proceed to other ports; from these places they announce their arrival to their agent seeking cargoes for them.

And often, of course, they are obliged to go to other ports where freight is more easily obtained and more profitable. But in this case they are obliged to enter two harbours, and consequently pay double pilotage fees and other charges; they also run more or less danger of losing their sailors by desertion, and they lose their time.

The coast line telegraph can remedy this, in many cases, in a very simple way, which, besides, is already in use in other countries.

This will be done with the aid of the coast line telegraph stations, of which the Government owns nearly forty on the shores and islands of the Gulf of St. Lawrence.

The manner of accomplishing it will be as follows:—The Government will give notice in advance, at the custom houses of the principal maritime countries of the

\* Testimonial and letters appear in Annual Report for 1881, page 114 of Appendices.

world that the new service is in operation at such and such telegraph and signal stations, the names of which would be given in the notice.

The ship owners who send the vessels to Canada, in ballast, to obtain cargoes of timber there, would give instructions to their captains to stop opposite one of these signal stations, when they have entered the Gulf of St. Lawrence, to lie to at a reasonable distance, to signal the names of their vessels by means of the International code of flags, and to enquire for any dispatches there may be for them at the station. So soon as the vessels are dispatched, the ship owners write by the quickest route to agents, who transact this kind of business, in the Ports of Quebec, Miramichi, St. John or elsewhere, to look for freight for such and such vessels. The letter reaches its destination long before the vessels, which are sailing vessels of ordinary speed.

The agent soon finds profitable freights, and hastens to make this fact known to the Superintendent of Government signals, who sends a telegraphic dispatch containing everything connected with the freighting vessel, to all the Government signal and telegraph stations, in operation in the Gulf of St. Lawrence.

Soon after this, these vessels enter the Gulf of St. Lawrence, and they direct their courses to the stations most convenient for them according to the winds they have had and the time made, then each vessel will go and lie to opposite one of these stations, and spell out its name by means of signal flags, as I have mentioned before.

The signal man examines his journal and discovers that he has received a short time previous a message with instructions to convey it by means of signals to the vessel, whose number they have given him, as found in the official list of vessels, appended to the book containing the national code, and he immediately communicates this message by means of the code signals, and by this message he has told the vessel to proceed to a certain port where a cargo of timber awaits it.

The vessel has only to bear off, fill its sails, and gain as quickly as possible the port indicated.

And this is done without the vessel being obliged to put into any intermediate port, without casting the anchor, without incurring any expense. And in order to bring this new service into perfect operation at once, the Government need incur no expense. It has only to have it published throughout all maritime countries.

The Superintendents and the operators of our telegraph and signal stations will be able, without any difficulty, to put this new service into practical effect, after merely a few days study and trial.

I beg that you will kindly take this matter into consideration at your convenience.

If you decide upon putting it into operation, allow me to remark that it will be necessary to organize it in the month of January at latest, in order that it may be advertised in time, and may be of use to the fleet which will visit the waters of the Gulf of St. Lawrence next spring.

This service will be useful to the timber trade, inasmuch as it will assist in some degree in facilitating the means of transport of our timber to Europe and more especially to England.

F. A. Schwartz, Esquire, the distinguished Consul-General of Sweden and Norway at Quebec, who has had a great experience in maritime affairs and shipping concerns, has kindly appreciated the projective system in a letter dated the 10th December, 1881, which I enclose.

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

P. FORTIN.

The Honorable  
SIR HECTOR L. LANGEVIN, K.C.M.G., C.B.,  
Minister of Public Works,  
Ottawa.

## ROYAL SWEDISH AND NORWEGIAN CONSULATE,

QUEBEC, 10th December, 1881.

DEAR SIR,—In reply to your letter of yesterday, I have no hesitation in saying, that such a system for signalling as you propose, would not only give the facilities you mention to vessels coming out seeking, in the manner you mention, but would also enable an owner residing in England, or on the other side, to keep the disposal of the vessel for a much longer time in his own hands, giving him the choice of either market.

Yours truly,

F. A. SCHWARTZ.

Hon. P. FORTIN, M.P.,  
House of Commons,  
Ottawa, Ontario.

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THE NORWEGIAN TELEGRAPHIC SYSTEM.

(Translation.)

OTTAWA, 28th November, 1881.

SIR,—The task which I have imposed upon myself, and which I have the honour to bring before your notice, would be incomplete if I did not send you the following short notice upon the telegraphic system of Norway. A country which in respect to its climate, the industrial occupations engaged in there, the fisheries, the timber trade, the extent of water communication, the coasting trade, the configuration of its sea coasts, much resembles our Maritime Provinces and the Province of Quebec.

Norway has a sea coast of over 1,500 nautical miles in extent, measured in a direct line, but by following the indentation of its bays and fiords, some of which are 60 miles in depth, the figure of 2,000 miles, at least, is reached.

This coast line fairly bristles with points, capes, &c., girt about with rocks and islands, some of which are forty miles in the offing. All these taken together go to make the coast navigation of Norway very dangerous.

All the prominent points on these coasts whether parts of the mainland, of an island, or of a rock, are united by telegraph wires or cables forming part of the Telegraphic System of Norway.

What study, what work of genius I may say, was required to conceive and carry out such a system, and to keep it constantly in thorough working order, it is almost impossible to express.

As the work of seamen it is one worthy of the descendants of the Norsemen.

I cannot state in what year this telegraphic system was perfected, but the following extract from a report of the English Vice-Consul at Christiania would make it appear that in 1866, the greater part of the system was already in operation.

*Extract from the Report of the Vice-Consul General of Her Majesty at Christiania upon the Cod and Herring Fishery in Norway, for the year 1866:*

“That part of the population directly or indirectly interested in the fisheries numbers about 150,000, and the number of fishermen regularly employed at the present time is 60,000.

“These latter in their boats come and go along the coasts, according to the reports which reach them as to the signs or prognostics, for example the appearance of the

straw-herring, sea birds, whales, &c., &c., and formerly, before they had the telegraph wire to procure a speedy information for them, the impossibility in their position of verifying the correctness of the reports, and the great distances they had to traverse to reach the neighbourhood of the fishing banks, were the causes of numberless disappointments and deceptions, and often the catch was not as great as it might have been owing to the lack of hands to take the fish. All this has greatly changed since, especially as concerns the herring fishery.

"There are telegraph stations already constructed, and others are in course of erection at the principal points along the coast, and the inspectors require that directions should be every day posted up at each of the stations upon the appearance and position of the banks, and they keep up a constant communication with all the stations in operation.

"Field telegraphs are always ready to connect with the main line, and in this way the slightest movements of the banks of fish are attentively watched and promptly signalled, and it is a curious sight to see the sudden exodus of thousands of fishermen, with their accompanying train of buyers, salters, &c., with their equipage of boats, barrels and apparatus pushing forward towards a distant spot at the summons of the telegraph wire. The men seem to extol highly this important assistant, and in the cases where the success of the fishing is owing to its intervention they call their fish telegraphic herrings. The inspectors post up every morning in the various stations a statement of the quantity of fish taken the day before, and, at the same time, they quote the price per barrel, and they carry on this duty until after the spawning season, which it is easily ascertained by the water assuming the color of the milt.

"This fishery lasts for three months, but the profitable fishing only lasts six weeks or about that, during which they take from ten thousand up to twenty thousand tons each week.

"The advantages which the telegraph will probably secure are incalculable, for it will not be confined to rendering greater the produce of the cod and herring fishermen, but will permit the inhabitants scattered here and there along the coast and the banks of the great fiord, to gather at places determined upon, during other seasons of the year, and to give close attention to other fisheries less important but very numerous in this country, and especially the summer herring fishery, a very fat fish and highly esteemed, which, for its delicacy of flavor and its size, rivals successfully the Dutch and Northern herring."

The short description which follows displays, on one hand, the numberless difficulties which require to be overcome to carry out a similar work, and, on the other hand the extent and perfection of the works which ensure a perfect action throughout the whole system, even to the most retired parts of Norway, as far as the 70th degree and 35 minutes of north latitude, that is to say, fourteen hundred (1,400) geographical miles further north than Quebec.

#### DESCRIPTION.

This system may be divided into three classes:

The first includes the telegraphic lines of the interior, of which the most important are found between the capital Christiania and Trondhjen, about 300 miles in length. In the second place, there are the railway lines about 500 miles. In the third place, the sea or coast lines, nearly 2,000 miles in length.

Commencing at the boundary line of Sweden, the coast line telegraphic system, composed at times of several lines, and again of a single line, makes the circuit of the fiord at the bottom of which Christiania is built; then it reaches the coast, by proceeding in a westerly direction, at the Bay called Skager Rack, which separates Norway from Denmark, as far as Stravanger, on the Atlantic—the North Sea—having a length of 370 miles.

A submarine cable of 15 miles in length crosses the entrance of a great fiord, and the line proceeds from Skudesnæs to Bergen, one of the great sea ports of Norway, a distance of 100 miles.

Within this circuit two large islands are connected with the mainland by submarine cables, 15 miles and 12 miles long respectively. These islands are Utsire and Røvær.

Brandesund, an island situated thirty miles further to the north, is also connected by a submarine cable with the mainland line.

From Bergen, the telegraphic line runs along the coast, sometimes crossing the mouths of fiords by means of sub-marine cables, at other times going round them, and it reaches Christiansund after a course of about 300 miles.

On the route it crosses over some fifteen fiords by means of cables of from one to three miles in length.

Several islands and rocks which occupy important positions on this part of the coast are joined to the principal line by cables varying from two to ten miles in length.

Eighty miles further on, the line passes into Trondhjen, a sea-port situated on one of the largest fiords in all Norway.

About 330 miles further to the north, the line reaches Lödingen, an important sea port on a large fiord which lies on the 68th parallel of north latitude.

In this circuit there are several branch lines, each from twenty to forty miles in length, which connect islands, rocks, ports or places with the main line.

At Lödingen, we find ourselves opposite to the famous group of the Lofoden islands, about 180 miles in length, especially notable for its cod and herring fisheries.

A system of land lines and sub-marine cables, about 200 miles in length, connects all the islands of this group with one another as well as all the ports, harbours and fishing localities where the fishing boats betake themselves, and the whole are joined to Lödingen.

We have already reached a point which is about twelve hundred (1,200) nautical miles more northerly than Quebec. But the coast line telegraph system of Norway does not end here, it continues to girdle the coast as far as Hammerfest, which we know to be the most northerly sea-port in the world. Then it proceeds across Laponic up to within a few miles of the famous North Cape, the most northerly portion of the mainland of Europe. It is in north latitude 70 degrees, 30 minutes,—fourteen hundred and ten (1410) miles further north than Quebec, and eleven hundred and forty (1,140) miles than Forteau Bay in the Straits of Belle-Isle.

In all there are about 2,800 miles of telegraphic lines of all kinds. Some sixty sub-marine cables of from one to twenty miles in length, form connecting links in this system.

There are on the coast lines more than 130 telegraph and signal stations, of which fifteen are upon the Lofoden islands.

#### CONCLUDING STATEMENT.

The telegraph offices may be placed in several categories:—

There are offices, of the permanent service.

“ “ of the full day.

“ “ of limited service.

“ “ open during the winter, that is during the fishing season only.

“ “ attached to railways.

Such, in a few words, is what a nation, of an especially maritime character, having a population of 1,760,000, and a territory 121,000 square miles in extent, (two-thirds the size of the Province of Ontario), has done in aid of its shipping, and its fisheries.

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It seems to me to have set an example, well worth following by such a country as Canada, which possesses such an extent of sea coast and fisheries so varied and so important.

I have the honour to be, Sir,

Your obedient servant,

P. FORTIN.

The Honorable

SIR HECTOR L' LANGEVIN, K.C.M.G., C.B.

Minister of Public Works.

TELEGRAPH AND SIGNAL SERVICE.  
NEWFOUNDLAND TELEGRAPH SYSTEM.

STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
1 Port au Basque.....	Miles. 0	.....	\$ cts. 50 00 or com'n.....	.....	N. B.—The commission is 25 p.c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2 Cape Ray Lighthouse .....	14	.....	50 00 do .....	.....	
Totals.....	14	.....	100 00	.....	

Cost of land line \$1,500; interest thereon at p.c. .... \$ 75 00  
 Estimated annual maintenance and repairs..... 175 00  
 Total ..... \$250 00 { Required in Estim  
 1883-84.

N. B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line and cable system of the Anglo-American Telegraph Company.



**NOVA SCOTIA TELEGRAPH SYSTEM.**  
**LOW POINT, CAPE BRETON, SECTION.**

STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
1 Lingan .....	Miles. 0	.....	\$ cts. 50 00 or com'n.....	.....	N.B.—The commission is 25 p.c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2 Low Point Lighthouse.....	5	St. Peter's .....	50 00 do .....	Aug. 1, 1881.	
Totals.....	5		100 00		

Cost of land line ..... \$635 00

Estimated annual maintenance and repairs :—

Land lines—Salaries and repairs ..... \$150 00 { Required in Estimates,  
 1883-84.

Less probable revenue ..... 5 00

Balance deficit ..... \$145 00

**EAST COAST SECTION.**

N.B.—In connection with the Signal Service a land line 208 miles in length has been erected between Canso and Halifax for a bonus of \$16,000, and is now maintained and operated by the Western Union Telegraph Company without further cost to the Government.

TELEGRAPH AND SIGNAL SERVICE—Continued.

BAY OF FUNDY, N.B., TELEGRAPH SYSTEM.  
GRAND MANAN SECTION.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	<i>Long Eddy Cable Hut, to</i>	Miles.		\$ cts.		
1	Flagg's Cove .....	3	{ H. C. Seely (D. Supt.) Miss C. Daggett.....	420 00 50 00	Nov. 18, 1880 June 1, 1882	N.B.—The commission is 25 p.c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Woodward's Cove .....	6	W. A. Fraser .....	50 00 or com'l'n....	Nov. 26, 1880	
3	Grand Harbour.....	2	Miss Josie Cronk.....	50 00 do ...	Jan. 18, 1881	
4	Seal Cove .....	4½	Miss L. Frye.....	50 00 do ...	Nov. 1, 1882	
5	Southern Head Lighthouse.....	5½	Wood McLaughlin .....	50 00 do ...	Jan. 18, 1881	
			D. McKay, Repairer .....	60 00	May 1, 1881	
	Totals.....	21		730 00		

Cost of land lines..... \$2,000 00

CABLE.

Length of cable, Long Eddy, Grand Manan, to Liberty Cove, Campobello, 7,133 nau. miles. 8,000 00

Total ..... \$10,000 00

CAMPOBELLO SECTION.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
	<i>Liberty Cove Cable Hut, to</i>	Miles.		\$ <i>cts.</i>		
1	Welchpool.....	7½	G. M. Mabee.....	50 00 or com'n.	Dec. 1, 1881	This office was worked by G. M. Mabee, from 1st February to 30th April, 1881, at \$20 per month, and by G. M. Byron, at \$50 per annum, from 1st May to 30th November, 1881.
2	Eastport, Maine, U.S.A.....	½	J. Cushing.....	100 00	Dec. 26, 1881	
	Total.....	8		150 00		

Cost of land lines ..... \$ 825 00

CABLE.

Cable 1½ nautical miles, Welchpool, Campobello to Eastport, Maine, U.S.A. .... 2,100 00

Total ..... \$2,925 00

TOTAL COST GRAND MANAN TELEGRAPH SYSTEM.

Land lines, 29 miles cost ..... \$2,925 00

Cables, 9½ nautical miles cost..... 10,100 00

Total ..... \$12,925 00

ESTIMATED COST OF ANNUAL MAINTENANCE AND REVENUE.

Land lines—Salaries and repairs..... \$1,000 00

Cable—Repairs, probably ..... 1,500 00

Total ..... \$2,500 00

Less probable revenue ..... 750 00

Balance deficit..... \$1,750 00

Required in Estimates  
1883-84.

TELEGRAPH AND SIGNAL SERVICE—Continued.

MAGDALEN ISLANDS TELEGRAPH SYSTEM.

MAGDALEN ISLANDS SECTION.

STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	Memo.
1 Amherst.....	Miles. 0	Miss Campbell.....	\$ cts. 50 00 or com'n.	June 10, 1881	N.B.—The commission is 25 per cent. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2 Amherst Lighthouse.....	9	Wm. Cormier.....	50 00	June 11, 1881	
3 Etang du Nord Village.....	15	P. Pelletier.....	360 00	Dec. 1, 1881	Plus \$30 per annum for rent. General line repairer.
4 do Lighthouse.....	1	Miss O'Brien.....	50 00 or com'n.	do 1, 1881	2 wire loop.
5 House Harbor.....	8	P. Joncas.....	50 00	do 1, 1881	1 mile loop. Short cable of 750 feet in length.
6 Wolf Island.....	28½	N. Clark.....	50 00	Sept. 25, 1881	
7 Grosse Isle.....	11	A. LeBourlais, D. Supt.....	500 00	Aug. 17, 1880	Plus \$1 per day when absent on duty.
8 Bird Rock.....	Cable	T. Turbide.....	50 00 or com'n.	do 20, 1881	
9 Grand Entry.....	11	Miss McPhail.....	50 00	Feb. 18, 1882	Memo.—House Harbor office was worked by Miss O'Brien from 1st January, 1881, to 30th November, 1881.
Total.....	83½		1210 00		

Cost of above land lines complete, with instruments, at \$130 per mile..... \$10,855 00

CABLES.

Distance, Grosse Isle to Bird Rock, 18.7½ nautical miles: } At a general average cost of	
do do Old Harry to Meat Cove, C.B., 54.18½ do	about \$1,100 per mile laid
do do Across House Harbour Gut, 7½ do	down, 73.75 miles .....
	80,630 00
Total.....	\$91,485 00

CAPE BRETON SECTION.

STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
1 Meat Cove.....	Miles. 0	A. B. McDonald.....	\$ cis. 420 00	Nov. 7, 1880	N.B.—The commission is 25 p.c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum. Plus \$1 per day when absent on duty. N.B.—This section is at present operated and maintained by the Dominion Telegraph Company, but at the cost of the Government. The agreement is for ten years (expiring 18th April, 1891), but can be cancelled on one year's notice. N.B.—Ingonish office was worked by F. Brown from Jan. 1, 1881, to March 31, 1882.
2 Aspie Bay.....	10½	R. G. Zwickler.....	50 00 or Com'n. do	Aug. 1, 1882	
3 O'Neil's Harbour (½ way house)	15	J. M. Burke.....	50 00 do	April 1, 1882	
4 Ingonish North Bay.....	9	.....	360 00	.....	
5 Ingonish Harbour.....	10½	.....	50 00 or Com'n. do	.....	
6 McLennan's.....	23	.....	50 00 do	.....	
7 St. Anne's South Bay.....	19	.....	50 00 do	Jan. 1, 1882	
8 Baddeck (Loop Line).....	13	Miss Dunlop.....	50 00 do	July 19, 1882	
9 Englishtown.....	6	Miss Bingham.....	50 00 do	.....	
10 Kelly's Cove.....	2	C. Campbell.....	50 00 do	.....	
11 Big Bras d'Or.....	6	H. Campbell.....	50 00 do	.....	
12 North Sydney.....	12½	.....	.....	.....	
Total.....	156½	.....	1230 00	.....	

Cost of above land lines complete, with instruments, at \$110 per mile..... \$13,915 00

CABLES.

Crossing Big Bras d'Or, ½ nautical mile..... 550 00

\$14,465 00

TOTAL COST MAGDALEN ISLANDS SYSTEM.

Land lines, 210 miles cost..... \$24,770 00

Cables, 73½ nautical miles cost..... 81,180 00

\$105,950 00

ESTIMATED COST OF ANNUAL MAINTENANCE OF MAGDALEN ISLANDS SYSTEM.

Land lines. Salaries and repairs..... \$3,500 00

Cable. Repairs, say..... 1,000 00

Total..... \$4,500 00 { Required in Estimates,

Less probable revenue..... 1,000 00 { 1883-84.

\$3,500 00

Balance deficit.....

TELEGRAPH AND SIGNAL SERVICE—Continued.

ANTICOSTI TELEGRAPH SYSTEM.  
ANTICOSTI ISLAND SECTION.

STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
1 Fox Bay.....	Miles. 0	Miss Nickerson.....	\$ cts. 50 00 or Com'n.	Aug. 11, 1881	N.B.—The commission is 25 per cent. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2 Heath Point Lighthouse.....	23	Mr. Gagnon.....	50 00 do	July 20, 1881	
3 South Point Lighthouse.....	32½	Mr. Carter.....	50 00 do	July 27, 1881	
4 Shallop Creek.....	17½	Mr. Bradley.....	50 00 do	July 7, 1881	
5 Salt Lake.....	52½	F. Denault.....	360 00	Oct. 19, 1881	General Repairer. Plus \$1 per day when absent on duty.
6 South-West P'nt Lighthouse.	15	Miss Denault.....	50 00 or Com'n.	Sept. 1, 1882	
		Miss E. Pope.....	200 00 do	Oct. 18, 1880	Chief Operator since 1st August, 1882. Previously received \$50 per annum.
		Mr. E. Pope.....	100 00	Aug. 1, 1881	District Superintendent. Plus \$1 per day when absent on duty.
7 Jupiter River.....	7	.....	50 00 or Com'n.	.....	
8 Otter River.....	17½	.....	50 00 do	.....	
9 Beesie River.....	22	Miss Ascan.....	50 00 do	Oct. 8, 1881	Plus \$1 per day for her father when he is absent on repairing duties.
10 Cape Eagle (Ellis Bay).....	10	Mr. Malouin.....	50 00 do	Aug. 1, 1881	
11 West Point Lighthouse.....	14	F. Cabot.....	50 00 do	July 1, 1882	N.B.—Mr. J. A. LeBourdais was District Superintendent from 17th August, 1880, to 31st July, 1882, at \$450 per annum.
12 English Bay.....	3				
Totals.....	214		1210 00		

Cost of land lines complete at (say) \$165 per mile..... \$35,300 00

CABLE.

S. W. Point Light-house to L'Anse à Fougère, Gaspé, 44½ nautical miles at \$1,100 laid down ... 48,700 00

Total ..... \$84,000 00

GASPÉ STATION.

STATIONS	Intermediate Distances.	Operators.	Salary per Annum.	Date of Appointment.	Memo.
1 L'Anse à Fougère.....	Miles.		\$ cts. 50 00 or Com'n.		N.B.—The commission is 25 per cent. on all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum. Plus his salary as operator for the Montreal Telegraph Company.
2 Gaspé Basin.....	28 28	J. J. Annett.....	150 00 200 00	Oct. 16, 1881.	

Cost of land line..... \$1,925 00

**TOTAL COST OF ANTICOSTI TELEGRAPH SYSTEM.**

Land lines, 242 miles..... \$37,225 00  
 Cable 44<sup>1</sup>/<sub>3</sub> nautical miles..... 48,700 00  
 Total..... \$85,925 00

**ESTIMATED COST OF ANNUAL MAINTENANCE AND REVENUE.**

Land lines. Salaries and repairs..... \$3,500 00  
 Cable. Repairs, say..... 500 00  
 Total..... \$4,000 00 Required in Estimates  
 Less Revenue, probably..... 500 00 1883-84.  
 Balance deficit..... \$3,500 00

N.B.—In connection with the Signal Service a land line 206 miles in length has been erected between Grand Metis and Gaspé Basin for a bonus of \$16,000, and is now maintained and operated by the Great North-Western Telegraph Company without further expense to the Government.

**TELEGRAPH AND SIGNAL SERVICE -- Continued.**  
**CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.**  
**CHICOUTIMI SECTION.**

No.	STATIONS.	Intermediate Distances.	Operators.	Salary per Annum.	Date of Appointment.	Memo.
		Miles.				
1	Bay St. Paul.....	0	The Operators on this line are appointed and paid by the Company operating the line.			This line was completed 1st September, 1881. This line is operated and maintained by the Great North-Western Telegraph Company, (assignees of the Montreal Telegraph Company) per agreement to that effect.
2	St. Urbain.....	9				
3	Petit Lac Ha! Ha!.....	37				
4	St. Alexis.....	31½				
5	St. Alphonse de Bagotville.....	3				
6	Chicoutimi.....	11½				
	Total.....	92				

CONSTRUCTION.

Cost of land line complete, at \$135 per mile..... \$12,420 00

MAINTENANCE.

Included in agreement with Montreal Telegraph Company for North Shore Section.  
**NORTH SHORE SECTION.**

No.	STATIONS.	Intermediate Distances.	Operators.	Salary per Annum.	Date of Appointment.	Memo.
		Miles.				
1	Murray Bay.....	0	The Operators on this line are appointed and paid by the Company operating the line.			The line to Anse du Portage was completed 23rd July, 1881. The line to Mille Vaches was completed 7th November, 1881. One nautical mile of this distance is submarine cable.
2	St. Fidèle.....	10				
3	St. Simeon.....	11				
4	Anse du Portage.....	23				
5	Tadoussac.....	2				
6	Bergeronnes.....	15				
7	Escoumains.....	12				
8	Saint au Mouton.....	16				
9	Portneuf Village.....	11½				
10	do Lighthouse (Loop 3 miles)	9				



11	Sault au Rochon.....	7	This section of the North Shore line yet to be completed.	The line to Betsiamits completed in September, 1882, and is being operated and maintained by the Great North Western Telegraph Company (assignees of the Montreal Company) per agreement to that effect.		
12	Betsiamits.....	31				
13	Pointe aux Outardes.....	12				
14	Manikagan.....	15				
15	River Godbout.....	27				
16	Pointe des Monts.....	12				
17	Sept Isles.....	68				
18	River Moisy.....	19				
19	River Chaloupe.....	45				
20	Poste de Mingan.....	50				
21	Pointe aux Esquimaux.....	18				
22	Natashquan.....	64				
23	Tohiskaska.....	18				
24	Wapitagan.....	42				
25	Meccatina.....	33				
26	Shecatia.....	50				
27	Bonne Espérance.....	49				
28	Bianc Sablon.....	24				
Total.....		693½				

CONSTRUCTION.

Cost of land line complete to Mille Vaches, at \$135 per mile.....	\$11,610 00
do do from Mille Vaches to Betsiamits, at \$250 per mile.....	14,625 00
Cost of one knot of cable laid across the entrance of River Saguenay, from anse du Portage to Anse à l'Eau, near Tadoussac.....	1,100 00
Total.....	<u>\$27,335 00</u>

MAINTENANCE OF CHICOUTIMI AND NORTH SHORE SECTIONS.

Per agreement (terminating five years from completion of the whole of the lines which the Company contract to build) with the Montreal Telegraph Company..... \$1,500 per annum. { Required in Estimates for 1883-84.

Plus revenue—as per Order-in-Council, No. 14,845, 22nd June, 1881—when the North Shore Section now completed to Betsiamits shall have reached Pointe des Monts.

TELEGRAPH AND SIGNAL SERVICE IN BRITISH COLUMBIA.

Office.	Intermediate Distances	Miles.	Names.	Positions.	Salaries per Month.	Date of Appointment.	MEMOS.
Victoria			Miss D. A. Maclure	Manager and operator	\$ 90 00	1st Dec, 1871	Repairing allowance, \$3 per day.
do			J. A. Carmichael	Assistant and clerk	65 00	1st Jan, 1881	To be appointed.
do			Max. Leclaire	Night operator	75 00	1st Aug, 1882	Repairing allowance, \$2 per day.
Cowichan	31		J. V. Dawson	Operator and repairer	50 00	1st June, 1882	Testing station; no salary attached.
Somenos	8		Mrs. Skinner	Operator	60 00	1st May, 1881	Repairing allowance, \$2 per day.
Chemainus	9		T. D. Conway	Operator and repairer	60 00	15th May, 1882	do \$4 do
Nanaimo	25		F. S. Brown	do	60 00	15th May, 1882	Telephone station at Colliery Wharves.
Departure Bay	34		B. H. Wake	Operator and repairer	20 00	15th Aug, 1881	Repairing allowance, \$3 do
Valdes	18		S. T. Mackintosh	do	6 00	9th May, 1880	do
Granville	35		James Wilson	District superintendent	125 00	22nd May, 1880	do
New Westminster	11 1/2		Wm. F. Archibald	Manager and operator	100 00	1st Jan, 1881	do
do			Miss S. E. Maclure	Assistant operator	75 00	1st May, 1881	do
do			Henry J. Edwards	Night operator	75 00	1st June, 1881	To be appointed.
do			John Maclure	Messenger	20 00	1st June, 1881	do
Moodyville				Operator and repairer	60 00	1st March, 1885	Private line; operated by Moodyville Saw Mill Co. Plus 36 miles 2nd land wire; repairing allowance, \$1 per day.
Matsqui	36			do	50 00	15th June, 1865	Repairing allowance, \$1 per day.
Chilwack	22		John McCutcheon	Operator	50 00	1st Nov, 1879	do \$1 do
Hope	36		Mrs. E. M. Daly	Operator and repairer	50 00	1st Nov, 1871	do \$3 do
Yale	13		Alex. Lindsay	do	50 00	17th July, 1882	do
do			James Fraser	Messenger and assistant	30 00	23rd Sept, 1882	\$15 per month, horse feed.
Boston Bar	25		J. A. LeBourdais	Operator and repairer	60 00	29th Mar, 1882	C. P. R. Divisional Engineer's headquarters.
Keefe's	16		Henry L. Good	Operator	50 00	29th Mar, 1882	\$20 per month, horse feed.
Lytton	16		B. Belanger	Operator and repairer	60 00	20th April, 1882	C. P. R. Divisional Engineer's headquarters.
Drynook	17		H. A. F. MacLeod	Operator	60 00	20th April, 1882	Repairing allowance, \$3 per day.
Spence's Bridge	6		Daniel O'Hara	Operator and repairer	50 00	1st June, 1881	do \$2 do
Cacoe Creek	30		Geo. E. MacLeod	do	50 00	1st June, 1881	do \$2 do
Sayona's	22		Mrs. J. B. Leighton	Operator	50 00	28th Oct, 1881	do \$2.50 do
Kamloops	26		A. J. Venn	Operator and repairer	50 00	1st Sept, 1881	do
Clinton	26		J. J. Mackay	do	50 00	1st May, 1880	\$10 per month, horse feed.
Bridge Creek	53		Wm. Walker	do	60 00	June, 1863	do
Soda Creek	78		Henry Yates	Operator	60 00	20th April, 1882	do
Quesnelle	54 1/2		Miss I. Barlow	do	47 00	17th Feb, 1873	Accommodation office; no salary attached.
Stanley	48		W. W. Dodd	do	83 33	17th Feb, 1873	Repairing allowance, \$3 per day.
Baterville	13		James Stone	Operator and repairer	83 33		
					1,755 33		

676½ plus 36 miles double line, 712½ miles. \$1,755.33 per month; \$21,064 per annum.

TOTAL COST OF BRITISH COLUMBIA TELEGRAPH SYSTEM.

430 miles land lines and 16 knots of sub-marine cables purchased from Western Union Telegraph Company .....	\$24,000 00
Additional amount expended and to be expended to put land service in good order, about ....	12,000 00
Value of 210 miles additional new lines erected, say at a cost of \$100 per mile.....	21,000 00
New cable laid, including cost of "Electron," say 26 knots at \$1,100 per mile.....	28,600 00
<b>Total present value.....</b>	<b>\$85,600 00</b>
Estimated expenditure, 1883-84, salaries, repairs, &c.....	\$37,000 00
Less—Revenue, probably.....	28,000 00
<b>Balance deficit.....</b>	<b>\$9,000 00</b>

**JAMES WILSON,**  
*District Superintendent.*

GENERAL RECAPITULATION.

Total length of land lines now in operation (exclusive of Manitoba and North-West lines, and lines on South Shore of St. Lawrence) .....	1,427 miles.
Total length of cables .....	152 do
<b>Total present valuation .....</b>	<b>\$425,270 00</b>
Annual maintenance (including \$2,000 subsidy to Prince Edward Island), about.....	64,000 00
Annual revenue upon Government account, over.....	25,000 00

**F. N. GISBORNE,**  
*Superintendent.*



APPENDIX No. 30.

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TABULATED PROFILES AND MEMORANDA  
INLAND NAVIGATION OF CANADA  
OCEAN ROUTES THENCE TO FOREIGN COUNTRIES  
CANADIAN LAND ROUTES TO THE SEABOARD  
GOVERNMENT RAILWAYS  
TELEGRAPH LINES  
RAILWAY MAIL ROUTES OF CANADA

ALSO

THE PRINCIPAL OVERLAND MAIL ROUTES AND LINES OF RAILWAY  
AND WATER COMMUNICATION IN MANITOBA, THE  
NORTH-WEST TERRITORIES AND  
BRITISH COLUMBIA.

BY

G. F. BAILLAIRGÉ,  
Deputy Minister of Public Works.

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 APPENDIX No. 30.
 

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DEPARTMENT OF PUBLIC WORKS,

OTTAWA, 9th April, 1883.

SIR,—I have the honour to submit herewith various tabular statements and memoranda, sub-divided as follows, viz. :—

PART I.—Respecting the inland navigation of Canada upon existing and proposed routes, with their principal connections, and showing the length and dimensions of the various canals and locks, the draught of water throughout, together with the rise and fall on each route, and the elevations of the rivers, lakes and canals above tide-water at Three Rivers.

PART II.—Showing the ocean routes between the principal ports of Canada and the United States, and those of foreign countries.

PART III.—Inter-provincial roads and land routes to the seaboard, Government railways and Government telegraph lines, etc.

PART IV.—Showing the railway mail routes of Canada, the principal overland mail routes, and lines of railway and water communication, etc., in Manitoba, the North-West Territories and British Columbia.

The whole has been prepared with as much accuracy as possible, according to the most recent data and the most reliable authorities up to the present date.

The information contained in these statements and memoranda will, it is presumed, be found useful for reference thereto in connection with questions arising in regard to the works in progress or projected on the lines of inland navigation and overland routes of Canada, and the ocean connections with foreign countries.

I have the honour to be, Sir,

Your very obedient servant,

G. F. BAILLAIRGÉ,

*D.M.P.W.*

Hon. Sir HECTOR L. LANGEVIN,  
Minister of Public Works,  
Ottawa.

APPENDIX No. 30.

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PART I.  
—

TABLES OF DISTANCES, ETC.,  
INLAND NAVIGATION OF CANADA

SHOWING

EXISTING AND PROPOSED ROUTES WITH THEIR PRINCIPAL CON-  
NECTIONS, ALSO, LENGTH AND DIMENSIONS OF CANALS  
AND LOCKS AND DRAUGHT OF WATER THROUGH-  
OUT, TOGETHER WITH, THE RISE AND  
FALL ON EACH ROUTE,  
ETC., ETC.

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## APPENDIX No. 30.

## PART I.

INDEX TO TABULAR STATEMENTS AND MEMORANDA RESPECTING  
INLAND NAVIGATION OF CANADA.

- No. 1.—Table of distances, St. Lawrence navigation from Straits of Belle-Île to Duluth, at head of Lake Superior.
- No. 2.—Draught of water, St. Lawrence navigation.
- No. 3.—Remarks respecting dredged channel between Quebec and Montreal and the draught of water through the Canals, and the difference of level between the mitre sills at the head and foot of the Welland Canal.
- No. 4.—St. Peter's Canal, Cape Breton, Nova Scotia, connecting St. Peter's Bay on the Atlantic with the Great Bras d'Or Lake. Length, size and rise of canal and locks.
- No. 5.—River St. Lawrence and Canal navigation from the Straits of Belle-Île up to Fond du Lac, Lake Superior. Total and intermediate distances from Straits of Belle-Île, draught of water, intermediate rise, elevation above tide-water. Three Rivers, number of locks, length and size of canals and locks, depth of water in prism and locks of each canal, tonnage of vessels which can navigate through canals.
- No. 6.—Lake navigation from head of Lake Superior to Three Rivers. Length, breadth, depth, area, and elevation above the sea at Three Rivers.
- No. 7.—Distances between the principal places, from Montreal to Quebec, along the centre line of the ship channel.
- No. 8.—St. Lawrence navigation. Levels of river and lakes above tide-water at Albany and Three Rivers, according to various authorities.
- No. 9.—Levels established between low tide-water at Three Rivers and lowest observed water of Montreal Harbour at lower entrance of Old Lock No. 1, at foot of Lachine Canal.
- No. 10.—Highest and lowest water levels, and depths at low water on the lower mitre sill of Old Lock No. 1 at foot of Lachine Canal, in the Harbour of Montreal, hitherto and now adopted by Engineers of Harbour, Water Works, Shearer Scheme, *et al.*
- No. 11.—Memoranda concerning the line of levels run to connect tide-water at Three Rivers with water level of Montreal Harbour.
- No. 12.—Lake Champlain Route. Distances, Montreal and Quebec to seaboard at New York.
- No. 13.—Lake Champlain Route. Details of a similar nature to those given at No. 5.



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- No. 13 $\frac{1}{2}$ .—Champlain Canal. Time and cost of construction, together with other details respecting Canal and locks.
- No. 14.—Montreal, Ottawa and Kingston navigation. Details of a similar nature to those given at No. 5.
- No. 15.—River Trent navigation. Details of similar nature to those given at No. 5.
- No. 16.—Table showing the smallest locks on the several lines of navigation named, also the dimensions of the largest vessels which may pass through them.
- No. 17.—River St. Lawrence and Dawson Route. From Straits of Belle-Ile to Prince Arthur's Landing on north shore of Lake Superior, and thence to Winnipeg.
- No. 18.—Fort Frances Canal, on the Dawson Route.
- No. 19.—Opening and closing of navigation. Lake Superior and chain of lakes on the Dawson Route.
- No. 20.—Approximate distances from mouth of Red River down to Grand Rapid at mouth of North or Main Saskatchewan, and thence up to Fort Edmonton.
- No. 21.—Remarks respecting steamers and draught of water on route between mouth of Red River and Fort Edmonton on the Saskatchewan.
- No. 22.—Volume of water discharged from the River Saskatchewan and from its north and south branches.
- No. 23.—Names of vessels navigating the waters of Manitoba and the North-West Territories.
- No. 24.—Port Nelson, Hudson's Bay.
- No. 25.—Projected Baie Verte Canal, between Bay of Fundy and Baie Verte.
- No. 26.—A tabular view of the River St. John from Fredericton to the Grand Falls, New Brunswick.
- No. 27.—Projected Cedars Canal, on north shore of St. Lawrence, between Lakes St. Louis and St. Francis.
- No. 28.—Projected Tay Canal from the Town of Perth to the Rideau Canal.
- No. 29.—Projected Ottawa Ship Canal, between the City of Ottawa and Georgian Bay, Lake Huron *vid* Lake Nipissing and French River.
- No. 30.—Table of principal rivers throughout the world compared with the Rivers St. Lawrence and Ottawa.
- No. 31.—Memorandum A, on the Ottawa and French River navigation.
- No. 32.—Memorandum B, on the proposed Georgian Bay and Ottawa Canal.

## TABLES OF DISTANCES, ETC.

## No. 1.—ST. LAWRENCE NAVIGATION.

FROM STRAITS OF BELLE-ILE TO DULUTH, AT HEAD OF LAKE SUPERIOR, BY WATER.

From	To	Sections of Navigation.	Statute Miles.	
			Inter-mediate.	Total to Straits of Belle-Ile.
Straits of Belle-Ile.....	Gape Whittle .....	Gulf of St. Lawrence ....	240	240
Cape Whittle.....	West Light, Anticosti.....	do .....	201	441
West Light, Anticosti.....	Father Point.....	River St. Lawrence.....	202	643
Father Point.....	Rimouski .....	do .....	6	649
Rimouski .....	Bic.....	do .....	12	661
Bic.....	Isle Verte.....	do .....	39	700
Isle Verte (opp. Saguenay)	Quebec .....	do .....	126	826
Quebec.....	Three Rivers.....	do to Tidewater .....	74	900
Three Rivers.....	Montreal .....	do .....	86	986
Montreal .....	Lachine .....	Lachine Canal.....	8 $\frac{1}{2}$	994 $\frac{1}{2}$
Lachine .....	Beauharnois .....	Lake St. Louis.....	15 $\frac{1}{2}$	1,009 $\frac{1}{2}$
Beauharnois.....	Ste Cécile.....	Beauharnois Canal.....	11 $\frac{1}{2}$	1,021
Ste. Cécile.....	Cornwall.....	Lake St. Francis.....	32 $\frac{1}{2}$	1,053 $\frac{1}{2}$
Corawall.....	Dickinson's Landing .....	Cornwall Canal.....	11 $\frac{1}{2}$	1,065 $\frac{1}{2}$
Dickinson's Landing .....	Farran's Point.....	River St. Lawrence.....	5	1,070 $\frac{1}{2}$
Farran's Point.....	Upper end of Croyle's Island.	Farran's Point Canal.....	3 $\frac{1}{2}$	1,071
Upper end Croyle's Island.	Williamsburgh or Morrisburgh	River St. Lawrence .....	10 $\frac{1}{2}$	1,081 $\frac{1}{2}$
Williamsburgh.....	Rapid Plat.....	Rapide Plat Canal .....	4	1,085 $\frac{1}{2}$
Rapide Plat.....	Point Iroquois Village.....	River St. Lawrence.....	4 $\frac{1}{2}$	1,090
Point Iroquois Village.....	Upper end Presqu'Île.....	Point Iroquois Canal.....	3	1,093
Presqu'Île.....	Point Cardinal, Edwards- burgh .....	Junction Canal .....	2 $\frac{1}{2}$	1,095 $\frac{1}{2}$
Point Cardinal.....	Head of Galops Rapids.....	Galops Canal.....	2	1,097 $\frac{1}{2}$
Galops Rapids.....	Prescott .....	River St. Lawrence.....	7 $\frac{1}{2}$	1,105
Prescott.....	Kingston .....	do .....	59	1,164
Kingston.....	Port Dalhousie.....	Lake Ontario.....	170	1,334
Port Dalhousie.....	Port Colborne.....	Welland Canal.....	27	1,361
Port Colborne.....	Amherstburgh.....	Lake Erie .....	232	1,593
Amherstburgh.....	Windsor.....	River Detroit .....	18	1,611
Windsor.....	Foot of St. Mary's Island.....	Lake Ste. Claire.....	25	1,636
Foot of St. Mary's Island...	Sarnia .....	River Ste. Claire.....	33	1,669
Sarnia.....	Foot of St. Joseph's Island...	Lake Huron.....	270	1,939
Foot of St. Joseph's Island	Foot of Sault St. Mary .....	River St. Mary.....	47	1,986
Sault St. Mary.....	Head of Sault St. Mary.....	Sault Ste. Marie Canal ...	1	1,987
Head of Sault St. Mary.....	Point aux Pins.....	River St. Mary .....	7	1,994
Point aux Pins.....	Duluth .....	Lake Superior.....	390	2,384

Of the 2,384 miles from the Straits of Belle-Ile to the Head of Lake Superior, 71 $\frac{1}{2}$  miles are artificial navigation, and 2,312 $\frac{1}{2}$  open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical, or 2,234 statute miles.

The total ascent from tide-water to Lake Superior is now assumed to be not less than 602 $\frac{1}{2}$  feet, above tidewater at Three Rivers, and 601.78 above tidewater at New York, according to the most recent information obtained up to 7th April, 1883.—G.F.B.

## No. 2.—Draught of Water—St. Lawrence Navigation.

Sections of Navigation.	Minimum depth available in 1882.	Depth when work now in progress is completed. — See Remarks at No. 3.
Dredged Channel—Quebec to Montreal—In progress.....	22	25
Lachine Canal—Enlargement nearly completed.....	9	12
Beauharnois Canal—To be enlarged or another canal to be constructed on north shore opposite .....	9	12
Cornwall Canal—Enlargement commenced in 1876.....	9	12
Williamsburgh Canals—To be enlarged .....	9	12
Murray Canal—Now being constructed; not on main line of navigation..	10	10
Burlington Bay Canal—Not on main line of navigation.....	10	10
Welland Canal—Enlargement completed.....	12	12
Sault Ste. Marie Canal—State of Michigan—Enlargement completed.....	16·8	16·8

See No. 3.—For remarks respecting dredged channel between Quebec and Montreal; the draught of water through the canals, and the elevation above tide-water.

See No. 5.—For details respecting the various sections of river and canal navigation, viz.: The intermediate and total distances; the intermediate and total rise above tide-water; the dimensions and depth of each Canal, and of each Lock, &c.

See Appendix No. 31.—For dates of opening and closing of navigation.—G.F.B.

## NO. 3.—ST. LAWRENCE NAVIGATION.

REMARKS respecting dredged channel between Quebec and Montreal, the draught of water through the canals on the main line of the St. Lawrence navigation, and the elevations along this and other routes above tide-water at Three Rivers.

## DREDGED CHANNEL BETWEEN QUEBEC AND MONTREAL.

According to the Report of John Kennedy, Chief Engineer of the Harbour Commissioners of Montreal, dated 18th October, 1882, the channel between Quebec and Montreal has been dredged to a depth of 25 feet, at low water, except at the following places, viz:—

1. Cape Charles, where the shoal has been cut through to a depth of 22 feet 3 inches, but where some boulders and loose rock remain to be removed.
2. Cap à la Roche, where nearly the whole shoal has been cut through to a depth of 22 feet.

The width of the dredged portions of the channel varies from 350 to 450 feet.

See also Appendix No. 10 of the present Report, pages 452 to 456.

For further details see No. 28,839, or Appendix No. 13 in printed Report of the Minister of Public Works for 1881-82, pages at 153, 154.

The Government are now being pressed to deepen the channel throughout from Quebec to Montreal to a depth of 27½ feet.

## CANALS—RIVER ST. LAWRENCE ROUTE.

When the enlargement of the canals was decided upon in 1871, the scale of navigation on the St. Lawrence route, was throughout fixed at an available depth of twelve feet of water. This was authorized to be carried out in 1873.

In 1875, strong representations were made of the desirability of deepening the various channels for the passage of vessels drawing fourteen feet of water.

This was assented to by the Government, and orders were accordingly given to place the foundations of all permanent structures, on those parts of the works not then under contract, at a depth corresponding to fourteen feet of water on the mitre sills of the locks.

The orders thus given applied to all the principal works on the main line of navigation between Lake Erie and the City of Montreal.

The locks on the enlarged canals throughout are to be 270 feet long between the gates, 45 feet in width, and when completed, are to have a depth of 14 feet of water on the sills.

This will enable vessels of almost any ordinary build to pass, carrying fully one thousand tons burden; but as the tendency seems to be towards increasing the breadth of beam and sectional area of freight vessels, it is probable that the canals will ere long be navigated by a class of vessels capable of carrying fully 1,500 tons.

For preceding and further details, see pages 4 and 5, Report of John Page, Chief Engineer of Canals, dated 16th February, 1880, published the same year.

**SAULT STE. MARIE CANAL.**

According to a telegram, No. 33,238, dated 5th April, 1883, from Major Farquhar, Engineer in charge of this work, the maximum lift of the new lock of the enlarged canal is 18·6 feet, and the minimum lift 16·8 feet.

Opening and closing of navigation between Quebec and head of Lake Superior. For details see Appendix No. 31.

**ELEVATION ABOVE TIDE-WATER AT THREE RIVERS.**

The elevation of the various reaches of the navigable waters on the River St. Lawrence and other routes, above tide-water at Three Rivers, differ, according to the following tabulated profiles, from those published in previous reports.

The surveys made since 1867, in connection with the enlargement of the Canadian canals, have brought to light several discrepancies which have been corrected in the tabulated profiles of the inland routes of navigation now submitted.

The waters of the rivers and lakes of the various routes of navigation, have not been levelled throughout, up to the present time.

Their declivity therefore, in many instances, had to be assumed, and the largest lakes have been considered as being level, owing to the want of proper data to determine their actual declivities.

The differences of levels therefore given in each case, are claimed to be accurate only where reliable data were available for establishing the same.

The principal discrepancies between the levels given prior to 1837 and those now given according to subsequent surveys and observations, may be enumerated as follows, viz:—

	Feet of Declivity	
	At present.	Formerly.
1st. Rapide Plat Canal, Farran's Point Canal...	8·75	2·75
2nd. Galops Canal.....	14·75	15·75
3rd. Welland Canal.....	326·75	330·00

These differences of levels consequently affect the elevations shown in the previous published reports which have not been corrected up to the present time.

When the rivers and lakes of the various routes are levelled throughout, the intermediate rise of each section of navigation and the total elevation of the rivers and lakes above tide-water will again have to be modified.

See letter herewith of Thos. Monro, Resident Engineer on lower or northern division of Welland Canal, respecting declivity between Lakes Ontario and Erie. No. 33,381.

G. F. BAILLAIRGÉ,  
D.M.P.W.

OTTAWA, 9th April, 1883.

THOROLD, 22nd December, 1882.

MY DEAR SIR,—It is difficult to determine differences of levels, where there is no correct standard of comparison.

For example, what is meant by the elevation of Lake Erie above the sea? Both the sea and the lake are constantly fluctuating, so that some fixed gauge must be adopted before any reliable information can be obtained.

I may say, however, that the absolute difference of level between the top of the mitre sill of the Port Dalhousie lock (old) and that of the old lock at Port Colborne is, as we make it, 327.96 feet, which, with an equal depth of water on both would represent the relative heights of the lake surfaces. This, however, is obviously not reliable, as the lakes do not fluctuate synchronously or to the same extent.

Yours very truly,

THOMAS MONRO.

G. F. BAILLAIRGÉ, Esq.,  
D.M.P.W.

No. 4.—ST. PETER'S CANAL.  
CAPE BRETON, Province of Nova Scotia.

Section of Navigation.	Length. feet.	Extreme rise or fall of tide, St. Peter's Bay. feet.	No. of Locks.	Dimensions of lock.			Canal prism.			Remarks.
				Length between quoins. feet.	Width at water surface. feet.	Depth of water on sills. feet.	Width at bottom. feet.	Width at water surface. feet.	Depth of water. feet.	
St. Peter's Canal, connecting Great Bras d'Or Lake, & St. Peter's Bay, Cape Breton, N.S.	2,400	7	1	200	49½	18	46	55	19	The works on the first canal were commenced in 1854, suspended in 1856, resumed in 1864, and completed in 1869. Up to Nov., 1867, the works have been carried on by the Government of Nova Scotia. The works of enlargement were commenced in 1875, and the final estimate was paid on the 30th April, 1881. Total cost of enlargement, \$357,880.71.

NOTE.—This navigation extends from ocean to ocean, through Cape Breton Island; starting from the eastern end to the Bras d'Or Lakes, the channel is divided in two by the Boularderie Island; the northern channel, called the Great Bras d'Or, is about 20 miles long, with a depth of water of at least 4 fathoms; the southern channel, called the Little Bras d'Or, is obstructed at its eastern entrance by a rocky bar, which prevents other than small vessels entering; proceeding westwards and crossing Little Bras d'Or Lake, which is about 12 miles long, its least depth 7 fathoms, we reach Barra Strait, about 1 mile long and ½-mile wide; this point is considered to be the head of tide-water; thence we cross the Great Bras d'Or Lake, about 21 miles long, least depth 4 fathoms, and through St. Peter's Inlet, 6½ miles long, we reach the St. Peter's Canal, cut through the isthmus, composed of compact clay, intermixed with gravel, stones and boulders, overlaying a hard layer of syenitic rock; passing through the canal we reach the western end of the navigation at St. Peter's Bay.

The Great Bras d'Or Lake is tideless, and its level is at about the mean level of the sea at St. Peter's Bay, where the range of the tide is about 7 feet.

No. 5.—NAVIGATION OF THE

From	To	Sections of navigation.	Distances.		Draught of vessels.	Rise.		No. of locks.
			Intermediate.	Total from Straits of Belle-Île.		Intermediate.	Above tide-water at Three Rivers.	
			miles.	miles.	feet. deep	feet.	feet.	
Straits of Belle-Île.	Quebec.....	River and Gulf of River St. Lawrence.	826	826				
Quebec.....	Three Rivers (head of tide).	Riv. St. Lawrence	74	900	25		0	
Three Rivers (head of tide).	Montreal.....	do ...	86	986	25	11½	11½	
Montreal.....	Lachine (foot of Lake St. Louis).	Lachine Canal, (old).	8½	994½	9	44½	56½	5
do .....	do ...	Lachine Canal, enlarged.	8½ not added.	.....	12	45 not added.	.....	5 not added.
Lachine, foot of Lake St. Louis.	Melocheville, foot of Beauharnois Canal.	Lake St. Louis...	15½	1009½	9	1½	58	
Melocheville.....	Valleyfield, foot of Lake St. Francis.	Beauharnois Canal.	11½	1021	9	82½	140½	9
Valleyfield.....	Cornwall.....	Lake St. Francis.	33½	1053½	9	1½	142	
Cornwall.....	Dickinson's Landing.	Cornwall Canal.	11½	1065½	9	48	190	7
Dickinson's Landing.	Farran's Point....	R. St. Lawrence.	5	1070½	over 12	1½	191½	
Farran's Point.....	Upper end of Croyle's Island	Farran's Point Canal.	¾	1071	9	3½	195½	1
Upper End of Croyle's Island.	Morrisburgh.....	R. St. Lawrence.	10½	1081½	9	8½	203½	
Morrisburgh.....	Head of Rapide Plat.	Rapide Plat Canal.	4	1085½	9	11½	215½	2
Head of Rapide Plat	Iroquois Village.	R. St. Lawrence	4½	1090	over 12	3½	219½	

RIVER ST. LAWRENCE.

Length.		Breadth.			Depth.		Tonnage of vessels.	Remarks.
Canal.	Locks.	Canal at bottom.	Canal at water surface.	Lock at water surface.	In canal prism and basins.	On mitre sills of locks.		
miles.	feet.	feet.	feet.	feet.	feet.	feet.		
8½	200	80	120	45	10	9		The difference between low tide-water at Three Rivers and the low water in Montreal Harbour has lately been found to be 11·73 feet.
8¾ not added.	270	137 to 200	163 to 208	45	19 and 13	18 and 14	1000 to 1500	The depth of water on the sills of the two lower locks at Montreal is 16 feet. The Lachine Canal overcomes the Sault St. Louis, also known as the Lachine Rapids.
11½	200	80	120	45	10	9	600	The depth of water on the sills of the two lower locks of the enlarged canal at Montreal is 18 feet; and in Basin No. 1, situated between the two locks, 19 feet. From Lock No. 2 to Wellington Bridge, depth in centre of channel 19 feet, for a width of 100 feet; balance of basin (Basin No. 2), 13 feet deep. From Wellington Bridge upwards to Lachine, the old canal has been enlarged, but new locks constructed alongside the old ones, forming also a new entrance at Lachine, 320 feet wide.
11½	200	100	150	55	10	9	750	This canal overcomes the "Cascades," "Cedars" and "Coteau" Rapids, which occupy a distance of about 7 miles, the intermediate spaces being easily navigated. Passenger steamers run down those rapids. The Bacot Hayes Shoal, across the steamboat channel, once the shallowest spot in all the rapids between Montreal and Kingston, has been deepened lately for a width of 150 feet, and can now pass vessels drawing 8 feet at low water. Former depth available at low water about 6½ feet. Coteau Rapids, 18 feet fall in 3¼ miles; Cedars Village, 5 miles, 9·1 feet fall; Cedars Rapids, 1¾ miles, 28·7 feet fall; foot of Cedars Rapids to head of "Cascades," 2¼ miles, 3·5 ft. fall; Cascades Rapids, 2½ miles, fall 23·2 ft.
¾	200	50	90	45	10	9	600	The lower entrance of the enlarged canal is placed 300 feet south of the existing line; two enlarged locks, of 270 × 45 × 14 feet of water on the sills, have been constructed; also a basin 825 feet long between these locks. This canal overcomes the Long Sault Rapids which downward vessels run with safety.
4	200	50	90	45	10	9	600	Lock used by ascending vessels only; rapid run by downward vessels. In October, 1872, the water came exceptionally low, there being only 7¼ feet of water on the lower sill. Former reports gave the rise on this stretch of the river as 2¾ feet.
								Channel through rapid is safe and deep. During the extreme low water of October, 1872, there was only 6 ft. 7 in. on the upper sill of guard lock. Downward vessels pass through the rapid.

No. 5.—NAVIGATION OF THE

From	To	Sections of navigation.	Distance.		Draught of vessels.	Rise.		No. of locks.
			Intermediate.	Total from Straits of Belle-Île.		Intermediate.	Above tide-water at Three Rivers.	
			miles.	miles.	feet.	feet.	feet.	
Iroquois Village...	Head of Galops Rapids.	Galops Canal...	7 $\frac{5}{8}$	1097 $\frac{3}{8}$	9	14 $\frac{5}{8}$	234	3
Head of Galops Rapids.	Prescott.....	R. St. Lawrence.	7 $\frac{3}{8}$	1105	10 $\frac{1}{2}$	1 $\frac{1}{2}$	235 $\frac{1}{2}$	.....
Prescott.....	Kingston.....	do .....	59	1164	deep	4 $\frac{1}{2}$	240	.....
Kingston.....	Port Dalhousie....	Lake Ontario.....	170	1334	deep	.....	240	.....
Port Dalhousie.....	Port Colborne....	Welland Canal... (Old.)	27	1361	9	326 $\frac{3}{4}$	566 $\frac{3}{4}$	27
do .....	do .....	do enlarged	26 $\frac{3}{4}$ not added	.....	12	326 $\frac{3}{4}$ not added	.....	26 not added
Port Colborne.....	Amberstburg .....	Lake Erie.....	232	1593	deep	.....	566 $\frac{3}{4}$	.....
Amberstburg .....	Windsor.....	Detroit River....	18	1611	15	4	570 $\frac{3}{4}$	.....
Windsor.....	Foot of St. Mary's Island.	Lake Ste. Claire.	25	1636	15	.....	570 $\frac{3}{4}$	.....
Lake Ste. Claire...	Sarnia.....	Ste. Claire River	33	1669	15	6	576 $\frac{3}{4}$	.....
Sarnia.....	Foot of St. Joseph's Island.	Lake Huron.....	270	1939	deep	.....	576 $\frac{3}{4}$	.....
Foot of St. Joseph's Island.	Foot of Sault Ste. Marie.	St. Mary's River.	47	1986	16	8	584 $\frac{3}{4}$	.....
Foot of Sault Ste. Marie.	Head of Sault Ste. Marie.	Sault Ste. Marie Canal.	1	1987	16	18	602 $\frac{3}{4}$	1
Head of Sault Ste. Marie.	Pointe aux Pins..	St. Mary's River.	7	1994	16	.....	602 $\frac{3}{4}$	.....
Pointe aux Pins....	Fond du Lac.....	Lake Superior....	390	2384	deep	.....	602 $\frac{3}{4}$	.....
				2384			602 $\frac{3}{4}$	55
Kingston.....	Head of Bay of Quinté.	Lake Ontario.....	67	1231	.....	.....	.....	.....
Head of Bay of Quinté, a cross Peninsula.	Presqu'île Harbor, Lake Ontario.	Murray Canal....	6 $\frac{1}{2}$	1237 $\frac{1}{2}$	10	.....	240	no lock.
Murray Canal.....	Burlington Bay...	Lake Ontario....	101 $\frac{1}{2}$	1339	.....	.....	.....	.....
Lake Ontario.....	do .....	Burlington Bay Canal.	.....	1339 $\frac{1}{2}$	10	.....	240	no lock.



RIVER ST. LAWRENCE—Continued.

Length.		Breadth.			Depth.		Tonnage of vessels.	Remarks.
Canal.	Locks.	Canal at bottom.	Canal at water surface.	Lock at water surface.	In canal prism and basins.	On mitre sills of locks.		
miles.	feet.	feet.	feet.	feet.	feet.	feet.		
7 $\frac{3}{8}$	200	50	90	45	10	9	600	This canal overcomes the rapids at Pointe aux Iroquois, Pointe Cardinal and Galops. The channel in the Galops Rapids is now being deepened to 16 ft. At extreme low water there is about 8 ft. of water on the sills of the guard lock. The Farran's Point, Rapide Plat and Galops Canals, collectively known as the Williamsburgh Canals, are not generally used, either by ascending or descending passenger steamers.
27	2 of 200 24 of 150 1 of 230	26 to 70	66 to 110	2 of 45 24 of 26 $\frac{1}{2}$ 1 of 45	11	10 $\frac{1}{2}$	450 500	Overcomes the Niagara River and Falls, and connects Lake Ontario with Lake Erie. Until the late surveys made for the enlargement, the difference of level between Lakes Erie and Ontario was estimated at 330 ft. Difference of level between the mitre sills of the guard locks (old) at Port Dalhousie and Port Colborne, equals 327.96 ft.
26 $\frac{3}{4}$ not added.	270	100	152	45	13	12 and 14	1000 1500	A new line for the enlarged canal was followed from Port Dalhousie to Allaunburgh, 11.83 miles long; from Allaunburgh to Port Colborne, the old canal was widened and deepened, distance 14.94 miles. In April, 1875, it was decided that all permanent structures should be adapted to a 14-foot navigation; the locks constructed prior to that date are for a 12-foot navigation, but are chiefly situated on that part of the line where the water level can be raised to give the contemplated depth when required.
								It is contemplated by the United States Government to improve the whole of this part of the river; contracts have been given out to increase the capacity of the channel to a width of 300 ft. by 20 ft. deep.
1	515	108 270	108 270	80	17	16		The two old locks, situated on the northeast side of and adjoining to the new lock, are 350 ft. long, 70 ft. wide at top and 69 ft. at bottom, with 12 ft. water on sills; capable of passing vessels of 2,000 tons. Under control of United States Government. Major Farquhar, U. S. Engineer, states that the least width of enlarged canal is 108 ft. at upper entrance for a distance of 500 ft., and just above the locks, 270 ft. wide, sides being vertical; depth, 16 ft. at mean low water; length of canal above locks, 5,500 ft.
71 $\frac{1}{8}$								Dredging in Bay of Quinté, $\frac{3}{4}$ mile; in Lake Ontario, $\frac{1}{4}$ mile. Total length of canal, about 6 $\frac{1}{2}$ miles. Now under construction.
4 $\frac{1}{2}$		80	124		11			
$\frac{1}{2}$		103 to 174	103 to 174		11			Piers on both sides of canal. It gives access to Port of Hamilton, and to the town of Dundas, via the Desjardins Canal. North pier, 2,307 ft. in length; south pier, 2,710 ft. in length; piers generally 20 ft. wide; east end south pier, 40 ft wide; piers 103 ft. apart at their inner ends, and 174 ft at their outer ends.

LAKE NAVIGATION.

No. 6.—LAKE SUPERIOR TO TIDE-WATER.

Names of Lakes, and of Rivers connecting the same.	STATUTE MILES.			DEPTH IN FEET.		Area in Square Miles.	Elevation above sea, at Three Rivers.	
	Greatest length.	Greatest breadth.	Average breadth.	Greatest.	Mean.			
Superior.....	390	160	80	.....	900	32,000	602½	
St. Mary's River.....	55	4	1	60	30	.....	584½	
Michigan.....	345	84	58	.....	1,000	22,400	578½	
Green Bay.....	100	25	18	.....	500	2,900	578½	
Mackinaw Straits.....	Not added below.		20	10	200	40	.....	578½
Georgian Bay.....	130	55	40	.....	500	.....	576½	
Huron.....	270	105	70	900	450	23,000	576½	
Ste. Claire River.....	33	.....	.....	50	35	.....	.....	
Ste. Claire Lake.....	25	25	20	27	15	360	570½	
River Detroit.....	25	3	1	37	20	.....	.....	
Lake Erie.....	250	60	38	204	90	10,000	566½	
Niagara River.....	35	3	1	.....	30	.....	.....	
Lake Ontario.....	190	52	40	600	412	6,700	240	
Lake St. Francis.....	43	5	4	80	36	132	142	
Lake St. Louis.....	15	7	5	68	30	75	58	
Lake St. Peter.....	30	9	7	40	8	290	0	
River St. Lawrence, connecting Lakes between Kingston and Three Rivers.	186	.....	.....	.....	20	.....	.....	
Total length of Lake Navigation.....	2,112	Inclusive of River portions.....			.....	96,867	.....	
do do.....	1,778	Exclusive of River portions.....			.....	.....	.....	

## No. 7.—DISTANCES OF PLACES BETWEEN MONTREAL AND QUEBEC.

Measured in English Statute Miles along the centre line of the Ship Channel.

From	To	Statute Miles.	
		Inter- mediate.	Total.
Montreal, Island Wharf, opp. Custom House	Longue Pointe.....	6 $\frac{1}{10}$	6 $\frac{1}{10}$
Longue Pointe.....	Pointe aux Trembles, <i>en haut</i> .....	4	10 $\frac{1}{10}$
Pointe aux Trembles, <i>en haut</i> .....	Varenes.....	3 $\frac{4}{10}$	13 $\frac{5}{10}$
Varenes.....	Cap St. Michel.....	2 $\frac{2}{10}$	15 $\frac{7}{10}$
Cap St. Michel.....	Verchères.....	5 $\frac{8}{10}$	21 $\frac{5}{10}$
Verchères.....	Plum Island Light.....	1 $\frac{1}{10}$	22 $\frac{6}{10}$
Plum Island Light.....	Contrecoeur Channel, upper entrance.....	6 $\frac{1}{10}$	28 $\frac{7}{10}$
Contrecoeur Channel, upper entrance.....	Lavaltrie.....	1 $\frac{1}{2}$	30 $\frac{1}{2}$
Lavaltrie.....	Contrecoeur Channel, lower entrance.....	4 $\frac{3}{4}$	35
Contrecoeur Channel, lower entrance.....	Lanoraie.....	1 $\frac{2}{10}$	36 $\frac{3}{10}$
Lanoraie.....	Sorel, opposite Lighthouse.....	8 $\frac{7}{10}$	45
Sorel, opposite Lighthouse.....	Ile de Grace Light.....	3 $\frac{1}{2}$	48 $\frac{3}{2}$
Ile de Grace Light.....	Stone Island Light.....	3 $\frac{1}{2}$	52 $\frac{1}{2}$
Stone Island Light.....	Light-ship No. 1.....	5 $\frac{1}{2}$	57 $\frac{1}{2}$
Light-ship No. 1.....	do No 2.....	2 $\frac{2}{10}$	60 $\frac{4}{10}$
do No 2.....	White Buoy.....	4 $\frac{4}{10}$	64 $\frac{6}{10}$
White Buoy.....	Light-ship No 3.....	6 $\frac{1}{2}$	71 $\frac{1}{10}$
Light-ship No. 3.....	Port St. Francis.....	4 $\frac{2}{10}$	75 $\frac{3}{10}$
Port St. Francis.....	Three Rivers.....	6 $\frac{1}{2}$	82
Three Rivers.....	Becancour, Iron Buoy at Bend.....	5 $\frac{6}{10}$	87 $\frac{6}{10}$
Becancour, Iron Buoy at Bend.....	Champlain.....	6	93 $\frac{6}{10}$
Champlain.....	Batiscan Wharf.....	7 $\frac{1}{10}$	101 $\frac{1}{10}$
Batiscan Wharf.....	Cap Levrant.....	4	105 $\frac{1}{10}$
Cap Levrant.....	Cap à la Roche, centre of new channel.....	3 $\frac{1}{2}$	108 $\frac{3}{2}$
Cap à la Roche, centre of new channel.....	Cap Charles.....	2 $\frac{1}{2}$	111
Cap Charles.....	Richelieu Rapids.....	9	120
Richelieu Rapids.....	Platon Wharf.....	4 $\frac{9}{10}$	124 $\frac{9}{10}$
Platon Wharf.....	Ste. Croix.....	5 $\frac{6}{10}$	130 $\frac{5}{10}$
Ste. Croix.....	Ecureuils.....	1 $\frac{1}{2}$	132
Ecureuils.....	Pointe aux Trembles, <i>en bas</i> .....	7	139
Pointe aux Trembles, <i>en bas</i> .....	Cap Rouge.....	12	151
Cap Rouge.....	Quebec, Custom House Wharf.....	9 $\frac{1}{2}$	160 $\frac{1}{2}$

ST. LAWRENCE NAVIGATION.

No. 8.—LEVELS of River and Lakes above Tide Water at Albany and Three Rivers, according to the following authorities:—

Sections of Navigation.	Above Tide Water at Albany.	Above Tide Water at Three Rivers.						
	U. S. Engineers, 1816, 1876, 1882, 1883.	Admiralty Charts, 1817, 1818, 1822, 1823.	Rubidge, 1846.	Ottawa Ship Canal Survey — Shanly, 1858.	Ottawa Ship Canal Survey — Clarke, 1868.	Department of Public Works Report, 1867.	Canal Commission Report, 1871.	Department of Public Works Report, 1882.
Albany, River Hudson....	0·00	.....	.....	.....	.....	.....	.....	.....
Three Rivers, River St. Lawrence.....	.....	0·00	0·00	0·00	0·00	0·00	0·00	0·00
Montreal, River St. Lawrence .....	.....	.....	12·75	13·00	12·75	13·25	11·00	11·75
Kingston, Lake Ontario.....	.....	1817. 232·00	234·00	.....	.....	234·00	234·00	240·00
Oswego do .....	245·15	.....	.....	.....	.....	.....	.....	.....
Lake Erie, Survey of 1816... ..	564·85	.....	.....	.....	.....	.....	.....	.....
do do 1876... ..	571·68	.....	.....	.....	.....	.....	.....	.....
do Report of 1882... ..	568·57	.....	.....	.....	.....	.....	.....	.....
do Canadian authorities.....	.....	1818. 564·00	564·00	.....	.....	564·00	564·00	566·75
Lake Ste. Claire .....	.....	.....	.....	.....	.....	572·00	568·00	570·75
Lake Huron .....	.....	1822. 590·00	594·00	.....	.....	578·00	574·00	576·75
Georgian Bay, Lake Huron .....	.....	1822. 594·00	594·00	572·00	574·00	578·00	578·00	580·75
Lake Michigan .....	.....	.....	.....	.....	.....	580·00	578·00	580·75
Lake Superior, Sault Ste. Marie.....	Mean Elevation. 601·78	1823. 627·00	.....	.....	.....	600·00	600·00	602·75

REMARKS.

The tide water at Albany signifies the mean low water, which is about one foot above extreme low water.—See telegram from Major D. L. Malloy, Deputy State Engineer and Surveyor, State of New York, No. 32,607, of 12th March, 1883.

The tide water at Three Rivers is the lowest water recorded up to 19th Sept., 1881. It is 17 feet below the bench mark on the south-east corner of the wharf of the Richelieu and Ontario Company at Three Rivers.—See memoranda, dated 21st February, 1883, No. 33,687.

The mean elevation of Lake Superior above the sea refers to the level of mean tide at New York.—See telegram from Major Farquhar, Engineer, dated Detroit, 7th April, 1883, No. 33,363.

The elevation of low water surface, 11.75 feet, at Montreal, above tide water at Three Rivers, represents a depth of 15.40 feet of water on top of the mitre sill of old Lock No. 1, at foot of Lachine Canal.

## No. 9.—THREE RIVERS TO MONTREAL.

ELEVATION above lowest tide water observed at Three Rivers, as established by levels taken during the construction of the North Shore Railway, 1876 to 1879, and in February 1883.

Designation.	Datum— North Shore Railway, Montreal and Quebec.	Rise.	
		Inter- mediate.	Above low water, Three Rivers
Lowest water observed at Three Rivers by R. Steckel up to 19th September, 1881.....	39·55	0·00	0·00
Top of S.E. corner of Richelieu Co's. wharf at Three Rivers.....	56·55	17·00	17·00
Bench mark top of railway bridge, River St. Maurice, 2 miles up stream.....	90·00	33·45	50·45
Bench mark, top of railway bridge, at Terrebonne.....	81·17	8·83	41·62
Top of coping, old entrance Lock No. 1 of Lachine Canal, Montreal, distance from railway bridge, Terrebonne, about 19 miles.....	67·19	13·98	27·64
Lowest water recorded at Montreal since Sept., 1852 : on 8th-9th Nov., 1879, and 6th Oct., 1881, at foot of Lachine Canal, old Lock No. 1.....	51·28	15·91	11·73
	Depth of w'r on lower sill, Lock No. 1.	Depth of w'r on lower sill, Lock No. 1.	
Top of lower mitre sill of old Lock No. 1, at foot of Lachine Canal, Montreal.....	35·86	15·42	—3·69
Low water level adopted by Harbour Commissioners at present : Depth on mitre sill, 16; previous low-water level, Harbour Commissioners : on mitre sill, 17 ; summer water datum of the Montreal Water Works : on mitre sill, 19.			
Top of coping, old Lock No. 1, above lower mitre sill.....	67·19	31·33	27·64
Flood level of highest water above Victoria Bridge, April, 1858.	79·61	43·75	40·66
Summer water of Flats of Lake St. Peter, 10·50 feet : corresponds to a depth of 17 feet on the lower mitre sill of Lock No. 1, Montreal.....			

## No. 10.—HARBOURS OF THREE RIVERS AND MONTREAL.

High and low water levels referred to tide water at Three Rivers and to top of lower mitre sill old lock No. 1, at foot of Lachine Canal, Montreal.

Designation.	Datum— Montreal Harbour Engineers.	Datum— North Shore Railway Engineers.	Above top of lower mitre sill of old lock No. 1, Lachine Canal, Montreal.	Elevation above tide water, Three Rivers
Lowest water observed at Three Rivers, 19th September, 1881.....	84·69	39·55	(—)3·69	0·00
Top of lower mitre sill, old Lock No. 1, at lower entrance of Lachine Canal.....	81·00	35·86	0·00	(—)3·69
Lowest water observed at Montreal from September, 1852, to 8th–9th November, 1879, and to October, 1881 .....	96·42	51·28	15·42	+11·73
Low water, Montreal Harbour, as lately adopted by Harbour Commissioners.....	97·50	52·36	16·50	+12·81
Low water, Montreal Harbour, as previously adopted .....	98·00	52·86	17·00	+13·31
Summer water datum of Montreal Water Works— T. C. Keefer.....	100·90	54·86	19·00	+15·31
Level of coping of old Lock No. 1.....	112·33	67·19	31·33	+27·64
Flood level of highest water above Victoria Bridge, April, 1858.....	124·75	79·61	43·75	+40·06
Ordnance bench mark on ramp of revetment wall in front of the Bonsecours Market—				
Per Engineers of Shearer scheme.....	119·63	74·49	38·63	+34·94
Per John Sutcliffe, C.E.....	119·61	74·47	38·61	+34·92
Per Montreal Harbour Engineers .....	119·57	74·43	38·57	+34·88

No. 11.—MEMORANDUM respecting levels taken between the Harbours of Three Rivers and Montreal, as per J. E. Boyd, formerly Chief Engineer of Railways, Prince Edward Island, and Superintending Engineer of portion of the North Shore Railway, Quebec to Montreal.

The elevations 90·00 for the bridge seat of the St. Maurice Railway Bridge, and 81·17 for the bridge seat of the Terrebonne Railway Bridge, are the heights above the datum used during the construction of the North Shore Railway, between Quebec and Montreal, 1876–1879.

The former point was connected by levels run in February, 1883, by John Sutcliffe, C.E., with the bench mark on the south-east corner of the Richelieu and Ontario Navigation Company's wharf at Three Rivers, the latter being the datum to which the harbour works in that place are referred. This datum is seventeen feet above the lowest water known, which was observed by R. Steckel, C.E., 19th September, 1881.

At the same time levels were run connecting the bridge seat at Terrebonne with the lower sill of old lock No. 1, at the foot of the Lachine Canal, thus completing the chain of levels from low water at Three Rivers to the lowest observed low water in the Harbour of Montreal.

The connecting levels referred to in the above memorandum were taken at my request, in order to establish the elevation of low water at the lower entrance of the Lachine Canal at Montreal, above tide-water at Three Rivers, as no record could be found of any continuous line of levels having been previously taken for the purpose.

The tabulated profiles of the various routes of navigation furnished herewith are

partly based on the rise of tide-water lately established, as I have just stated, between Three Rivers and Montreal.

The profiles referred to have been prepared with care and are as accurate as it is possible to give them, according to the best information obtained up to the present time.

G. F. BAILLAIRGÉ, D. M. P. W.

MONTREAL, 19th March, 1883.

DEAR SIR,—I have seen Sutcliffe again this morning about the levels which he took for you lately. He showed me his level book, which I examined carefully and I am of the opinion that his levels are perfectly correct. The following is a copy of a memorandum which he had prepared on the subject. I was under the impression that the B.M. on which he closed was at the gaol. This was a closing point for one evening—and next day he carried the levels up to a well-known B.M. at the Bonsecours Market, made by the Royal Engineers.

MEMO.—“Checked on ordinance B.M. on Ramp of Revetment Wall in front of the Bonsecours Market which I had previously checked in February, 1882. It also has been frequently checked by the Harbour Commissioners’ Engineers, and Shearer’s Scheme engineers, all of which levels nearly agree. My check gives 119.61; Shearer’s engineers, 119.63; Harbour Commissioners’ engineers 119.57; old lock No. 1 coping being 112.33.—All above the assumed datum level of 81.00 on lower sill of said lock No. 1, lower entrance of Lachine Canal to Montreal Harbour.”

(Signed) J. S.

There is great confusion in the datums used in and about Montreal. Generally speaking each CHIEF ENGINEER has a datum of his own. I give on the opposite page a table showing what relation some of them bear to the sill of old lock No. 1.

Mr. Keefer (Thos. C.) assumed average summer water of Montreal Harbour to be 19 ft. above that sill in all levels connected with the Montreal WATER WORKS. The Harbour Commissioners and the City Surveyor have until lately used 17 ft. on sill as low water; and I cannot say what the G. T. R. datum is but think it is some way connected with the sea level. The Harbour Commissioners for some short time past have assumed 16½ feet on sill as low-water mark. In the survey which I made of the shoals at St. Lambert, I reduced the soundings to 16 feet on the sill because the water had been several times previously down nearly as low as that. In October, 1881 it fell to 15’ 5” on the 6th day.

Mr. Lesage tells me that Mr. Parent is sending to Mr. Perley, this day, copies of the water registers for the year 1881. Mr. Douglas, who is working for Mr. Page, has copies of these registers from the beginning, and Mr. Guerin has got copies of them for several months in the spring and fall of each year for some time back.

In conclusion, I say with perfect confidence, that you may rely on the correctness of Sutcliffe’s levels.

I remain, dear Sir,  
Yours very truly,

T. W. HARRINGTON.

G. F. BAILLAIRGÉ, Esq.,  
Deputy Minister Public Works,  
Ottawa.

LAKE CHAMPLAIN ROUTE.

No. 12.—QUEBEC and Montreal to Sea board at New York.

Names of Places.	Distances in miles from			Remarks.
	Place to Place.	Montreal.	New York.	
River St. Lawrence—				
Quebec .....	160	160	525	River St. Lawrence.
Montreal .....			457	do
Sorel .....	46	46	411	At junction of River St. Lawrence and Richelieu.
River Richelieu—				
St. Onrs .....	14	60	397	Lock and dam on Richelieu River.
Chambly .....	32	92	365	Lower or northern entrance, Chambly Canal.
St. John's .....	12	104	353	Upper or southern do do
Lake Champlain—				
Rouse's Point .....	23	127	330	Boundary between Canada and United States, near lower end of Lake Champlain.
Whitehall .....	111	238	219	Northern or upper entrance of Lake Champlain Canal, at head of Lake Champlain.
Champlain Canal from Junction to Whitehall, 64 miles long—				
Comstock's Landing .....	8	246	211	
Fort Ann .....	4	250	207	North end, summit level of Champlain Canal.
Smith's Basin .....	4	254	203	
Baker's Basin .....	5	259	198	
Glen's Falls Feeder (navigable) .....	1	260	197	Supplying summit level from the Hudson.
Fort Edward .....	2	262	195	South end, summit level of Champlain Canal.
Moses Kill .....	5	267	190	
Fort Miller .....	3	270	187	
Saratoga Bridge .....	3	273	184	
Schuylerville .....	2	275	182	
Vanduzen's Landing .....	3	278	179	
Wilbur's Basin .....	5	283	174	
Blecker's Basin .....	2	285	172	
Stillwater Village .....	2	287	170	
Mechanicsville .....	4	291	166	
Waterford .....	8	299	158	
Junction .....	3	302	155	Champlain Canal connects with Erie Canal.
Erie Canal—				
West Troy .....	2	304	153	
Albany .....	7	311	146	Lower or eastern entrance of Erie Canal, on the River Hudson at tide water.
River Hudson—				
New York .....	146	457	.....	At the outlet of the River Hudson, on the Atlantic Ocean.

REMARK.—Out of the distance of 457 miles from Montreal to New York, 372 miles are open navigation, and 85 miles artificial navigation; the total lockage from the St. Lawrence to the summit level of the Champlain Canal is 136½ feet upwards, and the total lockage from the summit down to Albany, 150 feet.



No. 13.

Champlain Canal and Glen's Falls Feeder:—

Construction authorized April 15, 1817.  
 Glen's Falls Feeder authorized, April, 1822.  
 Estimated cost of canal at Engineer's prices..... \$871,000 00  
 Navigation opened from Fort Edward to Lake Cham-  
 plain, November 24, 1819.  
 Canal completed, from Waterford to Lake Champlain,  
 1822.  
 Canal, cost of construction up to 1832 ..... \$921,011 00  
 Feeder, do do 1837 ..... 91,944 00  
 Total cost of both, including improvements, exclusive  
 of ordinary repairs, June, 1868.....\$2,378,910 00  
 Number of lift locks on canal, 20; feeder, 13; size,  
 110' x 18' and 100' x 15'.  
 Length of canal, 66 miles; feeder, 7 miles; pond, 5  
 miles=78 miles.  
 Size of prism, canal and feeder, 40·26 x 4.  
 Size authorized, Chapter 213, Laws 1860, 50·35 x 5.  
 do do 788, do 1870, 58·44 x 7.  
 Total cost of canal and feeder up to September 30,  
 1876..... \$673,028 73

LOCKS.

Champlain Canal.						Glen's Falls Feeder.			
No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.	No.	Lift.
1	10½	8	8½	15	8	1	10	8	10
2	10½	9	10	16	7	2	10	9	10
3	8½	10	9½	17	3½	3	10	10	10
4	9	11	11½	18	9	4	10	11	11
5	9	12	9	19	9	5	10	12	11
6	9	13	10½	20	10	6	10	13	10
7	9½	14	8			7	10		

See Report of State Engineer and Surveyor, State of New York, at page 91, published in 1878.

No. 13.—LAKE CHAMPLAIN ROUTE,

From	To	Sections of Navigation.	Distance.		Rise.	Fall.	Number of Locks.
			Intermediate	Total from Montreal.			
			m.	miles.			
		Montreal Harbor .....					
Montreal.....	Sorel.....	River St. Lawrence.....	46	46		11.75	
Sorel.....	St. Ours.....	River Richelieu .....	14	60	1.75		
		St. Ours Lock & Dam .....			5.00		1
St. Ours Lock.....	Chambly Basin.....	River Richelieu .....	32	92	1.25		
Chambly Basin.....	St. John's .....	Chambly Canal .....	12	104	74.00		9
St. John's .....	Rouse's Point.....	River Richelieu .....	23	127			
Rouse's Point.....	Whitehall.....	Lake Champlain .....	111	238			
Whitehall .....	Fort Ann.....	.....	12	250	57.25		7 lift locks... 1 guard lock
Fort Ann.....	Fort Edward.....	.....	12	262			
Fort Edward.....	Schuylerville .....	.....	13	275		50.25	5 lift locks... 1 guard lock
Schuylerville .....	West Troy Junction.	Champlain Canal ...	29	304		75.75	8 lift locks... 1 guard lock
West Troy Junction...	Albany.....	.....	7	311		24.25	2 not added.
Albany.....	New York .....	River Hudson .....	146	457			
	Total, Montreal	to New York.....	457	457	139.25	161.25	33

GLEN'S FALLS FEEDER AND POND—SUPPLYING

Summit level, at a point about 2 miles north-east of Fort Edward.	Head of Feeder on Hudson River.	Glen's Falls Feeder.	7	267	132		13 lift locks. 1 guard lock
Head of Feeder.....	Head of Pond.....	Fort Edward Pond..	5	272			
	Total.....	.....	12	272	132		14

FROM MONTREAL TO NEW YORK.

Height above Tidewater.		Dimensions of Locks.			Width of Canal.		Remarks.
At Three Rivers.	At Albany.	Length.	Width at water surface.	Depth of water on sills.	At water surface.	At bottom.	
feet.	feet.	feet.	feet.	feet.	feet.	feet.	
11.75	22.75	.....	.....	.....	.....	.....	Junction of River Richelieu with the River St. Lawrence.
.....	11.00	.....	.....	.....	.....	.....	
1.75	12.75	.....	.....	.....	.....	.....	Dam on west side of Island, 600 feet long; on east side of Island, 300 feet long. Dam across River Richelieu raises water from 4 to 7 feet in height. From 8 to 10 feet of water passes over these dams during freshets. Lock and dam commenced in 1844, and completed in 1849, at a cost of \$153,117.
6.75	17.75	200	45	7	.....	.....	
8.00	19.00	.....	.....	.....	.....	.....	The minimum depth of river at its lowest stage is 7 feet. Works commenced in 1831, suspended in 1835, resumed in 1840, and completed in 1843. During the last two years, 1881-82, the locks have been repaired, the canal prism cleaned, and the banks raised and widened.
82.00	93.00	118	23½	7	60	36	
82.00	93.00	.....	.....	.....	.....	.....	Navigated by freight boats of 500 tons. Discovered by Samuel de Champlain in 1600: the first American steamer was the "Vermont," of 167 tons, which ran on this lake in 1809; navigated by steamboats of 700 tons.
82.00	93.00	.....	.....	.....	.....	.....	
139.25	150.25	} 100	18	5	50	35	Canal commenced in 1817 and completed in 1822; 20 lift locks, 3 guard locks. Average tonnage, 80 tons. Summit level supplied by Glen's Falls Feeder and Pond, supplemented on the north, at Fort Ann, by the waters of Wood Creek; on the south, at Fort Miller, by the small drainage of the Hudson; between that point and Glen's Falls, and at Cahoes, by the waters of the Mohawk.
139.25	150.25						
80.00	100.00						
13.25	24.25	.....	.....	.....	.....	.....	Junction with the Erie Canal. Old Erie Canal commenced in 1817, completed in 1825; total length, 363 miles; 83 locks of 90' x 15' x 4'; tonnage, 70 tons; lockage, 675½ feet. Enlarged Erie Canal commenced in 1836, and completed in 1862; total length, 350½ miles; 72 locks of 110' x 18' x 7'; tonnage, 220 tons; lockage, 654½ feet.
11.00 below tidewater, T.R.	.....	.....	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	Part of canal common to both the Erie & Champlain Canals.
.....	.....	.....	.....	.....	.....	.....	

SUMMIT LEVEL OF CHAMPLAIN CANAL.

271.25	282.25	100	18	5	50	35	One dam of 800 feet in length across Hudson River. Commenced in 1822, completed in 1837; tonnage, 80 tons.
271.25	282.25	.....	.....	.....	.....	.....	
271.25	282.25	.....	.....	.....	.....	.....	

No. 14.—MONTREAL, OTTAWA

From	To	Sections of Navigation.	Distances.		Draught of vessels.	Rise.		No. of Locks.
			Intermediate.	Total.		Intermediate.	Above tide-water at Three Rivers.	
			miles.	miles.	feet.	feet.	feet.	
		Montreal Harbor.			25		11 $\frac{3}{4}$	
Montreal.....	Lachine, foot of Lake St. Louis.	Lachine Canal (enlarged).	8 $\frac{3}{4}$	8 $\frac{3}{4}$	12	45	56 $\frac{3}{4}$	5
Lachine .....	Ste. Anne's Canal	Lake St. Louis...	14 $\frac{1}{2}$	23 $\frac{1}{2}$	10	1 $\frac{1}{4}$	58	
Foot of Ste. Anne's Canal.	Head of Ste. Anne's Canal.	Ste. Anne's Canal.	$\frac{1}{8}$	23 $\frac{5}{8}$	9	2	60	1
Head of Ste. Anne's Canal.	Foot of Carillon Canal.	Lake of Two Mountains and River Ottawa.	27	50 $\frac{5}{8}$	12	1	61	
Foot of Carillon Canal.	Head of Carillon Canal.	Carillon Canal...	$\frac{3}{4}$	51 $\frac{3}{8}$	9	12 $\frac{1}{2}$	73 $\frac{1}{2}$	2
Head of Carillon Canal.	Foot of Grenville Canal.	River Ottawa ....	6 $\frac{7}{8}$	58 $\frac{1}{4}$	over 10		73 $\frac{1}{2}$	
Foot of Grenville Canal.	Head of Grenville Canal.	Grenville Canal.	5 $\frac{1}{4}$	64	9	45 $\frac{3}{4}$	110 $\frac{1}{4}$	5

## AND KINGSTON NAVIGATION.

Length.		Breadth.			Depth.		Tonnage of vessels.	Remarks.
Canal.	Locks.	Canal at bottom.	Canal at water surface.	Lock at water surface.	Canal prism & basins.	On sills of locks.		
miles.	feet.	feet.	feet.	feet.	feet.	feet.		
8 $\frac{1}{4}$	270	{ 137 to 200 }	{ 163 to 208 }	45	{ 19 & 13 }	{ 18 & 14 }	1000 to 1500	This canal overcomes the Sault St. Louis, known also as Lachine Rapids. The depth of water on the sills of the two lower locks of the enlarged canal, at Montreal, is 18 feet, and in Basin No. 1, situated between the two locks, 19 feet. From Lock No. 2 to Wellington Bridge, depth in centre of Basin Channel 19 feet for a width of 100 feet; balance of basin (Basin No. 2) 13 feet deep. From Wellington Bridge, upwards, to Lachine, the old canal has been enlarged, and new locks constructed alongside the old ones, forming, also, a new entrance at Lachine, 320 feet wide. The entrance pier at Lachine will be completed, at the latest, in the fall of 1884.
$\frac{1}{2}$	200	mean 125	mean 125	45	10	9	700	Surmounts the Ste. Anne's Rapids between Isle Perrot and the head of the Island of Montreal. The enlarged lock and canal now under contract. Channel below lock has been improved; deepening of channel above lock is under contract.
$\frac{3}{4}$	200	100	140	45	10	9	700	The construction of a dam, 1,781 feet long, across the River Ottawa, has created a stretch of smooth water from the head of the new Carillon Canal, $\frac{3}{4}$ of a mile above the village of Carillon, to Greese's Point, or foot of the Grenville Canal, the lock at Châte à Blondeau being rendered useless. The locks are on the north shore. For the passage of timber a slide has been constructed on the south side of the river; the slide is 640 feet long by 28 feet wide. The new works will be ready for navigation during summer of 1883.
5 $\frac{1}{4}$	200	40	{ 50 to 80 }	45	10	9	700	Overcomes the Long Sault Rapids of the River Ottawa. Crossing basins, 600 feet long by 80 feet wide at bottom, are constructed at approximate intervals of $\frac{1}{2}$ a mile. The width of the canal prism at upper entrance is being increased to a 100-foot bottom. Enlarged canal can be used during summer of 1883.

No. 14.—MONTREAL, OTTAWA AND

From	To	Sections of Navigation.	Distances.		Draught of vessels.	Rise.		No. of Locks.
			Intermediate.	Total.		Intermediate.	Above tide-water at Three Rivers.	
			miles.	miles.	feet.	feet.	feet.	
Head of Grenville Canal.	Ottawa.....	River Ottawa....	56	120	30	2½	121½	.....
Ottawa.....	Kingston.....	Rideau Canal....	126½	246½	4½	Rise..... 282½ Fall..... 164 Lockage.. 446½	240	Rise.... 33 Fall.... 14 Locks.. 47
	Total.....	.....	.....	.....	.....	Rise, 118½	240	60

KINGSTON NAVIGATION—*Concluded.*

Length.		Breadth.			Depth.		Tonnage of vessels.	Remarks.
Canal.	Locks.	Canal at bot- tom.	Canal at water surface.	Leck at water surface.	Canal prism & basins.	On sills of locks.		
miles. <sup>5</sup> <sub>16</sub>	feet.	feet.	feet.	feet.	feet.	feet.		
16½	134	Earth... 60 Rock ... 54	Earth, 80	} 33	5	5	250	<p>Mr. Clarke says that the width of the channel is from 1,000 to 2,000 feet, and its depth 30 feet, until we get to the "Green Shoal," some 8 or 9 miles below Ottawa City. Here a calciferous sandstone reef runs clear across the river, diminishing the depth at low water to 8 feet for a length of 500 feet. Between this place and Ottawa City there are some sand shoals, but no more rock. These shoals are composed of shifting sand, with only a depth of 6½ feet of water at low water.</p> <p>This canal was commenced on the 21st September, 1826, and completed on the 29th May, 1832, and was constructed by the Imperial Government.</p>
31½								

No. 15.—TRENT

From	To	Sections of Navigation.	Distance.		Distance.		Levels.	
			Intermediate.	Total from Bay of Quinté.	Navigable.	Unnavigable.	Intermediate rise.	Total rise from Bay of Quinté.
			m.	m.	m.	miles.	feet.	feet.
<i>Mouth of River Trent, Bay of Quinté, 67 miles above Kingston, Lake Ontario.</i>								
Mouth of River Trent.....	Nine Mile Rapids ....	River Trent.....	9	9	1	8	116·48	116·48
Nine Mile Rapids.....	Lock at Chisholm's Rapids.	do .....	6½	15½	6½	.....	.....	116·48
Lock at Chisholm's.....	Percy Landing .....	do .....	13	28½	13	.....	8·64	125·12
Percy Landing.....	Head of Ranney's Falls.	do .....	5	33½	.....	5	49·67	174·79
Head of Ranney's Falls..	Campbellford .....	do .....	1¼	34¾	.....	1¼	.....	.....
Campbellford .....	Fiddler's Island.....	do .....	1¼	36	.....	1¼	54·54	229·33
Fiddler's Island.....	Foot of Middle Falls.	do .....	1½	37½	.....	1½	.....	.....
Foot of Middle Falls.....	Crow Bay.....	do .....	½	38	.....	½	46·23	275·56
Crow Bay .....	Junction of Trent River.	do .....	3	41	3	.....	.....	.....
Junction of Trent.....	Foot of Heely's Falls...	do .....	1½	42½	.....	1½	.....	275·56
Foot of Heely's Falls.....	Lock at foot of Crooks' Rapids.	do .....	12	54½	12	.....	76·95	352·51
Lock, Crooks' Rapids...	Foot of Rice Lake.....	do .....	6½	61	6½	.....	8·17	360·68
		Intermediate rise on the various reaches from mouth of Trent to Rice Lake.....	.....	.....	.....	.....	4·32	365·00
Foot of Rice Lake .....	Foot of River Otonabee	Rice Lake .....	12½	73½	12½	.....	.....	365·00
Outlet of River Otonabee.	Lock at Whitlaw's Rapids.	River Otonabee ...	19½	93	19½	.....	1·50	366·50
Foot of Whitlaw's Lock.	Head of Whitlaw's Lock.	Lock and Canal at Whitlaw's.	¼	93¼	¼	.....	3·00	369·50
Lock at Whitlaw's, thro' Little Lake.	Foot of rapids ¼ mile below Peterborough Bridge.	River Otonabee....	1¼	94½	1¼	.....	.....	369·50
Foot of Rapids at Peterborough.	Foot of Katchiwannoe Lake at Herriott's Mill, Lakefield.	do .....	9½	104	.....	9½	144·50	514·00
Foot of Katchiwannoe Lake.	Young's Mills .....	Katchiwannoe Lake	3¾	107¾	3¾	.....	.....	514·00
Lock at Young's Mills....	Foot of Clear Lake....	do .....	1½	109	.....	1½	3·00	517·00
Foot of Clear Lake.....	Burleigh Canal, foot of Peninsula Falls..	Clear and Stony Lakes.	6½	115½	6½	.....	0·92	517·92
Foot of Burleigh Canal...	Head of Chûte.	Burleigh Canal ....	2¼	117¼	2¼	.....	27·83	545·75
Head of Burleigh Chûte...	Foot of Buckhorn Canal.	Deer Lake and Deer Bay.	7	124¾	7	.....	.....	.....



NAVIGATION.

Length of Canal, including Locks.	Number of Locks.	Dimensions of Locks.		Lift of Lock.	Depth of Water on Sills of Locks.		Canal and Locks completed.	Remarks.
		Length.	Width.		Upper.	Lower.		
feet.		feet.	feet.	feet.	feet.	feet.	Year.	
.....	.....	.....	.....	.....	.....	.....	.....	Nine Mile Rapids, formerly known as Widow Harris' Rapids. Stone dam built in 1844, 4 feet wide at top, 10 feet wide at base, 6 feet high and 1,265 feet long.
3060	1	133 $\frac{3}{8}$	32 $\frac{1}{2}$	11	5	5	1844.....	At Chisholm's Rapids, dam 715 feet long and 6 feet high; slide, 100 feet long by 50 feet in width, and of 2 feet draught. Percy Landing now known as Myersburgh.
.....	.....	.....	.....	.....	.....	.....	.....	Ranney's Falls, 2 slides; total length 2,202 feet x 33 feet wide, and of 2 feet draught, only 1,492 feet of which is floored. Dam 414' x 33' wide x 12' high.
.....	.....	.....	.....	.....	.....	.....	.....	Campbellford Bridge, 348 feet long by 12 feet broad, under control of township authorities.
.....	.....	.....	.....	.....	.....	.....	.....	Fiddler's Island, wing dam 300' x 14' x 6' high. Cross dam, 100' x 14' x 12' high.
.....	.....	.....	.....	.....	.....	.....	.....	Middle Falls, lower slide, 455' x 33' x 2' draught. Upper slide, 60' x 33' x 2' draught. One dam, 96' x 25' x 12' high; another of 96' x 20' x 7' high. Wing dam, 638' x 8' x 5' high.
.....	.....	.....	.....	.....	.....	.....	.....	Heely's Falls, lower slide, 360' x 33' x 2' draught. Upper slide, 713' x 33' x 2' draught. Dam, 488' long x 33' wide.
744	1	134	33	6 $\frac{3}{4}$	6	6	1844.....	Lock at Crock's Rapids now known as Hastings' Lock. Dam, 253' x 40' x 7 $\frac{1}{2}$ ' high; slide, 97' x 33 $\frac{1}{2}$ ' x 2' draught; swing bridge across lock, 68' long x 13' broad.
.....	.....	.....	.....	.....	.....	.....	.....	Lock at Whitlaw's, cross dam, 160' long x 27' wide x 9' high; waste weirs
1203	1	133 $\frac{3}{8}$	33	6 $\frac{1}{2}$	.....	5	1843.....	Wing dam, 323 $\frac{1}{2}$ ' x 27' x 12' high. This dam, which was renewed in 1872, was swept away in 1873 and reconstructed in 1874.
.....	.....	.....	.....	.....	.....	.....	.....	Peterborough Bridge, consisting of 2 spans, Howe truss, 264' long x 18' wide, built in 1847, was removed in 1872
.....	.....	.....	.....	.....	.....	.....	.....	Dam at Lakefield maintains navigation up to Young's Point Lock. Erected by private enterprise.
} ...	1	134	34	4	5	5	.....	Lock at Young's Mills built by the Ontario Government and under their control. One dam which controls the levels of Clear and Stony Lakes.
2 $\frac{1}{2}$ m	3	134	33	2 locks of 14 ft. lift, & 1 of 6 ft. lift.	5	5	In progress.	Burleigh Canal—3 locks under contract commenced in 1882; also several dams, landing piers, &c., under control of the Department of Railways and Canals. Actual works—slide, dam and waste weir.

No. 15.—TRENT

From	To	Sections of Navigation.	Distance.		Distance.		Levels.	
			Intermediate.	Total from Bay of Quinté.	Navigable.	Unnavigable.	Intermediate rise.	Total rise from Bay of Quinté.
			m.	m.	m.	miles.	feet.	feet.
<i>Mouth of River Trent, Bay of Quinté, 67 miles above Kingston, Lake Ontario.—Continued.</i>								
Foot of Buckhorn Canal.	Head of Buckhorn Rapids.	Buckhorn Canal....	¼	125	¼	.....	9·16	554·91
Head of Buckhorn Rapids	Foot of Bobcaygean Canal.	Buckhorn & Pigeon Lakes and opening navigation of Chemong Lake.	15½	140½	15½	.....	0·42	555·33
Foot of Bobcaygean Canal.	Head of Bobcaygean Canal.	Bobcaygean Canal.	¼	140¾	¼	.....	5·44	560·77
Head of do	Outlet of River Scugog	Sturgeon Lake.....	12¼	153¼	12¼	.....	.....	560·77
Outlet of River Scugog.	Lock, Town of Lindsay	River Scugog.....	8	161¼	8	.....	1·50	562·27
Lock, Town of Lindsay.	Foot of Lake Scugog.	do .....	9	170¼	9	.....	8·00	570·27
Foot of Lake Scugog.	Port Perry.....	Lake Scugog.....	19¾	190	19¾	.....	.....	.....
<b>Total from mouth of River Trent, Bay of Quinté, to Port Perry, at head of Lake Scugog.</b>			.....	190	160½	29½	.....	570·27
<b>Bay of Quinté, Lake Ontario, above the sea.....</b>			.....	.....	.....	.....	.....	240·00
<b>Total elevation, Lake Scugog above the sea.....</b>			.....	.....	.....	.....	.....	810·27

ON PROPOSED ROUTE

Head of Bobcaygean Canal.	.....	.....	.....	140¾	.....	.....	.....	560·77
do do	Fenelon Falls Canal.	Sturgeon Lake and Fenelon River.	15½	156¾	15½	.....	.....	560·77
	This canal overcomes the Fenelon Falls or Camerons Falls, Feet. rising in ¼ mile. 24·84	Fenelon Falls Canal.	½	156¾	½	.....	28·55	589·32
	Also the Balsam Rapids rising in ¼ mile. .... 3·71							
	Total rise..... 28·55							
	The Balsam Rapids are situated 4½ miles above Fenelon Falls, at head of Cameron Lake.							
Fenelon Falls Canal.....	Head of Balsam Rapids.	Cameron Lake.....	41½	161½	41½	.....	.....	589·32

NAVIGATION—Continued.

Length of Canal, including Locks.	Number of Locks.	Dimensions of Locks.		Lift of Lock.	Depth of Water on Sills of Locks.		Canal and Locks completed.	Remarks.
		Length.	Width.		Upper.	Lower.		
feet.		feet.	feet.	feet.	feet.	feet.	Year.	
1/4 m.	1	134	33	12	5	5	In progress.	Buckhorn Canal—1 lock, 1 rock wing dam, piers, &c., under contract commenced in 1882, under control of the Department of Railways and Canals. Existing works: dam, 387' x 25' x 5', at each end of which is built a dam of 173' x 8' x 6'; bridge on dams, 600' x 12'; slide, 95' x 33' x 2' draught.
1/4 m.	1	134	33	7 1/2	12 1/2	5.0	1857.....	Bobcaygean Canal—swing bridge across lock, 65' x 13', renewed in 1878; 2 dams, one 468' x 25' x 12 1/2', another 79 1/2' x 15' x 6'; slide, 30' x 33' wide x 2' draught; slide for saw-logs; 3 bridges under control of local authorities; fish pass; old wooden lock, built in 1835, was replaced by the lock of masonry in 1857.
3/4	1	134	34	8	5	5	Renewed, 1870	Lock rebuilt by the Ontario Government in 1870, and under their control; first lock completed in 1844, and converted into a slide in 1859; dam, 280' x 30' x 9' high; bridge, 3 spans, 171' x 18'; fish pass.

TO LAKE HURON.

1/4 m.	2	134	33	2 locks of 14 ft. lift each	5	5	In progress.	Fenelon Falls, dam 304' long x 7' high; slide, 290' long x 33' wide; 2 locks, landing piers, dams, &c., commenced in 1882, under control of the Department of Railways and Canals.
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No. 15.—TRENT

ON PROPOSED ROUTE

From	To	Sections of Navigation.	Distance.		Distance.		Levels.	
			Intermediate.	Total from Bay of Quinté.	Navigable.	Unnavigable.	Intermediate rise.	Total rise from Bay of Quinté.
			m.	m.	m.	miles.	feet.	feet.
Head of Balsam Rapids...	Head of Balsam Lake.	Balsam Lake.. .....	5	166½	5	.....	.....	589·32
	<i>Proposed Canal.</i>							
Balsam Lake.....	Talbot River.....	Through cut.....	13¾	180¼	.....	13¾	} 118·50	} 470·82
Talbot River.....	Mouth of Talbot River	Talbot River.....	2¾	183	.....	2¾		
Mouth of Talbot River....	Gloster Bay, Lake Huron.	Lake Simcoe and River Severn.	52	235	.....	52	} 134·07	} 336·75
Lake Huron, above Lake Ontario .....			.....	.....	.....	.....	.....	336·75
Lake Ontario, above the sea.....			.....	.....	.....	.....	.....	240·00
Lake Huron, above the sea .....			.....	.....	.....	.....	.....	576·75

NOTE —The booms, piers and slides, and all such portions of the works as are connected with the Rapids, were transferred in 1855 to a company formed purposely for the management and maintenance of Crooks' Rapids, where the works constructed do not facilitate the descent of timber.—See Departmental See also General Report of 1867, Appendix No. 15, pages 122 to 129.  
The works transferred, as above stated, were resumed by Government, as per Order of Council, No.

NAVIGATION—*Concluded.*

TO LAKE HURON—*Concluded.*

Length of Canal, including Lock.	Number of Locks.	Dimensions of Lock.		Lift of Lock.	Depth of Water on Sills of Lock.		Canal and Locks completed.	Remarks.
		Length.	Width.		Upper.	Lower.		
feet.		feet.	feet.	feet.	feet.	feet.	Year.	
								Balsam Lake is the summit level of the Trent navigation, and the head of the recent scheme of improvements.

lumbering operations on the River Trent, at Chisholm's Rapids, Ranney's Falls, Middle Falls and Crooks those works, with the right of levying tolls thereon, at each of the slides, except at Chisholm's and at Reports for 1870-71 and 1880-81.

30,380, dated 21st December, 1882.—G.F.B.

No. 16.—TABLE showing the smallest locks on the several lines of navigation; also the dimensions of the largest vessels which may pass through them.

Name of canal.	Dimensions of lock in feet.			Dimensions of vessels in feet.			Tonnage of vessel.
	Length.	Breadth.	Depth of water on sills.	Length.	Breadth.	Draught of water when loaded.	
Lachine.....	270	45	12	250	44	12	1,000
Beauharnois.....	200	45	9	180	44	9	700
Cornwall.....	200	55	9	180	54	9	750
Williamsburg.....	200	45	9	180	44	9	700
Welland.....	270	45	12	250	44	12	1,000
St. Ours Lock.....	200	45	7	180	44	7	600
Chambly.....	118	23½	7	110	23	6½	230
Rideau.....	134	33	5	120	31½	4½	250
Ste. Anne's.....	200	45	9	180	44	9	700
Carillon.....	200	45	9	180	44	9	700
Grenville.....	200	45	9	180	44	9	700
Culbute.....	200	45	6	180	44	6	550
St. Peter's.....	200	49½	18	199	49	17½	1,000
<i>United States Canals.</i>							
Erie.....	110	18	7	102	17½	6½	220
Champlain.....	100	18	5	92	17½	4½	80
Sault Ste. Marie (new)...	515	80	16	480	79	16	To pass several vessels.
do (old)....	350	70	12	330	69	12	2,000

No. 17.—RIVER ST. LAWRENCE AND DAWSON ROUTE.

No. 5.—From Straits of Belle-Ile to Prince Arthur's Landing, on north shore of Lake Superior, and to Winnipeg.

From	To	Sections of route.	Statute miles.	
			Inter-mediate.	Total to Straits of Belle-Ile.
Straits of Belle-Ile .....	Quebec.....	Gulf and River St. Lawrence.	826	826
Quebec.....	Foot of Sault Ste. Marie.	River and Lakes of the St. Lawrence .....	1,160	1,986
Foot of Sault Ste. Marie.	Head of Sault Ste. Marie.	Sault Ste. Marie Canal .....	1	1,987
Head of Sault Ste. Marie.	Pointe aux Pins.....	River St. Mary.....	7	1,994
Pointe aux Pins.....	Prince Arthur's Landing.	Lake Superior.....	270	2,264
Prince Arthur's Landing.	Lake Shebandowan.....	Dawson Route, by land.....	45	2,309
Lake Shebandowan.....	Foot of Rainy Lake.....	Dawson Route, by chain of lakes and portages.....	192	2,501
Foot of Rainy Lake.....	Head of Rainy River .....	Dawson Route, by Fort Frances Canal.....	$\frac{1}{2}$	2,501 $\frac{1}{2}$
Head of Rainy River .....	North-West Angle of Lake of the Woods.....	Dawson Route, by Rainy River and Lake of the Woods.....	119 $\frac{5}{8}$	2,621
North-West Angle of Lake of the Woods.....	Fort Garry, Winnipeg....	Dawson Route, by land.....	95	2,716

The steamboat voyage from Collingwood to Prince Arthur's Landing is..... 522 Statute miles  
 Length of Dawson Route, chain of lakes and portages, from Prince Arthur's Landing to Fort Garry, Winnipeg..... 452 do  
 Canadian Pacific Railway, from Prince Arthur's Landing to Winnipeg..... 435 do

## No. 18.—FORT FRANCES CANAL.

*(On the Dawson Route.)*

As laid out by G. F. Baillaigé, formerly Assistant Chief Engineer, now Deputy Minister of Public Works. See his report, No. 63,981, 26th December, 1876.

Canal situated near the outlet of Rainy Lake, at 237 miles north-westward from Prince Arthur's Landing, on Thunder Bay, Lake Superior, and 215 miles south-eastward from Fort Garry, Winnipeg, *via* the Dawson Route.

Length of canal, including lock.....	800 feet.
Number of locks.....	1 lock.
Length of lock between gates.....	200 feet.
Width of lock at narrowest part.....	36½ "
Total rise of lockage varies from.....	22½ to 24 "
Depth of water on upper mitre sill of lock, below low water level of Rainy Lake.....	19.42 "
Depth of water on lower mitre sill, below low water level of Rainy River.....	7 "
Breadth between piers at upper entrance of canal, about.....	132 "
Breadth between piers at lower entrance of canal, at least.....	60 "

	Miles.	Miles.
Length of Rainy Lake and River, above centre of Fort Frances Canal.....	44	44
Length of Rainy River, below centre of Fort Frances Canal, down to wharf ½ mile below foot of Long Sault and at head of Lake of the Woods.....	45	
Head of Lake of the Woods to north-west angle.....	75	120
	—	—
Total length of navigation from head of Rainy Lake to north-west angle.....		164
Length of road from north-west angle of Lake of the Woods to Fort Garry, Winnipeg.....	95	95
	—	—
Total distance from head of Rainy Lake to Fort Garry, Winnipeg.....		259

Elevation above the sea.  
Feet.

High water, upper reach, Rainy Lake, 15th July, 1876....	1,098.83
Low water, do do October, 1875.....	1,093.39
Top of upper mitre sill.....	1,073.97
High water, lower reach, Rainy River, July, 1876.....	1,076.50
Low water, do do October, 1875.....	1,069.47
Top of lower mitre sill.....	1,062.47

Work done by day labour.

Work commenced by H. Thompson, under superintendence of Hugh Sutherland, 14th June, 1875.

Specification of work prepared and lock laid out by G. F. Baillaigé, according to a new design with one lock, instead of two locks as originally projected, 15th August to 2nd September, 1876.

The object sought by the construction of the Fort Frances Canal is to connect the navigation from Kettle Falls, at the head of Rainy Lake, with the terminus of the navigation down to the north-west angle of the Lake of the Woods, a distance of 164 miles, for vessels of 7 feet draught of water during the time of low water.



Draught of water available through shallowest portions of Rainy Lake at time of construction of canal, during the time of low water, about 4½ feet.

Draught of water available through shallowest portions of Rainy River and of the Lake of the Woods to the north-west angle of this lake at time of construction of canal during low water, about 3½ feet.

On 22nd January, 1879, Mr. Hugh Sutherland reported that the lock at Fort Frances was nearly completed, and suggested that the construction of the lock gates should be deferred until the materials for such purpose could be brought by the Canadian Pacific Railway.

Nothing appears to have been done since the date of the last mentioned report. See Public Works Report published 1878, Appendix 25, and Return to an Address of the House of Commons, dated 21st February, 1877.

EXPENDITURE ON FORT FRANCES CANAL.

*(Included in expenditure on Canadian Pacific Railway.)*

1875 .....	\$ 7,411 91
1876.....	76,529 34
1877.....	54,988 38
	<hr/>
	\$138,929 63
1878.....	114,692 66
1879.....	34,656 22
	<hr/>
Total cost up to time when work was suspended.	\$288,278 51

No. 19.—OPENING AND CLOSING OF NAVIGATION.

The following are considered as the general dates of the opening and closing of the navigation on the route from Sault Ste. Marie, foot of Lake Superior, up to Prince Arthur's Landing on north shore of Lake Superior, and on the chain of lakes on the Dawson Route.

	Opening.	Closing.
Sault Ste. Marie, foot of Lake Superior.....	1st May.	1st Dec.
Prince Arthur's Landing, Eastern Terminus Canadian Pacific Railway on Thunder Bay, north shore Lake Superior .....	6th May.	26th Nov.
River Kaministiquia, Western Terminus of Can- adian Pacific Railway, north shore L.S.....	6th May.	10th Nov.
Chain of lakes along the Dawson Route.....	25th May.	20th Oct.

See No. 63,981 before referred to.

No. 20.—TABLE of approximate distances between various points from mouth of Red River, at Head of Lake Winnipeg, down to Grand Rapid, at mouth of the North or Main Saskatchewan, towards foot of Lake, and thence along the Saskatchewan up to Fort Edmonton, as per maps published in 1878, 1880, &c.

Name of localities.	Inter- mediate distances.	Total distances from mouth of Red River.
	Miles.	Miles.
<i>Lake Winnipeg.</i>		
1. Mouth of Red River to Mouth of Saskatchewan, or from Head of Lake Winnipeg down to Grand Rapid towards Foot of Lake.....	260	260
<i>North or Main River Saskatchewan.</i>		
2. Mouth of Saskatchewan, on Lake Winnipeg, at Grand Rapid up to Foot of Cedar Lake.....	20	
3. Foot to Head of Cedar Lake.....	30	
4. Head of Cedar Lake to Cumberland House.....	115	
5. Cumberland House to Tobin's Rapids.....	52	
6. Tobin's Rapids to Fort à la Corne.....	92	
7. Fort à la Corne to Forks, North and South Saskatchewan.....	14	
8. Forks of Saskatchewan to Cole's Rapid.....	9	
9. Cole's Rapid to Carlton House.....	71	
10. Carlton House to Battleford, on Pacific Railway Line.....	110	
11. Battleford to Fort Pitt.....	95	
12. Fort Pitt to Fort Saskatchewan.....	185	
13. Fort Saskatchewan to Fort Edmonton.....	20	
		813
Total from Mouth of Red River to Fort Edmonton, at about 30 miles above intersection of Pacific Railway Line.....		1,073

See pages 392 to 395, Note A, Appendix No. 8.—G.F.B.

### No. 21.—REMARKS.

The navigation between the mouth of Red River and Fort Edmonton is performed by three steamers of the Hudson Bay Company, one of which plying between Red River and Grand Falls, near Lake Winnipeg. These falls are impassable for vessels. Here the Company has built a tramway, about four miles in length, to overcome the falls, which involves the transshipment of passengers and freight.

A second steamer runs from the head of the falls to Carlton House, say 400 miles.

A third steamer completes the journey, thence to Fort Edmonton, 410 miles.

The entire journey of 1,073 miles is said to occupy about a fortnight.

The depth available during low water is said to be from three to four feet or less.

For further details, see Appendix, page 65, Public Works Report, 1879-80,

No. 11,090.

For distances from Prince Arthur's Landing to Winnipeg and westward by Canadian Pacific Railway, see tables of Appendix No. 30, parts III. and IV.—G.F.B.

RIVER SASKATCHEWAN.

No. 22.—EXTRACT FROM MACOUN'S WORK ON MANITOBA AND THE GREAT NORTH-WEST PUBLISHED IN 1882.

An approximate estimate of the number of cubic feet of water passing down the South Branch, the North Branch and the Main Saskatchewan, made by Prof. H. Y., Hind, in 1858, gives the following result :—

	Cubic feet per hour.
South Branch .....	123,425,516
North Branch.....	91,011,360
Main Saskatchewan, at Fort à la Corne.....	214,441,290
“ “ near Deering River.....	206,975,000

See Appendix No. 8, pages 392 to 395.—G.F.B.

No. 23.—NAMES of Vessels which were navigating the waters of Manitoba and North-West Territories in 1878 and 1879, as per Macoun's work, published in 1882.

Name of vessel.	Name of river or lake navigated.	Canadian or American vessel.	Remarks.
Alpha.....	Assiniboine and Lower Red Riv.	Canadian.....	Owned by the Winnipeg and Western Transportation Company.
Cheyenne .....	do .....	do .....	
Swallow.....	Lower Red River	do .....	
Prince Rupert.....	do .....	do .....	
Keewatin.....	do .....	do .....	
Ellen.....	do .....	do .....	Owned by the Hudson's Bay Company.
Colville.....	Lake Winnipeg.	do .....	
Northcote.....	Saskatchewan .....	do .....	
Lilly.....	do .....	do .....	do do
Marquette.....	Assiniboine.....	do .....	do do
Manitoba.....	Red River .....	American .....	Owned by the Kittson or Red River Transportation Company, who own also fourteen barges of 1,800 tons capacity.
Dakota.....	do .....	do .....	
Selkirk.....	do .....	do .....	
Minnesota.....	do .....	do .....	
Grandin.....	do .....	Independent.....	Owned by the Great Grandin Farm.

See Appendix No. 8, pages 390 to 392.—G.F.B.

PORT NELSON.

No. 24.—EXTRACT FROM MACOUN'S WORK ON MANITOBA AND THE GREAT NORTH-WEST, PUBLISHED IN 1882.

Port Nelson is about eighty miles nearer to Liverpool, *via* Hudson's Straits, than is New York. It is at the mouth of a river of the first class, carrying a body of water double that of the north and south branches of the Saskatchewan combined, and it reaches the sea through a narrow depression in the Laurentides, having a descent of about twenty inches in a mile, or, in round numbers, seven hundred feet in a little

more than four hundred statute miles from the spot where it debouches from Lake Winnipeg.

Port Nelson, moreover, is about the same distance from the edge of a vast fertile region in the North-West, exceeding two hundred millions of acres in area, as Quebec is from Toronto.

For more than two hundred years, from two to five sailing vessels on an average, frequently with war ships conveying them, have sailed annually from Europe and America to Port Nelson, or other parts in Hudson's Bay, and returned with cargoes the same season, *via* the only available route, Hudson's Straits.

See Appendix No. 8, Note A, pages 390 to 495.—G.F.B.

## NO. 25.—PROJECTED BAIE VERTE CANAL.

SYNOPSIS OF REPORTS ON BAIE VERTE CANAL, FROM 1822, WITH NOTES RESPECTING UNDERGROUND FOREST, ETC.

### *Synopsis of Reports on Baie Verte Canal.*

Robert C. Minnitte, P.L.S.—Acting under instructions from Government of New Brunswick. Survey, October, 1822, for a canal between Bay of Fundy and Baie Verte. Line traced through valley of Au-Lac, across to Missiguash Lakes, and thence to River Tidnish, for a canal of small depth, say 4 feet, to be fed by fresh water.

Francis Hall, C.E.—Acting under instructions from Sir Howard Douglas, Baronet, Lieutenant-Governor of New Brunswick. Report dated October, 1825, on Minnitte's survey. Also on line from Shediac to bend of Petitcodiac. Also on line from Shediac *via* Memramcook River to Dorchester. Also on line across the Isthmus from Au-Lac to Tidnish—which he recommends—the other lines being impracticable, for want of water supply.

He proposes that canal should commence  $3\frac{1}{2}$  miles up the Au-Lac, and terminate at a point 2 miles up the Tidnish; and that it should be fed by a fresh water reservoir of 150 acres, to be formed in the valley of the Missiguash for the canal supply. Canal to have its summit six feet above the highest spring tides of the Bay of Fundy—to be 21 feet wide at bottom, 45 feet wide at top, with 6 locks 105 $\frac{1}{2}$  feet long x 20 $\frac{1}{2}$  feet wide, and 8 feet of water on the lock sills. The whole estimated to cost £67,728 14s. 10d. sterling = \$298,006.45.

This estimate would be reduced, he says, to £45,152 10s. 4d. sterling = \$198,671.09 for a depth of 4 $\frac{1}{2}$  feet, instead of 8 feet.

Thomas Telford, C.E.—Report addressed to Sir Howard Douglas, Baronet, Lieutenant-Governor of New Brunswick, towards 1826, on Hall's Reports and Plans, which were referred to him. He recommends canal to be built 30 feet wide at bottom and 72 feet at water surface in deep cuttings; but 45 feet wide at bottom, and 95 feet at top surface, elsewhere; with locks of 150 x 40 feet, and 13 feet water on the lock sills. The summit level of upper reach to be at same elevation as highest spring tides of Cumberland Basin. Fresh water to be used mainly for supply; salt water to be used at spring tides, if required, in case of a deficiency. Estimated cost, £155,898 5s. 5d. sterling = \$685,952.39.

H. O. Crawley, Capt. R.E.—Reports on 19th January and 19th March, 1843, to Sir William M. G. Colebrooke, K.H., etc., Lieutenant-Governor of New Brunswick, Canada, and Prince Edward Island; also the schemes proposed by Hall and Telford.

He considers that a canal 45 feet wide at bottom, 85 feet wide at top surface, with locks of 150 feet by 40 feet, and nine feet of water on the sills is sufficient; but that it is impracticable, on account of the deficiency of the fresh water supply; and he objects to using the Bay of Fundy tidal water to supplement the deficiency

(6,607). John Page, Chief Engineer Public Works.—Reports to Secretary of Public Works, Canada, on 7th May, 1869, upon the previous surveys. After reviewing the schemes proposed by Hall and Telford, he is of opinion that an abundant supply of fresh water can be obtained by adopting a lower level than the one they recommend, or at an elevation of from 10 to 12 feet below the level of the highest tides of Cumberland Basin; and that the waters of the Bay of Fundy should be kept back by a lock at the western end of the canal. He recommends further surveys and examinations.

(22,692). Report—G. F. Baillairgé, Assistant Chief Engineer (8th April, 1872), to J. Page, on projected canal: recommends Au-Lac and Tidnish line for a whole-tide canal; water supply to be taken from Bay of Fundy, by means of one or more rivers converted into reservoirs.

	Miles
Length of canal—shore to shore.....	18.84
Do do from 16 feet at extreme low water, Bay of Fundy, to 16 feet in Baie Verte.....	21.43

Number of locks.—Four at Bay of Fundy, two at Baie Verte.

Locks of Upper Reach, calculated for 18 feet water on mitre sill, in case of future deepening.

Size of locks:—270 x 40 feet. Navigable draft 15 feet.

Western entrance on Bay of Fundy, to be at Au-Lac Point, near mouth of that river. Eastern entrance, Baie Verte, to be at Tidnish Head.

Canal Commissioners (page 90).—Report, 24th February, 1871. Estimate, \$3,250,000. Mr. Keefer supposes that canal may be fed from the tide-water of Baie Verte, which is from 13½ to 22½ feet lower than the Bay of Fundy at high tide; and from 18½ to 19½ feet higher at low tide than the Bay of Fundy. This would involve 19½ feet in depth of additional cutting throughout.

(22,527). J. Page (April 26, 1872). Cannot report without further time on Mr. Baillairgé's project.

(22,573): Messrs. Keefer & Gzowski (May 2, 1872). Report on Baillairgé's Report, 22,692, recommending certain modifications and reductions.

(28,653). Messrs. Keefer & Gzowski (February 18, 1873). Recommend a half-tide canal *vid* La Planche, Long Lake, Tidnish and Weeks' Point. Cost estimated at \$5,317,000. This line not susceptible of extension hereafter for a whole-tide canal. Length of canal between entrance locks, 20½ miles.

(29,889). G. F. Baillairgé (April 12, 1873). Furnishes estimate of cost of a half-tide canal on the Au-Lac and Tidnish line, susceptible of extension for a whole-tide canal.

One based on Mr. Keefer's project for 12 hours.....	\$5,650,000
do do his own project for 16 hours.....	8,217,849
Also cost of a whole-tide canal.....	8,592,849

(38,591). G. F. Baillairgé (November 17, 1873). Report to Chief Engineer on Location Survey. Recommends Au-Lac and Tidnish line *vid* Missiguash Valley; also Rivers Au-Lac and Missiguash as reservoirs and settling ponds.

	Cubic yards.
Canal excavation, half-tide, Bay of Fundy and full-tide, Baie Verte.	14,640,634
Do three-quarter-tide do	14,911,493
Do full-tide do	15,506,639
Length of canal. { Between entrance locks.....	18.67 miles.
{ Shore to shore.....	19.25 "

Western entrance—Bay of Fundy—to be at Au-Lac Point near mouth of that river.

Eastern entrance—Baie Verte—to be at Tidnish Head.

(33,591). J. Page (December 10, 1873). Report on Mr. Keefer's project—also on Mr. Baillairgé's—condemns the former—approves the latter—submits estimate of cost of a canal on the Au-Lac and Tidnish line *via* Missiguash Valley.

For a half-tide canal.....	\$7,700,000
three-quarter-tide canal.....	8,100,000
full-tide canal.....	8,500,000

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## SYNOPSIS OF REPORTS.

### MEMRAMCOOK AND SHEDIAC LINE.

A line was explored between Dorchester Island, on the Bay of Fundy and Shediac Bay, for a canal through the valley of the Memramcook, by Robert Minnitte, P.L.S., in 1823; it was also surveyed and reported on by Francis Hall, C.E., in 1825, and by Captain Crawley, R.E., in 1843,—and finally by S. Keefer, C.E., in the autumn of 1872.

Plans and profiles of the 1st, 3rd and 4th surveys are in the possession of the Government.

Length of line from shore to shore.....	22.92 miles.
do from end to end of entrance piers.....	25.59 miles.

16 locks required, and 28,200 lineal feet of pier work.

All the head-water available, according to above reports, is but a fractional portion of what is required for the supply.

A thorough cut for a tidal canal would involve a cutting 25 miles long and 115 feet deep at summit.

### MONCTON AND SHEDIAC LINE.

This line less favorable for a canal than the Memramcook line.

Length of artificial navigation, were it possible, is about 34.69 miles.

Number of locks required—19.

The only source for the supply of a canal between Moncton and Shediac is a small basin among the hills called Humphrey's Pond, about 500 acres in extent, with very limited drainage.

A thorough cut for a tidal canal would be 17 miles long, from Moncton to Shediac, and 150 feet deep at the summit. A dam would also be required across the mouth of the Petiteodiad, in order to kill the bore and make slack-water navigation up to Moncton, a distance of 17 miles or more, through the most of which a channel would have to be dredged.

This line was also examined by the above named parties who explored the Memramcook line.

According to all the reports furnished by these gentlemen, "the idea of constructing a navigable canal, either by the Memramcook or Moncton lines, is not to be entertained, and is not worthy of serious discussion.

(See pages 18 and 19, S. Keefer's Report, 19th February, 1873.)

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 NOTES RESPECTING UNDERGROUND FORESTS, &c.
 

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## MOSSY PLAINS.

According to borings made November, 1873, in the Mossy Plain, at the Head of Long Lake, the thickness of the moss varies from 9 to 13 feet on Mr. Keefer's location line of 1872.

The crust of the plain for a depth of about 5 feet, is composed of roots and live moss; below this depth, the material appears to consist of rotten moss and decayed vegetable matter, resting upon the fallen timber of a buried forest, probably accumulated centuries ago—the whole resting upon clay and red sandstone rock.

This plain, which appears to be an accumulation of forest timber and moss, is situated at the water-shed between Long Lake and the valley of the Tidnish.

Plains similar in outward appearance to the one described, are found near the water-shed, between the valleys of the Rivers Missiguash and Tidnish; they vary from  $\frac{1}{4}$  to  $\frac{1}{2}$  mile in length, by  $\frac{1}{8}$  to  $\frac{1}{2}$  mile in width.

The preceding is based on a report from Alex. Monro, Esq., P.L.S., of Port Elgin, N.B., under whose supervision the borings were made

## MARSHES AND BOGS

In Mr. Baillaigé's original Report, dated 8th April, 1872—at page 152 of Appendix to Public Works Report for 1872—under the heading of "Marshes, Bogs, Dykes," &c., will be found a description of the black muck, of a hard peaty nature, which is found below the first layer of clay and sand, at depths of from 13 to 24 feet below the top surface of the bogs, in the Missiguash Valley.

This peaty understratum, which rests chiefly on white sand, has been also found beneath the soil of the dyked marshes, at depths varying from 15 to 25 feet below their top surface; it appears to extend for a distance of about 9 miles from the Bay of Fundy, eastward, and to have a thickness of from 1 to 4 feet.

The same peaty substance and underlying soil crop out on the banks of Cumberland Basin, where pine and beech stumps, &c., are found imbedded in a similar description of soil, near the outlets of Sharp's Creek, the River La Planche and Cumberland Creek, when the tide is out. This would lead to the supposition already made by Professor Dawson in his Acadian Geology, respecting the subsidence of the soil, or the increased height of the tides.

No. 26. — A TABULAR VIEW of the River St. John, from Fredericton to the Great Falls, from a Report, dated St. John, N.B., Aug. 21, 1826, on a Survey of the River St John, from Fredericton to the Grand Falls, by Robert Foulis, C.E. and D.P.S.

Distances of Places.	Miles.	Chains.	Links.	Ascent from Level in inches.	No. of Rapids.	Velocity of current in Rapids, per 66 feet.	Medium Velocity of current, per 66 ft.	Depth of Channel.	Geological.
From Fredericton to confluence of tide below Chapel Bar .....	4	77	59	.....	.....	.....	72	ft. in. From 6 0 to 11 .....	Sand, gravel, appearance of free-stone, accidental blocks of granite.
do Confluence of tide to French Chapel .....	5	15	.....	43	2	22"	58	do 1 9 to 8 .....	Gneiss-clay, slate, roofing slate.
do French Chapel to Cliff's Bar .....	7	52	.....	129	3	28	1 26	do 2 9 to 10 .....	do gravel, clay.
do Cliff's Bar to head of Bear Island Bar .....	5	70	40	227	2	.....	46	At Bear Island from 1 9 to 7 1/2 .....	do red granite.
do Bear Island to Mackawickak .....	8	54	.....	56	2	.....	60	From 2 6 to 9 .....	Variety granite
do Mackawickak to Meductic .....	4	68	50	.....	.....	Meductic Rapids. 12	.....	do 5 0 to 10 .....	Large-grained granite veined with quartz.
do Meductic to Eel River .....	9	25	.....	220	3	30	48	do 2 9 to 8 .....	Granite and porphyritic granite.
do Eel River to Griffith's Island .....	9	43	.....	168	4	.....	55	do 2 0 to 7 .....	Volcanic stones, detached.
do Griffith's Island to McMullan's .....	12	26	.....	144	3	28	50	do 1 9 to 6 1/2 .....	do cellular.
do McMullan's to Presqu'ile .....	8	77	.....	375	7	24	45	do 3 0 to 8 .....	Gneiss-trap.
do Presqu'ile to Rivière de la Chute .....	14	71	.....	765	3	.....	15	do 3 0 to 7 .....	Limestone, slate.
do Rivière de la Chute to Tobique .....	12	12	.....	.....	.....	.....	42	do 2 6 to 9 .....	Trap.
do Tobique to Great Falls .....	21	12	.....	.....	8	.....	.....	do 2 0 to 33 .....	Transition limestone.
Total distance .....	125	39	47	2127	45	Total length, 10 1/2 m.	.....	.....	.....
Perpendicular height of Great Falls .....	.....	.....	.....	.....	.....	74 ft.	.....	Depth of water in Upper Basin .....	20 ft.
Descent through Rocky Chasm .....	.....	.....	.....	.....	.....	45 ft. 6 in.	.....	Lower do .....	33 ft.
Total descent of Falls .....	.....	.....	.....	.....	.....	119 ft. 6 in.	.....	Length of cut necessary for tunnel from Upper to Lower Basin. ...	836 yds.
Height of Hill at Portage, from level of Upper Basin .....	.....	.....	.....	.....	.....	120 ft. 7 in.	.....	.....	.....
do do .....	.....	.....	.....	.....	.....	240 ft. 1 in.	.....	.....	.....



No. 27.—SURVEYS AND ESTIMATES MADE FOR PROJECTED CEDARS CANAL.

Letter No. 16,909, dated 26th October, 1872, instructed Mr. G. F. Baillaigé, then Assistant Chief Engineer of Public Works, to have a survey made on the north shore of the River St. Lawrence, between Lakes St. Louis and St. Francis, so as to have the necessary information to prepare an estimate for the construction of a canal of the dimensions recommended by the Canal Commissioners in 1871, viz. : Locks 270 feet long by 45 feet wide, with 12 feet of water on sills, and 13 feet of water in canal prism, with a bottom width of 100 feet.

The field operations were commenced on the 6th November, 1872, and completed at the end of February, 1873; they were entrusted to F. C. Farijana, C.E., who reported on the 12th April, 1873, and recommended two lines of canal :—

1st line through Chambéry Gully, known as the Gully Line, could be used only for steam navigation, per revised estimate.....	\$3,058,250
2nd line using the navigable parts of the River St. Lawrence, known as the River Line.....	2,720,905

No provision having been made for a line of canal with a towing path, more information was necessary, and, in the summer of 1874, Mr. Baillaigé made a personal examination of the locality and reported on the 17th September, 1874, endorsed under No. 44,375, giving a general plan, profiles and estimates of several lines of canal, with the dimensions, as above stated.

During these few months of survey, the field work did not embrace any more than what was indispensable for ascertaining the most advantageous route for the projected canal and the probable cost of its construction; thus the general map, which has been submitted, is based partly on the surveys made by Messrs. Stevenson, Trudeau, Thompson, Mills, Larue, Casey, Stewart, Baillaigé, Maillefert and Raasloff and partly on the recent surveys.

The estimates of the various lines submitted are as follows :—

12 FEET DRAUGHT THROUGHOUT.

Miles Length.		
14.59	River Line, using 4.56 miles of the navigable portions of the St. Lawrence.....	\$3,090,000
13.95	Gully Line, for steam navigation.....	3,004,000
14.20	Inland Line, avoiding the Gullies, with a towing path.....	3,360,000

On the 24th August, 1875, at the request of the Chief Engineer, Mr. Baillaigé prepared the following estimates for a 14-foot navigation :—

Gully Line, for steam navigation.....	\$3,650,000
Inland Line, with a towing path.....	4,136,589

INLAND LINE.

The inland line, which is recommended, may be described as follows :—Beginning at the upper entrance at McIntyre's Point, the line proceeding eastward from the shore coincides with that of the proposed pier at the entrance for a distance downwards of 1,100 feet, and passes at from 150 to 250 feet in rear of the buildings upon the point, thence it follows the shore within 150 to 450 feet north of the water margin, and curves in a north-easterly direction for a distance of 1,300 feet; it afterwards continues within a short distance from the shore, until it cuts the water margin and the public road, which is the proposed site

of the guard lock, situated at one mile from the upper entrance. The upper summit reach extends from this lock to St. Antoine Road, a distance of 10·23 miles, crossing the River à Delisle and River Rouge and three public roads at from 700 to 900 feet from the main road, and the St. Emmanuel Road at 200 feet from the main road; the line then follows the south side of the Rivière à la Graisse, crossing the St. Dominique road at 3,400 feet and the St. Ferréol and St. Grégoire Roads at 7,700 feet from the main road, striking the head of the Chambéry Gully at a distance of  $3\frac{1}{2}$  miles from the St. Dominique Road; thence proceeding on the south bank of the Chambéry Gully, crosses the St. Antoine Road at about 5,000 feet from the main road; the line then continues to the main road on the banks of the St. Lawrence, opposite the old lock at Split Rock Rapids, crossing Bissonnette's Gully and Brook; thence along the top and upon the slope of the St. Lawrence for 1,000 feet, curves slightly towards the north and passes across the point of the high bank between the St. Lawrence and the Ottawa on the west side of Cascades Point, traversing the old Cascades Canal, and reaching Cascades Bay at a point situated 1,100 feet below the mouth of the old Cascades Canal.

It is proposed to modify that part of the line, from where the line crosses the St. Emmanuel Road to the Upper Guard Lock, by following the shore of the St. Lawrence instead of passing inland, north of the Village of Côteau du Lac.

#### RIVER LINE.

The river line begins on Lake St. Francis at the same point as the inland route and extends downwards along the north shore of the St. Lawrence to a point between the Fer à Cheval and the mouth of the River Rouge below the Village of St. Ignace, distance 2·97 miles; thence one mile of river navigation to reach Pointe au Diable where a canal 1,600 feet in length and one lock is necessary; then comes the second and last link of river navigation which extends from Pointe au Diable to Pointe à Biron, distance 3·56 miles; on this stretch of the river a lock is recommended at Pointe à Watier, thence a canal 6·76 miles in length extends through Roussin's Ravine and Chambéry Gully to a point on the River Ottawa, opposite the mouth of the Cascades Canal, 2,700 feet below the outlet of the gully.

#### SURVEYS OF 1875-1876.

The surveys during the fall of 1875 and the summer of 1876 were specially devoted to the examination of the River St. Lawrence, in view of having more complete information for the river line; this new river line has not yet been reported upon, nor estimated;—its general course from Lake St. Francis to Pointe à Biron will be about the same as that of 1874—From Pointe à Biron instead of turning inland to meet Chambéry Gully, the line will follow the shore and north bank of the St. Lawrence as far as Pointe du Moulin, avoiding the Cedar Rapids, distance about  $2\frac{1}{2}$  miles;—the navigable stretch to Pointe à Coulonge, about two miles long, will thus be made use of;—thence a canal to be constructed along the north bank of the river, meeting the proposed inland line at a point opposite the Quinze Chiens Road and terminating at the same point, that is about 1,100 feet below the mouth of the old Cascades Canal.

The inland line of 1876 will be about the same as the one recommended in 1874, there being only slight modifications.

Another general plan to a scale of 400 feet to the inch, has been prepared, from the information acquired during the surveys made at various times between 1872 and 1877. This map, and the profiles which are to accompany it, were discontinued by order of the Department, prior to its subdivision, on account of other works of a more pressing nature. The plan and profiles, however, can be completed in the course of about one month, whenever they may be required.

## No. 28.—RIVER TAY CANAL.

The Town of Perth, County of Lanark, was connected with the Rideau Lake, in 1834, by a canal constructed on the line of the River Tay, which flows from Perth, and empties into the east end of the Rideau Lakes, a distance of about ten miles.

The canal was built by the "Tay Navigation Company," who were incorporated by the Legislature of Upper Canada, in 1831—Sec. 1, William IV., Chap. 2, Local and Private Acts of Upper Canada.

The works consisted of five separate locks, with a total lift of 28 feet, the levels of the different reaches being maintained on the same principle as on the Rideau Canal, by flat dams built across the river at different points, causing the flooding of a considerable amount of low lands.

The total length of the canal proper from Perth to Port Elmsley, where the level of the Rideau Lake is reached, is eight and a-half miles.

The locks were constructed of rubble masonry faced with stone, 100 feet between quoins, and 20 feet in width, with 4 feet water on their sills.

The canal has long since been abandoned for any boat traffic, and scarcely a vestige of the locks remains; the dams, however, with the exception of one, are still serving the purpose of keeping up sufficient water to run logs down.

## PROJECTED TAY CANAL.

To restore the canal on the former line of the Tay, so as to render it navigable for boats which now run on the Rideau Canal, would necessitate the construction of four stone locks, each 126 x 26 x 5 feet on the sills; four dams and weirs; the excavation of a channel, in rock, between Locks Nos. 3 and 4, and in rock and clay, between Lock No. 4 and Perth; the purchase of the rights of the mill owners, at Locks Nos. 1, 2 and 3, and the purchase of any legitimate claims for re-drowning the lands.

Another route, which is perfectly feasible, not more costly, and, as far as navigation is concerned, unquestionably the best, is by leaving the River Tay about a mile and a-quarter above the fourth lock, and making an artificial canal about a mile in length to Beveridge's Bay, on the Rideau Lake.

The length of the canal and river navigation, by this route, will be about seven miles from Perth to Rideau Lake; a further reduction, as regards distance, of nearly two miles can be made by cutting across the worst bends in the river.

The works required on the deviation, will be as follows:—

1. Dredging entrance from the Bay to Lock No. 1 (new route) and building entrance piers.
2. The construction of two locks of 13 feet lift each, with 5 feet water on the sills.
3. The excavation of a channel 30 feet wide at bottom, with slopes of two and a-half to one, about 6 feet deep, for a distance of 1,400 feet to Lock No. 2, part clay and rock.
4. The excavation of a channel through an average depth of 5 feet of clay and rock to the Tay River, a distance of over 4,000 feet.
5. The construction of a dam on flat rock, a short distance below where the proposed deviation leaves the river, in order to raise the level to the same height as formerly.
6. From the Tay River to Perth, the deepening of the channel is common to both routes.

The source of the Tay rises in lakes some thirty miles west of Perth, and the total area drained by the Tay is over 200 square miles.†

The restoration and improvement of the Tay Canal are now under the consideration of the Minister of Railways and Canals.\*

\* Total cost of Tay Canal up to 30th June, 1867, \$17,764.05. For further details, see page 61 of Commissioner's General Report, and pp. 484 and 569 of Appendix No. 70 of same report in 1867.

**No. 29.—PROJECTED OTTAWA SHIP CANAL ACCORDING TO T. C. CLARKE'S REPORT, DATED 2ND JAN., 1860.**  
 Dimensions of Projected Canal—Canal Prism, 100 feet and 146 feet wide at bottom, with a depth of 13 feet water ;  
 depth in Rivers and Lakes at least 15 feet ; Locks to be 250' X 45' X 12'.

Names.	Distance.			Rise.		Number of Locks.	Remarks.
	Intermediate.		Total from City of Ottawa.	Inter-mediate.	Total above tide-water at Three Rivers.		
	Rivers and Lakes.	Canals.					
Ottawa Harbour.....				feet.	feet.	.....	At foot of Rideau Canal. (For the navigation between Montreal and Ottawa Harbour, see the special tabular form at pages 814 to 816.)
do do to Lake DesChénes	3-75	2-61	6-36	63-0	184-75	6	Overcomes Chaudière Falls and Little Chaudière Falls. The general channel depth is from 20 to 30 ft. of water. Lake DesChénes is also called Chaudière Lake.
Foot to head of do ...	26-69		33-05	0-30	185-05	.....	Chats Canal—For details respecting the work done on this canal from 1854 to 1866, see Public Works Report of 1867, page 79-81. See Note B. on following pages.
Head of Lake DesChénes to foot of Chats Lake.	1-70	0-60	35-35	50-0	235-05	5	General channel depth 25 to 30 feet. Through North or Calumet Channel.
Foot to head of Chats Lake.....	19-28		54-63	.....	235-05	.....	
Foot of Cheneaux to head of Grand Calumet.	12-81	1-05	68-49	98-07	333-12	11	
*Head of Grand Calumet to head of Lake Coulonge.	30-44		98-93	8-13	341-25	.....	From August, 1873, at different epochs contracts were entered into for the improvement of this part of the river so as to have an unbroken navigation with a draft of 6 ft.
Head of Lake Coulonge to head of Oulbute Locks.	4-99		103-92	18-00	359-25	2	The works at Oulbute consist of two wooden combined locks, each 200 ft. in length and 45 ft. in width, with 6 ft. of water on sills. The construction of the dams at Grand Calumet Reef and at Flat Rapids in Rocher Fendu Channel, and the excavation of shoals, are to be completed this spring. See Note C. on following pages.
Head of Oulbute to foot of Joachim's Rapids.	33-58		137-50	1-30	360-55	.....	Overcomes the following rapids: The Joachims, McSorley's, Rocher Capitaine, Deux Rivières and Johnson's.
Foot of the Joachims to mouth of Mattawan River.	51-74	2-26	191-50	148-20	508-75	14	The line of proposed canal now follows the River Mattawan, by this part of canal are the Plain-Chant, de la Rose, Paresseux Chute, Petit Paresseux, Talon Chute, &c.
Mattawan River to Summit Level	16-22	1-08	208-80	145-00	653-75	11	



No. 30.—TABLE OF PRINCIPAL RIVERS throughout the World compared with the Rivers St. Lawrence and Ottawa.

Names.	Area of Drainage in Square Miles.	Length in Miles.	Discharge in Cubic Feet per Second.			Authority.
			Low Water.	Mean.	High Water.	
Amazon .....	2,400,000	4,000	.....	.....	1,700,000	Encyclopædia Britannica
Mississippi .....	1,226,000	4,400	447,200	.....	1,270,000	C. Ellet, jun,
St. Lawrence .....	565,000	2,600	.....	900,000	.....	A. J. Russell, Esq.
Niagara .....	237,300	.....	370,589	389,000	406,000	New York State Reports.
Ganges .....	432,000	1,680	36,300	207,000	494,200	Sir C. Lyell.
Nile .....	520,200	2,240	23,100	220,000	.....	Encyclopædia Britannica
Ohio, at Wheeling....	25,000	.....	1,400	.....	260,277	C. Ellet, jun.
Thames .....	5,000	215	1,330	.....	7,900	Encyclopædia Britannica
Rhone.....	38,000	560	7,000	21,000	204,000	D. Aubuisson.
Rhine.....	88,000	700	13,400	33,700	164,000	do
Ottawa (Grenville)...	80,000	700	35,000	85,000	150,000	Ottawa Survey.
French River .....	4,700	.....	9,500	.....	.....	do

See Report of T. C. Clarke, 2nd January, 1860.

NOTE A.—OTTAWA SHIP CANAL, OR MONTREAL AND LAKE HURON NAVIGATION, VIA OTTAWA AND FRENCH RIVER.

According to the first survey, which, was made by Mr. James Stewart, C.E., under Walter Shanly, C.E., the estimated cost of the projected work from Montreal to Lake Huron, including the enlargement of the Lachine and other Canals on the route, amounts to \$24,000,000.

Mr. Shanly's project contemplated the construction of locks 250 x 50, with 10 feet of water on the sills, and 58 miles of canals, with 372 miles of intermediate river and lake navigation, in all 430 miles from Montreal to Lake Huron, and a total rise of lockage of 698 feet—that is to say, a small vessel in passing from Lake Huron to Montreal would ascend 83 feet to a summit level, and then descend 642 feet to the St. Lawrence at Montreal, this giving for each passage a total rise and fall of 725 feet. Of these 725 feet, 698 would have to be overcome by means of locks.

According to the second survey, which was made under T. C. Clarke, C.E., in 1859, the estimated cost of the projected works, exclusive of the enlargement of the Lachine Canal, is \$12,000,000.

Mr. Clarke's project embraced 69 locks, 5 of which, on the Lachine Canal, and 29-30 miles of canal, 8½ of which between Montreal and Lachine. The locks were designed to be 250 x 45, with 12 feet of water on the sills, and the depth of water in the river was to be increased by means of dams at various places in order to shorten the length of the canals, otherwise required, according to Mr. Shanly's project.

COMPARISON OF OTTAWA AND ST. LAWRENCE ROUTES.

	Miles:
Montreal to mouth of French River <i>via</i> projected Ottawa route .....	430
Mouth of French River, Lake Huron, to Chicago, Lake Michigan .....	145
Total, Montreal to Chicago <i>via</i> Ottawa route.....	575
Distance from Montreal to Chicago <i>via</i> St. Lawrence route..	1,145
Difference in favour of Ottawa route.....	570

**NOTE B.—CHATS CANAL, ON NORTH SHORE OF THE RIVER OTTAWA AT PONTIAC, OPPOSITE FITZROY HARBOR.**

This canal extends from the head of Lake Chaudière or Lac des Chênes, 33 miles above the City of Ottawa, to the foot of Chats Lake, on the north shore of the River Ottawa, at Port du Fort.

It was designed to connect the navigable waters of the former lake, about 25 miles in length, with those of the latter of the same extent, or for a total distance of 50 miles.

Its total length, as laid out, was 2·83 miles.

It was designed with six locks of 190x45 feet each, similar to the old lock used at Ste. Anne, with a depth of 7 feet of water on the sills, and a total lockage of 49·80 feet.

It was commenced in August, 1854, by Messrs. A. P. McDonald and P. Schram, under a contract with the Department, and is yet in an unfinished state, the work having been suspended on 15th November, 1856.

At this time, the scale of navigation which should be adopted for navigation between Montreal and Lake Huron was discussed, and surveys of the whole river were decided on; in accordance with this decision, the Government gave orders to postpone the completion of the works commenced, and they have not since been resumed.

The total expenditure up to 1st July, 1867, on the work done, which consisted chiefly of rock excavation and the preparation of stone [for the locks, amounts to \$482,950·81.

See preceding statement. Also pages 79 to 82 of Commissioner's General Report on Public Works, 1867, and Appendix No. 70 of same Report at pages 485, 569.

**NOTE C.—CULBUTE CANAL, ABOUT 108 MILES ABOVE THE CITY OF OTTAWA.**

This canal is situated at L'Islet Rapids, about half a mile below the Culbute Rapids, and within three miles of the head of the Culbute Channel, towards the upper end of Allumette Island, and in the north channel of the River Ottawa.

It connects navigation between the Village of Bryson at the head of the Grand Calumet Falls and the Village of Aberdeen at the foot of the Joachim Rapids, a total distance of 77 miles.

Canal commenced in 1873 and completed in 1876. Dredging between Bryson and Culbute, and submerged dams towards foot and head of Allumette Island, to be completed in 1883.

Length of canal,  $\frac{1}{3}$  mile.

Number of locks combined, 2.

Dimensions of each lock, wooden, 200x45 feet.

Total rise of lockage, 14 feet during low water.

“ “ 18 “ high water.

Depth of water on sills, 6 feet during low water.

*Distances per W. Shanly's Map.*

	Miles.	Miles.
Montreal to Ottawa.....	110	110
Ottawa to Bryson at head of Grand Calumet..... ..	66	66
Bryson to head of Culbute Canal . . . . .	42	
Head of Culbute Canal, <i>via</i> Allumette Lake and Deep River, to the Village of Aberdeen at the foot of the Joachim Rapids. . . . .	35	77
Total from Montreal to foot of Joachim Rapids, <i>via</i> North Channel.....		253

A dam of a total length of 223 feet has been constructed across the head of L'Islet Island and rapids at the head of the canal across the north channel, so as to connect the lock with Allumette Island.

Two submerged dams have also been constructed, the lower one below the Village of Bryson towards the lower end of Calumet Island above the Grand Calumet Falls, in the north channel of the Ottawa, and the other, above Flat Rapids in the south channel below the Village of La Passe, towards the upper end of Calumet Island; five small shoals have also been dredged on the lower forty-two miles of the north channel between Bryson and the lower end of the Culbute Canal, above Chapeau bridge, in order to obtain a draught of 6 feet during low water.

One of the submerged dams is at the head of the Grand Calumet Reef, above the falls, and the other at the head of Flat Rapids in the Rocher Fendu Channel between Oak or Sullivan Island and the Calumet Island.

The draught of water in the upper reach of 35 miles to the Joachin Rapids is about 7 feet.

	Above Tide-Water. Three Rivers.	
	Per Shanly.	Per Clarke.
City of Ottawa, elevation of River Ottawa.....	109 ft.	120 ft.
Village of Bryson, do do .....	325 "	333½ "
Head of Culbute Canal do do .....	350 "	359½ "
Village of Aberdeen do do .....	353 "	360½ "
Total cost of construction of all the works up to 1st July, 1882 .....	\$313,412 81	

### No. 31.—MEMORANDUM A.

#### THE OTTAWA AND FRENCH RIVER NAVIGATION.

In 1615, Samuel Champlain, a Frenchman, ascended the Ottawa River from where the city of Montreal now stands, and under the guidance of Indians, who dwelt or roamed on its banks, as well as on the now desolate shores of Lake Nippissingue and the French River, he arrived at Lake Huron. This was probably the first time that Lake Huron had saluted European eyes, and prior to the time when the thunders of Niagara saluted European ears. After the exploit of Champlain others quickly followed in his footsteps, and for a series of years, fleets of canoes laden with the peltries of the North ascended French River, crossing over the Nippissingue, dropped down the Ottawa to Montreal. Owing partly to the decrease of the number of fur-bearing animals in the region of Nippissingue and to the opening up of new channels of communication, this route fell into general disuse save as regards the latter river for the purpose of the timber trade.

The distance from Montreal to Lake Huron *via* the Ottawa, Mattawan, Lake Nippissingue and French River is 430 miles. Following the course of the Ottawa for about 300 miles, we come to the Mattawan, the widest and deepest of the western tributaries of the Ottawa, turning into it and taking a due west course for 50 miles, thence crossing a slightly elevated sandy ridge, a little river is reached, the current of which runs in the opposite direction to the Mattawan. Five miles of canoeing on this stream brings the *voyageur* to Lake Nippissingue, where he finds 30 miles of deep water, which at the point now arrived at, hurries tumultuously through a narrow channel in the hard granite rock. Here a portage of about a quarter of a mile brings us to the navigable water of the French River; following its deep water and making three short portages in its length of 50 miles, we reach the Georgian Bay. It is not by any means surprising that this should have been the first highway of Canadian commerce, nor that its capabilities for constituting the great highway from the West to the Atlantic seaboard should at this day be seriously discussed. Fortunately, we



are not without reliable data on which to arrive at safe conclusions; for the whole route was examined in 1856-7 by Mr. Walter Shanly, and again in 1859-60 by Mr. Clarke, both of whom are somewhat distinguished in the profession of Engineers. While agreeing in some essentials, as for instance that it shall be capable of passing the largest class of propellers engaged in the transportation of produce on the upper lakes, the difference in their respective estimates of cost is in remarkable contrast. The estimate of Mr. Shanly is \$24,000,000, and that of Mr. Clarke \$12,000,000. The latter, however, omits from his calculations the Lachine Canals which Mr. Shanly proposes to enlarge and otherwise improve. Mr. Shanly estimates the river navigation at..... 347 miles.  
 Canal navigation..... 58 "

405 "

Add to this the navigation across Lake Nippissingue, and we have the total distance, as before stated, of about 430 miles. Mr. Clarke estimates the necessary canaling at 38 miles only. This discrepancy is merely accounted for from the fact that Mr. Clarke resorts to the plan of damming up the Ottawa and Mattawan Rivers to avoid expensive excavations.

The question of supply of feeders, is elaborately discussed by these gentlemen, and though they slightly differ as to the mode to be adopted for raising Nippissingue to the summit level, they quite agree that the supply is ample to guarantee sufficiency for whatever drafts may be made upon it for any possible purposes of lockage in the most distant future. For the information of our readers on this point, we observe that the head waters of the Mattawan are enclosed in a basin of immense depth called Trout Lake, the length of which is about 8½ miles. The supply of water from this lake at the summit level could not be relied on, and as Lake Nippissingue, the head waters of the French River, is 23 feet below the summit level, it would be necessary to raise it to the level of Trout Lake, which can be done in two ways, either by dams thrown across the outlets to raise the water 23 feet, or by lowering Trout Lake, either of which appears to be quite practicable. Few people, we imagine, are aware that the connection between Lake Huron and Montreal can be made by French River and the Ottawa with between 30 and 57 miles of canal. The entrance to, and the mouth of the French River fulfil all the conditions of a noble harbor. For more than a mile from its mouth the river is broad, deep and still. It is estimated that seven locks and eight dams, with three-quarters of a mile in length of rock cutting, embraces all the necessary work to admit vessels of 1,000 tons burden passing from Lake Huron to Lake Nippissingue. The French River is more like a succession of lakes than a continuous river. The lake portions are studded with islands of every conceivable outline of beauty, and the general character of the scenery far surpasses that of the scenery of the Thousand Islands of the St. Lawrence. The Ottawa and French River route has the advantage of penetrating the heart of the country, its scenery is magnificent, its immense water power defies computation. It passes through a country possessing immense mineral resources, and an almost exhaustless supply of pine timber. Its water power would be turned to account in preparing the grain of Michigan for the markets of the East. The vessels going West would carry the sawn lumber of the Ottawa to Chicago, the greatest lumber market of the world; in short the valley of the Ottawa would become the workshop of Canada. In its agricultural capabilities the valley of the Ottawa cannot be compared to that of the St. Lawrence, but the traveller who judges of the capabilities of the former from what he beholds while passing up or down the Ottawa will judge erroneously. The worst of it is along shore on both sides. The interior possesses large tracts of hardwood land in the valleys of the mountains on the north side, and in broad belts towards the lakes on the south. The whole region through which these rivers, the French, Mattawan, and Ottawa, pass is in the highest degree healthy. The diseases incident to rich alluvial districts and prairies of the West are unknown. We cannot over-estimate the importance of opening up through the heart of the "Dominion of Canada" a continuous navigation shortening by fully one hundred and fifty miles the shortest water

communication that now or ever can exist, to tide-water. In reference to the season of navigation Mr. Shanly remarks as follows:—

“The season of water-borne traffic between Montreal and the Western Lakes is at present governed, as to duration, by the period at which the lower links in the St. Lawrence improvements—the Beauharnois and Lachine Canals, to wit—open and close. The former period is not often earlier than the 1st of May; the latter as seldom reaches the 10th of December. It will be observed, then, from the dates already given, in reference to the assumed season of open water on the Ottawa and French River route, say from 5th May to 1st December, that balance against it in the actual number of days navigation in the year cannot be very great, while practically, and in point of available time, it can claim an advantage over the lake route, from the fact that, owing to the lesser distance to be travelled, a vessel could make at least three trips more in the season between Chicago and Montreal by the former than it could by the latter route.”

Besides a general, we in the County of Grey have a special interest in this canal project. Its construction would have the effect of changing our front. Owen Sound and all the frontier towns would have a chance of becoming cities of the first-class, with facilities for European intercourse quite equal to that of Toronto itself. If the work we have herein indicated is ever undertaken, it will be by the Federal Government. Assuming this, the people of North Grey especially, should seek to make their influence of some practical value. If they send a man who regards everything as corruption, except it be sanctified by finding its way into his own pocket, they will reap an appropriate reward. We commend this subject to the serious consideration of our Northern brethren. Nature has given them advantages which, if properly utilized will be of more value to them than all the railroads that can be constructed.

From the *Durham Chronicle* (Co. Grey).

### No. 32.—MEMORANDUM B.

#### THE PROPOSED GEORGIAN BAY AND OTTAWA CANAL.

*To the Hon. Sir Allan Napier McNab, Kt., President of the Executive Council, Minister of Agriculture, &c., &c., &c. :*

SIR,—As First Minister of the Crown in Canada, you have been addressed more than once on the subject of the proposed canal to unite the waters of Lake Huron and the Ottawa River. During the last few months much has been said and written on this project, but nearly all by its advocates. Yet, notwithstanding all that has been said and written, very little reliable information has been given. This must have arisen either from ignorance that such information existed, or from a determination to suppress it as making against the scheme. I beg leave, therefore, to call your attention to a few facts on this subject, that may be new to you and many others.

On the 4th of March, 1837, in the Parliament of Upper Canada, an Act was passed having the following title: “An Act to provide for a Survey of the Ottawa River and the Country bordering on it, together with the Country and waters lying between that River and Lake Huron.” This Act granted £3,000 to pay the expenses of the survey, and authorized the appointment of three Commissioners to carry out its object, under its authority, the Hon. John Macaulay, then Surveyor-General, John S. Cartwright, Esq., and Captain Baddeley, Royal Engineers. In the Commissioners' Report to Sir George Arthur, they state, “That in order to carry into effect the intention of the Legislature, and to ensure, if possible, every information calculated to ascertain the practicability of making a navigable communication between the Ottawa and Huron, the Commissioners engaged three gentlemen, who were directed to take different routes, with a view of discovering the nature of the country,

the facilities of transport, the quality of the soil, and whether adapted for purposes of cultivation, besides the great object, the 'water communication.' They beg leave to subjoin the Report of David Taylor, Esq., and Messrs. David Thompson and Wm. Hawkins, the gentlemen employed, who appear to have discharged their duty with zeal and ability."

From the Report which now lies before me, I shall extract such parts as will give you a clear view of the results of their survey. Mr. Taylor ascended French River into Lake Nipissing, thence by Sturgeon River up to Lake Temiscaming; from Lake Temiscaming he descended by the mean stream of the Ottawa to the entrance of the Matawa or Little River; he ascended this river to the height of land, thence down to Lake Nipissing, through the Lake again, and down French River to Lake Huron. In his diary he gives the result of each day's examination, the distance, height of each fall and rapid, and a statement of the geological formation of the country, and its capability, in an agricultural point of view, all appearing to be done carefully and correct.

The advocates of this project state that Lake Nipissing is only about 70 feet above Lake Huron; they have some countenance for this from Mr. Hawkins' statement. But Mr. Taylor, who made the survey, and who is very circumstantial in his report, states as follows: "Summary sketch of Lake Nipissing.—Lake Nipissing is 165 feet above Lake Huron, and is irregular in its shape; in length, from the Chaudière Falls to the north-eastern extremity is twenty-eight geographical miles, and its extreme breadth from Turtle River to West River is twenty-eight miles; several small rivers flow into the lake; the principal ones are West, Sturgeon, Turtle and South. The waters are generally shallow, except in the bays, which are deep and full of rocky islands. The shores are granite, except at the entrance of some of the streams; alluvial deposit is there met with, forming banks, but too inconsiderable to be worthy of notice in an agricultural point. The fish caught in this lake are few—jack and carp are the principal, in season some sturgeon and white fish. I attribute this scarcity of fish to the extreme sterility of the surrounding country. Game of all kinds are scarce." This is part of his description in ascending. He then passes to Lake Temiscaming and down to the entrance of the Matawa River. In going up this river he describes it as generally rapid, shallow, a flat bottom full of large granite boulders, having a continual succession of high falls, the shores bold, granite, rising abruptly from the level of the river, in many places to the height of 150 feet. He makes the height of land before descending to Lake Nipissing, 200 feet above the Ottawa at the mouth of the Matawa. His whole report in connection with Mr. Hawkins' goes to show that there would be at least 700 feet of lockage from Lake Huron to Bytown.

The parties insisting on this undertaking, declare that a canal and locks of a less dimension than will pass vessels of 1,000 tons burden will be of no use. If built at all it must be so capacious as to command the whole of the western trade; in this they are correct, a small canal would be useless. Now, to find a summit feeder for such a large canal, it would be necessary to make Lake Nipissing that feeder, and to effect that, a cut would be required of at least twenty miles, and of an average depth of about 30 feet, and all through solid granite rock.

Your correspondent in the *Montreal Gazette*, of the 9th inst., Mr. James Anderson, evidently one of the best informed on this subject, as he is one of its most enthusiastic advocates, is well aware of the latter hard fact. In comparing the proposed deep cutting back of Toronto with that on this part of his favorite route, he says: "The Ottawa cutting will present 35 feet firm substance, and will not slip or give in any way." I fully concur with him in that assertion, solid granite don't easily give way, and so the advocates of the measure would find should they ever venture to make the proposed excavation.

From Mr. Taylor's report the whole country, from the mouth of the French River to the mouth of the Matawa, a distance of about 150 miles, is a granite formation, and presents insuperable difficulties to the constructing of a canal of even less dimensions than the one proposed.

Sir George Simpson, in his overland journey, confirms Mr. Taylor's statements of the difficulties in this quarter. He states that eleven portages occur in ascending the Matawa to the summit, some of them to overcome falls of at least 50 feet in height.

It will be observed that the Ottawa country rises by a succession of steps or tables, each marked on the river by a high bold rapid, or a fall over a solid rock formation. Above each such rapid or fall, the river expands into a lake, as the Lake of Two Mountains, what may be called the Grenville Lake, from Grenville to Ottawa City, the Chaudiere Lake, Chats Lake, Allumette's Lake, etc., so that the Ottawa is rather a succession of smaller lakes than a river. The question may then be asked, why is it a succession of shallow lakes? On a little reflection and an acquaintance with the country and its geological formation, the answer is obvious. Because each table is a flat solid rock, and the water could never cut a channel into it, it was forced, therefore, to expand into a lake. In the whole distance from St. Ann's to the mouth of the Matawa, about 400 miles, only one exception to this occurs—the part called the deep river. The champions of this project concur in this opinion. Mr. Powell, in his speech at Montreal, says, "It (the Ottawa) had a rocky bed, which, when once cut through would never require repairs or dredging." And Mr. Perry brings forward a carefully worded and cautiously written certificate from one he calls an Old Pilot to smooth over the shoals, ledges of rock, sandbanks, etc., in what I have called the Grenville Lake.

The advocates generally, of this grand project, have not duly considered the difficulties arising on this account. These lakes have miles of flat rock bottom, which in low water will not give a depth of ten feet, shallowing in numerous places and for long distances to less than 5 feet.—Now, to cut a channel of 200 or 300 feet in width, and from 5 to 10 feet deep, of any considerable length, in the bottom of a lake, may be considered as next to impossible. Were it possible to cut such a channel, it would be so much lower than the general bottom of the lake, it would receive all the drift, fill up, and require dredging every spring after the flood, before any vessels could pass. Your correspondent, Mr. Anderson, evidently foresees this difficulty, and proposes to get over it. His words are: "By a judicious system of damming, on a new but simple and inexpensive, and highly improved, and efficient principle, and as yet known to very few, the Ottawa can be always kept at a level of some feet above its spring flood pitch." And again: "A few dams would turn the whole river from Joachim to Matawa into a series of lakes, and any depth of water could be had from Grenville to Deep River by the same means, without doing any great injury to private property."

From the above you will observe that the best informed advocate of this project, acknowledges that it will be necessary for this great navigation, "to keep the level of the water some feet above its spring flood pitch." Now, what is this spring flood pitch? Why, at the head of the Loug Sault at Grenville, it is at least 10 feet above ordinary low water, and it will be about the same on each of the lakes up to the mouth of the Matawa.

As a further illustration of the immense magnitude of the works that would be necessary even in the view of the supporters of this project, I have to introduce the remarks of Mr. Perry, C. E., in his speech at the meeting in Montreal. He says: "There was as much water flowed over the Chaudière Falls at high water, as over the Niagara, and while Lake Ontario was navigable, they would not pretend the Lake of Two Mountains was such an expansion as to render the waters of the Ottawa unnavigable. With regard to the other obstructions, they had only to confine the volume of water within certain limits, and vessels would float over any obstructions they could find upon the river bed." You thus see that these two gentlemen concur in the same opinion—"That it will be necessary to dam the river at the entrance of the several lakes, to get a sufficient depth of water to float their large vessels."

More than one of the magniloquent advocates of this stupendous undertaking, have declared that the Ottawa passes a volume of water equal to the Ganges; for

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argument sake we will try to believe them—they agree with what Mr. Perry says as to its being equal to the Niagara River.

I well remember, Sir, the days you spent in by-gone years, and during exciting and most stirring times, on the bank of the Niagara. I am sure you have not forgotten them; nor have you forgotten the appearance and condition of that great stream. Now fancy to yourself an Engineer throwing a dam of from 12 to 25 feet in height, across the Niagara River, immediately at the head of the rapids above the Niagara Falls, and from the Canada to the American shore; you will then have some tolerable idea what it would be to build about six such dams across the magnificent Ottawa.

I have the honor to be, Sir,

Your most obedient humble servant,

JAMES WEST,

*Provincial Land Surveyor and Civil Engineer*

Strawberry Hill, South Mountain,

February 23rd, 1856.



APPENDIX No. 30.

—  
PART II.  
—

TABLES OF DISTANCES, ETC.

—  
OCEAN ROUTES

BETWEEN THE

PRINCIPAL PORTS OF CANADA AND UNITED STATES, IN NORTH AMERICA,

AND THOSE OF

FOREIGN COUNTRIES

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APPENDIX No. 30—*Continued.*

## PART II.

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- No. 14.—Definition of geographical or nautical and statute miles.



No. 1.—Quebec to Liverpool, *viâ* Straits of Belle-Ile and Malin Head, North of Ireland.

From	To	Sections of Navigation.	Geographical Miles.	Statute Miles.
Quebec .....	Saguenay .....	River St. Lawrence.....	106	122
Saguenay .....	Father Point.....	do .....	53	61
Father Point.....	Lighthouse, west end Anticosti	do .....	176	202
West end of Anticosti....	Cape Whittle, Labrador Coast.	Gulf of St. Lawrence.	175	201
Cape Whittle.....	Belle-Ile Lighthouse, east entrance of Straits .....	do .....	209	240
Belle-Ile.....	Malin Head, North of Ireland...	Atlantic Ocean .....	1,750	2,013
Malin Head.....	Liverpool.....	do and Irish Sea	192	221
Total from Quebec to Live.pool, <i>viâ</i> Belle-Ile and Malin Head, North of Ireland...			2,661	3,060

No. 2.—Head of Lake Superior to Liverpool, *viâ* Straits of Belle-Ile and North of Ireland

Sections of Navigation.	Geographical Miles.	Statute Miles.
Head of Lake Superior, at Fond du Lac, to Quebec.....	1,355	1,558
Quebec to Liverpool, <i>viâ</i> Straits of Belle-Ile and North of Ireland.....	2,661	3,060
Total from head of Lake Superior to Liverpool, <i>viâ</i> Belle-Ile and Malin Head, North of Ireland.....	4,016	4,618
N.B.—Route <i>viâ</i> Straits of Belle-Ile shorter than <i>viâ</i> Cape Race.....	158	182

Straits of Belle-Ile, 80 miles long by 14 average breadth.

No. 3.—Quebec to Liverpool, *viâ* Cape Race and Malin Head, North of Ireland.

From	To	Sections of Navigation.	Geographical Miles.	Statute Miles.
Quebec .....	Saguenay.....	River St. Lawrence ....	106	122
Saguenay .....	Father Point.....	do .....	53	61
Father Point.....	Métis Point.....	do .....	22	25
Métis .....	Cap Ste. Anne des Monts.....	do .....	71	82
Cap Ste. Anne des Monts	Cap de la Madeleine.....	do .....	46	53
Cap de la Madeleine. ....	Fame Point.....	do .....	29	33
Fame Point.....	Cap des Rosiers.....	do .....	25	29
Cap des Rosiers.....	Cap St Pierre de Miquelon .....	Gulf of St. Lawrence.	343	394
Cap St. Pierre de Miquelon	Cape Race .....	Atlantic Ocean .....	132	152
Cape Race.....	Malin Head.....	do do .....	1,800	2,070
Malin Head.....	Liverpool.....	do and Irish Sea	192	221
<b>Total from Quebec to Liverpool, <i>viâ</i> Cape Race and Malin Head, North of Ireland</b>			<b>2,819</b>	<b>3,242</b>

No. 4.—Head of Lake Superior to Liverpool, *viâ* Cape Race and North of Ireland.

Sections of Navigation.	Geographical Miles.	Statute Miles.
Head of Lake Superior, at Fond du Lac, to Quebec.....	1,355	1,558
Quebec to Liverpool, <i>viâ</i> Cape Race and North of Ireland. ....	2,819	3,242
<b>Total from head of Lake Superior to Liverpool, <i>viâ</i> Cape Race and Malin Head, North of Ireland.....</b>	<b>4,174</b>	<b>4,800</b>
<b>N.B.—Route <i>viâ</i> Cape Race longer than <i>viâ</i> Straits of Belle-Ile.....</b>	<b>158</b>	<b>182</b>

No. 5.—Prince Arthur's Landing, North Shore, Lake Superior, to Liverpool, *viâ* Straits of Belle Ile and North of Ireland.

Sections of Navigation.	Geographical Miles.	Statute Miles.
Prince Arthur's Landing, North Shore of Lake Superior to Quebec.....	1,250	1,438
Quebec to Liverpool, <i>viâ</i> Straits of Belle-Ile and Malin Head, North of Ireland	2,661	3,060
<b>Total from Prince Arthur's Landing to Liverpool, <i>viâ</i> Belle-Ile, and Malin Head, North of Ireland.....</b>	<b>3,911</b>	<b>4,498</b>
<b>N.B.—Route <i>viâ</i> Cape Race longer than <i>viâ</i> Straits of Belle-Ile.....</b>	<b>158</b>	<b>182</b>

No. 6.—Distance to Liverpool, from Halifax, N.S.; St. John, N.B.; Portland, State of Maine; and Quebec, as measured on Colton's Map of 1861.

Halifax to Liverpool, *via* Cape Clear.

From	To	Sections of Navigation.	Distance in Miles.	
			Geographical.	Statute.
Halifax, N.S.....	Cape Clear.....	Across Atlantic to S.W. end of Ireland....	2,200	2,530
Cape Clear.....	Liverpool.....	Up St. George's Channel.....	330	380
		Total.....	2,530	2,910

St. John to Liverpool, *via* Cape Clear.

St. John, N.B.....	Cape Sable.....	Across Bay of Fundy to S.W. end of Nova Scotia.....	180	207
Cape Sable.....	Cape Clear.....	Across Atlantic to S.W. end of Ireland....	2,310	2,656
Cape Clear.....	Liverpool.....	Up St. George's Channel.....	330	380
		Total.....	2,820	3,243

Portland to Liverpool, *via* Cape Sable and Cape Clear.

Portland, State of Maine.	Cape Sable.....	Across Bay of Fundy to S.W. end of Nova Scotia.....	210	242
Cape Sable.....	Cape Clear.....	Across Atlantic to S.W. end of Ireland....	2,310	2,656
Cape Clear.....	Liverpool.....	Up St. George's Channel.....	330	380
		Total.....	2,850	3,278

Quebec to Liverpool, *via* Cape Race and North of Ireland.

Quebec.....	Cape Race.....	River and Gulf of St. Lawrence to S.W. point of Newfoundland.....	827	951
Cape Race.....	Malin Head.....	Across Atlantic to N. end of Ireland.....	1,800	2,070
Malin Head.....	Liverpool.....	Down North Channel.....	182	221
		Total.....	2,819	3,242

Quebec to Liverpool, <i>via</i> Straits of Belle-Ile and Malin Head, North of Ireland..			2,661	3,060
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For further details, see preceding tables of distances. G.F.B.

No. 7.—TABLE of distances from the principal seaports in North America to Galway,  
 {Liverpool, Havre, Havana and Rio Janeiro.

	Geographical Miles.
Louisburg, N.S., to Galway .....	2,100
do Liverpool .....	2,350
do Havre .....	2,450
do Havana .....	1,700
do Rio Janeiro .....	5,200
Halifax, N.S., to Galway .....	2,240
do Liverpool .....	2,500
do Havre .....	2,600
do Havana .....	1,600
do Rio Janeiro .....	5,100
St. John, N.B., to Galway .....	2,450
do Liverpool .....	2,700
do Havre .....	2,800
do Havana .....	1,550
do Rio Janeiro .....	5,050
Quebec to Louisburg, <i>Vid</i> Cape North .....	742
do Galway { <i>Vid</i> Belle-Ile .....	2,392
do do Cape Race .....	2,700
do Liverpool { <i>Vid</i> Belle-Ile (2,661 Colton's map) .....	2,649
do do Cape Race (2,819 do) .....	2,808
do Havre { <i>Vid</i> Belle-Ile .....	2,810
do do Cape Race .....	2,939
do Havana .....	2,891
do Rio Janeiro .....	5,546
Boston to Galway .....	2,600
do Liverpool .....	2,895
do Havre .....	2,993
do Havana .....	1,530
do Rio Janeiro .....	4,935
New York to Galway .....	2,700
do Liverpool .....	3,095
do Havre .....	3,228
do Havana .....	1,240
do Rio Janeiro .....	4,885
Philadelphia to Liverpool .....	3,275
do Havre .....	3,358
do Havana .....	1,190
do Rio Janeiro .....	4,990
Baltimore to Liverpool .....	3,450
do Havre .....	3,543
do Havana .....	1,160
do Rio Janeiro .....	5,000
Richmond to Liverpool .....	3,380
do Havre .....	3,473
do Havana .....	1,090
do Rio Janeiro .....	4,930
New Orleans to Liverpool .....	4,780
do Havre .....	4,838
do Havana .....	505
do Rio Janeiro .....	5,315

## No. 8.—CANADIAN and Brazilian Mail Line of Steamships.

From	To	Inter- mediate Mileage.	Total Distances.	Remarks.
Montreal.....	Quebec.....	160	.....	SS. "Comte d'Eu," 2,000 tons.
Quebec.....	Gaspé.....	350	510	SS. "Tancarville," 2,000 tons.
Gaspé.....	Halifax.....	400	910	Monthly to and from Montreal in summer; and to Halifax in winter.
Halifax.....	St. Thomas.....	1,584	2,494	
St. Thomas.....	Para.....	1,326	3,820	
Para.....	Maranhao.....	390	4,210	
Maranhao.....	Ceara.....	440	4,650	
Ceara.....	Pernambuco.....	390	5,040	
Pernambuco.....	Bahia.....	430	5,470	
Bahia.....	Rio Janeiro.....	825	6,295	
		6,295		

## No. 9.—The Principal Ocean Steam Routes throughout the World, with Distances in Nautical or Geographical Miles, and the average time in days, from England to the West—Canada, United States, West Indies, South America, Asia, &amp;c.

From.	To.	Miles from Eng- land.	Days from Eng- land.	Remarks.
Liverpool.....	New York.....	3,046	12	
do.....	Quebec.....	2,634	10	
Southampton.....	St. Thomas (West Indies).....	3,570	14	
do.....	Jamaica do.....	4,270	17	
do.....	Colon or Aspinwall (Central America).....	4,820	19	
do.....	Panama do.....	4,860	20	
do.....	Calao (South America).....	6,250	29	
do.....	Valparaiso do.....	7,650	39	
do.....	Demerara do.....	4,460	20	
do.....	Bahia (Brazil).....	4,408	22	
do.....	Rio Janeiro (Brazil).....	5,140	26	
do.....	Buenos Ayres (La Plata).....	6,178	31	
do.....	San Francisco (by Panama).....	8,190	35	
do.....	Victoria, B. C., do.....	8,950	42	
do.....	Wellington (New Zealand) (by Panama).....	11,400	48	
do.....	Yokohama (Japan) do.....	12,710	56	
do.....	Shanghai (China) do.....	13,745	61	

No. 10.—THE Principal Ocean Steam Routes throughout the World, with Distances in Nautical or Geographical Miles, and the average time in Days, from England to the East—India, China, Japan and Australia, by Overland Route.

From	To	Miles from Eng-land.	Days from Eng-land.	Remarks.
Southampton .....	Gibraltar, Europe.....	1,151	5	
do .....	Malta, Mediterranean.....	2,132	9	
do .....	Alexandria, Africa.....	2,951	14	
do .....	Suez do .....	3,203	15	
do .....	Aden do .....	4,511	21	
do .....	Bombay, India.....	6,175	30	
do .....	Galle, Ceylon, India.....	6,645	32	
do .....	Madras do .....	7,190	36	
do .....	Calcutta do .....	7,960	40	
do .....	Penang do .....	7,858	38	
do .....	Singapore do .....	8,239	40	
do .....	Hong Kong, China.....	9,676	49	
do .....	Shanghai do .....	10,546	54	
do .....	Pekin do .....	11,273	59	
do .....	Nagasaki, Japan.....	11,016	60	
do .....	Yokohama, Yedo (re-named Tokio), Japan .....	11,586	65	
do .....	King George's Sound, Australia.....	9,975	48	
do .....	Melbourne do .....	11,315	54	
do .....	Sydney do .....	11,875	57	
do .....	Auckland, New Zealand.....	13,083	64	
do .....	Otago do .....	12,423	62	

The above may be shortened 4 days by the Continental Route from London to Marseilles *viâ* Paris, and thence to Alexandria in 9 days instead of 13, as in the above *viâ* Gibraltar.

No. 11.—THE Principal Ocean Steam Routes throughout the World, with Distances in Nautical or Geographical Miles, and the average time in Days. Route to the East by the Cape of Good Hope.

From	To	Miles from Eng-land.	Days from Eng-land.	Remarks.
Southampton.....	Cape of Good Hope.....	5,850	38	
do .....	Natal .....	6,570	44	
do .....	Mauritius.....	8,162	53	
do .....	Madras, India.....	13,000	66	
do .....	Calcutta do .....	13,770	69	
do .....	Melbourne, Australia.....	11,720	60	
do .....	Sydney do .....	12,280	64	
do .....	Otago, New Zealand.....	13,046	70	
do .....	Auckland do .....	13,540	72	
Melbourne, Australia.....	Liverpool, by Cape Horn.....	13,200	66	

See Mercator's Map of the World.

No. 12.—TABLE of Latitudes and Longitudes of Principal Canadian Ports.

	North Latitude.			West Longitude.		
	°	'	''	°	'	''
Halifax, N.S., dockyard observatory.....	44	39	04	63	35	00
Louisburg, N.S., lighthouse.....	45	54	39	59	57	15
Sydney do E. Church tower.....	46	08	45	60	12	50
Pictou do tower of custom house.....	45	40	50	62	42	10
Charlottetown, P.E.I., province building.....	46	14	19	63	07	37
St. John, N.B., time ball on custom house.....	46	16	42	66	03	45
Fredericton, N.B.....	46	03	00	66	38	15
Quebec, P.Q., citadel.....	46	49	12	71	12	15
Three Rivers, P.Q.....	46	23	00	72	33	00
Montreal do.....	45	31	00	73	33	00
Ottawa, Ont.....	45	23	00	75	42	00
Kingston, Ont., city clock.....	44	15	15	76	28	30
Toronto do lighthouse on Queen's Wharf.....	43	38	29	79	28	35
Hamilton do.....	43	54	00	79	57	00
Rondeau do lighthouse, south end of east pier.....	42	15	35	81	54	25
Port Colborne, Ont, lighthouse, west pier.....	42	53	00	79	19	30
Goderich do do.....	43	45	10	81	32	30
Collingwood do do on break water.....	44	31	00	80	02	10
Prince Arthur's Landing.....	48	24	00	89	28	00
Winnipeg, Manitoba.....	49	52	00	97	08	00
Victoria, B.C.....	48	39	00	123	25	00

J. E

GREAT CIRCLE OR AIR LINE DISTANCES.

No 13.—GREAT CIRCLE or Air Line Distances in Geographical Miles, as per Map of the Dominion of Canada. Published by order of the Hon. the Minister of the Interior, the 1st November, 1873.

From	To	Miles.
Yokohama (Japan).....	Port Simpson.....	3,865
do.....	Port Moody (Burrard Inlet).....	4,374
do.....	San Francisco.....	4,470
San Francisco.....	New York.....	2,228
do.....	Montreal.....	2,202
Burrard Inlet.....	do.....	1,992
Port Simpson.....	do.....	2,194
St. John, (N'fd).....	Cape Clear.....	1,670
do.....	Tory Island.....	1,693
Montreal.....	Quebec (River St. Lawrence).....	145
do.....	Cape Race (via St. Paul).....	1,013
do.....	Belle-Ile.....	892
Belle-Ile.....	Tory Island.....	1,657
Cape Race.....	do.....	1,736
do.....	Cape Clear.....	1,708
Tory Island.....	Liverpool.....	240
Cape Clear.....	do.....	310
Halifax.....	Cape Race.....	470
Portland.....	do.....	767
Boston.....	do.....	808
New York.....	do.....	1,010

**NO. 14.—DEFINITION OF GEOGRAPHICAL OR NAUTICAL AND STATUTE MILES.**

A nautical mile, or sea mile, is the length of one minute of longitude of the earth at the equator, at the level of the sea, or the  $\frac{1}{21600}$  part of the earth's equatorial circumference. By the United States standard, and as used by the Coast Survey, its length is 1,152,664 common statute or land miles; 1855.11 metres; 2028.69 yards; or 6086.07 feet; consequently, one degree of longitude at the equator = 69,160 land miles; and a land mile = 0.86755 of a nautical mile. By British standard the sea mile is about 4 ins. longer than by United States. Sometimes one minute of mean *latitude* is taken as a nautical mile. A minute of latitude at the equator is about 6,046 feet; and at the Poles about 6,107; the mean of which is 6,076 $\frac{1}{2}$  feet.

Lengths of a degree of longitude in different latitudes, and at the level of the sea.

These lengths are in common land or statute miles, of 5,280 feet. Since the figure of the earth has never been *precisely* ascertained, these are but close approximations.

Degree of Latitude.	Miles.	Degree of Latitude.	Miles.	Degree of Latitude.	Miles.	Degree of Latitude.	Miles.	Degree of Latitude.	Miles.	Degree of Latitude.	Miles.
0	69·16	14	67·12	28	61·11	42	51·47	56	38·76	70	23·72
2	69·12	16	66·50	30	59·94	44	49·83	58	36·74	72	21·43
4	68·99	18	65·80	32	58·70	46	48·12	60	34·67	74	19·12
6	68·78	20	65·02	34	57·39	48	46·36	62	32·55	76	16·78
8	68·49	22	64·15	36	56·01	50	44·54	64	30·40	78	14·42
10	68·12	24	63·21	38	54·56	52	42·67	66	28·21	80	12·05
12	67·68	26	62·20	40	53·05	54	40·74	68	25·98	82	9·66

Intermediate ones may be found correctly by simple proportion. See Trautwine—at pages 74 and 75.



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APPENDIX No. 30.

PART III.

TABLES OF DISTANCES, ETC.

INTERPROVINCIAL ROADS

AND

LAND ROUTES TO THE SEABOARD

GOVERNMENT RAILWAYS

AND

GOVERNMENT TELEGRAPH LINES

TOGETHER WITH

TABLE OF THE BRITISH POSSESSIONS THROUGHOUT THE WORLD,  
POPULATION AND EXTENT OF THE GLOBE, AND  
TABLE OF LARGEST EMPIRES,  
ETC., ETC.

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## APPENDIX No. 30.

## PART III.

## INDEX

## TABLES OF DISTANCES, ETC.

- No. 1. New Road, Quebec to Lake St. John,  
Railway, do do
- No. 2. Quebec to Labrador, along the north shore of the St. Lawrence.
- No. 3. Population of settlements, Tadoussac to Labrador.
- No. 4. Prince Edward Island Railway and connections.
- No. 5. Quebec to Gaspé Basin, *viâ* Métapédiac Road and Railway.
- No. 6. do do along south shore of St. Lawrence.
- No. 7. Quebec to Halifax, *viâ* Métapédiac Road and Railway.
- No. 8. do do *viâ* Témiscouata Road, Woodstock, Fredericton, St. John and Amherst.
- No. 9. do do *viâ* Témiscouata Road, Woodstock, St. Andrew's, St. John and Windsor, crossing the Bay of Fundy.
- No. 10. do do *viâ* Témiscouata Road, Woodstock, Fredericton, St. John and Annapolis, crossing the Bay of Fundy.
- No. 11. Quebec to St. Andrew's, Bay of Fundy, New Brunswick, *viâ* Témiscouata Road, Grand Falls and Woodstock.
- No. 12. Quebec to St. John, Bay of Fundy, New Brunswick, *viâ* Témiscouata Road, Grand Falls, Woodstock and Fredericton.
- No. 13. Quebec to St. John, Bay of Fundy, New Brunswick, *viâ* Témiscouata Road, Grand Falls, Woodstock and St. Andrew's.
- No. 14. Quebec to Maritime Provinces, *viâ* Intercolonial Railway.
- No. 15. do do do *viâ* Témiscouata Road and the railways in the valley of the River St. John.
- No. 16. Prince Arthur's Landing (Lake Superior) to Winnipeg, by the Dawson route.
- No. 17. Prince Arthur's Landing to Winnipeg and westward, by the Canadian Pacific Railway.
- No. 18. Government Telegraph Lines, constructed and projected. Summary showing proportion of Land and Cable Telegraph Lines owned or operated by Government in the several Provinces.
- No. 19. Table of the British Possessions throughout the World, with their populations and areas in English square miles.
- No. 20. Estimated Population of the Globe.
- No. 21. Table of the Largest Empires.

## No. 1.—DISTANCES—New Road—Quebec to Lake St. John.

From	To	Intermediate Mileage.	Total Mileage.
Quebec.....	Boundary Post.....	15	
Boundary Post.....	1st Camp, Lachance (Stoneham).....	8	23
1st Camp, Lachance (Stoneham).....	2nd do Noël.....	11½	34½
2nd do Noël.....	3rd do Lac des Roches.....	9	43½
3rd do Lac des Roches.....	4th do Lake Jacques Cartier.....	14	57½
4th do Lake Jacques Cartier.....	5th do Pikauba.....	13	70½
5th do Pikauba.....	6th do Bédard.....	12	82½
6th do Bédard.....	7th do Rivière Upika.....	12	94½
7th do Rivière Upika.....	8th do do Pika.....	10½	104½
8th do do Pika.....	9th do do aux Ecorces.....	11	115½
9th do do aux Ecorces.....	10th do Lake Belle Rivière.....	10½	126
10th do Lake Belle Rivière.....	St. Jérôme, at lower end of Lake St. John, on south side.....	14	140
St. Jérôme.....	Chicoutimi.....	50	

Mail passes three times a week, winter and summer.

Time : 20 hours, Quebec to Lake Jacques Cartier (per mail).

do 28 hours, Lake Jacques Cartier to St. Jérôme (per mail).

Total 48 hours, Quebec to Lake St. John (per mail).

Total distance 140 miles, Quebec to Lake St. John.

## REMARKS.

## MAIL ROAD—QUEBEC TO LAKE ST. JOHN.

Messrs. Blaiklock and Duberger, Provincial Land Surveyors, first examined the country between Quebec and Lake St. John in 1847-1848, for a road, but did not find a practicable route throughout.

In 1863, Messrs. Vallée and Picard located and opened, at their own expense, the first five miles of the road from Stoneham.

In 1864, with the aid of other citizens from Quebec, they continued to locate and open it as far as Lake Jacques Cartier, for a total distance of about thirty miles.

Mr. Jean Gagnon afterwards, at the request of the Reverend G. Tremblay, curate of Beauport, located the remainder of the line towards St. Jérôme, on the east side of Lake St. John, and stated that the aggregate length of the hills between Lake Jacques Cartier and Lake St. John, did not exceed three and a-half miles.

In 1877, the Local Government of the Province of Quebec undertook the construction of the road, which is about twenty-four feet in width.

The depth of snow in winter varies from three to three and a-half feet.

## RAILWAY—QUEBEC TO LAKE ST. JOHN.

A railway is now in progress of construction since 1879, from Quebec to Lake St. John, running south of Lake St. Joseph, from the crossing of the River Jacques Cartier direct to St. Raymond, thence *via* River Batiscan and Lake Edward to the Township of Roberval, near the River Ouiatchouan, at Lake St. John, through a considerable extent of good agricultural and finely timbered country, and with practicable grades.

The summit intervening between the St. Lawrence and Lake St. John is 1,348 feet, and is at 123 miles from Quebec.

The summit can be surmounted by grades varying from 20 to 80 feet per mile for most of the distance, and from 80 to 132 on the remainder, say for 25 miles.

It is now constructed, and has been in operation during the past year, from Quebec to St. Raymond.

The length of the railway being constructed is as follows, viz. :—

	Miles:
Quebec to Lorette Junction, <i>via</i> North Shore Railway (in operation).....	4
Lorette Junction to St. Raymond (in operation).....	31
St. Raymond to Lake St. John (proposed) .....	144
	<hr/>
Probable total length, when completed.....	179

In the immediate vicinity of the railway there are six millions of acres of land, out of which three millions are reported as being well adapted for settlement.

See report of A. L. Light, Engineer-in-Chief of Government Railways, Province of Quebec, dated 9th March, 1881, in answer to an Order of the House of Commons, dated 14th February, 1881.

For progress of work and funds granted towards its construction, see Appendix No. 8, pages 348, 349.

In addition to sums granted as stated in Appendix No. 8, viz. :

\$384,000 by Federal Government, by Act 45 Vic., cap. 14, passed in 1882.

\$350,000 by Municipal Council, Quebec, under by law of 9th February, 1883.

The Provincial Government of Quebec have granted \$5,000 in money and 5,000 acres of land per mile, on 170 miles, by Act 45 Vic., cap. 23, of 1882, and previous Acts passed.

See No. 33,360, 9th April, 1883, from J. G. Scott, Secretary Lake St. John Railway Company.

No. 2. —TABLE of Distances from Quebec to Labrador, along North Shore of the St. Lawrence.

From	To	Intermediate Mileage.	Total Mileage from Quebec.	Remarks.
Quebec	Beauport	3	3	Provincial Highway.
Beauport	Montmorency Falls	4	7	do
Montmorency Falls	Ange Gardien	3	10	do
Ange Gardien	Château Richer	6	16	do
Château Richer	St. Anne de Beaupré	6	22	do
St. Anne de Beaupré	St. Joachim	5	27	do
St. Joachim	St. Tite des Caps	9	36	do
St. Tite des Caps	St. Paul's Bay	24	60	do
St. Paul's Bay	Les Eboulements	9	69	do
Les Eboulements	St. Irénée	9	78	do
St. Irénée	Pointe à Pic	9	87	do
Pointe à Pic	Murray Bay	3	90	do
Murray Bay	Cap à l'Aigle	3	93	do
Cap à l'Aigle	St. Fidèle	6	99	do
St. Fidèle	St. Siméon or Black River	10	109	do
St. Siméon	Port au Persil	8	117	do
Port au Persil	Pointe au Bouleau	9	126	do
Pointe au Bouleau	Anse du Portage	5	131	do
Ferry Anse du Portage (across mouth of River Saguenay)	Anse à l'Eau	1	132	do
Anse à l'Eau	Tadoussac	1	133	do
Tadoussac	Les Petites Bergeronnes	9	142	do
Les Petites Bergeronnes	Escoumains	9	151	do
Escoumains	Mille-Vaches	18	169	do
Mille-Vaches	Portneuf	9	178	Beach used—2 portages.
Portneuf	Sault au Cochon	7	185	do
Sault au Cochon	Ilets de Jérémie	18	203	Track req. through forest.
Ilets de Jérémie	Betsiamitts (Betsiamits)	7½	210½	Beach used.
Betsiamitts (Betsiamits)	Pointe aux Outardes	12	222½	do
Pointe aux Outardes	Manicouagan	15	237½	Track req. through forest.
Manicouagan	River Godbout	27	264½	do do
River Godbout	Pointe des Monts	12	276½	do do
Pointe des Monts	Trinité	7	283½	Beach used.
Trinité	Ilet Caribou	7½	291	do
Ilets à Caribou	Baie des Kani	22	313	do
Baie des Kani	Jambon	8	321	Track req. through forest.
Jambon	River Ste. Marguerite	12	333	do do
River Ste. Marguerite	Sept Iles	12	345	do do
Sept Iles	River Moisy	19	364	Beach used.
River Moisy	River à la Truite	8	372	do
River à la Truite	Cormoran	8	380	do
Cormoran	Pigou	7	387	do
Pigou	River au Bouleau	7	394	Fine beach—short portage.
River au Bouleau	River Matemek	7	401	do do
River Matemek	River Chaloupe	8	409	do do
River Chaloupe	River Shaldrac	7	416	do do
River Shaldrac	River Tonnerre	7	423	do do
River Tonnerre	Portage du Loup-Marin	8	431	do do
Portage du Loup-Marin	River Magpie	7	438	do do
River Magpie	River St. Jean	7	445	do do
River St. Jean	Longue Pointe	9	454	do do
Longue Pointe	Poste de Mingan	5	459	do do
Poste de Mingan	Pointe aux Esquimaux	18	477	do do
Pointe aux Esquimaux	Nataskouan	64	541	do do
Nataskouan	Tshikaaska	18	559	
Tshikaaska	Mecatins	75	634	
Mecatins	Bonne Espérance	99	733	
Bonne Espérance	Blanc Sablon	24	757	Boundary of Labrador, Newfoundland and Canada.

No. 3.—POPULATION of various Settlements between Tadoussac and Labrador, on the North Shore of the St. Lawrence.

Names of Places.	Census Returns.		Church Returns.		
	No. of Persons.	No. of Persons.	No. of Families.	No. of Families.	No. of Persons.
	1871.	1881.	1864.	1881.	1881.
Tadoussac.....	765	1,542	Not obtained	131	1,070
Escoumains.....	1,023	520	do	163	1,133
Mille-Vaches.....		1,115	do		
Portneuf.....	1,790		do	109	1,037
Sault au Cochon.....			2	45	290
Ilets de Jérémie.....			1		
* Betsiamits (Betsiamits or Bersimis)	552		110	176	687
Pointe aux Outardes.....			5		
Manicouagan.....	86	120	3	13	100
* River Godbout.....			17	13	59
Pointe des Monts.....	106	243	3		
Trinité.....			3		
Ile aux Œufs.....					
Pointe aux Anglais.....				24	127
Rivière Pentecôte.....					
Cailles Rouges.....					
Ilets à Caribou.....				9	65
* Rivière Ste. Marguerite.....			2		
* Sept Iles.....	191		35	83	385
Rivière Moisy.....	336	241	18	22	114
Rivière à la Truite.....			2		
Cormoran.....			2		
Pigou.....			6		
Rivière au Bouleau.....			2		
River Matemek.....			2		
River Chaloupe.....			2		
River Sheldrake.....			6		
Petit Manitou.....					133
Rivière au Tonnerre.....			5	16	90
Rivière du Loup-Marin.....			3		
River Magpie.....			6	42	240
Rivière St. Jean.....			13	27	173
* Longue Pointe.....			14		
* Mingan.....	560		110	75	310
Pointe aux Esquimaux.....	862	1,775	75	181	967
Betchouan, &c.....				35	177
Nataskouan.....	358	480	44	53	286
Nampissippi.....					
Havre à la Croix.....				22	90
Mécatina.....	280	410	Not obtained		
Tête à la Baleine.....				48	254
Baie des Moutons.....					
Tabatière.....					
Anse des Dunes.....				89	425
St. Augustin.....					
Blanc Sablon.....					
Bonne Esperance.....	266	341	Not obtained		
* Romaine.....				68	245
	7,175	6,787	491	1,468	8,457

In places of preceding table marked thus (\*) the population is divided as follows:—

Name of Place.	Whites.		Indians.	
	No. of Families.	No. of Persons.	No. of Families.	No. of Persons.
Betsiamits .....	56	207	120	480
River Godbout.....	7	45	6	14
Rivière Ste. Marguerite and Sept Iles.....	18	110	65	275
Longue Pointe and Mingan.....	18	96	57	214
Romaine.....			68	245
	99	458	316	1,228

Population of settlements given in Census of 1871 and Census of 1881 include intermediate places:

The returns for 1864 were obtained from Rev. C. Arnaud, Oblat Missionary, and those for 1881 were furnished by the kindness of His Lordship the Bishop of Rimouski for places from Sault au Cochon to Romaine; and by Rev. Father Laberge, Secretary to His Lordship the Bishop of Chicoutimi, for Tadoussac, Escoumains, Mille-Vaches and Portneuf.

G. F. B.

## No. 4.—DISTANCES—Prince Edward Island Railway and Connections.

From	To	Intermediate Mileage.	Total Mileage. from Charlottetown.	Remarks.
Charlottetown .....	County Line.....	32	.....	via P. E. I. Railway.
County Line.....	Summerside.....	17	49	do
Summerside.....	Alberton.....	53	102	do
Alberton.....	Tignish.....	14	116	do
Charlottetown.....	Mount Stewart.....	22		
Mount Stewart.....	Georgetown.....	24	46	do
do .....	Souris.....	39	61	do

WINTER ROUTE *via* THE CAPES.

Charlottetown .....	County Line.....	32	.....	via P. E. I. Railway.
County Line.....	Cape Traverse .....	16	48	Stage.
Cape Traverse.....	Cape Jourimain.....	12	60	Ice boats.
Cape Jourimain.....	Au Lac.....	45	105	Stage.
Au Lac.....	St John, N.B.....	131	236	Intercolonial Railway.
do .....	Halifax, N.S.....	145	250	do
do .....	Quebec, P.Q.....	542	647	do

WINTER ROUTE *via* GEORGETOWN AND PICTOU.

Charlottetown.....	Georgetown.....	46	.....	P. E. I. Railway.
Georgetown .....	Pictou.....	45	91	Steamer "Northern Light."
Pictou.....	Truro.....	52	143	Intercolonial Ry. (Pictou Branch)
Truro.....	Halifax, N.S.....	62	205	do do
do .....	St John, N.B.....	214	357	Intercolonial Railway.
do .....	Quebec, P.Q.....	625	768	do



No. 5.—**QUEBEC TO GASPÉ BASIN, via Provincial Highway, along South Shore of the St. Lawrence to Ste. Flavie; thence by Métapédiac Road; thence by the present Highway along the north side of the Baie des Chaleurs—prior to continuation of Railway from Rivière du Loup, downward.**

From	To	Intermediate Mileage.	Total Mileage from Quebec.	Remarks.
Quebec.....	Rivière du Loup.....	114	114	128 miles per Grand Trunk, now Intercolonial Railway, to Government Wharf, which is about 3 miles from Railway Station and 1½ miles from Village.
Rivière du Loup.....	Rimouski.....	66	180	Government Wharf, about 1½ miles from Village.
Rimouski.....	Ste. Flavie.....	21	201	North end Métapédiac Road, on St. Lawrence, at 5 miles from north end of Kempt Road.
Ste. Flavie.....	Mouth of the River Métapédiac.....	93½	294½	At Junction of River Restigouche.
Mouth of River Métapédiac.....	James Sillars.....	5	299½	South end Métapédiac Road, on Restigouche.
James Sillars.....	South end of Kempt Road.....	3	302½	On the River Restigouche.
South end of Kempt Road.....	Opposite Campbellton.....	4½	307	do do
Opposite Campbellton.....	River Nouvelle.....	18	325	Along Bay of Restigouche.
River Nouvelle.....	Carleton.....	10	335	Along Baie des Chaleurs.
Carleton.....	Great Casopédiac River.....	13½	348½	do do
Great Casopédiac River.....	Great Bonaventure River.....	22½	371	do do
Great Bonaventure River.....	New Carlisle.....	8½	379½	Chief-Lieu, Co. of Bonaventure, along Baie des Chaleurs.
New Carlisle.....	Paspébiac.....	3	382½	Along Baie des Chaleurs.
Paspébiac.....	Nouvelle, Township of Hope.....	5½	388	do do
Nouvelle, Township of Hope.....	West Point of Port Daniel.....	9	397	do do
West Point of Port Daniel.....	Pabos Village.....	21½	418½	do do
Pabos Village.....	Grand River.....	7½	426½	do do
Grand River.....	Junction of road, 1½ miles above Percé.....	16½	442	do do
Junction of road, 1½ miles above Percé.....	Malbale, at outlet of Barachois.....	8½	450½	do do
Malbale, at outlet of Barachois.....	Belle Anse.....	2½	452½	At road intersection, 2½ miles above Point Peter, between Baie des Chaleurs and Gaspé Bay.
Belle Anse.....	Douglasstown.....	11½	464½	Along Gaspé Bay.
Douglasstown.....	Gaspé Basin.....	6½	470½	Fort Ramsay.

REMARK.—The 128 miles from Quebec to Rivière du Loup do not comprise the 1 mile of ferry from Quebec to Point Lévis.

No. 6.—**QUEBEC TO GASPÉ BASIN, *via* Provincial Highway, along South Shore of St. Lawrence, to Ste. Anne des Monts, thence by proposed Road to Great Fox River, thence by the New Road to Griffin's Cove and Peninsula, and the Ferry across Gaspé Bay.**

From	To	Intermediate Mileage.	Total Mileage from Quebec.	Remarks.
Quebec.....	Rivière du Loup.....	114	114	128 miles by railway to Government Wharf, which is 1½ miles from village, and 3 miles from railway station.
Rivière du Loup.....	Rimouski.....	66	180	Government Wharf, about 1¼ miles from village.
Rimouski.....	Ste. Flavie.....	21	201	North end of Métapédiac Road.
Ste. Flavie.....	Grand Métis.....	5	206	North end of Kempt Road.
Grand Métis.....	Matane.....	33½	239½	West end of Government Road.
Matane.....	Ste. Félicité.....	9	248½	
Ste. Félicité.....	Grosses Roches.....	9	257½	
Grosses Roches.....	Grands Méchins.....	9	266½	
Grands Méchins.....	Capuçins.....	9	275½	
Capuçins.....	Cap de Chatte.....	9	284½	East end of Government Road at River Cap de Chatte. District of Rimouski ends at Cap Chatte Light-house. District of Gaspé begins at Cap Chatte Lighthouse.
Cap de Chatte.....	Ste. Anne des Monts.....	12	296½	East end of Government Road.
Ste. Anne des Monts.....	Latourle.....	1½	297½	West end of South Gulf Shore Road.
Latourle.....	Great Magdalen River.....	6½	304	½ of South Gulf Shore Road.
Great Magdalen River.....	Great Fox River.....	50½	412½	do
Great Fox River.....	Griffin's Cove.....	6	418½	do
Griffin's Cove.....	Peninsula.....	7	425½	East end of South Gulf Shore Road.
Peninsula.....	Gaspé Basin.....	3½	429	Government Road across Peninsula. Ferry across Gaspé Bay.

N. B.—The mileage of the various places along the Provincial Highways, as above, is that which is generally charged to travellers. The above route is 41½ miles shorter than the route by the Métapédiac and Baie des Chaleurs.

From Quebec to St. Octave or Little Métis by Intercolonial Railway, the distance is 218 miles across a level and well settled country.

From Little Métis Railway Station to the watering place at Petit Métis, the distance is about 5 miles, and thence to Matane Village, about 23 miles.

From Griffin's Cove the road continues downward to Cape Rosier Lighthouse, a distance of 9 miles further, or of 427½ miles below Quebec.

No. 7.—QUEBEC TO HALIFAX, *viâ* Métapédia Road—Prior to continuation of Intercolonial Railway from Rivière du Loup downward.

Names of Places.	Intermediate Mileage.	Total Mileage from		Remarks.
		Quebec.	Halifax.	
Quebec—				
Quebec .....	0	0	699	Mail Route.
Rivière du Loup .....	126	126	573	Intercolonial Railway 12½ miles longer than road along South Shore of St. Lawrence.
Rimouski .....	66	192	507	On road do do
Ste. Flavie .....	21	213	486	Northern and Métapédia Road, on do
Mouth of Métapédia River	94½	307½	391½	At confluence of Restigouche River.
Cross Point, South end Métapédia Road.....	15½	323	376	At head of Baie des Chaleurs.
New Brunswick—				Riv. Restigouche, boundary between Quebec and N.B.
Campbellton .....	1	324	375	Ferry from Cross Point across mouth of Restigouche.
Dalhousie .....	16	340	359	On Baie des Chaleurs.
Belle-Dune.....	31	371	328	do do
Bathurst.....	23	394	305	do do
Chatham.....	46	440	259	Miramichi Bay, Gulf St. Lawrence.
Richibucto.....	40	480	219	E. entrance Northumberland Strait, Gulf St. Lawrence.
Shédiac .....	36	516	183	On do do
Bend of Petitcodiac.....	15	531	108	On River emptying into Bay of Fundy.
Nova Scotia—				
Amherst.....	44	575	124	Head of Bay of Fundy, N.-W. arm of Cumberland Basin.
Truro .....		638	61	Head of Cobequid Bay, Bay of Fundy, S.E. arm.
Halifax .....	61	699	0	Railway ending on Atlantic Ocean.

REMARK.—The 126 miles per Intercolonial, formerly Grand Trunk Railway, comprise 1 mile of ferry from Quebec to Point Lévis, and 125 miles to the Rivière du Loup Railway Station.

From Campbellton to the River St. John near the mouth of the Tobique River, 132 miles. The mouth of the Tobique River is 11 miles above Rivière de la Chûte and 27 miles below Grand Falls.

From Halifax to Liverpool, *viâ* Cape Clear, 2,530 geographical=2,910 statute miles. (See Appendix No. 30, Part II.)

No. 2.—QUEBEC TO HALIFAX, *via* Témiscouata Road, Woodstock, Fredericton, St. John and Amherst.

Names of Places.	Intermediate Mileage.	Total Mileage from		Remarks.
		Quebec.	Halifax.	
<b>Quebec—</b>				
Quebec.....	0	0	763	Grand Trunk, now Intercolonial Railway, including ferry. Témiscouata Road.
Rivière du Loup.....	126	126	577	
Province Line.....	67	193	510	
<b>New Brunswick—</b>				
Little Falls (Edmundston)....	12	205	498	Near confluence Rivers Madawaska & St. John.
Grand Falls.....	38	243	460	On east side of River St. John.
Rivière de la Chûte.....	33	276	427	On west do do
Woodstock.....	40	316	387	do do do
Fredericton.....	63	379	324	do do do
St. John.....	66	445	253	Bay of Fundy Railway, 106 miles long. St. John to Shédiac.
Petitcodiac, on Shédiac Rail'y	90	535	168	
<b>Nova Scotia—</b>				
Amherst.....	44	579	124	Head N.-W. arm, or Cumberland Basin, Bay of Fundy.
Truro.....	63	642	61	Head S.E. arm, or Cobequid Bay, Bay of Fundy.
Halifax.....	61	703	0	Railway from Bay of Fundy to Ocean.

N.B.—River St. John, from Little Falls to Grand Falls, forms the boundary between Maine and New Brunswick.

No. 9.—QUEBEC TO HALIFAX, *vid* Témiscouata Road, Woodstock, St. Andrew's, St. John and Windsor, crossing the Bay of Fundy.

Names of Places.	Intermediate Mileage.	Total Mileage from		Remarks.
		Quebec.	Halifax.	
Quebec—				
Quebec.....	0	0	632	
Province Line.....	193	193	439	
New Brunswick—				
Woodstock.....	123	316	316	} Railway ends on N. side Bay of Fundy. On north side do
St. Andrew's.....	88	404	228	
St. John.....	63	467	165	
Nova Scotia—				
Windsor.....	120	587	45	} Up Bay of Fundy by steamboat. Railway from Bay of Fundy to Ocean.
Halifax.....	45	632	0	

No. 10 —QUEBEC TO HALIFAX, *vid* Témiscouata Road, Woodstock, Fredericton, St. John and Annapolis, crossing the Bay of Fundy.

Quebec—				
Quebec.....	0	0	630	
New Brunswick—				
Fredericton.....	379	379	251	} North side Bay of Fundy.
St. John.....	66	445	185	
Nova Scotia—				
Annapolis.....	59	504	126	} South side do do do Railway from do to Ocean.
Windsor.....	81	585	45	
Halifax.....	45	630	0	

The distance of 126 miles from Quebec to railway station at Rivière du Loup, includes 1 mile of ferry from Quebec to railway station at Point Lévis.

No. 11.—QUEBEC TO ST. ANDREW'S, Bay of Fundy, New Brunswick, *via* Témiscouata Road, Grand Falls and Woodstock.

Names of Places.	Intermediate Mileage.	Total MI	Remarks.
Quebec to Rivière du Loup, per ferry and Intercolonial, formerly Grand Trunk Railway.....	126	126	1 mile of ferry from Quebec to Point Lévis; 125 miles of railway across a well settled country; steamer and cars run every day.
Rivière du Loup, per Témiscouata Road, to boundary line between Quebec and New Brunswick.....	67	193	¾ of the Témiscouata Road may be considered either level or undulating; ¼ is hilly, but the grades do not exceed 1 in 10 to 1 in 12; road traverses a thinly settled country.
Provincial boundary line to Edmundston or Little Falls, on the River St. John, near boundary, State of Maine.....	12	205	Good level road along the River Madawaska, through a thialy settled country, inhabited by Acadians on both sides.
Little Falls to Grand Falls, on east side of River St. John.....	38	243	From Little Falls to Grand Falls, the River St. John forms the boundary between the State of Maine and New Brunswick. Both sides of river are thickly settled by Acadians.
Grand Falls to Rivière de la Chûte, on west side of River St. John.....	33	276	Well settled; road being at from 3 to 5 miles from American frontier.
Rivière de la Chûte to Woodstock, on west side of River St. John.....	40	316	Rivière de la Chûte is 3 miles from frontier; the road passes through Florenceville at 15 miles, thence to Woodstock 25 miles. Woodstock is 11 miles from the frontier.
Woodstock to Eel River, on west side of River St. John.....	13	329	At Woodstock, to which point the country is well settled all the way from Little Falls, the remainder of the distance to St. Andrew's can be travelled by railway,
Eel River to Oak Bay, on west side of River St. John.....	62	391	
Oak Bay to St. Andrew's Harbour, Bay of Fundy.....	13	404	
Quebec to St. Andrews, Bay of Fundy, <i>via</i> Témiscouata Road, Grand Falls and Woodstock.....	404		

This route, for a considerable distance, especially the road leading directly to St. Andrew's, is within from 3 to 11 miles only from the American frontier.

There is an American fort, called Fairfield, at the intersection of two cross roads leading to Restook and Tobique, both on the River St. John, at 5½ miles from the American frontier. Tobique is 61 miles and Restook 55 miles below the terminus of the Témiscouata road, at the provincial boundary line.

No. 12.—QUEBEC TO ST. JOHN, Bay of Fundy, New Brunswick, *viâ* Témiscouata Road, Grand Falls, Woodstock and Fredericton.

Names of Places.	Intermediate Mileage.	Total mileage.	Remarks
ébec to Rivière du Loup per Ferry and Intercolonial Railway .....	126	126	
Rivière du Loup, per Témiscouata Road, to boundary line between Quebec and New Brunswick .....	67	193	
Provincial boundary line to Edmundston or Little Falls, on the River St. John, near boundary, State of Maine .....	12	205	For description of road see <i>remarks</i> in table of distances between Quebec and St. Andrew s.
Little Falls to Grand Falls, on east side of River St. John .....	38	243	
Grand Falls to Rivière de la Châte, on west side of River St. John .....	33	276	Between Fredericton and St. John, the travelling in winter is said to be preferable on the ice of the River St. John, the banks of which are thickly settled.
Rivière de la Châte to Woodstock, do do .....	40	316	
Woodstock to Fredericton, on south side River St. John .....	63	379	
Fredericton to St. John.....	66	445	
Quebec to St. John, Bay of Fundy, <i>viâ</i> Témiscouata Road, Woodstock and Fredericton .....	445		

From St. John, Halifax may be reached in from 2½ to 3 days, *viâ* Annapolis and Windsor, viz. : by steam ferry, in 4 hours, across the Bay of Fundy to Annapolis, thence in 2 days by stage to Windsor, thence by railway in 2 or 3 hours more to Halifax. From St. John, Halifax may also be reached in about 13 hours, viz. : by steamer to Windsor, 120 miles up the Bay of Fundy, in 10½ hours, and from Windsor to Halifax by railway, 45 miles, in 2½ hours.

No. 13.—QUEBEC TO ST. JOHN, Bay of Fundy, New Brunswick *viâ* Témiscouata Road, Grand Falls, Woodstock and St. Andrew's.

Names of Places.	Intermediate mileage.	Total mileage.	Remarks.
Quebec to Rivière du Loup, per Intercolonial Railway.....	126	126	
Rivière du Loup, per Témiscouata road, to boundary line between Quebec and New Brunswick.....	67	193	
Provincial boundary line to Edmunston or Little Falls, on the River St. John, near boundary, State of Maine.....	12	205	
Little Falls to Grand Falls, on the east side of the River St. John.....	38	243	For description of road see remarks in table of distances between Quebec and St. Andrews.
Grand Falls to Rivière de la Chûte, on west side of the River St. John.....	33	276	
Rivière de la Chûte, <i>viâ</i> Florenceville to Woodstock, on west side of River St. John.....	40	316	
Woodstock to Eel River, on west side of River St. John.....	13	329	
Eel River to Oak Bay.....	62	391	
Oak Bay to St. Andrew's Harbour, Bay of Fundy...	13	404	
St. Andrew's to St. John do do	63	467	
Quebec to St. John, Bay of Fundy, <i>viâ</i> Témiscouata Road, Grand Falls, Woodstock and St. Andrews.	467		

REMARKS ON ROADS AND HARBOURS OF NEW BRUNSWICK AND NOVA SCOTIA.

By reference to the preceding tables of distances, Nos. 18, 19, 20, 21, 22, 23 and 24, it will be seen that the shortest route from Quebec to the sea-board is that by the Témiscouata road to St. Andrew's, on the Bay of Fundy; the total distance being 404 miles.

The harbours of St. Andrew's and St. John are accessible at all times during winter and summer, for vessels of any tonnage. The harbour of St. John, which is also on the Bay of Fundy, is well provided with deep water wharves, and is 63 miles eastward from that of St. Andrew's. At this latter port, where there are no deep water wharves, vessels have to lay from 1 to 1½ miles out from the shore, and passengers have to be landed at half-tide by lighters.

The railway from St. Andrew's is completed as far as the Woodstock road, a distance of 88 miles. At 11 miles from St. Andrew's, the railway passes at 8 miles from the American town of Calais and the British town of St. Stephen. Vessels can run to Calais and St. Stephen at any time in summer.





No. 15.—DISTANCES from Quebec to Maritime Provinces *via* Témiscouata Road and the railways in the Valley of the River St. John.

	Intermediate distances.	Distances from Quebec.	
	miles.	miles.	
Quebec to Rivière du Loup .....	126	.....	Intercolonial Railway.
Rivière du Loup to Edmundston, N.B. ....	80	206	Témiscouata Road.
Edmundston to Fredericton .....	152	358	New Brunswick Railway.
Fredericton to Fredericton Junction .....	22	380	Fredericton Railway.
Fredericton Junction to St. John .....	46	426	St. John and Maine Railway.
St. John to Halifax, N.S. ....	276	702	Intercolonial Railway.
Quebec to Fredericton Junction .....	380	.....	As above.
Fredericton Junction to McAdam Junction .....	40	420	St. John and Maine Railway.
McAdam Junction to St. Andrew's .....	44	464	New Brunswick and Canada Railway.
McAdam Junction to St. Stephen .....	35	455	New Brunswick and Canada Railway.
Quebec to Edmundston .....	206	.....	As above.
Edmundston to Woodstock, N.B. ....	120	326	New Brunswick Railway.
Woodstock to McAdam Junction .....	51	377	do and Canada Railway.
McAdam Junction to St. John .....	86	463	St. John and Maine Railway.
McAdam Junction to St. Andrew's .....	44	421	New Brunswick and Canada Railway.
McAdam Junction to St. Stephen .....	35	412	New Brunswick and Canada Railway.
	Intermediate distances.	Distances from St. John.	
	miles.	miles.	
St. John, N.B., to Digby, N.S. ....	42	.....	} Steamer across Bay of Fundy.
Digby to Annapolis .....	18	60	
Annapolis to Halifax .....	130	190	
Digby to Yarmouth .....	67	127	Western Counties Railway.

No. 16.—DISTANCES from Prince Arthur's Landing (Lake Superior) to Fort Garry (Winnipeg) by the Dawson Route.

	Statute miles.	
	Inter- mediate.	Total.
Prince Arthur's Landing to Shebandowan.....	45	45
Lake Shebandowan to North-West Angle .....	312	357
North-West Angle to Fort Garry (Winnipeg) .....	95	452

The steamboat voyage from Collingwood to Prince Arthur's Landing is 532 miles.

The Dawson route has been superseded by the portion of the Canadian Pacific Railway now completed and in operation between Prince Arthur's Landing, (Thunder Bay, Lake Superior) and Winnipeg, via Rat Portage and Selkirk, a distance of 433 miles. See next table.

No. 17.—DISTANCES by Canadian Pacific Railway from Prince Arthur's Landing to Winnipeg, and thence westward.

Names of Places.	Statute miles.	Names of Places.	Statute miles.
<b>Prince Arthur's Landing, westward—</b>		<b>Winnipeg, westward—Continued.</b>	
Prince Arthur's Landing .....	0	Melbourne.....	98.5
Port William.....	6	Carberry.....	105.7
Murillo.....	17½	Sewell.....	114.3
Londer.....	28	Douglas.....	121.8
Finmark.....	38	Chater.....	127.5
Buda.....	49	Brandon.....	132.6
Norland.....	57	Alexander.....	143.7
Linkoping.....	67	Griswold.....	157
Port Savanne.....	77	Oaklake.....	165.5
Upsala.....	86½	Virden.....	180.2
Carlstadt.....	97	Hargraves.....	188.3
Bridge River.....	103½	Elkhorn.....	196.8
English River.....	118½	Fleming.....	211.1
Martin.....	127	Moosomin.....	219.3
Bonheur.....	137	Red Jacket.....	226.5
Falcon.....	147	Wapella.....	235.4
Ignace.....	157	Burrows.....	243.1
Butler.....	162½	Whitewood.....	249.4
Raleigh.....	177	Percival.....	256.3
Taché.....	187	Broadview.....	263.8
Burle.....	197	Oakshela.....	271.3
Wabigon.....	201½	Grenfell.....	279.1
Barclay.....	217	Summerberry.....	286.6
Oxdrift.....	227	Wolseley.....	294.3
Eagle River.....	232½	Sintaluta.....	302.2
Vermilion.....	242	Indian Head.....	312.2
Gilbert.....	252	Qu'Appelle.....	323.8
Parrywood.....	262	McLean.....	332.2
Cornack.....	272	Cassils.....	341.3
Slikameg.....	282	Pilot Butte.....	348.1
Rossland.....	292	Regina.....	356.6
Rat Portage.....	298½	Grande Coulee.....	366
Keewatin.....	301½	Pense.....	373.4
Ostersund.....	309	Belle Plaine.....	381.2
Kalmar.....	321	Pasqua.....	390.2
Ingolf.....	329	Moose Jaw.....	398.3
Cross Lake.....	335	Boharm.....	406.4
Telford.....	339½	Caren.....	414.4
Rennie.....	349	Mortlach.....	423.4
Darwin.....	359	Parkbeg.....	432.6
Whitemouth.....	369½	Secretan.....	443.0
Shelley.....	378	Chaplin.....	451.9
Monmouth.....	388	Ernfold.....	461.3
Beausejour.....	397	Morse.....	471.7
Tyndall.....	404	Herbert.....	480.5
Colville Landing.....	407	Rush Lake.....	489.1
Selkirk.....	410	Waldeck.....	499.9
Winnipeg.....	433	Swift Current.....	510.8
<b>Winnipeg, westward—</b>		<b>Emerson Section—</b>	
Winnipeg.....	0	Winnipeg.....	0
Winnipeg West.....	7.8	Winnipeg Junction.....	1.5
Rosser.....	15.1	St. Boniface.....	3
Meadows.....	22.2	St. Norbert.....	12
Marquette.....	29	Niverville.....	23.5
Reaburn.....	35.2	Otterburne.....	31
Poplar Point.....	40.5	Dufrost.....	46
Portage la Prairie.....	56	Armand.....	48
Burnside.....	63.5	Dominion City.....	56
Bagot.....	71	Emerson.....	66
McGregor.....	79	St. Vincent.....	68
Austin.....	84.6		
Sidney.....	92.8		
		Total Distances, C. P. Railway.....	1011.8

NOTE.—For Railways in Manitoba and North-West Territories, see Part IV, Appendix No. 30.

## No. 18.—GOVERNMENT TELEGRAPH LINES.

## CONSTRUCTED.

Names of Stations.		Lengths—Distances in miles.			Established.
From	To	Intermit	Pro- gressive.	Complete lines.	
		miles.	miles.	miles.	
<i>Newfoundland.</i>					
Port aux Basques.....	Cape Ray Lighthouse.....	14		14	
<i>Cape Breton Section.</i>					
Meat Cove.....	Aspey Bay.....	10½			Nov. 7, 1880; Aug. 1, 1882.
Aspey Bay.....	O'Neil's Harbour (House ½ way)	15	25½		
O'Neil's Harbour.....	Ingonish North Bay.....	9	34½		April 1, 1882.
Ingonish North Bay.....	Ingonish Harbour.....	10½	45		
Ingonish Harbour.....	McLennan's.....	23	68		
McLennan's.....	Ste. Anne's (South Bay).....	19	87		
Ste. Anne's.....	Baddeck (Loop-line).....	13	100		Jan. 1, 1882.
Baddeck.....	Englishtown.....	6	106		July 19, 1882.
Englishtown.....	Kelly's Cove.....	2	108		
Kelly's Cove.....	Big Bras d'Or (of this ½ mile cable).....	6	114		
Big Bras d'Or.....	North Sydney.....	12½	126½		Nov. 7, 1880.
	Land line.....	126			
	Cable.....	0½		126½	
<i>Magdalen Islands.</i>					
Amherst.....	Amherst Lighthouse.....	9			June 10, 1881.
Amherst Lighthouse.....	Etang du Nord Village.....	15	24		Dec. 1, 1881.
Etang du Nord Village.....	do Lighthouse.....	1	25		do
Etang du Nord Lighthouse.....	House Harbour (of this ½ mile cable).....	8	33		do
House Harbour.....	Wolfe Island.....	28½	61½		Sept. 25, 1881.
Wolfe Island.....	Grosse Ile.....	11	72½		Aug. 17, 1880.
Grosse Ile.....	Grand Entry.....	11	83½		Feb. 18, 1882.
do.....	Bird Rock (all cable).....	18½	101½		Aug. 20, 1881.
do.....	Meat Cove do.....	55	156½		Nov. 7, 1880.
	Land lines.....	83½			
	Cable.....	73½		156½	
<i>Low Point, C. B., Nova Scotia</i>					
Lingan.....	Low Point.....	5		5	Aug. 1, 1881.
<i>Nova Scotia Section.</i>					
Dartmouth.....		0			
Musquodoboit.....		28½	28½		
Ship Harbour, <i>via</i> Clam Cove		23½	52		
Tangier.....		20½	72½		
Sheet Harbour.....		18	90½		
Beaver do.....		10	100½		
Liscomb.....		36	136½		
Sherbrooke.....		11½	148		
Isaac's Harbour.....		36	184		
Manthorn's Cove.....		3	187		
Torbay.....		10	197		
Whitehaven Loop.....		11	208		
				208	

No. 18.—GOVERNMENT TELEGRAPH LINES—Continued.

CONSTRUCTED—Continued.

Names of Stations.		Lengths—Distances in miles.			Established.
From	To	Intermit	Pro- gressive	Complete lines.	
		miles.	miles.	miles.	
<b>BAY OF FUNDY.</b>					
<i>Campobello Section, N.B.</i>					
East Port, Maine.....	Welchpool (Cable $1\frac{1}{8}$ mile)....	$2\frac{3}{8}$			
Welchpool.....	Cable Hut (Liberty Cove)....	$7\frac{1}{2}$			$9\frac{1}{8}$
<i>Grand Manan Section.</i>					
Liberty Cove.....	Cable Hut (Long Eddy) cable	$7\frac{1}{4}$			
Long Eddy.....	Flagg's Cove.....	3	$10\frac{1}{2}$		
Flagg's Cove.....	Woodward's Cove.....	6	$16\frac{1}{2}$		
Woodward's Cove.....	Grand Harbour.....	2	$18\frac{1}{2}$		
Grand Harbour.....	Seal Cove.....	$4\frac{1}{2}$	$22\frac{1}{2}$		
Seal Cove.....	Southern Head.....	$5\frac{1}{2}$	$28\frac{1}{2}$		
	Land lines.....	29			$28\frac{1}{2}$
	Cables.....	$9\frac{1}{8}$			
					$38\frac{1}{8}$
<i>Anticosti</i>					
Gaspé Basin.....	L'Anse à Fougère.....	28			Oct. 16, 1881.
L'Anse à Fougère.....	South West Point (all cable) across south channel of St. Lawrence.....	$44\frac{1}{2}$	$72\frac{1}{2}$	$72\frac{1}{2}$	
Fox Bay.....	Heath Point.....	23			Aug. 11, 1881; July 20, 1881
Heath Point.....	South Point.....	$32\frac{1}{2}$	$55\frac{1}{2}$		July 27, 1881.
South Point.....	Shallop Creek.....	$17\frac{1}{2}$	73		July 7, 1881.
Shallop Creek.....	Salt Lake.....	$52\frac{1}{2}$	$125\frac{1}{2}$		Oct. 19, 1881.
Salt Lake.....	South West Point.....	15	$140\frac{1}{2}$		Oct. 18, 1880.
South West Point.....	Jupiter River.....	7	$147\frac{1}{2}$		
Jupiter River.....	Otter River.....	$17\frac{1}{2}$	165		
Otter River.....	Bec Scie River.....	22	187		
Bec Scie River.....	Cape Eagle (Ellis Bay).....	10	197		
Cape Eagle.....	West Point.....	14	211		Aug. 1, 1881.
West Point.....	English Bay.....	3	214		July 1, 1882.
	Land Line.....	242			214
	Cable.....	$44\frac{1}{2}$			$286\frac{1}{2}$
<i>South Shore St. Lawrence.</i>					
Grand Métis.....	Gaspé Basin.....	206			
(Subsidized by Government —Great North-Western Telegraph Co.)					

No. 18.—GOVERNMENT TELEGRAPH LINES.—Continued.

CONSTRUCTED AND PROJECTED.

Names of Stations.		Lengths—Distances in Statute miles.			Established.
From	To	Intermit	Pro-gressive	Complete lines.	
<i>North Shore, St. Lawrence.</i>					
Murray Bay.....	St. Fidèle.....	10	10	} 23rd July, 1881	
St. Fidèle.....	St. Siméon.....	11	21		
St. Siméon.....	Anse du Portage.....	23	44		
Anse du Portage.....	Tadoussac (cable 1¼ miles across mouth of Saguenay)		46	} 7th Nov., 1881.	
Tadoussac.....	Bergeronnes.....	15	61		
Bergeronnes.....	Escoumains.....	12	73		
Escoumains.....	Sault au Mouton.....	16	89		
Sault au Mouton.....	Portneuf village.....	11½	100½		
Portneuf village.....	do lighthouse.....	9	109½		
do lighthouse.....	Sault au Cochon.....	7	116½		
Sault au Cochon.....	Betsiamits.....	31	147½		
Betsiamits.....	Pointe aux Outardes.....	12	159½		
Pointe aux Outardes.....	Manicouagan.....	15	174½		
Manicouagan.....	River Godbout.....	27	201½	} Projected.	
River Godbout.....	Pointe des Monts.....	12	213½		
Pointe des Monts.....	Sept Iles.....	68	281½		
Sept Iles.....	River Moisy.....	19	300½		
River Moisy.....	River Chaloupe.....	45	345½		
River Chaloupe.....	Poste de Mingan.....	50	395½		
Poste de Mingan.....	Pointe aux Esquimaux.....	18	413½		
Pointe aux Esquimaux.....	Nataskouan.....	64	477½		
Nataskouan.....	Tshikaska.....	18	495½		
Tshikaska.....	Wapitagum.....	42	537½		
Wapitagum.....	Mecatina.....	33	570½		
Mecatina.....	Shecatina.....	50	620½		
Shecatina.....	Bonne Espérance.....	49	669½		
Bonne Espérance.....	Blanc Sablon.....	24	693½		
	miles.				
	Land lines.....	692½			
	Cable.....	1¼		693½	

No. 18.—GOVERNMENT TELEGRAPH LINES—Continued.

CONSTRUCTED.

Names of Stations.		Lengths—Distances in Statute miles.			Established.	
From	To	Intermit	Pro-gressive	Complete lines.		
<i>Chicoutimi.</i>						
Bale St. Paul.....	St. Urbain.....	9			} 1st Sept., 1881.	
St. Urbain.....	Petit Lac Ha! Ha!.....	37	46			
Petit Lac Ha! Ha!.....	St. Alexis.....	31½	77½			
St. Alexis.....	St. Alphonse de Bagotville...	3	80½			
St. Alphonse de Bagotville.	Chicoutimi.....	11½	92			
	Land line.....			92		
<i>North-West Lines.</i>						
Prince Arthur's Landing...	Fort William.....	6				
Fort William.....	Murillo.....	11½	17½			
Murillo.....	Buda.....	31½	49			
Buda.....	Upsola.....	37½	86			
Upsola.....	Bridge River.....	17	103½			
Bridge River.....	English River.....	15	118½			
English do.....	Butler.....	44	162½			
Butler.....	Wabigon.....	39	201½			
Wabigon.....	Eagle River.....	31	232½			
Eagle River.....	Rat Portage.....	66	298½			
Rat Portage.....	Telford.....	41	339½			
Telford.....	Whitemouth.....	30	369½			
Whitemouth.....	Selkirk.....	40½	410			
Selkirk.....	Winnipeg.....	23	433			
				433		1878.
Qu'Appelle Ry. Station.....	Fort Qu'Appelle.....	17				
Fort Qu'Appelle.....	Touchwood.....	46	63			
Touchwood.....	Humbolt.....	78	141			
Humbolt.....	Saskatchewan.....	55	196			
Saskatchewan.....	Battleford.....	85	281			
Battleford.....	Meridian.....	84	365			
Meridian.....	Victoria Trail.....	80	445			
Victoria Trail.....	Hay Lake.....	56	501			
Hay Lake.....	Fort Edmonton.....	36	537			
				537		
	Total land line.....			970		

NOTE.—An intermediate line (323.8 miles), owned and operated by the C. P. Railway, connects Winnipeg with Qu'Appelle Railway Station.



No. 18.—GOVERNMENT TELEGRÁPH LINES—*Continued.*

SYSTEM of Telegraph Lines and Cables now maintained by the Dominion Government,  
676½ miles, or 79½ miles less than by the Route of 1880.

## CONSTRUCTED.

Localities.		Constructed.	Miles.
From	To		
BRITISH COLUMBIA.			
Vancouver Island Land Lines—			
Victoria	Departure Bay.....	1878	74½
Nanaimo.....	Valdes.....	1881	15
Straits of Georgia Cables—			
Saanich Arm Crossing.....	.....	1878 & 1881	2
Gabriola Island do.....	.....	1881	1
Valdes Island.....	Point Gray.....	1881	20
Mainland British Columbia Land Lines—			
Point Gray.....	Granville.....	1881	15
Granville.....	New Westminster.....	1881	11½
New Westminster.....	Matsqui (exclusive of cable).....	1864 & 1881	35½
Matsqui.....	Cache Creek do.....	1864 & 1878	181
Cache Creek.....	Barkerville, Cariboo.....	1865 & 1878	272½
do.....	Kamloops.....	1878	48
Fraser River Crossings, 2 cables ½ mile each	.....	1881	½
Total miles.....			676½

Plus 44 miles of an additional wire between New Westminster and the United States boundary line, 8 miles from Matsqui.

Land line.....	653
Cables.....	23½
	676½

MEMO.—The land line and San Juan Island cable route of 1864 was finally abandoned at the close of 1880, in favor of the Valdes to Point Gray route.

New Westminster is now the established transfer station of the Western Union Telegraph Company, but for checking purposes is designated "Sumas."

An alternative cable connection *via* Victoria, Vancouver's Island and Point Angelos, Washington Territory, will probably be made during 1883.

No. 18.—SUMMARY showing proportion of Land and Cable Telegraph Lines, owned, subsidized or operated by Government in the several Provinces.

	Distances in miles.				Grand Total.
	Intermediate.		Progressive.		
	Land.	Cables.	Land.	Cables.	
Newfoundland—Subsidized line— Port aux Basques to Cape Ray.....	14		14		14
Nova Scotia— Sydney to Meat Cove.....	126	$\frac{1}{2}$			
Dartmouth to Torbay (subsidized).....	208		334	$\frac{1}{2}$	
Low Point to Lingan.....	5		339	$\frac{1}{2}$	339 $\frac{1}{2}$
New Brunswick— Bay of Fundy lines.....	29	9 $\frac{1}{2}$	29	9 $\frac{1}{2}$	38 $\frac{1}{2}$
Quebec— South Shore (subsidized) from Grand Metis to Gaspé } Basin.....	206				
Great North-Western Telegraph Company's Offices.. }					
Magdalen Islands.....	83 $\frac{3}{8}$	73 $\frac{3}{8}$	289 $\frac{3}{8}$		
Anticosti Island.....	242	44 $\frac{1}{2}$	531 $\frac{3}{8}$	117 $\frac{1}{8}$	
North Shore line.....	146 $\frac{1}{2}$	1 $\frac{1}{2}$	677 $\frac{3}{8}$	118 $\frac{1}{8}$	
Chicoutimi.....	92		769 $\frac{3}{8}$		888 $\frac{1}{2}$
North-West.....	970		970		970
British Columbia.....	653	23 $\frac{1}{2}$	653	23 $\frac{1}{2}$	676 $\frac{1}{2}$
	2,774 $\frac{3}{8}$	152			2,926 $\frac{1}{2}$

No. 19.—TABLE of the British Possessions throughout the World, with their Population and Area in English Square Miles, in 1881.

	Area.	Population.
	Eng. sq. miles.	
<b>In Europe—</b>		
British Islands.....	121,115	36,100,000
Gibraltar.....		23,991
Heligoland.....		2,001
Malta and Gozo.....	117	149,782
<b>In Asia—</b>		
British India (including Dependent States).....	1,568,254	254,000,000
Ceylon.....	24,702	2,758,166
Straits Settlements (Singapore, etc.).....	1,440	350,000
Aden (including Perim Island).....	70	35,163
Hong Kong.....	32	160,402
Labuan Island.....	30	6,000
<b>In Africa—</b>		
Gambia River.....	21	14,150
Sierra Leone.....	468	60,546
Gold Coast Colony.....	16,620	520,000
Lagos.....	75,270	
Cape Colony.....	240,110	1,249,824
Natal.....	18,750	361,537
Mauritius and dependencies (Rodriguez, etc.).....	704	359,419
Ascension Island.....	35	
St. Helena Island.....	47	5,059
<b>In North America—</b>		
Dominion of Canada.....	3,470,392	4,324,810
Newfoundland.....	40,200	161,389
British Honduras or Belise.....	6,500	27,452
Jamaica.....	4,256	580,804
Bahama Islands.....	5,794	43,521
Trinidad and other West India Islands.....	3,287	989,059
Bermuda Islands.....	41	14,434
<b>In South America—</b>		
British Guiana.....	85,000	252,186
Falkland Islands.....	4,740	1,543
<b>In Oceania—</b>		
New South Wales, Australia.....	310,937	750,000
Victoria do.....	87,884	862,346
Queensland do.....	668,224	213,525
South Australia.....	903,690	279,865
West Australia.....	975,824	30,200
Tasmania.....	26,215	115,705
New Zealand.....	106,260	489,993
<b>Total of British Empire throughout the world.....</b>	<b>8,757,029</b>	<b>305,292,872</b>

No. 20.—TABLE of Largest Empires.

	Area in square miles.	Population at last census.	Population per square mile.
<b>British Empire</b> .....	8,757,029	305,292,872	34·7
<b>Russian Empire</b> .....	8,325,293	100,038,342	12·0
<b>Chinese Empire</b> .....	4,540,000	250,000,000	55·0
<b>United States</b> .....	3,002,852	52,152,866	17·3
<b>Brazilian Empire</b> .....	3,288,000	10,200,000	3·1
<b>French Empire</b> .....	204,096	37,672,048	184·5
<b>German Empire</b> .....	208,744	45,194,177	216·5
<b>Spain (including Colonies)</b> .....	320,975	24,914,000	77·6
<b>Italy</b> .....	114,408	28,459,451	248·7

No. 21.—ESTIMATED Population and Extent of the Globe.

	Area.	Population in 1868.
	Eng. sq. miles.	
<b>Europe</b> .....	3,807,195	290,000,000
<b>Asia</b> .....	17,805,146	767,000,000
<b>Africa</b> .....	11,647,428	103,000,000
<b>North America</b> .....	13,542,400	53,000,000
<b>South America</b> .....		
<b>Oceania</b> .....	3,347,840	30,000,000
<b>Total</b> .....	50,150,009	1,270,000,000

For Table 21, see Mercantile Map of the World on Mercator's projection.

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APPENDIX No. 30.

—  
PART IV.  
—

RAILWAY MAIL SERVICE IN CANADA

—  
MAIL ROUTES, &c.,

IN

**MANITOBA THE NORTH-WEST TERRITORIES AND BRITISH COLUMBIA.**

—  
EXTRACTS FROM POSTMASTER GENERAL'S REPORT  
FOR THE YEAR ENDING 30<sup>TH</sup> JUNE, 1882.

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## APPENDIX No. 30.

## PART IV.

## INDEX

TABLES OF DISTANCES, ETC., RAILWAY MAIL SERVICE IN CANADA,  
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UMBIA.

- No. 1. Railway mail routes.
- No. 2. Abstract showing distances travelled daily with mails on each Railway in Canada, on 1st November, 1882.
- No. 3. Railway mail service between Thunder Bay, Lake Superior and Regina.
- No. 4. Mail service to and from Fort Walsh, Fort McLeod and Calgary. Conveyance to and from nearest United States Post Office, and cost.
- No. 5. Mail route proposed to be established. Regina to west terminus, Fort McLeod and Calgary, Fort Walsh and Maple Creek.
- No. 6. Settlements along the route between Calgary, Morleyville, Fort McLeod and Edmonton.
- No. 7. Progress of Manitoba and the North-West Territory.
- No. 8. Statistics showing the rapid growth of new settlements in Manitoba and North-West Territories.
- No. 9. Notes in reference to the construction of the Canadian Pacific Railway.
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- No. 13. Remark respecting mail routes, etc., in Manitoba and the North-West Territories.
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- No. 15. Mail routes by steamers and sailing vessels in British Columbia.
- No. 16. Canadian Pacific Railway. Distances between stations.
- No. 17. Canadian Pacific Railway. Completed and in operation.
- No. 18. Table of through distances from United States and Canadian Ports to Winnipeg, *vid* Chicago and the Canadian Pacific Route.
- No. 19. Comparative Table of Distances from Montreal, New York and Liverpool to San Francisco, Port Moody and to Yokohama, Japan, on the Pacific Ocean, *via* United States and Canadian Pacific Railways.

## GENERAL RAILWAY MAIL SERVICE IN CANADA.

No. 1.—RAILWAY Mail Routes since November, 1881, 762½ miles of Railway over which mails are carried, have been put in operation, viz.:—

Name of Railway.	Places between which Railways have been opened since November, 1881.	Miles.	Total Miles.
Quebec and Lake St. John .....	Quebec and St. Raymond.....		35
Quebec and Montreal (North Shore)....	Three Rivers and Grandes Piles Branch.....		29
Midland.....	North Hastings Junction and Peterboro'.....		51
Canada Atlantic.....	Ottawa and Côteau Station.....		78
Bay of Quinté.....	Grand Trunk Junction and Desoronto.....		4
Credit Valley.....	Toronto and St. Thomas.....	121	
	Streetsville Junction and Elora.....	75	
	Orangeville and Church's Falls.....	8	
			204
Grand Trunk.....	Palmerston and Durham.....	26½	
	Stratford and Warton.....	105	
			131½
Canadian Pacific, Western Division....	Winnipeg and Portage la Prairie (direct line).....	56	
	Brandon and Regina.....	223½	
	Cross Lake and Rat Portage.....	38½	
		318½	
	Deduct line between Stonewall and Portage la Prairie—discontinued.....	48½	
			269½
			802½
Deduct:—			
Prince Edward County.....	Picton and Trenton discontinued.....	32	
Canadian Pacific, Eastern Division...	Error in last year's return, distance between Pembroke and Mattawa stated at.....	101½	
	Actual distance.....	94	
			7½
			39½
	Total.....		762½

No. 2.—ABSTRACT showing distances travelled daily with Mails on each Railway in Canada, on 1st November, 1882.

Name of Railway	Actual length of Railway in miles.	Daily service by Travelling Post Office.		Daily Service by Bags in charge of Company's Servants.
		No. of Postal Cars on Road.	Distance travelled in miles.	Distance travelled in miles.
Intercolonial.....	839	9	2,460	668
Halifax and Cape Breton.....	81	1	162	.....
Halifax and Annapolis.....	116	1	260	142
Western Counties.....	67	1	134	.....
Spring Hill and Parrsboro'.....	32	.....	.....	64
Prince Edward Island.....	196½	1	98½	418½
Albert.....	45	.....	.....	90
Elgin Branch.....	14	.....	.....	28
St. John and Maine.....	91	2	364	91
Fredericton Branch.....	23	.....	.....	138
New Brunswick and Canada.....	118	.....	.....	236
Chatham Branch.....	9	.....	.....	72
Quebec and Lake St. John.....	35	.....	.....	70
Grand Trunk.....	1,906½	27	4,995½	3,786½
Quebec and Montreal (North Shore).....	191	2	346	404
Laurentian.....	15	.....	.....	30
Quebec Central.....	139	2	278	.....
International.....	69	1	138	.....
Massawippi Valley.....	38	1	76	68
South Eastern.....	172	3	358	.....
Vermont Central.....	91	2	182	100
Canada Atlantic.....	78	.....	.....	78
St. Lawrence and Ottawa.....	54	1	108	22½
Canadian Pacific (Eastern Division).....	396½	6	897	492½
Kingston and Pembroke.....	61	1	122	.....
Bay of Quinté.....	4	.....	.....	24
Midland.....	436½	5	650	508
Northern and North-Western.....	382½	6	764½	300½
Toronto, Grey and Bruce.....	191½	2	390	174
Welland.....	25	1	100	.....
Credit Valley.....	204	.....	384	16
Canada Southern.....	338½	3	601	89½
Canadian Pacific (Western Division).....	579½	3	496½	798
	7,038	81	14,365	8,908½



## MAIL SERVICE IN MANITOBA AND THE NORTH-WEST TERRITORIES.

No. 3.—RAILWAY Mail Service between Thunder Bay, Lake Superior and Regina.  
There are now 877 miles of railway over which mails are carried, viz. :—

Route.	Actual Length of Railway in miles.	Daily Service by Travelling P.O.			Daily Service by Bags in Charge of Company's Servants.
		No. of Postal Cars on Road daily.	No. of Mail Clerks.	Distance Travelled in miles.	
Rat Portage and Thunder Bay.....	300	.....	.....	.....	300
do      Winnipeg.....	136	.....	.....	.....	272
Stonewall and      do .....	20	.....	.....	.....	40
St. Vincent      do .....	65	1	3	130	130
Verdun and Regina.....	180	.....	.....	.....	352
do      and Winnipeg.....	176	2	3	360	.....
Total.....	877	3	6	490	1,094

No. 4.—MAIL Service to and from Fort Walsh, Fort McLeod and Calgary. Conveyance to and from nearest United States Post Office and cost. Couriers run once in every 10 days.

Between	Distance in miles.	Days occupied in journey.	Cost per annum.
Assiniboine and Fort Walsh.....	160	5	\$   cts. 5,000 00
Benton and Fort McLeod.....	220	6	6,000 00
Fort McLeod and Calgary.....	100	3	2,400 00
Total.....	480	.....	13,400 00

Leaving each terminus of the route on the 5th, 15th and 25th of each month.

One-third of the cost is paid by the Mounted Police, one-third by the North-West Government, and one-third by the Indian Department.

No. 5.—MAIL ROUTE proposed to be established between Regina and West Terminus, Fort McLeod and Calgary, Fort Walsh and Maple Creek.

Between	Distance in miles.	Days occupied in travel.	Cost per annum.
Regina and West Terminus (which will this winter be at Maple Creek) by railway.....	245	1	\$ cts. *6,134 80
West Terminus and Fort McLeod .....	190	5	3,000 00
Fort McLeod and Calgary.....	100	3	2,000 00
	535	.....	11,134 80

\* For daily service.

After the track crosses the Seven Persons River, 60 miles west of Maple Creek it is proposed that the couriers shall run

Between	Distance in miles.	Days occupied in travel.	Cost per annum.
Regina and West Terminus (at Seven Persons River) by railway ..	305	1	\$ cts. 7,637 20
West Terminus and Calgary .....	180	5	3,000 00
Calgary and Fort McLeod .....	100	3	2,000 00
	585	.....	12,637 20

Time occupied in transit of correspondence :—

Between	By present Route.	By proposed Route.
	Days.	Days.
Ottawa and Fort Walsh.....	15	.....
do Maple Creek.....	.....	7
do Fort McLeod.....	20	12
do Calgary.....	23	15

Total cost of the present Route.....	\$13,400
do proposed do .....	11,134
Decrease .....	\$2,266

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 No. 6.—SETTLEMENTS ALONG THE ROUTE BETWEEN CALGARY, MORLEYVILLE, FORT McLEOD, AND EDMONTON.
 

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By the autumn of 1883 it is expected that the end of the track will be at Calgary which is a centre for the ranche country, and which will be the most convenient distributing point for mails going southward 100 miles to Fort McLeod and northward 220 miles to Edmonton. Calgary is 245 miles west of Maple Creek and 846 miles west of Winnipeg.

At Calgary there is a settlement numbering about 300 souls. There are also stationed at this place sixty or seventy mounted police.

About twenty-five miles west of Calgary is the Cochrane ranche, comprising within its limits 210,000 acres, and stocked with about 500 horses and 18,000 head of cattle.

At Morleyville, 17 miles beyond the Cochrane ranche, and 42 miles west of Calgary, there is a settlement consisting of about sixty souls.

On the trail between Calgary and Fort McLeod there are two small settlements. The one at High River, 35 miles south of Calgary, consisting of about fifty souls; the other at Willow Creek, about 25 miles south of High River, and 30 miles north of Fort McLeod, consisting of twenty souls.

Fort McLeod is a centre for the settlements on the Belly and Old Man Rivers, as also for the settlement at Pincher Creek, 35 miles west (probably the largest in that part of the country), which consists of about eighty souls. There are also in the neighbourhood of Pincher Creek several small ranches.

Between Calgary and Edmonton there are two small settlements, the one where the trail crosses the Red Deer River, the other where the trail crosses the Battle River.

Edmonton is the centre of a large settlement and the "frontier" town for the extensive country to the north and westward drained by the Athabasca and Peace Rivers.

Though it may somewhat extend my report, I venture to lay before you a few facts which will, I trust, convey some idea of the wonderful progress which has, within a comparatively short time, been made in Manitoba and the North-West Territory.

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## No. 7.—PROGRESS OF MANITOBA AND THE NORTH-WEST TERRITORY.

The rapidity with which the City of Winnipeg has grown has, perhaps, rarely been equalled. In 1871 it was a small village, containing about 300 or 400 inhabitants. It was, as already stated, distant from the nearest railway station, St. Cloud, 427 miles, and the journey thither occupied seven days. It is now a city of considerable importance. A larger mercantile and banking business is done there in proportion to its size than in any city in the Dominion. Its population is about 25,000; the value of assessable property over \$30,000,000. The value of imports for the year ended 30th June last, was \$4,936,213, and the duties collected \$1,016,001. For the quarter ended 30th September, the value of imports was \$3,219,446, and the duties collected \$553,566, being at the rate of \$2,214,264 per annum.

At only two other cities in the Dominion, viz., Montreal and Toronto, are the customs and postal receipts exceeded.

It is the centre of four great divisions of the Canadian Pacific Railway; one destined (in connection with lines already completed or in course of construction through Canadian territory) to reach the Atlantic, stretching 426 miles eastward to Thunder Bay on Lake Superior; one destined (in connection with lines in course of construction in British Columbia) to reach the Pacific, stretching 510 miles westward to Swift Current; one stretching 67 miles southward on the east side of Red River to St. Vincent, and one stretching 69 miles southward on the west side of Red River to

Gretna, the roads on both sides of the river connecting at their southern termini on the International Boundary line with the American railway system.

There are also centreing at Winnipeg two smaller lines of railways.

One (the Canadian Pacific) stretching 20 miles north-westerly to Stonewall, and one (the Manitoba South-Western) stretching 53 miles south-westerly to Carman. Another branch of the Canadian Pacific is also in course of construction stretching 22 miles north-easterly on the west side of the Red River to Selkirk.

It will be seen by the above that Winnipeg is now the centre of six lines, and will probably next year be the centre of seven lines of railway.

There are at the Winnipeg station of the Canadian Pacific Railway 16 miles of siding. In the nine months, ended 30th September last, there were "handled" at this station 85,714 loaded and empty freight cars, being an average of 9,524 cars per month.

In 30 days, during the present season, there arrived by trains from the south 30,000 passengers, being an average of 1,000 per day. What was the total number of arrivals during the year I regret I have been unable to ascertain.

Throughout the vast extent of Manitoba and the North-West astonishing progress has been made. Thriving settlements have grown up where but a very short time since there was not a solitary inhabitant, and the first pioneers, isolated by great distances from their "nearest neighbour," have soon found themselves in the centre of prosperous farming communities.

Villages and towns, with their churches, their schools, their mills, stores and hotels, have sprung into existence with a rapidity almost unprecedented, and many places at which, but a short time since, there was nothing but the desolate prairie, are now centres at which a large business is transacted, and in which the value of property has risen to a height which it would be difficult to exaggerate.

No. 8.—STATISTICS showing the rapid growth of new settlements in Manitoba and North-West Territories.

Name of Place.	Situation.	Date of establishment of Post Office.	Population.	Churches.	Schools.	Flour Mills.	Saw Mills.	Factories.	Stores.	Hotels.	Value of assessable property.
Brandon .....	On C. P. Ry., main line...	Aug. 1, 1881	3,200	6	2	1	1	2	79	16	\$ 3,690,940
Birtle .....	64 miles N.W. from Rapid City.....	Sept. 1, 1879	600	1	1	2	1	1	12	3	250,000
Emerson .....	On St. Vincent Branch of C. P. Ry.....	Jan. 1, 1879	3,000	6	6	1	3	6	65	10	1,600,000
Gladstone .....	On W. & N. W. Ry.....	April 1, 1872	500	3	1	1	2	...	9	4	697,000
Minnedosa .....	18 miles N. from Rapid City.....	Aug. 1, 1876	600	2	1	1	2	...	12	5	173,157
Morris .....	On C. P. Ry., on West side of Red River.....	Jan. 1, 1874	400	4	1	1	1	1	14	4	Not stated.
Portage la Prairie .....	On C. P. Ry., main line...	July 1, 1871	3,000	7	5	1	2	12	71	18	6,500,000
Regina .....	do .....	Aug. 3, 1882	900	2	...	...	...	...	30	10	Not stated.
Rapid City .....	20 miles N. from Brandon.....	Sept. 1, 1879	750	4	3	2	1	2	10	5	Not stated.
Selkirk .....	On C. P. Ry., Selkirk Branch.....	Jan. 1, 1876	700	4	2	1	...	1	8	2	879,519
Stonewall .....	On C. P. Ry., Stonewall Branch.....	July 1, 1878	500	4	1	1	...	...	7	2	Not stated.
West Lynne .....	Opposite Emerson.....	July 1, 1871	400	2	1	1	...	2	9	8	738,235
Prince Albert .....	Saskatchewan River.....	Dec. 1, 1878	1,500	4	3	2	2	2	23	6	2,500,000

No. 9.—NOTES IN REFERENCE TO THE CONSTRUCTION OF THE CANADIAN PACIFIC RAILWAY.

The rapidity of railway construction during the present year has, perhaps, never been equalled. Notwithstanding the difficulties which the contractors, Messrs. Langdon & Sheppard experienced in the spring from the floods, as well as from the scarcity of labor, they have, during the present year, built the 345 miles between Flat Creek (Oak Lake Station, 165 miles west of Winnipeg) and Swift Current, 510 miles west of Winnipeg, on which daily passenger and freight trains are now running.

Before the 31st instant they expect to have the track (a portion of which is already laid) completed 91 miles further west to Maple Creek, which will probably be the base of operations for next season's work, and to which construction trains with material will probably run daily through the winter.

It will be seen from the above that during the present year there have been completed on the main line, west of Winnipeg, no less than 436 miles.

Some idea of the magnitude of this work may be formed, when it is stated that it has given employment to between 3,000 and 4,000 men, and about 1,500 teams, and that the quantity of earth "moved" each day has averaged 55,000 cubic yards.

	Miles.
Besides the above work there have been constructed between Winnipeg and the International boundary line at Gretna..	67
And between Morris Junction and Manitoba City.....	34
Total .....	101

making altogether 537 miles of road in a single season.

No. 10.—PORTIONS OF CANADIAN PACIFIC RAILWAY NOW COMPLETED.

The number of miles of railway now completed and operated is as follows:—

	Miles.
By Canadian Pacific Railway Company.....	831
“ Manitoba South-Western Colonization Railway Company.	53
“ Portage la Prairie, Westbourne and North Western Company.....	35
Total .....	919

By the end of the year there will be completed in addition to the above .....

	91
--	----

Making a total distance by 31st December, 1882, of..... 1,010

And by the end of next year about ..... 707

(Including the 300 miles between Rat Portage and Thunder Bay) will have been added to the line over which there will be regular passenger and freight traffic.

Making a grand total of.....	1,717
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Since the above was written I have been informed that it is the intention of the Portage la Prairie, Westbourne and North Western Railway Company to build 250 miles of railway during next year, west of Gladstone. This will make the number of miles in operation in 1883, 1,967, or in round numbers, not far from 2,000 miles. When it is remembered that the country through which these gigantic works have

been and are being constructed was, a very few years ago, almost a solitary waste, roamed over by the Indian and visited at intervals only by the adventurous traveller and the officers of the Hudson Bay Company, some idea may be formed of what in a short time has been accomplished, and of what may possibly be accomplished in years yet to come.

#### No. 11.—MEANS OF CONVEYANCE FOR PASSENGERS AND FREIGHT ON RIVERS AND LAKES, MANITOBA AND NORTH-WEST TERRITORY.

In connection with the means of internal communication provided by railways completed or in course of construction, a few facts in regard to the arrangements now being made for passenger and freight traffic by steamboat during the summer of 1883, on the Red River, the River Assiniboine, Lake Winnipeg and the River Saskatchewan may not prove uninteresting.

On the Red River two steamers will provide for one, two, or three trips per week each way, according to the business requirements, between Emerson and Winnipeg, a distance (by river) of about 100 miles, the round trip being performed in about twenty-eight hours.

On the River Assiniboine two steamers will provide for trips about once per week between Winnipeg, Brandon and Fort Ellice, a distance (by river) of about 450 miles, and, so long as water is high enough, Fort Pelly, a distance (by river) of about 700 miles, the round trip between Winnipeg and Fort Ellice being performed in from ten to fourteen days, and between Winnipeg and Fort Pelly in about three weeks.

On Lake Winnipeg a steamer is to make regular weekly trips, with passengers and freight, between Winnipeg and Grand Rapids, where the River Saskatchewan falls into the lake, a distance of about 350 miles, the round trip being performed in about five days.

Besides this steamer there will be employed on Lake Winnipeg eight freight steamers and seventeen barges, having an aggregate carrying capacity of 4,000 tons. Several barges will also be employed in the transport of lumber.

On the River Saskatchewan, five steamers, having an aggregate carrying capacity of 1,200 tons, will provide for a trip once per week each way between Grand Rapids and Edmonton, a distance of about 1,000 miles, the round trip being performed in about twenty days.

In addition to the above, I am informed that a steamer is being built by the Hudson's Bay Company on the Athabasca, to run on that and Peace River, a navigation of over 1,000 miles.

Taken together, the distances over which steamers will run are as follows:—

	Miles.
On Red River.....	100
River Assiniboine.....	700
Lake Winnipeg.....	350
River Saskatchewan.....	1,000
River Athabasca and Peace River.....	1,000
Being a total of.....	3,150

#### No. 12.—HUDSON'S BAY TRADING POSTS.

In addition to the means of communication which I have endeavoured briefly to describe it may be, perhaps, interesting to add that scattered over the immense area

between Labrador in the east, Alaska and British Columbia in the west, the Arctic Seas in the north and the Provinces and Territories of the Dominion in the south, are the Trading Posts of the Hudson's Bay Company, to and from each of which there is a regular communication provided by the Company, which, according to the distance and situation is more or less frequent; the most distant point, however, receiving and despatching one or two mails every year. East of the Rocky Mountain Range I am informed that there are 130 of these posts. Some idea may be formed of the distance to be traversed when it is stated that the trip from the most northerly post on the Mackenzie River to Winnipeg, occupies nearly the whole summer, or from four to five months.

No. 13.—REMARK.

The foregoing information in reference to the mail routes, &c., in Manitoba and the North-West Territories, the construction of the Canadian Pacific Railway, &c., &c., has been obtained from the report of J. Dewe, Esq., Chief Post Office Inspector, dated 16th December, 1882, and published in the Postmaster General's report, for the year ending 30th June, 1882.

G. F. B.

No. 14.—MAIL ROUTES—British Columbia—Overland Route, June 1882.

Name of Route.	Mode of conveyance.	Distance in miles.	No. of trips per week.
Alkali Lake and Clinton.....	Optional.....	80	1
do do.....	do.....	80	1
Barkerville and Yale.....	Stage.....	358	1
Burrard Inlet and New Westminster.....	Vehicle.....	9	6
Cache Creek and Kamloops.....	do.....	48	1
Clinton and Dog Creek.....	Optional.....	60	1
Clinton and Lillooet.....	Horse or vehicle.....	47	1
Esquimalt and Victoria.....	Vehicle.....	3	12
Head of Nicola Lake and Spence's Bridge.....	Optional.....	60	Fortnightly.
Hope and Kootenay.....	do.....	435	4 per annum.
Kamloops and Okanagan Mission.....	Horse or vehicle.....	100	Weekly summer and fortnightly winter.
Maple Bay and Somenos.....	Optional.....	7	2
Mud Bay and New Westminster.....	Horse or vehicle.....	10	1
Nanaimo and Wellington.....	Stage.....	7	6
New Westminster and Wharf.....	.....	.....	.....
Saanich and Victoria.....	Stage.....	24	1
Salt Springs Island and Wharf.....	Optional.....	3	2
Sooke and Victoria.....	Horse or vehicle.....	30	1
Victoria and Steamers.....	.....	.....	.....

## No. 15.—MAIL ROUTE by Steamers and Sailing Vessels.

Name of Route.	Distance in miles.	No. of trips per week.
Burrard Inlet and Granville.....	8 return trips	6
Comox, Nanaimo and Victoria.....	60 and 75	1 and fort-nightly.
Glenora and Fort Wrangle, U.S .....	100	.....
New Westminster and North Arm.....	12	1
do Victoria .....	75	2
do Yale.....	100	2
do do .....	100	1
Skeena and Victoria.....	510	As required.
Victoria and Port Townsend.....	40	2
do Yale.....	175	.....

For Nos. 14 and 15, see also Report of Postmaster-General, 1882.



No. 16.—CANADIAN PACIFIC RAILWAY (Prairie Section), with distances between stations.

<i>From St. Vincent (International Boundary) to Winnipeg.</i>		<i>From Winnipeg to Regina—Concluded.</i>		Miles.
Miles.		Miles.		
68	St Vincent .....	0	High Bluff .....	48.7
66	Emerson .....	2	Portage la Prairie.....	56
56	Dominion City .....	12	Burnside .....	63.5
48	Arnaud .....	20	Bagot .....	71
40	Dufrost .....	28	McGregor .....	79
31	Otterburne .....	37	Austin .....	84.6
23.5	Niverville .....	44.5	Sidney .....	92.8
12	St. Norbert .....	56	Melbourne .....	98.5
3	St. Boniface.....	65	Carberry .....	105.7
1.5	Winnipeg Junction .....	66.5	Sewell .....	114.2
0	Winnipeg .....	68	Douglas .....	121.8
			Chater .....	127.5
			Brandon.....	132.6
				141.1
			Alexander .....	148.7
			Griswold .....	157
			Oak Lake .....	165.5
			Virgen .....	180.2
			Hargraves .....	188.3
			Elkhorn .....	196.8
			Fleming .....	211.1
			Moosomin .....	219.3
			Red Jacket .....	226.5
			Wapella .....	235.4
			Burrows .....	243.1
			Whitewood .....	249.4
			Percival .....	256.3
			Broadview .....	263.8
			Oakshela .....	271.3
			Grenfell .....	279.1
			Summerberry .....	286.6
			Wolseley .....	294.3
			Sintaluta .....	302.2
			Indian Head .....	312.2
			Qu'Appelle .....	323.8
			McLean .....	332.2
			Cassils .....	341.3
			Pilot Butte .....	348.1
			Regina .....	356.6
			Grande Coulee .....	366
			Pense .....	373.4
			Belle Plaine .....	381.2
			Pasqua .....	390.2
			Moose Jaw .....	398.3
			Boharm .....	406.4
			Caron .....	414.4
			Mortlach .....	423.4
			Parkbeg .....	432.6
			Secretan .....	443
			Chaplin .....	451.9
			Ernfold .....	461.3
			Morse .....	471.7
			Herbert .....	480.5
			Rush Lake .....	489.1
			Waldeck .....	499.9
			Swift Current.....	510.8

<i>From Winnipeg to Rat Portage.</i>	
Miles.	
135	Winnipeg .....
133.5	Winnipeg Junction.....
126	Bird's Hill .....
119	Gonor .....
112	Selkirk .....
103.5	Tyndall .....
97	Beauséjour.....
87.5	Monmouth .....
77.5	Shelly .....
71.5	Whitemouth .....
62	Darwin .....
51.5	Rennie.....
41	Telfork .....
37	Cross Lake .....
31	Ingolf .....
23.3	Kalmar .....
16	Deception.....
11	Ostersund .....
3.5	Keewatin .....
0	Rat Portage .....

<i>From Winnipeg to Stonewall.</i>	
Miles.	
19.8	Winnipeg .....
18.3	Air Line Junction .....
6.5	Stony Mountain .....
0	Stonewall .....

<i>Main Line—From Winnipeg to Regina.</i>	
Miles.	
Winnipeg .....	0
Air Line Junction .....	1.5
Winnipeg West .....	7.8
Rosser .....	15.1
.....	22.2
Marquette .....	29
Reaburn .....	35.2
Poplar Point.....	40.5

## No. 17.—CANADIAN PACIFIC RAILWAY.—COMPLETED AND IN OPERATION.

*Main Line.*

	Miles.
Eastern Division, Montreal to Sturgeon River.....	389
Western “ Thunder Bay to Winnipeg.....	435
“ “ Winnipeg to Cypress Hills.....	606
	1,430

*Branch Lines.*

Eastern Division, Brockville to Carleton Place.....	46
“ “ Perth Branch.....	12
“ “ Aylmer Branch.....	9
“ “ St. Eustache Branch.....	8
“ “ St. Lin Branch.....	13
“ “ St. Jérôme Branch.....	14
Western “ Stonewall Branch.....	22
“ “ Pembina Branch.....	65
“ “ South Western Branch.....	113
	1,732

## TABLE OF DISTANCES.

*Main Line (when completed).*

Montreal to Winnipeg.....	1,434
Winnipeg to Port Moody (British Columbia).....	1,472
	2,906

*Lake Route.*

Montreal to Algoma (Lake Huron).....	539
Algoma to Thunder Bay.....	370
Thunder Bay to Winnipeg.....	435
	1,344

THROUGH DISTANCES, *vid* CANADIAN PACIFIC RAILWAY (when completed).

	Miles.
Halifax to Winnipeg.....	2,285
Portland to Winnipeg.....	1,731
Boston to Winnipeg.....	1,839
New York to Winnipeg.....	1,817
Quebec to Winnipeg.....	1,591
Montreal to Winnipeg.....	1,434

## DISTANCES BY OTHER ROUTES THROUGH CHICAGO.

Halifax to Winnipeg.....	2,561
Portland to Winnipeg.....	2,000
Boston to Winnipeg.....	2,028
New York to Winnipeg.....	1,827
Philadelphia to Winnipeg.....	1,731
Quebec to Winnipeg.....	1,875
Montreal to Winnipeg.....	1,703

## No. 18.—TABLE OF THROUGH DISTANCES.

*Via Chicago (All Rail).*

	Miles.
Halifax to Winnipeg.....	2,561
New York to Winnipeg.....	1,827
Toronto to Winnipeg.....	1,370
Montreal to Winnipeg.....	1,703
Quebec to Winnipeg.....	1,875
Montreal to Winnipeg, <i>via</i> the Canadian Pacific Route, when completed.....	1,434
Or from Quebec.....	1,591
Montreal to Winnipeg, <i>via</i> the Canadian Pacific Railway and Lake Route.....	1,344
(Of which 370 miles are by water).	
Chicago to Winnipeg.....	866
St. Paul to Winnipeg.....	410

## No. 19.—COMPARATIVE TABLE OF DISTANCES.

From Montreal to Port Moody (Pacific terminus)....	2,906
From New York to Port Moody, <i>via</i> Canadian Pacific Railway and Montreal.....	3,289
From New York to Port Moody, <i>via</i> Canadian Pacific Railway and Brockville.....	3,164
From New York to San Francisco, <i>via</i> Central and Union Pacific Railways and shortest connecting lines in the United States.....	3,331
From Liverpool to Montreal.....	2,790
From Liverpool to New York.....	3,040
From Liverpool to Port Moody, <i>via</i> Canadian Pacific Railway and Montreal.....	5,696
From Liverpool to San Francisco, <i>via</i> all United States routes.....	6,830
From Liverpool to Yokohama (Japan), <i>via</i> Montreal and Canadian Pacific Railway.....	11,019
From Liverpool to Yokohama (Japan), <i>via</i> New York and San Francisco.....	12,038

The above distances, *via* Canadian Pacific Railway, are by the **Kicking Horse Pass**, a route lately discovered by the Company's engineers, which shortens the line over ninety miles, and gives it the easiest gradients through the Rockies of any of the Pacific railroads.

## NOTES IN CONNECTION WITH PART I. OF APPENDIX NO. 30.

**ST. LAWRENCE AND LAKE CHAMPLAIN PROJECTED CANAL, KNOWN AS THE CAUGHNAWAGA CANAL PROJECT.**

The various surveys made from 1847 to 1856, together with the reports and estimates furnished by Messrs. Mills, Gamble and Swift, Civil Engineers, in connection with this projected work, are fully explained in the General Report of the Commissioner of Public Works in 1867, at pages 68 to 70.

**RIVER RICHELIEU AND LAKE CHAMPLAIN ROUTE FROM MONTREAL TO ALBANY AND NEW YORK.**

See pages 810 to 813.

**MEAN RISE AND FALL OF TIDE AT ALBANY AND NEW YORK.**

According to a telegram received 23rd April, 1883, from John G. Parke, acting Chief of Engineers at Washington, U. S., the mean rise and fall of the tide at Governor's Island, Harbour of New York, is 4.40 feet, and at Albany it is 2.32 feet. See No. 33,865.

**DECLIVITY OF THE RIVER HUDSON FROM ALBANY TO NEW YORK.**

According to a letter dated Washington, U. S., 1st May, 1883, from Richard D. Cutts, Assistant in charge of United States Coast and Geodetic Survey Office, the difference of level during low water, between Governor's Island, Harbour of New York, and Albany, or the total declivity between the two places, is 4.27 feet. See No. 34,047.

**SHUBENACADIE CANAL.**

connecting the Basin of Mines, (Minas,) and the Bay of Fundy with Dartmouth Cove, Halifax Harbour, Nova Scotia.

This canal, which is 41 miles in length, and comprises 15 locks, was designed for a navigation of 8 feet draught.

It connects the Basin of Mines with Dartmouth Cove on the north-east side of Halifax Harbour, by the way of the River Shubenacadie and the Dartmouth Lakes, through the Counties of Colchester, Hants and Halifax.

Its north end is at Fort Ellis, on the Shubenacadie, at 11 miles from the outlet of the latter into the Basin of Mines.

The outlet of the Shubenacadie is at 11 miles westward from Truro, at 120 miles westward from Amherst, N. S., and at 109 miles eastward from St. John, N. B.

The survey in connection with this canal was made in 1825, by Francis Hall, C. E.

The work was undertaken by a Joint Stock Company under a charter granted by an Act of the General Assembly of the Province of Nova Scotia, passed in 1824, and afterwards extended under the Act VIII, George IV, chapter 17 of 1827. The Government of Nova Scotia granted certain lands and a loan of money to the Company towards the construction of the canal.

Work was commenced towards 1827, but it does not appear to have been completed as originally designed, although a certificate under the hand and seal of Lord Mulgrave, the Governor of Nova Scotia in 1862, states that the water communication between the Harbour of Halifax and the Basin of Mines was then completed. No practical use appears to have been made of the work as a canal, although on one occasion a small steamer passed through from the Dartmouth Lakes to the Basin of Mines.

The Shubenacadie Canal was designed for the purpose of conveying lumber, minerals, gypsum, grain, etc., from the various ports of Nova Scotia and New Brunswick on the Bay of Fundy to Halifax on the Atlantic Ocean, for shipment to the United States and to Europe.

The canal works and property are now claimed by Lewis P. Fairbanks.

For further details, see Report of Minister of Justice, dated 28th March, 1881, No. 90,998, respecting claim of L. P. Fairbanks, in Department of Railways and Canals.

G. F. B.



APPENDIX No. 31.

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TABULAR STATEMENT

SHOWING THE

DATES OF THE OPENING AND CLOSING OF NAVIGATION

AT THE

PRINCIPAL PORTS OF CANADA

ON THE SEABOARD AND ON THE GULF, RIVER AND LAKES OF  
THE ST. LAWRENCE;

ALSO

ON THE CANALS

OF THE RIVER ST. LAWRENCE, RIVER RICHELIEU AND LAKE  
CHAMPLAIN ROUTES, RIVER OTTAWA ROUTE, RIVER  
TRENT ROUTE, DAWSON ROUTE, AND ON THE  
HUDSON RIVER AND ERIE CANAL.

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No. 1.—STATEMENT showing the Dates of Opening and Closing of Navigation at some of the principal Ports in the Gulf of St. Lawrence—the River St. Lawrence, Lake Ontario, Lake Erie, River Detroit, Lake Huron, Georgian Bay and Lake Superior, from 1867 to 1882.

GULF OF THE ST. LAWRENCE.

Years.	Charlottetown, P.E.I.			Georgetown, P.E.I.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 16...	Dec. 7...	Depth of water at the head of wharves 16 to 20 feet; in channel from 36 to 60 feet; at entrance of harbour 70 to 80 feet. Spring tides rise 9 feet 6 inches; neaps 8 feet. Harbour still open on 18th Dec., 1882.—Collector.			On 22nd Dec., harbour was still open and weather mild; Gulf clear of ice and five vessels loading. Depth of water at low tide in channel from opposite Railway Wharf to Wheeler's Bar buoy, 3½ miles, is from 30 ft., deepening gradually to 80 ft. Spring tides rise 5½ feet. neaps 4 feet.
1868	do 24...	do 10...				
1869	do 15...	Jan 10, '70		April 15...		
1870	do 5...	Dec. 23...		March 25...	Jan. 25...	
1871	March 20...	Nov. 30...				
1872	April 20...	Dec. 20...				
1873	do 22...	do 11...				
1874	do 18...	do 19...		April 18...	Jan. 31...	
1875	May 5...	Nov. 29...		May 4...	do 5...	
1876	April 23...	Dec. 15...		April 20...	do 10...	
1877	do 12...	Jan 4, '78.	March 30...	do 13...		
1878	do 8...	Dec. 30...	April 7...	do 29...		
1879	do 24...	do 19...	do 7...	do 30...		
1880	do 28...	do 1...	do 21...	do 3...		
1881	do 19...	do 27...	do 24...	do 3...		
1882	May 6...		May 7...	Feb. 3...		

GULF OF THE ST. LAWRENCE—Continued.

Years.	Pictou, N.S.			Sydney, N.S.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867			Depth of water on bar at low tide 17 feet; in channel in harbour 36 feet. Tides rise 6 feet. Harbour was still open on 20th Dec., 1882.	April 23...		Depth of water from 30 to 60 feet. Tides rise from 4 to 5 feet. Harbour still open and no ice, 20th Dec., 1882. North Sydney opens earlier and closes later than Sydney, being nearer the sea.
1868				May 5...	Jan 19, '69	
1869		Jan 14, '70		April 21...		
1870	April 15...	Dec. 27...		do 11...		
1871	March 25...	do 15...		March 21...		
1872	April 25...	do 24...		May 3...	Dec. 31...	
1873	do 19...	do 18...		April 28...		
1874	do 1...	do 28...		May 1...		
1875	May 3...	do 1...		do 12...		
1876	April 15...	do 27...		do 7...	Dec. 23...	
1877	do 7...	do 28...	April 7...	Jan. 8, '78		
1878	do 15...	do 28...	do 6...	do 16, '79		
1879	do 2...	do 17...	do 19...	Dec. 30...		
1880	do 30...	do 10...	May 6...	do 31...		
1881	do 18...	Jan 4, '82	April 29...	Jan. 5, '82		
1882	do 24...		May 11...			



No. 1.—STATEMENT showing the Dates of the Opening and Closing of Navigation, from 1867 to 1882—Continued.

GULF AND RIVER ST. LAWRENCE.

Years.	Shediac, N.B.			Bathurst, N.B.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867			No record kept before '76.			Depth of water on outer bar at lowest Spring tides, 7½ ft.; below public wharf, 6½ ft. General depth of water between bars, 10 ft. Ordinary Spring tides rise about 7 feet. Neaps, 5 feet. W. J. O'BRIEN, Collector. Bathurst, N.B., Dec. 23, 1882.
1868			Ordinary Spring tides rise 4½ ft.			
1869			Vessels load at the wharf down to 16 ft. at high water. The depth at the "Deep Hole," where the largest vessels finish loading, is about 19 feet.			
1870						
1871				April 24...	Nov. 6...	
1872						
1873						
1874						
1875						
1876	May 16...	Dec. 9...		May 10...		
1877	April 25...	do 15...	I am informed that a comparatively small amount of dredging would make a vast difference in regard to depth of water for ships. — Collector.	do 15...	Dec. 5...	
1878	do 29...	Nov. 17...		April 30...		
1879	May 1...	Dec. 13...		do 26...		
1880	do 26...	Nov. 22...		do 29...		
1881	do 19...	Dec. 2...		do 26...	Nov. 26...	
1882	May 9...	do 7...	Shediac, N.B., Dec. 14, '82	May 15...	Dec. 4...	

GULF AND RIVER ST. LAWRENCE.

Year.	Rimouski, P.Q.			Tadoussac, P.Q.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	Mar. 15...	Dec. 12...	Depth of water at wharf, low Spring tides, 7 ft. Spring tides rise 16 to 17 ft. Harbour still open on 20th Dec., '82. I have no doubt steam navigation could take place earlier in Spring and later in the Fall. P. L. GAUVREAU, Collector. Rimouski, Que., Dec. 22, 1882.	The Saguenay River closes generally from the 20th to the 25th of November, and opens about the 10th or 12th of May. The harbour of Tadoussac is open all the winter. It occasionally fills with small ice with an easterly wind for a tide, but it being small hature ice, a steamer of moderate power can pass through it. In the winter of 1872 the steamer "Arctic" brought the ship "Pride of England," wrecked at Escoumains, into the Bay of Tadoussac, (in the month of Jan.) where she wintered afloat. There are 25 ft. of water 80 yds. from the shore in the Bay of Tadoussac. Spring tides rise about 17 ft.; neaps 10 ft. Jos. RADFORD, Postmaster. Tadoussac, Que., Dec. 21, 1882.		
1868	do 20...	do 10...				
1869	do 19...	do 8...				
1870	do 18...	do 25...				
1871	April 5...	do 15...				
1872	do 1...	do 12...				
1873	do 3...	do 10...				
1874	March 24...	do 1...				
1875	do 20...	Nov. 26...				
1876	do 30...	Dec. 1...				
1877	April 1...	do 5...				
1878	do 7...	Nov. 28...				
1879	do 10...	Dec. 1...				
1880	March 17...	do 19...				
1881	.....	do 25...				
1882	March 22...	.....				

No. 1.—STATEMENT showing the Dates of Opening and Closing of Navigation from 1867 to 1882.—Continued.

RIVER ST. LAWRENCE.

Years.	* Quebec, P. Q.			Montreal, P. Q.			
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks	
1867	April 17	Nov. 29	The average depth of water in the harbour of Quebec is 14 fathoms, about two cables length from the wharves. In mid-channel the average is from 16 to 18 fathoms, and towards the south shore 25 fathoms. Spring tides rise 18 feet, neaps 13 feet. Flood runs 4 hours 45 minutes; ebb runs 7 hours 40 minutes. With a strong easterly wind the tides rise much more. The first winter steam ferry boat, the "Unity" began to run in 1857 from Quebec to Lévis.—J. W. DUNSCOMB, Collector.	Apl. 22	Dec. 6	Depth on First Old Lock, La-chine Canal. ft. in. These measurements give the depths on sill of first lock. Add 5 ft. which will give depth in harbour; and from 1st Oct., '82, add 8 ft. which gives depth in harbour and new channel.—M. P. RYAN, Collector.	
1868	do 23	do 28		do 17	do 9		Nov. 22
1869	do 27	do 27		do 25	do 6		Nov. 15
1870	do 16	Dec. 2		do 18	do 18		Oct. 3
1871	do 22	Nov. 27		do 8	do 1		Nov. 14
1872	do 30	do 26		May 1	do 8		Dec. 11
1873	do 28	do 22		Apl. 25	Nov. 26		Sept. 16
1874	do 28	do 25		do 25	Dec. 13		Nov. 15
1875	do 29	do 23		May 3	Nov. 29		do 30
1876	May 6	do 24		Apl. 27	Dec. 10		Oct. 23
1877	April 25	do 26		do 17	Jan. 2, '78		do 28
1878	do 20	do 25		Mar. 30	Dec. 23		Jan. 1
1879	do 29	do 28		Apl. 24	do 19		Nov. 8
1880	do 30	do 27		do 17	do 3		Oct. 22
1881	May 1	do 24		do 21	Jan. 2, '82		do 6
1882	do 5	do 25	do 11	Dec. 9	Dec. 6		

\* See additional table of opening and closing of navigation at Quebec, for fifty years.

LAKE ONTARIO,

Years.	Kingston, Ont.			Belleville, Ont.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 8...	Dec. 18...	Harbour still open on 15th December, 1882. C. HAMILTON, Collector. Kingston, 15th December, 1882.	.....	.....	No record kept prior to 1871. Depth of water in harbour 8 to 12 feet. W. M. WARSTER, Collector. Belleville, 18th Dec., 1882.
1868	March 31...	do 24...		.....	.....	
1869	April 17...	Jan. 8, '70...		.....	.....	
1870	do 13...	Dec. 31...		.....	.....	
1871	March 16...	do 25...		.....	Nov. 28...	
1872	April 22...	do 21...		.....	do 28...	
1873	do 24...	Jan. 14, '74...		.....	do 20...	
1874	March 28...	do 5, '75...		.....	do 29...	
1875	April 19...	Dec. 23...		.....	do 28...	
1876	do 18...	do 20...		.....	do 18...	
1877	do 9...	Jan. 8, '78...		.....	Dec. 31...	
1878	March 11...	do 2, '79...		.....	do 7...	
1879	April 21...	Dec. 28...		.....	do 14...	
1880	March 23...	do 21...		.....	March 20...	
1881	April 12...	Jan. 12, '82...		.....	Nov. 22...	
1882	March 7...	.....	.....	April 9...		
			.....	Dec. 10...		
			.....	March 10...		
			.....	do 2...		

No. 1.—STATEMENT showing the dates of the Opening and Closing of Navigation from 1867 to 1882.—Continued.

## LAKE ONTARIO.

Years.	Port Hope, Ont.			Toronto, Ont.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 1.....	Dec. 11.....	On 1st July the water on the bar at the entrance of the harbour was 14 ft. On 1st Dec. 11 ft. Vessels can load in the new harbour and put out drawing 11 feet; and in old harbour drawing 9 ft. The ebb and flow is from 6 to 12 inches, but only during strong winds. BORTON, Collector. Port Hope, 18th Dec., 1882.	April 6.....	Dec. 9.....	Depth of water in harbour from 11 to 16 feet. Toronto 16th Dec. 1882. JAMES PATTON, Collector.
1868	do 1.....	do 7.....		do 8.....	do 12.....	
1869	do 1.....	do 11.....		do 1.....	do 3.....	
1870	do 1.....	do 13.....		do 3.....	do 24.....	
1871	Mar. 23.....	do 6.....		Mar. 11.....	Nov. 30.....	
1872	April 1.....	do 9.....		April 12.....	Dec. 10.....	
1873	do 1.....	do 2.....		do 14.....	Nov. 26.....	
1874	do 1.....	do 5.....		Mar. 16.....	Dec. 20.....	
1875	do 1.....	do 4.....		April 16.....	Nov. 30.....	
1876	do 1.....	do 11.....		do 11.....	Dec. 9.....	
1877	do 1.....	do 11.....		Mar. 25.....	do 19.....	
1878	do 1.....	do 8.....		do 9.....	do 16.....	
1879	do 1.....	do 9.....		do 25.....	do 19.....	
1880	Mar. 20.....	do 15.....		Feb. 19.....	Nov. 22.....	
1881	April 1.....	do 6.....	April 1.....	Jan. 2, '82		
1882	Mar. 20.....	do 8.....	Feb. 13.....	Dec. 9.....		

## LAKE ERIE.

Years.	Port Stanley, Ont.			Port Dover, Ont.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 1.....	Dec. 10.....	Ten feet depth of water at entrance of harbour. Port Stanley, 21st Dec. 1882. Collector.	April 6.....	Dec. 9.....	The depth of water fluctuates, owing to the winds. The usual depth is 10 ft., but with a strong southerly wind it rises at least four feet. This past season it has been as low as 8 or 8 1/2 feet. I have given the dates as taken from the Export and Import manifest-books, but it is quite common for the harbour to be open long before a vessel leaves in the Spring, and after the last arrival in the Fall. T. B. BARRETT, Collector. Port Dover, 19th Dec., 1882.
1868	do 1.....	do 10.....		do 16.....	do 2.....	
1869	do 1.....	do 5.....		do 24.....	do 6.....	
1870	do 10.....	do 10.....		do 22.....	do 6.....	
1871	Mar. 20.....	do 20.....		do 3.....	do 29.....	
1872	April 10.....	do 5.....		do 30.....	do 2.....	
1873	do 1.....	do 5.....		do 28.....	Nov. 22.....	
1874	Mar. 20.....	do 5.....		do 15.....	do 24.....	
1875	April 10.....	do 20.....		May 6.....	do 26.....	
1876	do 1.....	do 5.....		April 19.....	Dec. 4.....	
1877	do 10.....	do 10.....		do 25.....	do 13.....	
1878	do 1.....	do 10.....		Mar. 12.....	do 10.....	
1879	do 5.....	do 20.....		April 29.....	do 27.....	
1880	Mar. 20.....	do 15.....		do 2.....	Nov. 25.....	
1881	April 10.....	do 10.....	do 30.....	do 3.....		
1882	do 1.....	do 10.....	Mar. 25.....	do 6.....		

\* See further particulars about Toronto Harbour.

No. 1.—STATEMENT showing the Dates of the Opening and Closing of Navigation, from 1867 to 1882—Continued.

RIVER DETROIT.				LAKE HURON.		
Windsor, Ont.				Sarnia, Ont.		
Years.	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	Feb. 23...	Dec. 11...		Mar. 30.....	Dec. 30...	The harbour is still open and steamers running. <i>Collector.</i> Sarnia, 6th Jan., 1883.
1868	Mar. 15...	do 10...		do 16.....	do 12...	
1869	April 5...	do 17...		April 1.....	Jan. 6, '70...	
1870	do 7...	do 1...	Average depth of water at	Mar. 29.....	Dec. 23...	
1871	Mar. 8...	do 8...	docks, 15 feet; average at mid-	do 6.....	do 21...	
1872	April 1...	do 17...	channel, 40 feet. The dates	do 18.....	do 19...	
1873	do 1...	do 15...	given indicate the arrival and	do 18.....	Jan. 12, '74...	
1874	Mar. 10...	do 28...	departure of vessels from and	do 17.....	Dec. 24...	
1875	April 9...	do 4...	to outside ports; but ferry	do 29.....	do 18...	
1876	Jan. 1...	do 4...	boats cross the river at all	do 20.....	do 18...	
1877	April 1...	do 31...	seasons.	April 7.....	Jan. 12, '78...	
1878	Mar. 1...	do 31...		Mar. 20.....	Dec. 24...	
1879	April 3...	do 24...		do 20.....	do 26...	
1880	Mar. 1...	do 3...		do 6.....	do 18...	
1881	April 15...	do 31...		April 4.....	Jan 10, '82...	
1882	Mar. 1...	do 18...		Mar. 11.....	.....	

LAKE HURON.

Goderich, Ont.				Kincardine, Ont.		
Years.	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 20...	Dec. 2...	Depth of water inside 7 piers, 14 to 16 ft. Just outside of piers in rough weather only about 12 ft. <i>D. Dory, Collector.</i> Goderich, 14th Dec., 1882.	.....	.....	Up to 1875 this was an outport of Goderich and no record kept. The dates are of the first arrivals of vessels and the departure of the last from harbour. Depth of water in inner harbour, 9 ft.; at entrance, about 11 ft. It is filling in fast this fall, owing to the outside crib on pier being carried away. Harbour was open on 4th December. A. M. WILLIAMSON, <i>Collector.</i> Kincardine, 14th Dec., 1882.
1868	May 1...	do 6...		.....	.....	
1869	April 25...	do 3...		.....	.....	
1870	do 18...	Nov. 28...		.....	.....	
1871	May 2...	Dec. 5...		.....	.....	
1872	April 15...	Nov. 25...		.....	.....	
1873	do 12...	Dec. 4...		.....	.....	
1874	do 30...	Nov. 30...		.....	.....	
1875	May 1...	Dec. 10...		.....	.....	
1876	do 4...	do 1...		.....	.....	
1877	April 20...	do 4...		.....	.....	
1878	do 6...	do 10...		.....	.....	
1879	do 12...	do 1...		.....	.....	
1880	Mar. 20...	do 10...		.....	.....	
1881	May 1...	do 1...	.....	.....		
1882	April 3...	do 7...	.....	.....		

No. 1.—STATEMENT showing the Dates of the Opening and Closing of Navigation, from 1867 to 1882—Concluded.

GEORGIAN BAY—LAKE HURON.

Year.	Owen Sound, Ont.			Collingwood, Ont.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	April 16...	Nov. 29...	Depth at low water 10 ft. 6 in. Rise and fall of tide from 18 to 24 inches.	April 20...	Nov. 28...	Depth at low water. 11 ft. 6 in.
1868	do 15...	Dec. 2...		do 20...	Dec. 5...	
1869	do 24...	Nov. 28...		do 28...	do 2...	
1870	do 18...	Dec. 5...		do 22...	do 10...	
1871	Mar. 22...	do 4...		do 1...	do 6...	
1872	May 9...	do 1...		May 3...	Nov. 28...	
1873	do 7...	do 11...		do 7...	do 24...	
1874	do 4...	Nov. 31...		do 9...	do 26...	
1875	do 15...	Dec. 2...		do 9...	do 22...	
1876	do 4...	do 6...		do 2...	Dec. 1...	
1877	do 1...	do 8...		April 20...	do 8...	
1878	March 19...	do 14...		March 18...	Nov. 27...	
1879	April 22...	do 4...		May 2...	Dec. 9...	
1880	March 2...	do 1...	April 14...	do 2...		
1881	April 26...	do 31...	May 9...	Nov. 29...		
1882	March 20...	do 13...	April 18...	do 3...		

LAKE SUPERIOR.

Year.	Sault Ste. Marie, Ont.			Prince Arthur's Landing, Ont.		
	Opened.	Closed.	Remarks.	Opened.	Closed.	Remarks.
1867	May 4	Dec. 3	The early closing in 1873 was not caused by cold weather, but the canal was closed so that the dam at head of canal (for keeping water out of the canal during winter to allow the work of deepening to be carried on) could be put in before ice formed. F. V. FARQUHAR, Maj. of Eng'rs, U.S.A. Detroit 11th April, 1883.			Lakes on Dawson Route, between P. A. Land'g. & L. of the Woods
1868	do 2	do 3				
1869	do 4	Nov. 29				
1870	April 29	Dec. 1				
1871	May 8	Nov. 29				
1872	do 11	do 26				
1873	do 5	do 18				
1874	do 12	Dec. 2				
1875	do 12	do 2				
1876	do 8	Nov. 26		May 16	Dec. 23	
1877	do 2	do 30		April 28	do 27	
1878	do 2	do 3		Mar. 17	Jan. 10, '78	
1879	April 8	Dec. 30		April 23	Dec. 30	
1880	May 2	do 2	do 25	do 28		
1881	April 28	Nov. 15	do 28	do 30		
1882	do 21	do 2	do 25	do 31		

Collector.  
 Prince Arthur's Landing, 28th Dec., 1882.  
 Navigation is said to open generally on 25th May.  
 do closed do 20th Oct.

No. 2.— STATEMENT showing the Opening and Closing of the Lachine, Beauharnois and Cornwall Canals.

Years.	LACHINE CANAL.			BEAUHARNOIS CANAL.			CORNWALL CANAL.		
	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.
1831									
1832									
1833									
1834									
1835		Nov. 22							
1836	May 1	do 25	209						
1837	April 26	do 24	213						
1838	do 23	do 23	215						
1839	do 11	do 23	227						
1840	do 21	do 23	217						
1841	May 1	do 25	209						
1842	do 2	do 26	209						
1843	do 4	do 28	209				April 10	Nov. 28	233
1844	April 23	do 17	209				do 24	Dec. 2	223
1845	May 5	do 28	208	Oct. 11	Nov. 26	47	do 28	Nov. 29	216
1846	do 6	Dec. 9	218	April 16	do 29	228	do 20	Dec. 2	227
1847	do 5	do 13	223	May 5	do 28	209	May 1	do 4	218
1848	April 24	do 11	232	April 12	do 30	233	April 7	do 9	237
1849	do 21	do 10	234	do 19	Dec. 8	234	do 7	do 6	244
1850	do 22	do 7	230	do 26	do 4	223	do 20	do 7	232
1851	do 22	do 10	233	do 25	Nov. 25	215	do 25	do 12	232
1852	May 7	do 16	224	May 2	Dec. 13	226	May 1	do 16	230
1853	do 20	do 2	197	April 29	Nov. 24	209	April 29	do 14	230
1854	do 13	do 2	204	May 1	Dec. 2	216	do 30	do 10	225
1855	do 1	Nov. 28	212	do 1	Nov. 28	212	do 30	do 18	223
1856	do 1	Dec. 3	217	do 1	Dec. 1	215	do 28	do 6	223
1857	do 4	Nov. 27	208	do 2	Nov. 26	209	May 1	do 12	226
1858	April 25	Dec. 1	221	April 26	do 26	215	April 26	do 7	226
1859	do 21	Nov. 30	224	do 19	do 29	225	do 20	do 7	232
1860	do 20	Dec. 5	230	do 19	Dec. 3	229	do 21	do 10	234
1861	do 24	do 4	225	do 24	do 3	224	do 24	do 12	233
1862	May 4	do 6	216	do 30	Nov. 30	215	May 1	do 12	226
1863	do 4	do 10	220	May 2	Dec. 4	217	do 4	do 12	222
1864	April 25	do 10	229	April 24	do 3	224	April 27	do 10	227
1865	May 1	do 12	226	do 25	do 7	227	do 26	do 13	231
1866	do 2	do 13	226	do 30	do 8	223	do 30	do 13	227
1867	do 1	do 2	216	do 29	do 2	218	May 1	do 1	215
1868	April 27	do 5	223	do 27	do 2	220	April 27	do 8	226
1869	May 3	do 7	218	May 3	Nov. 3	212	May 3	do 7	219
1870	April 29	do 10	226	April 28	Dec. 5	222	April 28	do 8	225
1871	do 24	do 6	227	do 19	do 2	228	do 20	do 8	233
1872	May 1	do 7	221	May 1	do 2	216	May 2	do 8	221
1873	do 5	Nov. 29	209	do 1	Nov. 24	208	April 30	do 4	219
1874	April 29	Dec. 4	220	do 3	do 25	207	do 29	do 4	218
1875	May 1	Nov. 30	214	do 3	do 25	207	May 4	do 6	217
1876	do 1	Dec. 2	216	do 1	do 29	213	do 1	do 8	222
1877	do 7	do 4	212	do 5	Dec. 6	216	do 27	do 8	196
1878	do 6	do 5	210	April 24	do 6	227	April 22	do 8	231
1879	do 4	do 4	215	May 1	do 2	216	May 2	do 9	222
1880	April 25	Nov. 27	217	April 30	Nov. 28	213	April 26	do 6	226
1881	May 1	Dec. 1	215	do 25	do 28	218	do 26	do 10	229
1882	April 25	do 1	221	do 25	Dec. 4	224	do 25	do 6	226

No. 2.—STATEMENT showing the Opening and Closing of the Farran's Point Canal, Rapide Plat and the Galops Canal.

WILLIAMSBURG CANALS :

Years.	FARRAN'S POINT CANAL.			RAPIDE PLAT CANAL.			THE GALOPS CANAL.		
	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.
1831									
1832									
1833									
1834									
1835									
1836									
1837									
1838									
1839									
1840									
1841									
1842									
1843									
1844									
1845									
1846									
1847									
1848	April 13...	Dec. 6...	238	April 13.....	Dec. 6...	238	April 13...	Dec. 6...	238
1849	do 9...	do 15...	251	do 9.....	do 15...	251	do 9...	do 15...	251
1850	do 27...	do 10...	228	do 27.....	do 10...	228	do 27...	do 10...	228
1851	do 25...	Nov. 25...	215	do 25.....	Nov. 25...	215	do 25...	Nov. 25...	215
1852	do 13...	do 24...	226	do 13.....	do 24...	226	do 13...	do 24...	226
1853	May 1...	Dec. 1...	215	May 1.....	Dec. 1...	215	May 1...	Dec. 1...	215
1854	do 3...	do 8...	220	do 3.....	do 8...	220	do 3...	do 8...	220
1855	April 20...	do 15...	230	April 20.....	do 15...	230	April 20...	do 15...	230
1856	do 28...	do 6...	223	do 28.....	do 6...	223	do 28...	do 6...	223
1857	May 1...	do 12...	226	May 1.....	do 12...	226	May 1...	do 12...	226
1858	April 25...	do 11...	231	April 25.....	do 11...	231	April 25...	do 11...	231
1859	do 30...	do 5...	220	do 30.....	do 5...	220	do 30...	do 5...	220
1860	do 21...	do 10...	234	do 21.....	do 10...	234	do 21...	do 10...	234
1861	do 24...	do 10...	231	do 24.....	do 10...	231	do 24...	do 10...	231
1862	do 29...	Nov. 30...	216	do 29.....	Nov. 30...	216	do 29...	Nov. 30...	216
1863	May 1...	Dec. 7...	221	May 1.....	Dec. 7...	221	May 1...	Dec. 7...	221
1864	April 26...	do 10...	229	April 26.....	do 10...	229	April 26...	do 10...	229
1865	do 29...	do 13...	229	do 29.....	do 13...	229	do 29...	do 13...	229
1866	May 1...	do 11...	225	May 1.....	do 11...	225	May 1...	do 11...	225
1867	April 30...	do 6...	221	April 30.....	do 6...	221	April 30...	do 6...	221
1868	do 27...	do 5...	225	do 27.....	do 5...	225	do 27...	do 5...	225
1869	May 1...	do 3...	217	May 1.....	do 3...	217	May 1...	do 3...	217
1870	April 23...	do 10...	232	April 23.....	do 10...	232	April 23...	do 10...	232
1871	do 21...	do 6...	230	do 21.....	do 6...	230	do 21...	do 6...	230
1872	May 1...	do 7...	221	May 1.....	do 7...	221	May 1...	do 7...	221
1873	do 1...	do 2...	216	do 1.....	do 2...	216	do 1...	do 2...	216
1874	do 1...	do 5...	219	do 1.....	do 5...	219	do 1...	do 5...	219
1875	do 1...	do 2...	216	do 1.....	do 2...	216	do 1...	do 2...	216
1876	do 1...	do 5...	219	do 1.....	do 5...	219	do 1...	do 5...	219
1877	do 1...	do 7...	221	do 1.....	do 7...	221	do 1...	do 7...	221
1878	April 29...	do 12...	228	April 29.....	do 12...	228	April 29...	do 12...	228
1879	do 28...	do 9...	226	do 28.....	do 9...	226	do 28...	do 9...	226
1880	do 20...	do 11...	236	do 20.....	do 11...	236	do 20...	do 11...	236
1881	do 27...	do 10...	228	do 27.....	do 10...	228	do 27...	do 10...	228
1882	do 24...	do 11...	232	do 24.....	do 11...	232	do 24...	do 11...	232

No. 2.—STATEMENT showing the Opening and Closing of the Welland Canal, Burlington Bay Canal and Sault Ste. Marie Canal.

Years.	WELLAND CANAL.			BURLINGTON BAY CANAL.			SAULT STE. MARIE.	
	Opened.	Closed.	No. of days open	Opened.	Closed.	No. of days open	Opened.	Closed.
1831	April 8							
1832	May 15							
1833	do 20							
1834	April 10	Nov. 15	220					
1835	May 1							
1836	April 28							
1837	May 5							
1838	April 5							
1839								
1840	April 2	Dec. 1	244					
1841	May 4	do 6						
1842								
1843		Dec. 4		April 24	Dec. 9	241		Nov. 17
1844	April 1	do 4	248	do 6	do 20	266	April 22	do 23
1845	May 7	Nov. 29	207	March 27	do 23	272	do 24	do 9
1846	April 3	Dec. 15	257	April 7	do 27	255	do 16	do 25
1847	do 14	do 9	240	do 10	do 25	260	May 9	do 26
1848	do 10	do 19	258	Feb. 28	do 25	302	April 26	do 23
1849	do 3	do 7	249	March 28	do 26	274	May 9	Dec. 4
1850	do 1	do 12	255	April 2	do 19	262	do 3	Nov. 17
1851	March 25	do 12	261	March 22	do 24	278	April 23	do 27
1852	April 13	do 14	245	April 22	do 31	254	May 3	do 23
1853	do 1	do 17	261	do 6	do 30	270	April 28	do 27
1854	do 3	do 4	242	do 4	do 18	258	do 28	do 29
1855	do 16	do 12	241	do 14	do 24	255	May 2	do 30
1856	do 26	do 13	232	do 21	do 18	242	do 3	do 15
1857	May 1	do 15	229	do 4	Jan. 31	303	do 8	Dec. 1
1858	April 7	do 1	245	March 29	do 10	288	do 3	Nov. 20
1859	do 1	do 8	252	do 15	Dec. 16	276	do 3	do 26
1860	do 1	do 6	250	do 12	do 15	278	April 25	do 29
1861	do 8	do 12	249				May 3	do 29
1862	do 15	do 15	244	April 18	do 21	247	April 27	Dec. 3
1863	do 13	do 13	244	do 11	do 24	257	do 28	do 1
1864	do 13	do 11	242	do 9	do 23	256	May 2	Nov. 26
1865	do 17	do 15	242	do 6	do 31	269	do 1	Dec. 3
1866	do 17	do 11	238	do 13	do 22	253	do 5	do 2
1867	do 23	do 7	229	do 15	do 18	248	do 4	do 3
1868	do 15	do 9	239	do 6	do 22	261	do 2	do 3
1869	do 21	do 10	234				do 4	Nov. 29
1870	do 20	do 16	241	do 20	do 12	237	April 29	Dec. 1
1871	do 5	do 9	248				May 8	Nov. 29
1872	do 22	do 10	233		Dec. 17		do 11	do 26
1873	do 21	do 15	239	April 12	do 11	244	do 5	do 18
1874	do 9	do 10	246	do 1	do 10	254	do 12	Dec. 2
1875	May 3	do 15	227	do 28	do 11	228	do 12	do 2
1876	April 17	do 15	243	do 17	do 16	244	do 8	Nov. 26
1877	do 17	do 5	233	do 11	do 13	247	do 2	do 30
1878	May 9	do 14	220	do 7	do 20	258	April 8	Dec. 3
1879	do 5	do 5	215	do 16	do 16	245	May 2	do 3
1880	do 1	Nov. 30	214	do 1	do 9	253	April 28	Nov. 15
1881	April 29	Dec. 15	231	do 18	do 19	246	May 7	Dec. 5
1882	do 20	do 5	230	do 5	do 12	252	April 21	do 3



No. 2.—STATEMENT showing the Opening and Closing of the St. Ours Lock and Chambly Canal.

Years.	ST. OURS LOCK.			CHAMBLY CANAL.		
	Opened.	Closed.	No. of days open.	Opened.	Closed.	No. of days open.
1831						
1832						
1833						
1834						
1835						
1836						
1837						
1838						
1839						
1840						
1841						
1842						
1843					Nov. 17	
1844				April 17	do 27	225
1845				do 21	do 25	219
1846				do 22	do 21	214
1847				May 18	do 29	196
1848				April 19		
1849				May 21	Dec. 1	195
1850	April 14	Dec. 6	237	April 19	do 5	231
1851	do 9	Nov. 23	228	May 20	Nov. 19	184
1852	do 10	Dec. 13	248	April 28	Dec. 14	231
1853	do 13	do 4	236	do 28	do 2	219
1854	do 19	do 4	230	May 2	do 2	215
1855	do 23	Nov. 30	222	do 2	Nov. 29	212
1856	do 18	Dec. 2	229	April 28	Dec. 1	218
1857	do 17	do 4	232	May 7	do 4	212
1858	do 9	Nov. 19	225	April 27	Nov. 19	207
1859	do 5	Dec. 3	243	do 15	Dec. 3	233
1860	do 4	do 5	246	do 22	do 2	215
1861	do 16	do 3	228	do 25	do 3	223
1862	do 25	do 2	222	May 6	do 4	213
1863	do 29	do 3	219	do 1	do 8	222
1864	do 7	do 9	247	April 25	do 7	227
1865	do 16	do 9	238	do 25	do 8	228
1866	do 9	do 12	248	May 1	do 12	226
1867	do 26	do 2	221	do 1	do 5	219
1868	March 30	do 2	248	do 5	do 2	212
1869	April 28	do 1	217	April 28	Nov. 29	215
1870	do 12	do 5	238	May 4	Dec. 3	214
1871	March 20	Nov. 28	254	do 3	Nov. 28	210
1872	April 20	Dec. 1	226	do 1	Dec. 2	216
1873	May 1	Nov. 16	200	April 25	Nov. 20	210
1874	April 16	do 25	224	do 25	do 25	215
1875	do 16	do 22	221	May 1	do 22	206
1876	do 19	do 30	226	do 1	do 28	212
1877	do 10	Dec. 5	240	do 1	Dec. 2	216
1878	do 1	do 12	256	do 1	do 6	220
1879	do 23	Nov. 24	216	do 5	do 6	216
1880	do 7	do 22	230	April 20	Nov. 25	230
1881	do 1	do 25	239	May 2	do 28	211
1882	do 13	do 28	230	do 2	do 30	213

No. 3.—STATEMENT showing the Opening and Closing of the Ste. Anne Lock, Carillon Canal, Chûte à Blondeau Canal and Grenville Canal.

Years.	STE. ANNE LOCK.			CARILLON CANAL.			CHÛTE À BLONDEAU CANAL.			GRENVILLE CANAL.
	Opened.	Closed.	No. of days open.	Opened.	Closed.	No. of days open.	Opened.	Closed.	No. of days open.	Opened.
1832										
1833										
1834										
1835										
1836										
1837										
1838										
1839										
1840										
1841										
1842										
1843	June 26.....	Nov. 27.....	155							
1844	April 28.....	do 25.....	222							
1845	do 24.....	do 28.....	219							
1846	do 11.....	do 29.....	233							
1847	May 5.....	do 29.....	209							
1848	April 16.....	do 30.....	229							
1849	do 26.....	Dec. 6.....	231							
1850	do 29.....	do 5.....	221							
1851	do 17.....	Nov. 24.....	222							
1852	do 30.....	Dec. 15.....	230							
1853	do 24.....	Nov. 28.....	219							
1854	do 29.....	Dec. 2.....	218							
1855	do 30.....	Nov. 27.....	212							
1856	do 25.....	Dec. 1.....	221							
1857	do 25.....	do 4.....	224							
1858	do 19.....	Nov. 29.....	225							
1859	do 18.....	do 28.....	225	April 29...	Nov. 28...	214	April 29...	Nov. 28...	214	April 29.....
1860	do 21.....	Dec. 2.....	226	do 30...	do 29...	214	do 30...	do 29...	214	do 28.....
1861	do 27.....	do 2.....	227	May 3...	do 29...	210	May 3...	do 29...	210	May 3.....
1862	do 29.....	do 2.....	218	do 3...	do 30...	212	do 3...	do 30...	212	do 3.....
1863	do 28.....	do 5.....	222	do 1...	Dec. 2...	217	do 1...	Dec. 2...	217	do 1.....
1864	do 23.....	do 1.....	223	do 2...	Nov. 30...	213	do 2...	Nov. 30...	213	do 2.....
1865	do 12.....	do 5.....	238	do 1...	do 30...	214	do 1...	do 30...	214	do 1.....
1866	do 25.....	do 6.....	226	do 3...	do 30...	212	do 3...	do 30...	212	do 3.....
1867	May 1.....	do 3.....	217	do 7...	do 30...	208	do 7...	do 30...	208	do 7.....
1868	April 18.....	Nov. 27.....	224	do 2...	do 30...	213	do 2...	do 30...	213	do 2.....
1869	do 29.....	do 21.....	215	do 3...	do 26...	207	do 3...	do 26...	207	do 3.....
1870	do 19.....	do 30.....	226	April 27...	Dec. 6...	224	April 27...	Dec. 6...	224	April 27.....
1871	do 13.....	do 27.....	229	May 1...	Nov. 27...	211	May 1...	Nov. 27...	211	May 1.....
1872	do 29.....	do 29.....	215	do 2...	Dec. 1...	214	do 2...	Dec. 1...	214	do 23.....
1873	do 24.....	do 20.....	211	do 1...	Nov. 18...	202	do 1...	Nov. 18...	202	do 1.....
1874	May 4.....	do 26.....	207	do 6...	do 15...	194	do 6...	do 18...	197	do 6.....
1875	do 3.....	do 22.....	204	do 1...	do 20...	204	do 6...	do 20...	199	do 7.....
1876	do 1.....	do 29.....	213	do 1...	do 30...	214	do 6...	do 30...	209	do 8.....
1877	April 21.....	Dec. 4.....	225	April 26...	Dec. 5...	224	do 1...	Dec. 5...	219	do 1.....
1878	do 15.....	do 6.....	234	do 19...	Sept. 6...	141	April 19...	Sept. 6...	141	do 3.....
1879	do 21.....	do 3.....	227	May 1...	Nov. 24...	208	May 1...	Nov. 24...	208	do 5.....
1880	do 24.....	Nov. 24.....	213	April 29...	do 23...	209	April 29...	do 23...	209	April 24.....
1881	do 18.....	do 2.....	216	do 29...	do 26...	212	do 29...	do 26...	212	May 2.....
1882	do 11.....	do 30.....	233	do 28...	do 24...	210	do 28...	do 24...	210	do 1.....

No. 3.—STATEMENT showing the Closing of the Grenville Canal, and the Opening and Closing of Rideau Canal.

Years.	GRENVILLE CANAL.		RIDEAU CANAL.										
	Closed.	No. of days open.	Ottawa.		Jones' Falls.		Brewer's Upper Mills		Kingston.				
			Opened.	Closed.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.			
1832			May 29	Nov. 14...	July 30	Nov. 14...							
1833			do 8	do 1...	June 7	do 7...							
1834			April 17	do 14...	April 28	do 13...							
1835			do 27	do 16...	do 23	do 23...							
1836			May 10	do 15...	May 6	do 16...	May 1	Nov. 20...					
1837			do 2	Dec. 1...	April 30	do 23...	do 1	do 22...					
1838			do 2	Nov. 19...	do 25	do 24...	do 1	do 23...					
1839			April 22	do 23...	do 29	do 24...	do 1	do 24...					
1840			do 22	do 24...	do 23	do 22...	do 1						
1841			do 28	do 24...	do 30	do 24...							
1842			do 23	do 25...	do 22	do 28...							
1843			May 2	do 27...	do 29	do 29...							
1844			April 24	do 23...	do 22	do 23...	May 1	Nov. 24...					
1845			do 26	do 28...	do 26	do 28...	April 26	do 27...					
1846			do 21	Dec. 2...	do 19	do 30...	do 19	Dec. 1...					
1847			May 4	Nov. 28...	May 1	do 29...	May 5	Nov. 24...					
1848			April 17	do 27...	April 20	do 30...	April 21	do 29...	May 2	Nov. 30			
1849			May 16	do 30...	do 26	do 30...	do 26	do 30...	do 2	do 30			
1850			do 3	Dec. 2...	May 2	do 30...	do 30	do 30...	do 1	Dec. 1			
1851			April 28	Nov. 24...	April 26	do 12...	do 26	do 17...	April 25	Nov. 30			
1852			May 4	do 24...	May 1	do 23...	May 3	do 23...	May 1	do 30			
1853			April 27	do 24...	April 27	do 27...	April 26	do 29...	do 1	do 30			
1854			May 1	do 22...	do 27	do 29...	do 28	do 29...	do 1	do 30			
1855			April 30	do 25...	May 2	do 28...	May 1	do 28...	do 1	do 28			
1856			May 1	do 27...	do 1	do 28...	do 1	do 28...	do 1	do 28			
1857			do 2	do 25...	April 22	do 21...	April 23	do 23	April 23	do 23			
1858			do 2	do 21...	May 1	do 19...	May 1	do 16...	May 1	do 22			
1859	Nov. 28...	214	April 27	do 19...	April 20	do 23...	April 16	do 27...	April 16	do 30			
1860	do 29...	214	May 2	do 28...	May 1	do 25...	May 1	do 26...	May 1	do 29			
1861	do 29...	210	April 30	do 26...	do 2	do 23...	do 1	do 20...	do 1	do 25			
1862	do 30...	212	May 1	do 27...	do 1	do 19...	do 1	do 22...	do 1	do 30			
1863	Dec. 2...	217	do 1	do 28...	do 4	do 26...	do 2	do 27...	do 1	do 30			
1864	Nov. 30...	213	do 1	Dec. 2...	do 1	do 29...	April 27	do 28...	April 27	do 30			
1865	do 30...	214	April 27	do 4...	April 24	do 30...	do 24	do 29...	do 25	Dec. 6			
1866	do 30...	212	May 1	do 6...	May 3	Dec. 2...	May 1	Dec. 2...	May 1	do 4			
1867	do 30...	208	do 1	Dec 5...	do 1	Nov. 20...	do 1	Nov. 25...	do 1	Nov. 30			
1868	do 30...	213	April 30	Nov. 30...	do 1	do 22...	do 1	do 30...	do 1	do 29			
1869	do 26...	207	May 6	do 27...	do 1	do 15...	do 1	do 15...	do 1	do 14			
1870	Dec. 6...	224	do 2	Dec. 5...	do 1	do 28...	April 27	do 25...	April 28	do 27			
1871	Nov. 27...	211	April 22	Nov. 29...	April 20	do 24...	do 15	do 28...	do 21	do 26			
1872	Dec. 18...	210	May 3	do 30...	May 1	do 27...	May 1	do 28...	May 1	do 26			
1873	Nov. 18...	202	do 5	do 19...	do 1	do 13...	do 1	do 13...	do 1	do 21			
1874	do 25...	204	do 5	do 26...	do 1	do 20...	April 29	do 24...	do 1	do 20			
1875	do 20...	198	do 5	do 22...	do 4	do 15...	May 1	do 22...	do 3	do 18			
1876	do 30...	207	do 6	Dec. 5...	do 4	do 25...	do 4	do 30...	do 5	do 27			
1877	Dec. 5...	219	do 1	do 3...	do 2	do 16...	April 30	do 15...	April 30	do 30			
1878	Sept. 6...	157	do 1	do 4...	do 1	do 29...	May 1	do 30...	May 1	do 31			
1879	Nov. 24...	204	do 5	Nov. 23...	do 5	do 21...	do 5	do 26...	do 5	do 20			
1880	do 23...	214	April 28	do 24...	April 28	do 17...	April 27	do 25...	April 27	do 17			
1881	do 26...	209	May 2	do 23...	May 2	do 21...	May 2	do 23...	May 2	do 20			
1882	do 24...	208	do 1	do 27...	do 2	do 20...	do 2	do 20...	do 1	do 19			

No. 4.—STATEMENT showing Dates of Opening and Closing of the Trent Riv  
Navigation, from 1867 to 1882.

Years.	Opened.	Closed.	No. of Days Open.
1867.....		November 15th.....	
1868.....	May 1st.....	do 14th.....	198
1869.....	do 10th.....	December 2nd.....	207
1870.....	do 9th.....	November 24th.....	200
1871.....	April 10th.....	do 10th.....	215
1872.....	do 29th.....	do 11th.....	197
1873.....	do 16th.....	do 24th.....	228
1874.....	do 15th.....	do 5th.....	205
1875.....	do 16th.....	do 29th.....	228
1876.....	do 19th.....	do 24th.....	220
1877.....	do 26th.....	December 25th.....	244
1878.....	May 1st.....	November 25th.....	209
1879.....	April 29th.....	December 8th.....	224
1880.....	do 7th.....	November 10th.....	218
1881.....	do 26th.....	do 25th.....	214
1882.....	March 15th.....	do 18th.....	249

Furnished by Thomas D. Belcher, Superintending Engineer, 14th April, 1883, as per No. 33,558.

No. 5.—LAKE CHAMPLAIN AND ERIE CANAL ROUTES.—The following table, taken from the Report of the Canal Commissioners of the State of New York, shows the date of Opening and Closing of the Hudson River, from 3rd March, 1824, to 1877; opening of Champlain Canal, from 1st May, 1857, to 1882; also, the time of Opening and Closing the Erie Canal, from 1824 to 1882, and the opening of Lake Erie, from 1827 to 1877.

Years.	HUDSON RIVER.			CHAMPLAIN CANAL.		ERIE CANAL.			LAKE ERIE.
	Opened.	Closed.	No of Days (Open.)	Opened.	Closed.	Opened.	Closed.	No. of Days Open	Opened.
1824	March 3...	Jan. 5...	309			April 30...	Dec. 4...	219	
1825	do 6...	Dec. 13...	283			do 12...	do 5...	28	
1826	Feb. 25...	do 24...	302			do 20...	do 18...	243	
1827	March 20...	Nov. 25...	251			do 22...	do 18...	211	April 21...1827
1828	Feb. 8...	Dec. 28...	220			March 27...	do 20...	269	do 1...1828
1829	April 1...	Jan. 11...	286			May 2...	do 17...	230	May 10...1829
1830	March 15...	Dec. 25...	283			April 20...	do 17...	242	do 5...1830
1831	do 15...	do 6...	263			do 16...	do 1...	230	do 8...1831
1832	do 25...	do 21...	289			do 25...	do 21...	241	April 27...1832
1833	do 21...	do 13...	277			do 19...	do 12...	238	do 23...1833
1834	Feb. 29...	do 15...	291			do 17...	do 12...	240	do 6...1834
1835	March 25...	Nov. 30...	268			do 15...	Nov. 30...	230	May 8...1835
1836	April 4...	Dec. 7...	248			do 25...	do 26...	216	April 27...1836
1837	March 27...	do 14...	261			do 20...	Dec. 9...	234	May 16...1837
1838	do 19...	Nov. 25...	257			do 12...	Nov. 25...	228	March 31...1838
1839	do 25...	Dec. 18...	286			do 20...	Dec. 16...	241	April 11...1839
1840	Feb. 25...	do 5...	285			do 20...	do 3...	228	do 27...1840
1841	March 24...	do 19...	286			do 24...	Nov. 30...	221	do 14...1841
1842	Feb. 4...	Nov. 28...	308			do 20...	do 28...	222	March 7...1842
1843	April 13...	Dec. 10...	242			May 1...	do 30...	214	May 6...1843
1844	March 18...	do 17...	278			April 18...	do 26...	222	Mar. 14...1844
1845	Feb. 24...	do 3...	283			do 15...	do 29...	228	April 3...1845
1846	March 18...	do 14...	275			do 16...	do 25...	224	do 11...1846
1847	April 7...	do 25...	263			May 1...	Nov. 30...	214	do 23...1847
1848	March 22...	do 27...	292			do 1...	Dec. 9...	223	do 9...1848
1849	do 19...	do 26...	286			do 1...	do 5...	219	Mar. 25...1849
1850	do 10...	do 17...	282			April 22...	do 11...	234	do 25...1850
1851	Feb. 25...	do 14...	293			do 15...	do 5...	235	April 2...1851
1852	March 28...	do 22...	270			do 20...	do 16...	239	do 20...1852
1853	do 23...	do 21...	274			do 20...	do 20...	245	do 14...1853
1854	do 17...	do 8...	266			May 1...	do 3...	217	do 29...1854
1855	do 27...	do 20...	268			do 1...	do 10...	224	do 21...1855
1856	April 11...	do 14...	248			do 5...	do 4...	214	May 2...1856
1857	Feb. 27...	do 27...	303			do 6...	do 15...	223	April 27...1857
1858	March 20...	do 17...	273			April 28...	do 8...	225	do 15...1858
1859	do 13...	do 10...	273			do 15...	do 12...	242	do 7...1859
1860	do 6...	do 14...	283			do 25...	do 12...	232	do 17...1860
1861	do 5...	do 23...	294			May 1...	do 10...	224	do 13...1861
1862	April 4...	do 19...	259			do 1...	do 10...	224	do 15...1862
1863	do 3...	do 11...	253			do 1...	do 9...	223	do 3...1863
1864	March 11...	do 12...	277			April 30...	do 8...	223	do 13...1864
1865	do 22...	do 16...	270			May 1...	do 12...	226	do 26...1865
1866	do 20...	do 15...	271			do 1...	do 12...	226	do 28...1866
1867	do 26...	do 8...	257	May 1...		do 6...	do 20...	229	do 21...1867
1868	do 24...	do 5...	252	do 5...		do 4...	do 7...	217	do 19...1868
1869	April 5...	do 9...	248	do 7...		do 6...	do 10...	218	May 1...1869
1870	March 31...	do 17...	261	do 10...		do 10...	do 8...	213	April 16...1870
1871	do 12...	Nov. 29...	263	April 24...		April 24...	do 1...	220	do 1...1871
1872	April 7...	Dec. 9...	247	May 13...		May 13...	do 1...	202	May 6...1872
1873	do 16...	Nov. 22...	221	do 15...		do 15...	do 5...	205	April 29...1873
1874	March 19...	Dec. 12...	269	do 5...		do 5...	do 5...	219	do 18...1874
1875	April 13...	Nov. 29...	229	do 18...		do 18...	Nov. 30...	197	May 12...1875
1876	do 1...	Dec. 2...	245	do 4...		do 4...	Dec. 1...	211	do 4...1876

Details could not be obtained.

No. 5.—LAKE CHAMPLAIN AND ERIE CANAL ROUTES—*Concluded.*

Years.	HUDSON RIVER.			CHAMPLAIN CANAL.		ERIE CANAL.			LAKE ERIE.
	Opened.	Closed.	No. of Days Open.	Opened.	Closed.	Opened.	Closed.	No. of Days Open.	Opened.
1877	March 30...	Dec. 31...	277	May 8...	Details could not be obtained.	May 8...	Dec. 7...	214	April 17...1877
1878	.....	.....	.....	April 15...		April 15...	do 11...	241	.....1878
1879	.....	.....	.....	May 8...		May 8...	do 6...	213	.....1879
1880	.....	.....	.....	April 16...		April 16...	Nov. 21...	220	.....1880
1881	.....	.....	.....	May 12...		May 12...	Dec. 8...	211	.....1881
1882	.....	.....	.....	April 11...		April 11...	do 7...	241	.....1882

No. 6.—STATEMENT of the dates of Opening and Closing of Navigation at Quebec, Montreal, Kingston and Toronto, from 1814 to 1882.

Years.	QUEBEC.		MONTREAL.		KINGSTON.		TORONTO.	
	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.
1814	April 28	Dec. 7						
1815	do 28	do 5						
1816	do 23	Nov. 29						
1817	May 6	Dec. 5						
1818	April 27	do 1						
1819	do 30	do 7						
1820	do 24	do 1						
1821	May 3							
1822	April 29	Dec. 3						
1823	do 25							
1824	do 20	Dec. 11						
1825	do 19							
1826	do 22	Dec. 21						
1827	do 14							
1828	do 12							
1829	do 18							
1830	do 17	Dec. 4						
1831	do 21	Nov. 30						
1832	do 29	do 30			April 27	Dec. 19		
1833	do 19	do 25			do 7	Jan. 1, '34		
1834	do 18	Dec. 9			March 19	Dec. 22		
1835	May 4	do 1			April 6	do 31		
1836	do 10	do 1			do 23	do 26		
1837	do 2	do 12			do 11	Jan. 16, '38		
1838	do 1	Nov. 26			do 6	Dec. 18		
1839	April 23	Dec. 19			do 8	do 26		
1840	do 21	do 2			March 19	do 23		
1841	May 4	do 14			April 23	do 31		
1842	April 26	do 2			March 24	do 31		
1843	May 5	do 1			April 25	Jan. 3, '44		
1844	April 23	Nov. 29			March 9	do 12, '45		
1845	do 23	Dec. 2			April 2	do 9, '46		
1846	do 14	do 9			March 31			
1847	May 11	do 3			April 11	Jan. 6, '48		
1848	April 18	do 5			do 3	Dec. 30		
1849	do 24	do 7			do 3	do 31		
1850	do 26	do 10			do 5	do 26		
1851	do 22	do 5			do 2	do 22		
1852	do 30	do 19			do 19	Jan. 14, '53		
1853	do 26	do 3			do 4	do 5, '54		
1854	May 5	do 5	April 25	Dec. 6	do 10	do 13, '55		
1855	do 8	Nov. 27	do 28	do 12	do 17	do 1, '56	April 2	Dec. 19
1856	April 22	Dec. 2	do 24	do 3	do 8	Dec. 31	do 17	do 22
1857	do 28	do 4	do 18	do 13	do 2	Feb. 2, '58	Feb. 27	do 30
1858	do 16	do 3	do 9	do 12	do 26	Jan. 8, '59	March 4	do 21
1859	do 26	Nov. 29	do 4	do 11	do 15	Dec. 25	Feb. 7	do 30
1860	do 20	Dec. 8	do 10	do 7	do 12	Jan. 10, '61	Jan. 10	do 31
1861	do 26	do 17	do 24	do 22	do 8	do 4, '62	do 2	do 31
1862	do 11	do 5	do 23	do 7	do 14	do 17, '63	do 2	do 30
1863	May 1	do 4	do 25	do 12	do 16	do 1, '64	do 7	do 21
1864	April 19	do 13	do 13	do 11	do 5	do 4, '65	Feb. 3	do 29
1865	do 18	do 9	do 10	do 16	March 28	do 5, '66	March 25	do 30
1866	do 27	do 15	do 19	do 15	April 11	do 5, '67	April 3	do 26
1867	do 17	Nov. 29	do 22	do 6	do 8	Dec. 18	March 28	do 9
1868	do 23	do 28	do 17	do 9	March 31	do 24	April 6	do 12
1869	do 27	do 27	do 25	do 6	April 17	Jan. 8, '70	do 1	do 3
1870	do 16	Dec. 2	do 18	do 18	do 13	Dec. 31	do 3	do 24
1871	do 22	Nov. 27	do 8	do 8	March 16	do 25	March 11	Nov. 30
1872	do 30	do 26	May 1	do 8	April 22	do 21	April 12	Dec. 10
1873	do 28	do 22	April 25	Nov. 26	do 24	Jan. 14, '74	do 14	Nov. 26
1874	do 28	do 25	do 25	Dec. 13	March 28	do 5, '75	March 16	Dec. 20

No. 6.—STATEMENT of the dates of Opening and Closing of Navigation at Quebec, Montreal, Kingston and Toronto, from 1814 to 1882—*Concluded.*

Years.	QUEBEC.		MONTREAL.		KINGSTON.		TORONTO.	
	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.
1875	do 29.....	do 23.....	May 3...	Nov. 29...	April 19.....	Dec. 23.....	April 16...	Nov. 30
1876	May 6.....	do 24.....	April 27...	Dec. 10...	do 18.....	do 20.....	do 11...	Dec. 9
1877	April 25.....	do 26...	do 17...	Jan. 2,'78	do 9.....	Jan. 8,'78	March 25...	do 19
1878	do 20.....	do 25.....	March 30...	Dec. 23...	March 11.....	do 2,'79	do 9...	do 16
1879	do 29.....	do 28.....	April 24...	do 19...	April 21.....	Dec. 28.....	do 25...	do 24
1880	do 30.....	do 27.....	do 17...	do 3...	March 23.....	do 21.....	Feb. 19...	do 8
1881	May 1.....	do 24.....	do 21...	Jan. 2,'82	April 12.....	Jan. 12,'82	April 16...	do 19
1882	do 5.....	do 25.....	do 11...	Dec. 9...	March 7.....	.....	Feb. 27...	do 9

See Appendix No. 47 of General Report of 1867, pages 393 to 400.



No. 7.—COMPARATIVE Statement of the Dates of Opening and Closing of the River St. Charles and River St. Lawrence, at Quebec.

In the Year	The ice of the St. Charles River broke up on the	The St. Charles River froze over on the	The Navigation of the St. Lawrence opened on the	The St. Lawrence Navigation closed on the
1860.....		Dec. 18.....		
1861.....	April 16.....			
1862.....				
1863.....	May 1.....	Dec. 10.....		
1864.....	April 10.....	Nov. 10.....		
1865.....		Dec. 20.....		
1866.....	April 20.....	do 5.....	April 26.....	Nov. 24.....
1867.....	do 29.....	Nov. 18.....		do 26.....
1868.....	do 23.....	Dec. 3.....	April 24.....	Dec. 1.....
1869.....	do 24.....	do 17.....	do 30.....	Nov. 30.....
1870.....		Nov. 29.....	do 23.....	do 22.....
1871.....	April 17.....		do 17.....	Dec. 1.....
1872.....	do 22.....	Nov. 19.....	do 27.....	Nov. 22.....
1873.....	do 27.....		do 29.....	do 24.....
1874.....	May 8.....		May 9.....	
1875.....	do 10.....		April 26.....	Nov. 23.....
1876.....	do 5.....	Nov. 26.....	May 6.....	
1877.....	April 18.....	do 27.....		
1878.....	do 5.....	do 28.....		
1879.....	do 10.....	do 29.....		
1880.....	do 19.....	do 29.....		
1881.....	do 12.....	do 28.....		
1882.....	do 25.....	do 28.....		

The dates of opening and closing from 1860 to 1876, inclusive, were recorded by Mr. Simons, who has acted for a long time as engineer to the Quebec Harbour Commissioners; they are registered at the local office of the Marine and Fisheries Department, at Quebec. Those from 1876 to 1882 were forwarded by A. H. Verret, Secretary-Treasurer of Harbour Commissioners of Quebec, 19th April, 1883. See No. 33,758.

See report of R. Steckel, 16th June, 1876, on formation, motion and breaking up of ice, &c., in the Harbour of Quebec, 1875-76, at Appendix No. 7 of this report at page 339.

G. F. B.

No. 8.—STATEMENT showing the dates of the Opening and Closing of Navigation at the Port of Quebec, in each year, from 1830 to 1882, inclusively, compiled by Mr. N. L. G. Belleau, Keeper of the Shipping Register, Custom House, Quebec.

Years.	Arrivals from Montreal Steamers.	Arrivals from Sea Ships.	Sailed for Sea.	Years.	Arrivals from Montreal Steamers.	Arrivals from Sea Ships.	Sailed for Sea.
1830.....	April 17.....	April 26.....	Dec. 4.....	1857.....	April 17.....	April 28.....	Nov. 24.....
1831.....	do 21.....	do 16.....	Nov. 30.....	1858.....	do 18.....	do 29.....	do 25.....
1832.....	do 29.....	May 4.....	do 30.....	1859.....	do 22.....	do 29.....	do 28.....
1833.....	do 18.....	do 10.....	do 25.....	1860.....	do 26.....	do 28.....	do 26.....
1834.....	do 18.....	do 6.....	do 24.....	1861.....	do 26.....	do 22.....	do 26.....
1835.....	May 4.....	do 2.....	do 25.....	1862.....	do 30.....	do 16.....	do 29.....
1836.....	do 11.....	do 11.....	do 26.....	1863.....	May 3.....	May 3.....	do 27.....
1837.....	do 1.....	April 29.....	do 18.....	1864.....	April 21.....	April 27.....	do 30.....
1838.....	April 28.....	May 3.....	do 20.....	1865.....	do 21.....	do 29.....	do 28.....
1839.....	do 21.....	do 8.....	do 23.....	1866.....	do 26.....	do 28.....	Dec. 1.....
1840.....	do 19.....	April 25.....	do 29.....	1867.....	May 3.....	do 17.....	Nov. 29.....
1841.....	May 1.....	do 29.....	do 28.....	1868.....	April 28.....	do 23.....	do 28.....
1842.....	April 21.....	May 3.....	do 28.....	1869.....	do 30.....	do 27.....	do 27.....
1843.....	May 5.....	April 18.....	do 28.....	1870.....	do 25.....	do 16.....	Dec. 2.....
1844.....	April 24.....	May 3.....	do 23.....	1871.....	do 18.....	do 22.....	Nov. 27.....
1845.....	do 25.....	do 1.....	do 26.....	1872.....	May 6.....	do 30.....	do 26.....
1846.....	do 17.....	April 24.....	do 27.....	1873.....	do 2.....	do 28.....	do 22.....
1847.....	May 8.....	May 8.....	do 26.....	1874.....	do 10.....	do 28.....	do 25.....
1848.....	April 6.....	do 1.....	do 21.....	1875.....	do 9.....	do 29.....	do 23.....
1849.....	do 25.....	April 28.....	do 25.....	1876.....	do 9.....	May 6.....	do 24.....
1850.....	do 25.....	do 28.....	do 28.....	1877.....	April 26.....	April 25.....	do 26.....
1851.....	do 22.....	do 20.....	do 29.....	1878.....	do 21.....	do 20.....	do 25.....
1852.....	do 30.....	do 15.....	Dec. 4.....	1879.....	May 2.....	do 29.....	do 28.....
1853.....	do 23.....	do 24.....	Nov. 26.....	1880.....	do 1.....	do 30.....	do 27.....
1854.....	May 5.....	do 29.....	do 29.....	1881.....	April 27.....	May 1.....	do 24.....
1855.....	do 6.....	May 6.....	do 22.....	1882.....	do 28.....	do 5.....	do 25.....
1856.....	April 27.....	April 20.....	do 23.....				

For arrivals and departures of vessels at Quebec, Montreal, Kingston and Toronto prior to 1867, see appendix No. 48 of General Report of that year, pages 401 to 409.

## No. 9.—PORT OF MONTREAL.

MEMORANDUM TAKEN FROM THE HARBOUR MASTER'S REPORTS GIVING THE DATES OF THE OPENING AND CLOSING OF NAVIGATION FROM 1864 TO DEC. 9TH, 1882.

- 1864—The ice in the harbour began to break and move on the 7th of April, on the 13th river was clear, close of navigation December 10th.
- 1865—On the 1st of January the water gradually rose, on the 14th the ice shoved, on the 15th the ice remained stationary.
- 1866—Opening of navigation April 19th, on the 5th January, 1866, the river was full of ice, on the 6th the ice became stationary.
- 1867—On the 1st of January the water was level with the wharves, ice forming fast, on the 9th ice became stationary. The first shove of the ice took place on the 14th April, on the 22nd the harbour was clear of ice.
- 1868—The winter was unusually cold, the river was frozen at an early date, teams crossed on the 16th of December, 1867, on the 19th of March, 1868, ice shoved, on the 4th of April the ice shoved heavily opposite the city, on the 14th and 15th the ice kept moving, on the 17th the harbour was clear.
- 1869—December 28th, the river was frozen over early. on this date the first team crossed to St. Lambert, in the beginning of 1869 the ice was considered firm for the winter, on the 13th April the ice shoved, on the 18th shoved again, on the 19th it shoved, flooding Griffintown, which continued until the 23rd, at 10 A.M. ice below gave way, on 25th the harbour clear of ice.
- 1870—On the 1st January channel opposite city free of ice, on the 8th crossed on foot, on 9th ice shoved, no crossing until 13th, teams crossed on the 15th, on 17th thaw set in which lasted some time, on 31st March the ice opposite the city was bad, the first shove on the 9th April, shoved on 10th and 11th, on the 17th harbour clear of ice.
- 1871—On the 4th January river frozen over, on 6th became mild, ice shoved, on 11th teams crossing, on 15th March a slight shove, 17th shoved again, on 31st last crossing, 3rd April the ice kept moving, on 10th harbour clear.
- 1872—When the year commenced the river was frozen and teams crossing, on April 18th first shove, on 28th harbor clear, on 1st May vessels arrived in port.
- 1873—On the 1st January the river was frozen over and ice stationary, teams crossing, on 11th April the ice shoved and continued to do so daily until the 21st when it gave way, on 25th Str. *William* arrived from Sorel.
- 1874—On 17th January the river was frozen over, on 21st teams crossed from Longueuil, April 18th first shove, on 23rd harbour free from ice, 25th a number of small craft arrived in port. The ice-bridge at Cap Rouge held firm until the 9th of May.
- 1875—On the 1st January the river opposite the city was full of ice, teams crossed below Hochelaga on the last day of the year 1874, on 4th January, 1875, ice became stationary. The winter was the coldest that had been experienced for many years. The first ice shoved on the 24th April, on 24th harbour clear, on the 1st May a may-pole was placed on the ice opposite Longueuil, on 3rd river vessels arrived from Boucherville, on the 7th ice-bridge at Cap Rouge gave way. On the 5th December ice became stationary, on 21st teams crossed to the city, the earliest on record.
- 1876—When January commenced the river was frozen and ice good, on April 12th ice got bad, on 16th first shove and shoved daily until 26th, on 27th several vessels arrived from Boucherville. On 19th December the ice was good, persons crossing on foot, 23rd teams crossing.
- 1877—When the year commenced the river was frozen over, the weather in April was fine and mild, on the 5th the ice began to get bad, on the 8th the first shove and moved downwards, on the 14th the channel was clear as far as Hochelaga, on the 17th the tug *Francis* arrived from Boucherville. The weather was mild this fall, the navigation was still open on the 31st of December.

- 1878—On the 1st of January, the Longueuil Ferry still running, in the afternoon left the harbour with a party on a pleasure excursion to Boucherville, on the 17th people crossed the ice on foot, on 24th good crossing. The 7th of January was the coldest day of the winter, at 8 a.m. 15° below zero, on the 1st of February roads were made, on the 18th a road was made to Laprairie, and on the last day of the month these roads were considered unsafe. March 1st cold snap, on the 2nd teams again crossed to St. Lambert and Laprairie, on the 12th again abandoned, on the 16th first open water, on 18th first shove of ice, on 22nd channel clear as far as Pointe-aux-Trembles, on the 29th the steamer *Montarville* came into the harbour but had to return to Boucherville, on the 30th tug *St. Francis* arrived in port; on the last day of the year the river was full of drift ice.
- 1879—On the 1st of January the weather was fine, in the afternoon a boat's crew descended the Lachine Rapids in safety, on the 25th the river was full of ice, on 26th teams crossed at Longueuil, on the 1st February a road was made from St. Lambert, on 13th February a road was made from Laprairie, on the 12th April the ice shoved, after the 15th the ice kept daily moving downwards, on the 18th the ice became so closely packed and stationary that people crossed on foot, on 23rd steamer *St. Lambert* arrived in port from Boucherville. On the 22nd December it was very cold, 22° below zero, on the 25th river full of ice, on 27th crossing on foot, teams crossing at Longueuil.
- 1880—On the 1st of January weather fine, at 8 A.M. 4° below zero, river opposite city full of ice, teams crossing below Longueuil; on the 2nd crossing on foot to St. Lambert; on the 13th commenced laying a railroad track on the ice from Hochelaga to Longueuil, completed on the 30th; on the following day the road was opened; on the 1st April ice began to get bad, on the same day a commencement was made to remove the ice-bridge railroad; April 5th first shove of the ice; on the 6th ice shoved again; on the 7th a very heavy shove on Island Mouton, it was piled up 44 feet, the water in the harbour at that time was 17 feet above the summer level; on the 13th a large quantity of ice left the harbour; on the 17th river craft arrived from Boucherville; on the 29th April the ice-bridge at Cap Rouge gave away; on the 3rd of December the river was full of ice, Longueuil Ferry left for winter quarters; on the 29th roads were commenced on the ice to St. Lambert.
- 1881—The New Year commenced with fine weather. On the 5th railway cars commenced crossing at Longueuil; on the 8th of April the ice commenced breaking up; 13th, channel opposite city clear; on 19th tug *C. W. Francis* arrived in port, being the first arrival of the season; on the 27th *S.S. Peruvian* arrived from Sorel where she had wintered; December 31st fine mild weather; the year closed with open navigation, the *Longueuil* making regular trips.
- 1882—Navigation opened on 11th of April, and closed on 9th December.

THOMAS HOWARD,  
Harbour Master.

MONTREAL, 17th April, 1883.

See report of Chief Engineer of Public Works on the St. Lawrence Bridge and Manufacturing Company's scheme for proposed works, dated 19th March, 1883, published same year.

No. 10.—STATEMENT showing the Highest and Lowest Water in Toronto Harbour from 1867 to 1882. Information furnished by the Harbour Master of the Port.

Years.	Highest Water.			Lowest Water.		
	Date.	in.	Above zero.	Date.	in.	Below zero.
1867.....	June 17.....	38	do	December 26.....	5	do
1868.....	July 1.....	17	do	February 6.....	12	do
1869.....	do 28.....	27½	do	do 5.....	2	do
1870.....	May 6.....	47	do	December 29.....	12	above zero.
1871.....	do 4.....	26	do	do 29.....	5½	below zero.
1872.....	June 22.....	3¼	do	March 19.....	16¼	do
1873.....	May 26.....	23	do	January 9.....	15	do
1874.....	June 11.....	29	do	December 30.....	5	do
1875.....	do 24.....	12	do	February 17.....	15	do
1876.....	July 5.....	41	do	January 10.....	2	do
1877.....	April 28.....	18½	do	November 18.....	1½	do
1878.....	December 14.....	25	do	January 5.....	1	do
1879.....	January 1.....	22	do	October 30.....	6½	do
1880.....	June 4.....	19	do	December 30.....	7	do
1881.....	July 8.....	15	do	do 7.....	7	do
1882.....	June 30.....	29½	do	January 3.....	3	do

No. 11.—NAMES of various Ports which are opened to Navigation the whole year.

Name of Port.	County.	Province.	Depth of Water available at Low Water.	Remarks.
			Feet.	
Annapolis.....	Annapolis.....	Nova Scotia.....	15 to 20	In very severe winters thin ice forms, but screw steamers could always enter.
Barrington.....	Shelburne.....	do.....	12 to 20	At anchorage, wharves dry at low water.
Digby.....	Digby.....	do.....	18	About 10 ft. at end of steamboat pier.
Halifax.....	Halifax.....	do.....	20 to 30	At wharves, 70 to 180 ft. in harbour.
Liverpool.....	Queen's.....	do.....	7	On bar, at Brooklyn, 24 ft.
Lockport.....	Shelburne.....	do.....	8	
Lunenburg.....	Lunenburg.....	do.....	12	
Parrsboro'.....	Cumberland.....	do.....	.....	Dry in harbour at low water.
Shelburne.....	Shelburne.....	do.....	40 to 60	
Yarmouth.....	Yarmouth.....	do.....	13	
St. Andrews.....	Charlotte.....	New Brunswick..	14	In inner harbour.
St. John.....	St. John.....	do.....	24	At entrance of harbour; 60 ft. in harbour.
St. Stephen.....	Charlotte.....	do.....	6	30 ft. at the ledge, 4 miles below the town.
Tadoussac*.....	Saguenay.....	Quebec.....	30 to 50	
Morpeth.....	Kent.....	Ontario.....	9	11 ft. at outer end of wharf.
Windsor.....	Essex.....	do.....	.....	

\* See Memorandum respecting Tadoussac Harbour at pp. 382-383 of Appendix No. 8, of Report 1868-1882. See also General Remarks at end of this appendix.

Victoria, Nanaimo, Burrard Inlet and all other ports of British Columbia up to Skeena River, remain always open. New Westminster is liable to be closed 7 to 15 days. See Telegram No. 34027, from Hon. T. W. Trutch, 3rd May, 1883.

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 GENERAL REMARKS.
 

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The dates of the opening and closing of navigation, given in the preceding tabular statement, are based partly on the tables I compiled for the General Report, published in 1867, and partly on information since obtained.

They have been furnished, in most cases, by the engineers and superintendents of the various canals and other works, and by the harbour masters, collectors, and other reliable authorities at the different ports.

They are not fully given in certain cases, because they could not be ascertained.

See references :—

No. 33,480—Lachine, Beauharnois, Chambly and St. Ours Canals.

L. A. LESAGE, Sec'y Canal Office.

Reports of Public Works and No. 33,652—Cornwall Canal.

D. A. McDONELL, Superintendent.

Reports of Public Works and No. 33,653—Williamsburg Canals.

A. G. MACDONELL, Superintendent.

No. 33,653—Welland and Burlington Bay Canals.

WILLIAM ELLIS, Superintendent.

No. 33,541—Sault Ste. Marie Canal.

J. U. FARQUHAR, Major of Engineers, U S.A.

No. 33,543—Ste. Anne, Carillon and Grenville Canals.

D. STARK, Suptg. Engineers.

No. 33,655—Lake Champlain Route.

C. S. COPPEN, Office of the Supt. of Public Works, State of New York.

No. 32,607—Erie Canal Route.

D. L. MALLOY.

No. 30,250—Quebec Harbour.

M. DUNSCOMB, Collector of Customs.

No. 30,296—Montreal Harbour.

M. P. RYAN, Collector of Customs.

No. 30,243—Kingston Harbour.

C. HAMILTON, Collector of Customs.

No. 30,301—Toronto Harbour.

JAMES PATTON, Collector of Customs.

G. F. BAILLAIRGÉ,

D. M. P. W.

APPENDIX No. 31½.

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STATEMENT

SHOWING

TIME OF HIGH WATER AT FULL AND CHANGE,

AND

RISE OF NEAP AND SPRING TIDES

AT VARIOUS PLACES IN

CANADA.

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NEW BRUNSWICK.

County.	Port or Harbour.	High Water, Full and Change.		Rise of Tides.		Remarks.	Authority.
		h. m.	h. m.	Neaps.	Springs.		
Charlotte	Grand Manan, Grand Harbour	11 7	17 6	ft. in.	ft. in.	Neap range, 14 ft.	Admiralty Charts, Com. Shortland, 1855.
do	do Seal Cove	10 54	15 0	21 0	20 0	do	do
do	Campobello Island	11 21	20 0	23 6	23 6	do 16½ ft.	Capt. Owen, 1847.
do	Port St Andrew	10 50	21 0	25 0	25 0	do	Lieut. Kortright, 1844.
do	Lepreau	11 18	21 0	24 6	24 6	do	Capt. Owen, 1848.
St. John	St. John Harbour	11 21	23 0	27 0	27 0	Neap range, 19 ft.	Lieut. Harding, 1844.
	Bay of Fundy, Cumberland Basin—						
Westmorland	Grindstone	11 47	34 6	41 0	41 0	do	Capt. Shortland, 1861.
do	Folly Point	11 49	38 0	45 0	45 0	do	do
do	Sackville	11 55	38 0	45 3	45 3	do	do
do	Fort Cumberland	11 55	38 0	45 3	45 3	Highest spring tide, 46 ft. above ordinary low water springs*.	Public Works Dept., G. F. Baillairgé, 1871.
do	Baie Verte	10 30	5 0	9 0	9 0	Highest spring tide, 10½ ft.	do
do	Shediac Harbour	8 0	2 0	4 0	4 0	do	Admiralty Charts, Capt. Rayfield, 1839.
do	Cocagne Harbour	7 30	2 0	4 0	4 0	do	do
Kent	Buctouche River	7 0	2 0	4 0	4 0	do	do
do	do	Once in 24 hrs., 3.30	2 6	4 0	4 0	do	do
do	Richibucto River	a. m.	4 0	5 0	5 0	do	do
do	Miramichi Bay	5 & 5 30	4 0	5 0	5 0	Neap range, 3 ft.	do
Northumberland	do River, Shieldrake	6 0	3 0	6 0	6 0	do	do
do	do do Beaubère	6 30	4 0	6 0	6 0	do	do
Gloucester	Miscou Harbour	3 30	3 0	5 0	5 0	do	do
do	Shippagan Harbour	3 42	3 0	5 6	5 6	do	do
do	Caraquette Harbour	2 40	3 0	6 0	6 0	do	do
do	Bathurst	3 15	4 0	7 0	7 0	do	do
Restigouche	Campbellton	4 0	7 0	10 0	10 0	do	do

Observed by Saxby, 6th Oct., 1869—  
 59.00 Feet.  
 Highest spring tide.  
 48.80 do

Observed by G. F. Baillairgé, 25th Oct., 1876.  
 46.00 Feet. Above ordinary low water springs.  
 48.80 do extreme do

\*Fort Cumberland—  
 Highest spring tide.  
 do



NOVA SCOTIA.

Cumberland	Amherst	11	55	38	0	45	3	Highest spring tide, 46 ft. above ordinary low water springs...	Public Works Dept., G. F. Raillière, 1871.
do	Advocate Bay	11	42	33	0	39	0	do	Admiralty Charts, Capt. Shortland, 1860.
Hants	Basin of Mines, Noel Bay	12	41	43	6	50	6	do	do
do	Avon River, Mouth of	12	30	40	0	48	0	do	do
Annapolis	Digby Gut	11	0	23	0	27	6	do	do
Digby	Peir's Passage	10	41	18	0	22	0	do	do
Yarmouth	Yarmouth	10	9	13	0	16	0	do	do
Shelburne	Sea Island	9	49	10	3	12	3	do	do
Yarmouth	Pubnico	9	25	10	0	12	0	do	do
Shelburne	Car's Sable	8	27	6	6	8	6	do	do
do	Shelburne	8	4	5	6	7	0	do	do
Queens	Port Mouton	7	54	5	3	7	6	do	do
do	Port Medway	7	50	0	0	8	0	do	do
Lunenburg	Lunenburg	7	54	6	0	7	3	do	do
Halifax	Blind Bay	7	46	6	0	7	6	do	do
do	Halifax	7	49	5	0	6	0	do	do
Guyshoro'	Ship Harbour	7	54	4	6	6	6	do	do
do	Luscomb Harbour	8	0	4	6	6	6	do	do
do	Whitehaven	8	0	5	6	6	6	do	do
do	Canso Harbour	7	48	4	6	6	6	do	do
do	Guyshoro' Harbour	8	20	4	6	4	0	do	do
Antigonish	Strait of Canso, N. entrance	9	15	2	0	4	0	do	do
Richmond	Archat Harbour	8	10	4	0	5	0	do	do
do	St. Peter's Bay	7	30	4	0	4	0	do	do
Cape Breton	Louisburg Harbour	8	0	4	0	5	0	do	do
do	Sydney Harbour	9	0	4	0	5	0	do	do
Victoria	Ste. Anne Harbour	8	34	4	6	6	0	do	do
do	Cape North	8	0	3	0	4	0	do	do
Inverness	Mabou Harbour	9	0	2	0	4	6	do	do
do	Port Hood	9	0	2	0	4	6	do	do
Antigonish	Tracadie Harbour	9	15	2	6	4	0	do	do
do	Antigonish Harbour	9	0	2	0	4	0	do	do
Pictou	Merigonish Harbour	10	6	2	6	5	0	do	do
do	Pictou Harbour	10	0	4	0	6	0	do	do
Colchester	Tatamagouche Bay	10	0	5	0	8	0	do	do
Cumberland	Wallace Harbour	10	30	5	0	8	0	do	do
do	Pugwash	10	30	4	0	7	0	do	do
do	Sable Island, north side	7	30	0	0	4	0	do	do
do	do south side	6	30	0	0	4	0	do	do



	8	20	2	0	3	0	do
<i>Gaspé</i> .....							Lieut. Collins, 1833 ;
<i>Magdalen Islands</i> .....							Public Wks Department, C. F. Roy, 1879
Anticosti Island, East Cape	1	0	3	0	5	0	Admiralty Charts, Capt. Bayfield, 1830
do do Bear Bay	1	10	3	0	5	0	do do do 1830
do do W. Point	2	0	4	0	6	0	do do do 1830
Bonaventure.....	3	0	4	0	6	0	do do do 1839 ;
do do Carleton Point.....							do do do 1839 ;
do do Macquereau Point.....							Public Wks Department, C. F. Roy, 1880
Gaspé.....	2	0	3	0	5	0	Admiralty Charts, Capt. Bayfield, 1839
do do Percé Bay.....	0	0	3	5	5	5	Public Works Department, C. F. Roy, 1881
do do Mat baie.....	1	50	3	0	5	0	Admiralty Charts, Capt. Bayfield, 1832
do do Gaspé.....	2	40	3	0	5	0	do do do
do do Cape Chatte.....	2	0	6	0	12	0	

RIVER ST. LAWRENCE.

Saguenay.....	1	52	6	0	11	0	Ebbs 6 h. 19 m. ; flows 6 h. 5 m.
do do St. Nicolas Harbour	1	55	7	0	12	0	Ebbs 6 h. 26 m. ; flows 5 h. 28 m.
Rimouski.....	2	15	7	0	11	0	
Saguenay.....	2	15	7	0	12	0	
Rimouski.....	2	10	8	0	13	0	
do do Little Méis at Boules	8	0	8	0	14	4	
Saguenay.....	2	0	7	0	12	0	
Rimouski.....	2	0	7	0	14	0	
do do Bic Island.....	2	15	8	6	14	0	Ebbs 6 h. 34 m. ; flows 5 h. 50 m.
do do Bic Harbour.....	2	15	8	6	14	0	
Saguenay.....	2	10	8	6	14	0	Ebbs 6 h 18 m ; flows 6 h. 7 m.
Témiscouata.....	2	10	8	6	14	0	
do do Trois Pistoles.....	2	45	9	6	16	0	Ebbs 6 h. 24 m. ; flows 6 h. by the shore.
do do Green Island.....	2	45	10	0	17	0	Ebbs by the shore 6 h. 15 m. ; flows 6 h. 8 m. Both streams continue to run $\frac{3}{4}$ h. after h. and l. water.
Chicoutimi.....	2	45	10	0	17	0	
do do Tadoussac.....	2	45	10	0	17	0	
Témiscouata.....	4	2	8	0	12	0	Ebbs 6 h. 34 m. ; flows 5 h. 50 m by the shore. Ebb continues to run 1 h. after l. w. ; flood continues to run $\frac{3}{4}$ h. after h. w.
do do Chicoutimi.....	3	6	10	0	17	0	
do do Brandy Pot.....	3	6	10	0	17	0	
Kamouraska.....	3	7	7	0	16	6	
do do Rivière du Loup.....	3	0	10	0	17	0	
do do Kamouraska.....	3	0	10	0	17	0	
do do River Ouelle (Pointe aux Orignaux).....	10	0	10	0	17	0	Public Works Dept., J. Stewart, 1847. Admiralty Charts, Capt. Bayfield, 1827-34.

RIVER ST. LAWRENCE—Concluded.

County.	Port or Harbour.	High Water, Full and Change.	Rise of Tides.		Remarks.	Authority.
			Neaps.	Springs.		
		h. m.	ft. in.	ft. in.		
Charlevoix.	Malbate.			16 0	.....	Public Works Dept., J. Stewart, 1847.
do	Coudres Island (Prairie Bay)	4 25	{ 10 0 7 9	17 0 17 0	Ebbs 6 h. 20 m.; flows 6 h. Ebb stream continues 1 h. 15 m. after l. w.; flood stream continues 45 m. after h. w.	Admiralty Charts, Capt. Bayfield, 1827-34; Public Works Dept., Chas. F. Roy, 1880.
L'Islet.	St. Roch.	4 50	{ 10 0 7 8	17 0 17 0	Ebbs 6 h. 45 m.; flows 5 h. 30 m.	do
Montmagny.	Crane Island.	5 24	13 0	17 0	.....	Admiralty Charts, Capt. Bayfield, 1827-34.
do	Berthier.			17 0	.....	Public Works Dept., P. Rubidge, 1846.
Montmorency.	St. François (Orleans Island)	5 40	13 0	17 0	.....	Admiralty Charts, Capt. Bayfield, 1827-34.
Quebec.	Quebec Harbour.	6 38	{ 13 0 11 0	18 0 18 0	Ebbs 7 h. 40 m.; flows 4 h. 45 m. by the shore. Stream of both tides runs an hour after h. and l. water by the shore.	do Com Orlebar, 1869; Public Works Dept., R. Steckel, 1882.
do	Cape Rouge.	7 15	11 0	16 0	The stream of flood makes 50 m. after l. w. by the shore, and runs up 4 h. 30 m. The stream of ebb makes up about 10 m. after l. w. by shore, runs down 7 h. 30 m.	Admiralty Charts, Capt. Bayfield, 1831-37.
Portneuf.	Fréchette's Island.	8 0	{ 9 0 9 8	14 0 14 6	do do	{ do do 1831-37; Public Works Dept., R. Steckel, 1882.
do	Portneuf (Platon).	8 30	{ 9 0 9 6	14 0 14 10	The stream of ebb makes immediately after h. w. by shore, running down 9 h. The flood makes up in the stream for about 2 h. at springs, but is scarcely felt at neaps.	Admiralty Charts, Capt. Bayfield, 1831-37; Public Works Dept., R. Steckel, 1882.
do	Cape à la Roche Grondines.	9 30	{ 4 0 5 3	6 0 8 7	Current always down; flood runs up on flat for 3 h. as far as Batiscan.	do

Champlain .....	9 45	2 0	3 0	The tide flows by the shore, but the current is always down.	do	1831-37.
St. Maurice .....	10 30	1 0	1 0	Easterly gales cause the tide to rise one or two feet higher.	do	do
do .....	.....	.....	.....	Tide ends.	.....	.....
Pointe du Lac .....	.....	.....	.....	.....	.....	.....



APPENDIX No. 32.

COMPARATIVE STATEMENT  
OF THE  
NUMBER OF VESSELS  
THEIR  
AGGREGATE TONNAGE  
AND THE  
NUMBER OF MEN EMPLOYED  
WHICH HAVE  
ARRIVED FROM SEA  
AT THE

PORTS OF HALIFAX, N.S., ST. JOHN, N.B., CHARLOTTETOWN, P.E.I.,  
QUEBEC AND MONTREAL, PROVINCE OF QUEBEC,  
AND VICTORIA, B.C., FROM 1867 TO 1882.

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## APPENDIX No 32.

**STATEMENT of the Number of Vessels and their Aggregate Tonnage, and Number of Men Employed, which have arrived from Sea, to 30th June each year since Confederation, at the Ports of Halifax, N.S.; St. John, N.B.; Charlottetown, P.E.I.; Quebec, Montreal, P.Q.; Victoria, B.C.**

Port.	Year.	No. of Vessels.	No. of Tons.	No. of Men	Remarks.
Halifax, N.S. ....	1868	1,089	274,089	16,562	Nova Scotia entered Confederation on 1st July, 1867.
	1869	1,292	288,682	16,022	
	1870	1,251	311,357	16,319	
	1871	1,266	302,338	15,581	
	1872	1,387	363,847	20,211	
	1873	1,384	372,985	19,803	
	1874	1,074	316,955	15,800	
	1875	1,215	354,271	18,188	
	1876	1,067	374,705	16,621	
	1877	1,076	494,638	20,358	
	1878	917	473,423	18,862	
	1879	959	391,448	19,725	
	1880	1,070	529,663	21,143	
	1881	1,157	601,398	23,630	
1882	1,168	575,529	23,806		
		17,372	6,025,341	281,631	
St. John, N.B. ....	1868	993	374,429	10,046	New Brunswick entered Confederation on 1st July, 1867.
	1869	1,423	502,083	13,320	
	1870	1,613	471,297	13,382	
	1871	1,575	442,837	12,371	
	1872	1,562	420,860	12,056	
	1873	1,470	406,442	11,537	
	1874	1,320	480,743	12,563	
	1875	1,131	377,614	10,593	
	1876	994	376,939	8,090	
	1877	1,115	421,060	10,501	
	1878	1,206	396,330	9,867	
	1879	1,055	376,919	9,711	
	1880	1,424	462,880	12,337	
1881	1,444	444,546	12,548		
1882	1,536	493,783	14,059		
		19,961	6,458,762	173,981	
Charlottetown, P.E.I.	1874	173	51,478	2,116	Prince Edward Island entered Confederation on the 1st July, 1873.
	1875	196	57,609	2,176	
	1876	184	68,521	2,305	
	1877	350	79,893	3,391	
	1878	288	65,716	2,932	
	1879	429	79,330	3,832	
	1880	255	64,281	2,598	
	1881	288	64,332	2,635	
	1882	196	50,038	2,018	
		2,358	581,198	24,003	



**STATEMENT of the Number of Vessels and their Aggregate Tonnage, and Number of Men Employed, which have arrived from Sea, to 30th June, &c.**

Port.	Year.	No. of Vessels.	No. of Tons.	No. of Men.	Remarks.
Quebec, Que.....	1868	910	628,866	18,520	Quebec entered Confederation 1st July, 1867.
	1869	952	640,087	19,205	
	1870	1,091	756,078	21,931	
	1871	844	623,474	18,741	
	1872	1,002	783,316	21,730	
	1873	917	734,937	20,827	
	1874	971	789,433	22,658	
	1875	854	639,235	19,818	
	1876	949	744,252	20,107	
	1877	983	855,101	21,489	
	1878	910	802,930	19,449	
	1879	642	604,490	15,610	
	1880	657	665,638	17,221	
	1881	783	802,186	19,888	
1882	642	676,327	17,675		
		13,107	10,754,350	294,869	
Montreal, Que.....	1868	253	160,553	7,339	
	1869	261	168,824	7,921	
	1870	340	228,121	9,366	
	1871	346	247,313	10,300	
	1872	435	311,567	11,724	
	1873	422	307,453	11,867	
	1874	384	306,782	11,623	
	1875	354	297,363	10,972	
	1876	337	285,609	9,881	
	1877	303	279,197	1,208	
	1878	325	309,261	9,679	
	1879	300	349,712	10,763	
	1880	374	427,057	13,269	
	1881	400	484,028	13,754	
1882	347	373,412	11,934		
		5,181	4,536,252	151,600	
Victoria, B.C.....	1872	292	131,696	4,487	British Columbia entered Confederation on the 20th July, 1871.
	1873	408	160,414	5,829	
	1874	401	156,197	5,744	Returns from British Columbia for 1875 were lost in transmission.
	1875	.....	.....	.....	
	1876	524	302,199	11,706	
	1877	523	312,155	11,569	
	1878	488	358,924	11,443	
	1879	514	377,705	10,891	
	1880	471	356,649	10,134	
	1881	467	338,996	9,297	
1882	488	398,034	11,792		
		4,576	2,892,969	92,890	



APPENDIX No. 33.

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STATEMENT

SHOWING THE

NUMBER AND TONNAGE OF VESSELS CONSTRUCTED

AT THE PRINCIPAL

SHIP BUILDING PORTS IN CANADA

FROM 1868 TO 1882 INCLUSIVE.

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APPENDIX No. 34.

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NUMBER OF SEA-GOING AND COASTING VESSELS WRECKED

ON THE

SEA COAST

IN THE

GULF, RIVER and LAKES of the ST. LAWRENCE

IN THE

DOMINION OF CANADA

From 1868 to 1881 (inclusive.)

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COMPILED FROM REPORTS OF DEPARTMENT OF MARINE AND  
FISHERIES.

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APPENDIX No. 34.

PART 1st.—SEA-GOING AND COASTING VESSELS.

(a) STATEMENT of Wrecks and Casualties which have occurred in Canadian Waters to Foreign and Canadian Sea-going Vessels, from 1868 to 1881.

(Compiled from the Yearly Reports of the Minister of Marine and Fisheries.)

Year.	Place where Wreck or Casualty occurred, and No. of Vessels wrecked or damaged at each place.										Description of Vessels wrecked or damaged, and No. of each description.						Nature of Casualty and No. of Vessels.					
	Newfoundland	Anticosti Is-land.	Magdalen Is-lands.	Prince Edward Island Coast.	New Brunswick Coast.	Nova Scotia Coast.	Gulf St. Lawrence.	St. Lawrence.	Quebec to Gulf.	River Quebec to Montreal.	Ships.	Barques.	Brigs.	Brigantines.	Schooners.	Stranded.	Sunk or Foundered.	Burnt.	Collision.	Abandoned.	Other Causes.	
June 1, 1868, to Dec. 31, 1869.	4	4			9	(b) 25	7	36	1	3	9	33	13	7	21		6					
1870.	4	5	2	1	9	51	4	30	8	8	15	23	8	13	47	83	6		15	1	9	
1871.	6	1	1	1	11	55	11	37	2	5	20	25	7	22	46	95	6		13	1	6	
1872.	3	8	4	1	19	40	16	31	1	6	13	43	4	10	46	90	11		8	2	10	
1873.	5	3	37	8	28	116	11	26	5	16	15	39	12	21	132	192	10		11	1	20	
1874.	6	7	6	3	23	71	6	62	2	30	21	40	4	18	72	114	5		28	1	33	
1875.	8	6	8	7	33	87	14	30	3	19	15	35	4	27	96	146	5		26	1	13	
1876.	11	4	9	21	33	109	16	38	10	24	14	49	6	33	125	152	9		47	3	37	
1877.	8	8	7	9	29	104	4	38	13	28	13	49	2	25	122	145	8		54		21	
1878.	8	7	4	7	33	76	14	31	10	20	8	43	3	18	98	133	5		30		17	
1879.	11	3	5	17	25	118	10	33	13	23	13	28	3	23	148	169	4		34	1	20	
1880.	7	11	3	11	16	88	24	29	17	27	13	49	8	16	83	113	7		39	5	37	
1881.	4	1	5	8	22	58	12	13	5	23	3	30		11	61	76	4		24		18	
(c)																						
Grand Totals.	83	67	91	94	290	988	149	453	87	234	172	486	74	244	1102	1508	79	51	332	16	240	

NOTES (a)—For statement of Wrecks prior to 1867, see Appendix No. 53 to Public Works Report for 1867, pp. 426 to 428, prepared by G. F. Baillargé, D.M.P.W.  
 (b)—The vessels shown as having been wrecked on the Nova Scotia coast are principally fishing and coasting schooners.  
 (c)—Statement of Wrecks, etc., for 1882, has not yet been published up to this date.





PART 2ND.—VESSELS NAVI  
STATEMENT of Wrecks and Casualties to Vessels navigating

Year.	Place where Wreck or Casualty occurred, and No. of Vessels wrecked or damaged at each place.						Description of Vessels wrecked or damaged, and No. of each description.				Nature of Casualty, and No. of Vessels.				
	Lakes.				Welland Canal.	Lake Ontario to Montreal.	Steamers.	Propellers.	Schooners, &c.	Barges.	Stranded.	Sunk or Foundered.	Burnt.	Collision.	Other Causes.
	Ontario.	Erie.	Huron.	Superior.											
July 1, 1868, to Dec. 31, 1869...	2	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jan. 1 to Dec. 31, 1870.....	26	21	11	.....	.....	5	5	7	48	3	.....	.....	.....	.....	.....
1871.....	16	6	16	.....	.....	3	6	5	30	.....	.....	.....	.....	.....	.....
1872.....	24	12	8	2	3	6	10	7	32	6	39	6	2	4	4
1873.....	9	2	3	2	.....	2	8	.....	8	2	9	2	4	.....	3
1874.....	10	9	4	.....	1	3	7	.....	19	1	15	5	4	.....	3
1875.....	9	5	5	1	.....	1	12	.....	9	.....	12	1	4	4	.....
1876.....	2	4	2	.....	.....	1	3	1	5	.....	6	1	1	1	.....
1877.....	4	12	3	1	.....	2	4	1	14	3	17	2	1	1	1
1878.....	8	7	10	.....	.....	1	16	.....	10	.....	11	5	7	1	2
1879.....	6	4	8	.....	1	4	10	.....	10	3	11	3	3	5	1
1880.....	22	9	9	1	.....	14	18	.....	27	10	28	9	6	4	8
1881.....	12	2	4	1	2	11	14	.....	14	4	10	8	5	4	5
Grand Totals..	150	99	83	8	7	53	113	21	226	32	158	42	37	24	27

DEPARTMENT OF PUBLIC WORKS, 20th April, 1883.

**GATING ON INLAND WATERS.**

on Inland Waters of Canada, from 1868 to 1881.

Approximate Loss.				Total No. of Wrecks or Casualties.	Remarks.
When Total.		When Partial.			
No. of Vessels.	Amount.	No. of Vessels.	Amount.		
	\$		\$		
				63	
				41	
11	153,700	44	70,433	55	{ On 28th Sept. steamer "Rapid" capsized near Pt. Pelée, Lake Erie; 7 lives lost; loss on vessel, \$3,000. On 24th Nov. propeller "Mary Ward" foundered off Nottawasaga Lighthouse, Lake Huron; 8 lives lost; \$13,000.
6	108,000	12	23,450	18	On 5th Nov. steamer "Bavarian" was burnt off Whitby Lighthouse, Lake Ontario; 20 lives lost; \$50,000.
6	109,300	21	52,175	27	
10	96,000	11	27,550	21	
4	40,000	5	11,000	9	{ On 17th May schooner "T. O. Street" capsized on Lake Erie; 6 lives lost; \$4,000. On 28th Oct. schooner "Maggie Hunter" on Lake Ontario; 7 lives lost; \$10,000.
9	92,000	13	12,400	22	On 8th Oct. barge "American" drifted ashore at Point Pelée, Lake Erie; 6 lives lost; \$7,000.
13	97,600	13	25,425	26	On 16th June schooner "James Scott" capsized above Port Burwell Lighthouse, Lake Erie; 5 lives lost; \$10,000.
5	20,900	18	27,445	23	
18	133,600	37	29,500	55	{ On 16th April schooner "Northman" foundered off Port Credit, Lake Ontario; 8 lives lost; \$13,000. On 7th Nov. steamer "Zealand" foundered near Long Point, Lake Ontario; 17 lives lost; \$27,000. On 24th Nov. steamer "Simcoe" foundered off Manitoulin Islands, Lake Huron; 12 lives lost; \$24,000. On 24th May steamer "Victoria" upset on Thames River, 1½ miles from London; 182 lives lost.
11	110,800	21	38,775	32	{ On 19th July steamer "City of Winnipeg" burnt at Duluth; 4 lives lost; \$60,000. On 14th Nov. schooner "E. P. Dorr" foundered off Long Point; 7 lives lost; \$9,000.
93	958,900	195	318,153	392	

A. GOBELL.



APPENDIX No. 35.

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STATEMENT

OF THE

A W A R D S

MADE BY THE

DOMINION ARBITRATORS

FROM THEIR APPOINTMENT TO 30<sup>TH</sup> JUNE, 1882.

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APPENDIX No. 35.

STATEMENT of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
James Goodwin.....	Grenville Canal.....	11th June, 1869.	5,468 54	2,061 93	13th Aug., 1869.	
Ward and O'Leary.....	Riécun Hall.....	18th do	59,991 47	50,088 71	17th Sept., 1869.	
Charles Côté.....	Sherbrooke Gaol.....	13th July, 1869.	6,821 08	2,055 85	19th Nov., 1869.	
John Damp.....	Court House and Gaol, Sault Ste. Marie	do	9,314 71	2,723 00	15th Sept., 1869.	
Simon Peters.....	Pte. St. Laurent Lighthouse and Pier.	do	1,206 28	683 59	22nd Nov., 1869.	
R. H. McGreevy.....	Parliament Buildings, Ottawa	do	56,905 48	29,245 67	7th Dec., 1869.	
Peter Stewart.....	Nova Scotia Railway.....	12th do	2,280 88	2,280 88	25th Jan., 1870.	
R. P. Mitchell.....	do	7th Oct., 1869.	33,798 95	21,661 89	do	
M. W. Baby.....	House rent, Quebec.....	12th do	1,668 00	1,668 00	9th Dec., 1869.	
Toussaint Vezina.....	Court House and Gaol, Sorel.....	10th Nov., 1869.	4,500 93	4,460 78	7th Feb., 1870.	
do	do Industrie.....	12th do	8,953 42	7,790 53	do	
E. A. Jones.....	Nova Scotia Railway.....	21st Dec., 1869.	12,804 20	3,500 00	25th Jan., 1870.	
John A. Cameron.....	Lachine Canal.....	18th May, 1872.	2,979 25	2,979 25	4th July, 1872.	
David McAlpine.....	European & North American Railway	27th June, 1872.	2,419 25	990 00	10th Aug., 1872.	
George Rochester.....	Ottawa River Works.....	4th July, 1872.	2,691 00	Nothing.	21st Nov., 1872.	
J. & D. McFarlane.....	do	do	2,949 10	do	do	
Maynew & Faichney.....	do	do	1,198 00	do	do	
Donald Monroe.....	do	do	1,333 00	do	do	Case withdrawn.
M. Caffery.....	Welland Canal.....	5th Oct., 1872.	1,000 00	500 00	27th Nov., 1872.	
F. B. McNamee.....	Piers and Booms, Sault au Recollet.....	11th do	3,779 05	845 60	do	
S. & C. Peters.....	Custom House, Quebec.....	20th Feb., 1873.	4,168 88	2,229 40	20th May, 1873.	
W. & R. Grithth.....	Red River Route.....	21st do	669 70	624 36	12th July, 1873.	
Alex. Yuill.....	Ottawa River Works.....	21st April, 1873.	6,783 84	Nothing.	29th Sept., 1873.	
Heur D. Campbell.....	Intercolonial Railway.....	14th Aug., 1873.	950 00	600 00	29th Sept., 1873.	
Charles Doherty.....	do	do	2,500 00	1,050 00	do	
Mrs. James Nevius.....	do	do	2,500 00	1,250 00	do	
John O'Brien.....	do	do	4,000 00	1,700 00	do	
Estate J. Simonds.....	do	do	3,958 00	2,050 00	do	
Edward Simonds.....	do	do	350 00	3,760 00	do	
James Van Horne.....	do	do	4,000 00	350 00	do	
J. & R. Smith.....	do	do	4,000 00	Nothing.	29th Sept., 1873.	Abandoned by Claimant.
Robert McLeod.....	do	do	2,933 06	2,857 00	do	
Estate H. Mahoney.....	do	do	9,600 00	6,343 14	do	

John Smith.....	do	9th Sept., 1873.	10,000 00	1,868 00	do	Claim withdrawn 5th May, 1873.
John Black.....	do	8th do	8,000 00	2,900 00	do	
A. O'Leary.....	do	4th Oct., 1873.	500 00			
W. D. Campbell and H. Gowen.....	St. Maurice River Works.....	7th do	11,344 00	Nothing.	7th Nov., 1873.	Claim withdrawn 10th August, 1874.
Michael MacMahon.....	Intercolonial Railway.....	14th do				Claim withdrawn.
Alex. Cameron.....	do	25th do				
James Moiz.....	Quebec Post Office Building.....	31st do	14,000 00	7,000 00	15th Nov., 1873.	Referred by Department of Customs.
Charles Beamish.....	Market Wharf, Halifax.....	24th Nov., 1873.	14,175 00			Referred by Department of Marine and Fisheries.
Robert Ingraham.....	Land taken for Lighthouse, Sydney.....	3rd Dec., 1873.	Claim withdrawn, 1st May, 1875.			
J. W. Young.....	do	26th Jan., 1874.	Settled by letter, 9th June, 1875.			do
Mrs. Christina Ross.....	Intercolonial Railway.....	29th Aug., 1874.	12,150 00	2,300 00	26th June, 1875.	Withdrawn on 10th Aug., 1874, referred again on 8th Sept., 1874.
Alex. Cameron.....	do	8th Sept., 1874.	800 00	100 00	do	
Oliver Fillmore.....	do	12th do	200 00	200 00	30th do	
George Rayne.....	do	do	200 00	200 00	do	
Calob McCready.....	do	10th Nov., 1874.	4,138 00	2,500 00	do	
Elias S. Freeze.....	do	do	8,180 00	3,600 00	do	
J. E. B. McGready.....	do	do	4,668 00	3,000 00	do	
St. George Red Granite Co.....	Post Office Building, St. John, N.B.....	11th Jan., 1875.	11,280 00	8,200 00	17th Feb., 1875.	This case was heard and adjudicated upon by one Arbitrator only.
Representatives Galagher & Sullivan.....	Lighthouse, Chibucto Head, N.S.....	25th Feb., 1875.	1,000 00	105 00	26th June, 1875.	Referred by the Department of Marine and Fisheries.
Adolphe Gagnon.....	Pier, Baie St. Paul, P.Q.....	6th do	24,956 59	1,574 00	do	
M. G. McLeod & Co.....	Breakwater, McVair's Cove, N.S.....	23rd March, 1875	8,430 92	3,400 00	do	
Théo. Letendre.....	Lighthouse, Lapierre Island, Sorel.....	30th do	1,220 00	915 00	21st June, 1876.	do
Redat & Carcia.....	do	do	880 00	650 00	do	do
A. L. Palmer.....	Intercolonial Railway.....	10th April, 1875.		55 20	26th June, 1875.	Withdrawn.
Thomas W. Crowe.....	do	15th do	16,000 00	5,150 00	26th June, 1875.	
Thomas J. Bentley.....	do	10th June, 1875.	6,000 00	1,566 00	do	
B. Walsh.....	do	do	2,450 00	2,275 00	do	
Chas. A. Hawkins.....	do	do		4,500 00	12th May, 1882.	On 25th June, 1875, claimant refused to have his case arbitrated on, but reserved right to do so at a future time. Case renewed 21st January, 1881.
M. Mellreith.....	do	do				This case was tried and adjudicated upon by one arbitrator only.
Théophile Letendre.....	Land taken for lighthouse, Lapierre Island.....	30th March, 1875.	\$100 per ar-pent.	\$75 per ar-pent.	21st June, 1876...	do
Bévard & Cardin.....	do	do	do	do	do	do
M. Mellreith.....	Land taken at Halifax, for Intercolonial Railway.....	10th June, 1875...	2,691 00 Nil.		24th Dec., 1875...	These three cases were referred for reconsideration by three of the arbitrators.
George Rochester.....	Ottawa River Works.....	10th Sept., 1875...	2,949 10 Nil.		do	
J. & D. McFarlane.....	do	do			do	
Mayhew & Faichney.....	do	do	1,198 00 Nil.		do	

Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—Continued.

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
Robert Kemp.....	Ash Island, Richelieu River.....	11th Dec., 1875...				
James S. Evans.....	Land taken for Laehine Canal.....	23rd May, 1876..				
Charles Esplin.....	do do .....	do do .....	5,486 32	2,234 00	15th July, 1876...	Referred by the Department of Marine and Fisheries and withdrawn by them 21st February, 1876. Claimant failed to appear at trial, 6th July, 1876.
Théophile Gartiépy...	do do .....	do do .....	24,410 00	7,444 00	do do .....	
Edward Wilgress.....	do do .....	do do .....	16,210 00	3,362 00	do do .....	
Mrs. Wm. Brophy.....	Land taken for Lighthouse, Wolfe Island, Lake Ontario.....	26th May, 1876..	650 00	600 00	29th Sept., 1877..	Referred for reconsideration of award.
J. B. Pouliot.....	Land damages, Section No. 1 Intercolonial Railway.....	8th June, 1876..	500 00			Referred by the Department of Marine and Fisheries. Amicably settled. Withdrawn.
J. B. Chamberland.....	do do .....	do do .....	150 00			
Désiré Nadeau.....	do do .....	do do .....	155 00	33 00	22nd Jan., 1877..	
Alexis Nadeau.....	do do .....	do do .....	185 00	33 00	do do .....	
Michel Lagacé.....	do do .....	do do .....	300 00	40 00	do do .....	
Aristobule Gagné.....	do do .....	do do .....	10 00			
Jean Bérubé.....	do do .....	do do .....	1,536 66	160 10	22nd Jan., 1877..	Claimant failed to appear, 29th July, '76
J. Bte. Pelletier.....	do do .....	do do .....	60 00	10 00	do do .....	
Joseph Chassé.....	do do .....	do do .....	1,095 33	140 00	do do .....	
Louis Bérubé.....	do do .....	do do .....	1,040 00	60 00	do do .....	
Wid. Maxime Chassé.....	do do .....	do do .....	2,166 67	110 00	do do .....	
Jacques Ponée.....	do do .....	do do .....	1,653 33	66 00	do do .....	
Félix Gagnon.....	do do .....	do do .....	2,166 66	Nil	do do .....	
François Bérubé.....	do do .....	do do .....	1,670 00	Nil	do do .....	
Paul Bélanger.....	do do .....	do do .....	150 00	10 00	do do .....	
Georges Desjardins.....	do do .....	do do .....	215 00	100 00	do do .....	
Joseph Gagnon.....	do do .....	do do .....	100 00	45 00	do do .....	
François Vaillancourt	do do .....	do do .....	200 00	50 00	do do .....	
Urban Dumont.....	do do .....	do do .....	400 00	50 00	do do .....	
Pierre Martin.....	do do .....	do do .....	2,416 68	100 00	do do .....	
George Saindon.....	do do .....	do do .....	303 33	Nil	do do .....	
Félix Saindon.....	do do .....	do do .....	20 00	Nil	do do .....	
Pierre Dumont.....	do do .....	do do .....	226 67	Nil	do do .....	





Statement of the Awards made by the Dominion Arbitrators, from their Appointment to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of Award.	Remarks.
			\$ cts.	\$ cts.		
Hubert Delisle .....	Land damages, Section No. 2, Intercolonial Railway.....	8th June, 1876...	32 00			Claimant fails to appear, 10th Aug., '76
Cyrille Leclerc.....	do	do	50 00			do
Ignace Rioux.....	do	do	160 00	Nil.	22nd Jan., 1877...	
Widow G. Drapeau.....	do	do	250 00	80 00	do	
Hyppolite Lebel.....	do	do	100 00	15 00	3rd Dec., 1877...	
Emile Lebel.....	do	do	740 00	332 00	22nd Jan., 1877...	
Anselme Métyer.....	do	do	880 00	360 00	do	
J. Bte. Métyer.....	do	do	880 00	363 00	do	
Anselme Rioux.....	do	do	55 00	Nil.	do	
Eugène Godbout.....	do	do	300 00		do	No award—Damage owing to erection of fence for snow storm.
Eugène Leblond .....	do	do	60 00		do	do
Paul Gagnon.....	do	do	40 00		do	do
Pascal Beaubien.....	do	do	30 00		do	do
Joseph Leblond.....	do	do	110 00	25 00	22nd Jan., 1877...	
Ulgère Dion.....	do	do	90 00	Nil.	do	
Solomon Dion.....	do	do	80 00	Nil.	do	
J. Bte. Leblond.....	do	do	18 00	18 00	do	
Théophile Bélanger.....	do	do	60 00		do	
Joseph Rioux.....	do	do	844 95	326 00	22nd Jan., 1877...	Claimant fails to appear, 10th Aug., '76.
J. Bte. Soucy.....	do	do	100 00		do	Claim withdrawn, 14th Aug., 1876.
Julien Rioux.....	do	do	100 00		do	do
{ Urban Rioux.....	{	do	5,083 34	364 00	22nd Jan., 1877...	
{ Théophile Rioux.....	{	do	200 00	10 00	3rd Dec., 1877...	Claim ruled out, 15th Aug., 1876.
Gonzague Renouf.....	do	do	20 00	Nil.	22nd Jan., 1877...	Claimant fails to appear do
Magloire Dubé.....	do	do	60 00		do	do
Cyprien Renouf.....	do	do	500 00		do	do
Eloi Rioux, jun.....	do	do	146 67		do	Claimants fails to appear and refused to give bonds for costs, 15th Aug., '76.
Napoléon Rioux.....	do	do	748 00		do	Claimant fails to appear do
Sephrin & t. Caron.....	do	do			do	do
David Damour.....	do	do	400 00		do	Claim withdrawn.
J. Bte. Deschênes.....	do	do	300 00	25 00	22nd Jan., 1877...	
Charles Damour.....	do	do	50 00		do	
Hilaire Damour.....	do	do	380 00	50 00	22nd Jan., 1877...	



Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 20th June, 1882—*Con.*

Claimant.	Subject of claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of award.	Remarks.
		18th June, 1876	\$ cts.	\$ cts.		
Théophile Bélanger..	Land damages, Section No. 2 Intercontinental Railway.....	do	.....	.....	.....	Claimant fails to appear, 18th Aug., '76
Marcel Thiéberge.....	do	do	.....	.....	.....	Special report, 23rd Jan, 1877.
Joseph Gagnon.....	do	do	.....	.....	.....	Claim withdrawn, 18th Aug., 1876.
Widow Pierre Garant	do	do	.....	.....	.....	do
Jacques Bélanger.....	do	do	.....	.....	22nd Jan., 1877..	
Abraham Ouellette....	do	do	Not stated.	Nil.	.....	
David Ouellette.....	do	do	.....	.....	.....	
Olivier Gagnon.....	Section No. 5	do	.....	.....	.....	
Joseph Bélanger.....	do	do	Not stated.	12 00	22nd Jan., 1877..	Claimant fails to appear, 18th Aug., '76
Ephrem Bélanger.....	do	do	35 00	25 00	do	
do	do	do	32 00	.....	.....	
do	do	do	25 00	.....	.....	
Valter Bélanger.....	do	do	.....	.....	.....	
Joseph Fournier.....	do	do	12 00	.....	.....	Claimant fails to appear, 21st Aug., '76
Ephigène Bélanger.	do	do	20 00	.....	.....	do
Edouard Gagnon.....	do	do	20 00	.....	.....	do
Pierre Morais.....	do	do	55 00	.....	.....	do
John Deguise.....	do	do	12 00	.....	.....	do
Bruno Fortin.....	do	do	20 00	.....	.....	do
Cyrus Dastous.....	do	do	15 00	.....	.....	do
Théodule Leresque....	do	do	100 00	.....	.....	do
Octave Thibault.....	do	do	20 00	.....	.....	do
Branco Lizotte.....	do	do	60 00	.....	.....	do
Hilaire Fournier.....	do	do	100 00	.....	.....	do
Pierre Coulombe.....	do	do	40 00	.....	.....	do
Romain Bérubé.....	do	do	1,333 33	50 00	22nd Jan., 1877..	Claim withdrawn
Joseph Bélanger.....	do	do	90 00	.....	.....	
Pierre Coulombe.....	do	do	50 00	Nil.	22nd Jan., 1877..	Claimant fails to appear
Widow C. Bélanger.	do	do	40 00	.....	.....	do
Félicien Bélanger.....	do	do	40 00	.....	.....	do
Napoléon Gaudreau....	do	do	275 00	25 00	22nd Jan., 1877..	do
Octave Morin.....	do	do	645 00	.....	.....	do
Zéphirin Albert.....	do	do	380 00	.....	.....	do
Charles Coulombe.....	do	do	252 00	37 00	22nd Jan., 1877..	do
Joseph Desjardins....	do	do	185 00	.....	.....	do
Moel Fortin.....	do	do	52 00	15 00	22nd Jan., 1877..	Claim withdrawn, 23rd Aug, 1876.
Louis Fortin.....	do	do	260 00	50 00	do	
Octave Bérubé.....	do	do	100 00	10 00	do	
do	do	do	11 00	.....	.....	do

<i>Elie Gagnon</i> .....	do	10 00	20 00	Claimant failed to appear, 23rd Aug, '76
<i>Louis Gagnon</i> .....	do	200 00	5 00	Claim withdrawn, 23rd Aug, 1876.
do	do	5 00		do
do	do			do
<i>George Gagnon</i> .....	do	1,378 33	215 00	do
<i>Elie Gagnon</i> .....	do	32 00	Nil.	do
<i>Nicolas Lecras</i> .....	do	330 00		do
<i>Zephrin Dastous</i> .....	do	225 00		do
<i>Achille Côté</i> .....	do			do
<i>Joseph Berger</i> .....	do			do
<i>Olivier Roy dit Desjardins</i> .....	do	1,087 80	50 00	Claimant fails to appear do
<i>Thaddeus Roy dit Desjardins</i> .....	do	450 00	Nil.	do
<i>Marvel Rioux</i> .....	do	340 00		Claim withdrawn do
<i>Fabien Ouellette</i> .....	do	215 00		do
<i>Agapit Bélanger</i> .....	do	17 00		Claimant fails to appear, 25th Aug, '76
<i>Romuald Gagnon</i> .....	do	30 00		do
<i>Adolphe Gagnon</i> .....	do	1,250 00	34 00	do
<i>Joseph Danjou</i> .....	do	525 00	25 00	do
<i>Vital Roy dit Lauson</i> .....	do	785 00	40 00	do
<i>Désiré Bélanger</i> .....	do	408 00		do
<i>Mrs. Françoise Fortin</i> .....	do	200 00		do
<i>Pascal Roy dit Lauson</i> .....	do	600 00	50 00	do
<i>Vincent Rioux</i> .....	do	650 00	50 00	do
<i>Théophile Boulanger</i> .....	do	650 00	50 00	do
<i>Charles Beaulieu</i> .....	do	400 00		Claim withdrawn, 24th Aug, 1876.
<i>Antoine Boucher</i> .....	do	420 00		do
<i>Magloire Boucher</i> .....	do	500 00		do
<i>Hyppolite Martel</i> .....	do	216 00		Claimant fails to appear do
<i>Louis Dementé</i> .....	do	372 00		Claim withdrawn do
<i>Abraham Gagnon</i> .....	do	255 00	Nil.	
<i>Euloge Rioux</i> .....	do	205 00	do	
<i>Fabien Coulombe</i> .....	do	410 00	25 00	do
<i>Sifroi Gagnon</i> .....	do	524 00	126 00	Claimant fails to appear, 25th Aug, '76
<i>Octave Boulanger</i> .....	do	140 00		do
<i>Boniface Côté</i> .....	do	142 00		do
<i>Magloire Gagné</i> .....	do	513 00	75 00	do
<i>Joseph Levesque</i> .....	do	300 00	40 00	do
<i>Rizcar Gagnon</i> .....	do	328 70	40 00	do
<i>J. B. Michaud</i> .....	do	100 00	50 00	do
<i>Cyrille Larivière</i> .....	do	218 00		do
<i>Jos. Roy dit Lauson</i> .....	do	180 00	25 00	Claim withdrawn do
<i>Cyprien Turcotte</i> .....	do	212 00		Claimant fails to appear do
<i>Raphaël Rioux</i> .....	do	300 00		Claim withdrawn do
<i>Jules Rioux</i> .....	do	300 00		do
<i>Vincent Rioux</i> .....	do	120 00	100 00	do
<i>Augustin Deschênes</i> .....	do	100 00		do
<i>Zacharie Canuel</i> .....	do	100 00		do



Ferdinand Bernard.....	do	do	100 00	.....	.....	.....	Claim withdrawn, 20th Aug., '76
J. B. Lafrance.....	do	do	25 00	.....	.....	.....	Claimant fails to appear do
Theophile Couture.....	do	do	340 00	.....	22nd Jan., 1877..	.....	Claimant refuses to give bond for costs, 29th August, 1876.
Joseph Bernier or Joseph Lamarre.....	do	do	430 00	.....	do	.....	Claimant fails to appear 29th Aug., '76
Joseph Bérubé.....	do	do	150 00	.....	.....	.....	do do
André Morin.....	do	do	50 00	.....	.....	.....	do do
Joseph Rioux (Bic).....	do	do	140 00	.....	22nd Jan., 1877..	.....	Claim withdrawn 31st Aug., '76
Widow Chs. Long-champs.....	do	do	80 00	.....	do	.....	Claimant fails to appear, 31st Aug., '76
Hector Bérubé.....	do	do	20 00	.....	do	.....	Claim withdrawn do
Antoine Charest.....	do	do	100 00	.....	do	.....	Claimant fails to appear do
Octave Rioux.....	do	do	375 00	.....	do	.....	do do
Julie Gagné.....	do	do	450 00	.....	.....	.....	do do
Majorique Rioux.....	do	do	150 00	.....	22nd Jan., 1877..	.....	Claimant fails to appear, 31st Aug., '76
Widow David Talbot.....	do	do	160 00	.....	.....	.....	Claim withdrawn do
L. R. Gauvreau.....	do	do	125 00	.....	22nd Jan., 1877..	.....	Claimant fails to appear do
Arthur Chamberland.....	do	do	125 00	.....	.....	.....	Claimant fails to appear do
Wm. Chamberland.....	do	do	200 00	.....	.....	.....	do do
Fabrique of Bic.....	do	do	25 00	.....	.....	.....	do do
Fortunat Côté.....	do	do	100 00	.....	.....	.....	do do
George Sylvain.....	do	do	400 00	.....	22nd Jan., 1877..	.....	do do
Pierre Santerre.....	do	do	325 00	.....	do	.....	do do
Charles Lavoié.....	do	do	275 00	.....	.....	.....	do do
François Beaulieu.....	do	do	80 00	.....	.....	.....	do do
Issac Campbell.....	do	do	100 00	.....	.....	.....	do do
Edouard Voyer.....	do	do	100 00	.....	.....	.....	do do
Alfred Ouellette.....	do	do	500 00	.....	22nd Jan., 1877..	.....	Claimant refuses to give bond for costs, 31st August, 1876.
Pierre Ouellette.....	do	do	220 00	.....	.....	.....	Claimant fails to appear do
Nazaire Ouellette.....	do	do	100 00	.....	.....	.....	do do
George Lavoié.....	do	do	164 00	.....	.....	.....	do do
W. D. Campbell.....	do	do	74 00	.....	.....	.....	do do
Henri Plourde.....	do	do	50 00	.....	.....	.....	do do
André Ouellette.....	do	do	250 00	.....	22nd Jan., 1877..	.....	do do
Louis Lavoié.....	do	do	150 00	.....	do	.....	do do
Martial Labrie.....	do	do	495 00	.....	22nd Jan., 1877..	.....	Claimant fails to appear, 31st Aug., '76.
François Parent.....	do	do	330 00	.....	do	.....	Claimant fails to appear do
Octave Brillant.....	do	do	100 00	.....	.....	.....	do do
Joseph Pineau.....	do	do	200 00	.....	.....	.....	do do
Alex. Desjardins.....	do	do	40 00	.....	22nd Jan., 1877..	.....	do do
Jean Gagnon.....	do	do	1,100 00	.....	.....	.....	do do
Henri Gagnon.....	do	do	150 00	.....	.....	.....	do do
Pierre Gagnon.....	do	do	100 00	.....	22nd Jan., 1877..	.....	do do
Jérôme Turcotte.....	do	do	1,165 00	.....	.....	.....	do do
Joseph Dubé.....	do	do	50 00	.....	22nd Jan., 1877..	.....	do do
Timothée Pineau.....	do	do	65 67	.....	do	.....	do do
Casimir Pineau.....	do	do	65 67	.....	.....	.....	do do

Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of award.	Remarks.
			\$ cts.	\$ cts.		
Eustache Roy .....	Land damages, Section No. 5, Inter-colonial Railway.....	8th June, 1876...	400 00	400 00	.....	Claim withdrawn, 5th Sept., 1876.
Widow A. Bradley.....	do	do	.....	.....	.....	Claimant fails to appear, 2nd Sept., '76.
Alex. Fraser.....	do	do	.....	Nil.	22nd Jan., 1877.	Claim withdrawn, 5th Sept., 1876.
Norbert Roussel.....	do	do	200 00	200 00	.....	
Pierre Lavoie.....	do	do	150 00	150 00	.....	
Ferdinand Tremblay.....	do	do	126 00	10 00	do	
Elzéar Lavoie.....	do	do	380 00	10 00	.....	Claimant fails to appear do
Elzéar Lévesque.....	do	do	32 00	.....	.....	Claim withdrawn, 6th Sept., 1876.
Widow P. Langis.....	do	do	367 00	Nil.	.....	
Joanem Dubé.....	do	do	100 60	Nil.	22nd Jan., 1877.	
Jean Langis, fils de Louis.....	do	do	93 60	.....	do	
Elzéar Drapeau.....	do	do	10 00	.....	.....	Claimant fails to appear, 5th Sept., '76.
Jean Langis, fils de Germain.....	do	do	200 60	Nil.	.....	Claim withdrawn, 2nd Sept., 1876.
Auguste Langis.....	do	do	142 80	Nil.	22nd Jan., 1877.	
Etienne Patry.....	do	do	200 60	Nil.	do	
François Castonguay.....	do	do	.....	.....	do	
Angèle Caron.....	do	do	1,250 00	25 00	.....	do
Joseph Parent.....	do	do	120 00	50 00	22nd Jan., 1877.	do
Elzéar Pineau.....	do	do	650 00	54 00	do	do
Paschal Parent.....	do	do	1,110 00	50 00	do	do
Auguste Parent.....	do	do	426 00	50 00	do	do
Louis Onellette.....	do	do	.....	.....	.....	Claimant fails to appear, 5th Sept., '76.
Louis Lavoie.....	do	do	5,850 00	Nil.	.....	
Widow Henri Martin.....	do	do	378 00	.....	22nd Jan., 1877.	do
E. O. Martin.....	do	do	65 00	20 00	3rd Dec., 1877...	do
The Seminary of Rimouski.....	do	do	560 00	104 00	22nd Jan., 1877.	do
The Bishop of Rimouski.....	do	do	840 00	164 00	do	do
Eusèbe Lepage.....	do	do	3,396 00	Nil.	do	do
Mrs. P. L. Gaavreau.....	do	do	200 00	50 00	do	do
Joseph Garon.....	do	do	160 00	.....	.....	Claim withdrawn, 8th Sept., 1876.





Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882. — *Con.*

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of award.	Remarks.
			\$ cts.	\$ cts.		
Léon Roy.....	Land damages, Section No. 8 Inter-colonial Railway.....	8th June, 1876.....	100 00	.....	.....	Claim withdrawn, 19th Sept., '76.
L. N. Gagné.....	do	do	85 00	.....	.....	Claimant fails to appear do
Joseph Lavoie.....	do	do	200 00	25 00	22nd Jan., 1877.	
Prudent Onellette.....	do	do	2,004 99	Nil.	do	
Louis Parent.....	do	do	Not stated.	Nil.	do	
Rosaire Parent.....	do	do	Not stated.	Nil.	do	
Théophile Mongrain.....	do	do	120 00	40 00	do	
Joseph Tanguay.....	do	do	.....	.....	.....	Claim withdrawn, 19th Sept., 1876
Gobert Tremblay.....	do	do	120 00	40 00	22nd Jan., 1877.	
Manent Gagnon.....	do	do	250 00	40 00	do	
.....	do	do	150 00	40 00	do	
Célestin Côté.....	do	do	200 00	40 00	do	
Michel Charette.....	do	do	300 00	40 00	do	
Paul Langevin.....	do	do	50 00	do	do	
Jean Morrisette.....	do	do	300 00	40 00	do	
Fabien Drapeau.....	do	do	200 00	25 00	do	
Laurent Lavoie.....	do	do	400 00	40 00	.....	Claimant fails to appear do
F. X. Gagné.....	do	do	100 00	.....	.....	
Trefflé Mongrain.....	do	do	100 00	40 00	do	do
Sylvère de Champlain.....	do	do	.....	.....	.....	
Pierre de Champlain.....	do	do	.....	40 00	do	do
Florence de Champlain.....	do	do	300 00	20 00	do	
André de Champlain.....	do	do	43 75	43 75	do	
Alexis Desrosiers.....	do	do	600 00	100 00	do	
Joseph Faucher.....	do	do	1,000 00	50 00	.....	
Hubert Langlois.....	do	do	Not stated.	50 00	22nd Jan., 1877.	
Simeon Lavoie.....	do	do	100 00	.....	do	Claim withdrawn, 21st Sept., 1876.
Absolon Desrosiers.....	do	do	650 00	30 00	do	
Olivier St. Laurent.....	do	do	300 00	30 00	do	
Laurent Proulx.....	do	do	1,200 00	Nil.	do	do
Hilaire Vaillancourt.....	do	do	Not stated.	30 00	do	do
Elzéar St. Laurent.....	do	do	1,200 00	130 00	22nd Jan., 1877.	
Ferdinand Vaillancourt.....	do	do	206 00	.....	do	



Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882—*Con.*

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of Award.	Remarks.
F. X. Bernier.....	Land damages, Section No. 8 Intercolonial Railway.....	18th June, 1876	\$ 100 00	Nil.	22nd Jan., 1877.	Claimant fails to appear, 25th Sept., '76
Edouard Bernier.....	do	do	408 00	do	do	do
Elzéar Ouellette.....	do	do	22 34	do	22nd Jan., 1877.	do
A. Bérubé.....	do	do	125 00	do	do	do
Hilaire Roy.....	do	do	142 00	do	do	do
J. Bte. Paradis.....	do	do	100 00	Nil.	22nd Jan., 1877.	do
Joseph Dubé.....	do	do	450 00	Nil.	do	do
Rémi Dubé.....	do	do	250 00	Nil.	do	do
Frs. Levasseur.....	do	do	1,200 00	Nil.	22nd Jan., 1877.	do
George Dubé.....	do	do	410 00	Nil.	do	do
Olivier Caron.....	Section No. 13,	do	420 00	Nil.	do	do
Solomon Bélanger.....	do	do	Not stated.	26 40	do	do
O. Caron.....	do	do	860 00	860 00	do	do
S. Bélanger.....	do	do	303 00	110 50	22nd Jan., 1877.	Claimant fails to appear, 27th Sept., '76
Jacob Lepage.....	do	do	Not stated.	do	do	do
Pascal Ouellette.....	do	do	120 00	do	do	do
Olivier Bérubé.....	do	do	200 00	50 00	22nd Jan., 1877.	do
Frs. X. Perreault.....	do	do	200 00	50 00	do	do
Widow J. St. Laurent.....	do	do	1,200 00	10 00	do	do
Melchior Ouellette.....	do	do	1,425 00	do	do	do
Jos. Prudent Hudon.....	do	do	841 00	5 00	do	do
André Bérubé.....	do	do	284 00	Nil.	do	do
Honoré Charette, jr.....	do	do	100 00	Nil.	do	do
Et. Fortin, fils de Jos.....	do	do	152 00	Nil.	do	do
Narcisse Richard.....	do	do	200 00	do	do	do
Octave Morin.....	do	do	Not stated.	do	do	do
F. X. Michaud.....	do	do	15 00	do	do	do
Alexander Smith.....	do	do	15 00	do	do	do
Ferdinand Moreau.....	do	do	22 50	do	do	do
James McEwing.....	do	do	8 00	do	do	do
Angus Campbell.....	do	do	515 00	30 00	22nd Jan., 1877.	do
Louis Bérubé.....	do	do	4 00	do	do	do
Richard Jenkins.....	do	do	30 00	do	do	do
Louis Dubé.....	do	do	330 00	Nil.	22nd Jan., 1877.	do
Joseph Beaulieu.....	do	do	550 00	Nil.	do	do
Joseph Bouchard.....	do	do	Not stated.	do	do	do
Louis Fortin.....	do	do	do	do	do	do
						Claimant refuses to give bond for costs, 27th Sept., 1876
						Claim withdrawn, 27th Sept., '76
						Claimant fails to appear
						do
						do
						Claim withdrawn
						do
						30th Sept., '76

<i>Theodore Richard</i> .....	do	do	do	160 00	40 00	22nd Jan., 1877.	Claim withdrawn, 29th Sept., '76.
<i>Anselme Bastille</i> .....	do	do	do	406 00	40 00	22nd Jan., 1877.	Claimant fails to appear, 27th Sept., '76
<i>Etienne Forth, fils de Louis Marie</i> .....	do	do	do	600 00	Nil.	do	Claimant refuses to give bond for costs, 29th Sept., 1876.
<i>Jean Bastille</i> .....	do	do	do	80 00	.....	.....	Claimant fails to appear, 29th Sept., '76
<i>Aristobule Roy</i> .....	do	do	do	190 00	.....	.....	do
<i>François Bastille</i> .....	do	do	do	52 00	Not stated.	.....	Claimant refuses to give bond for costs, 29th Sept., 1876.
<i>Octave Gendron</i> .....	do	do	do	400 00	400 00	.....	do
<i>Bruno Richard</i> .....	do	do	do	400 00	.....	.....	Claimant refuses to give bond for costs, 29th Sept., 1876.
<i>Louis Miller</i> .....	do	do	do	400 00	.....	.....	Claim withdrawn,
<i>Joseph Onellette</i> .....	do	do	do	400 00	.....	.....	do
<i>Wm. Saucier</i> .....	do	do	do	Not stated.	.....	.....	Claimant refused to give bond for costs, 29th Sept., 1876.
<i>Hector Routier</i> .....	do	do	do	140 00	.....	.....	do
<i>F. X. Turgeon</i> .....	do	do	do	300 00	.....	.....	Claimant refused to give bond for costs, 29th Sept., 1876.
<i>Magloire Bérubé</i> .....	do	do	do	73 50	.....	.....	Claim withdrawn,
<i>Daniel Smith</i> .....	do	do	do	24 00	.....	.....	Claimant fails to appear
<i>Elzéar Bernier</i> .....	do	do	do	Not stated.	.....	.....	do
<i>Fredif Thibault</i> .....	do	do	do	do	.....	.....	Claimant refuses to give bond for costs, 2nd Oct., 1876.
<i>Octave Blanchet</i> .....	do	do	do	50 00	16 00	22nd Jan., 1877.	Claim withdrawn, 2nd Oct., '76.
<i>Germain Ruest</i> .....	do	do	do	100 00	.....	.....	Claimant refuses to give bond for costs, 2nd Oct., 1876.
<i>Robt. Carroll</i> .....	do	do	do	80 00	.....	.....	do
<i>M. Roy</i> .....	do	do	do	1 01	.....	.....	Claimant fails to appear, 2nd Oct., '76
<i>Pierre Ross</i> .....	do	do	do	50 00	50 00	22nd Jan., 1877.	do
<i>Léon St. Laurent</i> .....	do	do	do	0 99	.....	.....	do
<i>Edouard Brousseau</i> .....	do	do	do	0 89½	.....	.....	do
<i>Jean Brochu</i> .....	do	do	do	0 99	.....	.....	do
<i>Thos. Fréchette</i> .....	do	do	do	Not stated.	10 00	22nd Jan., 1877.	do
<i>Lazare Roy</i> .....	do	do	do	50 00	.....	.....	do
<i>Joseph Poirier</i> .....	do	do	do	100 00	100 00	22nd Jan., 1877.	do
<i>Thomas Beaulieu</i> .....	do	do	do	801 86	.....	.....	do
<i>Chrystôme Bernier</i> .....	do	do	do	189 80	9 00	.....	do
<i>Adolphe Otis</i> .....	do	do	do	22 00	Nil.	.....	do
<i>Joseph St. Laurent</i> .....	do	do	do	200 00	.....	.....	do
<i>D. Robitaille</i> .....	do	do	do	.....	Nil.	22nd Jan., 1877.	3rd Oct., '76
<i>Land damages, Section No. 17 Intero-</i>	do	do	do	.....	.....	.....	do
<i>lonial Railway</i> .....	do	do	do	46 20	.....	.....	do
<i>D. McLeod</i> .....	do	do	do	54 60	.....	.....	4th Oct., '76
<i>A. Poirier</i> .....	do	do	do	69 00	.....	.....	do
<i>Isaie Ritchot</i> .....	do	do	do	278 96	.....	.....	Ruled out by the Arbitrators.
<i>Pierre Desjardis</i> .....	do	do	do	.....	.....	.....	Claimant failed to appear, 4th Oct., '76
<i>Jean Bérubé</i> .....	do	do	do	130 00	Nil.	3rd Dec., 1877...	do
<i>François LeBel</i> .....	do	do	do	153 33	Nil.	do	do
	do	do	do	476 00	Nil.	do	do

Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882—Con.

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed, \$ cts.	Amount awarded, \$ cts.	Date of Award.	Remarks.
Jérémie LeBel.....	Damages, &c., to property, resulting from construction of Intercolonial Railway, Section No. 1.	19th Aug., 1876.	430 66	Nil.	3rd Dec. 1877...	
J. Candide Dion.....	do	do	50 00	49 00	do	
Wm. Simard.....	do	do	133 33	Nil.	do	
Hilaire or Alarie Dubé.....	do	do	75 00	Nil.	do	
Jude Ouellet.....	do	do	333 33	.....	.....	This is a case arising from snow fence, and is specially reported on.
Alexis Leclerc.....	Section No. 2.	do	416 66	40 00	3rd Dec., 1877...	
Ulgère or Euger Dion.....	do	do	100 00	Nil.	do	
Théophile Bélanger.....	do	do	62 00	Nil.	do	
N. Tétu.....	do	do	333 34	50 00	do	
Magloire Dubé.....	do	do	284 00	45 00	do	
Cyrille Gagnon.....	do	do	566 68	Nil.	do	
J. St. Laurent.....	Section No. 8.	do	200 00	.....	do	
Joseph Anonion Côté.....	Section No. 17	5th Sept., 1876.	130 00	Nil.	do	
Hilaire Dubé.....	Section No. 2.	do	60 00	Nil.	do	
Narcisse Belleisle.....	do	do	80 00	Nil.	do	
Widow Théo. Soucy.....	do	do	100 00	Nil.	do	
Sifroi Dubé.....	do	do	100 00	Nil.	do	
Vital Rioux.....	do	do	40 00	Nil.	do	
Joseph Michaud.....	do	do	40 00	Nil.	do	
Napoléon Rioux.....	do	do	50 00	10 00	do	
Jules Larrivée.....	do	do	80 00	Nil.	do	
Hermidas Denis.....	do	do	90 00	Nil.	do	
Celestin Bernier.....	do	do	.....	.....	do	
Widow P. Garant.....	do	do	Not stated.	.....	do	Claimant fails to appear when called.
Cyriac Dastous.....	Section No. 5	do	20 00	3 00	do	Case heard, but claimant failed to produce documents promised, and arbitrators therefore made no award.
Magloire Dubé.....	do	do	Not stated.	.....	do	Claimant fails to appear when called.
Fabien Ouellet.....	do	do	18 00	10 00	do	This case was tried in 1876, during claimant's absence, and as his representative was unable to produce title deeds required, the arbitrators rendered an award against him. In
Lucien Belanger.....	do	do	300 00	.....	do	
Joseph Heppell.....	Section No. 8	do	380 00	40 00	do	



STATEMENT of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Date of reference to arbitration.	Amount claimed.	Amount awarded.	Date of Award.	Remarks.
Jules Michaud.....	Damages, &c., to property, resulting from construction of Intercolonial Railway, Section No. 8.	Oct. 4, 1876.....	\$ cts. 200 00	\$ cts. Nil.	Dec. 3, 1877.....	
P. Banville.....	do	do	300 00	Nil.	do	
Sylvain Lavoie.....	do	do	500 00	Nil.	do	
Alex. de Champlain.	do	do	65 00	30 00	do	
Octave Côté.....	do	do	200 00	.....	do	Ruled out by Arbitrators.
Jules St. Laurent....	do	do	Not stated.	40 00	do	
Alfred Blais.....	do	do	50 00	10 00	do	
I. K. Ward.....	Land taken, &c., for Lachine Canal enlargement.....	do	40,899 75	26,135 00	Oct. 29, 1877.....	
W. Evans.....	do	Feb. 2, 1877.....	8,701 58	3,767 00	do	
L. Fauteux.....	do	Feb. 3, 1877.....	9,442 66	5,000 00	do	
A. St. Denis.....	Land taken for Carillon Canal enlargement.....	do	3,200 00	297 00	10th Dec., 1877.	
Estate late Hon. Wm. Chipman.....	Land taken, &c., by Intercolonial Railway for dépôt grounds, &c., at St. John, N.B.....	12th March 1877.	84,140 00	24,000 00	7th Dec., 1877.	Arbitrators have also awarded interest from 1st January, 1872.
John Elliott.....	Contract, extras, &c., Custom House, Toronto.....	5th April, 1877.	with interest 110,275 01	95,377 00	20th Aug., 1877.	
F. X. Jary.....	Land taken for Lachine Canal enlargement.....	16th June, 1877.	2,981 76	1,194 00	29th Oct., 1877.	This claim has been referred back for consideration of award.
J. Caron.....	Damages, &c., to property resulting from construction of Intercolonial Railway, Section No. 8.....	20th June, 1877.	Not stated.	20 00	3rd Dec., 1877.	
W. Simard.....	do	do	200 00	40 00	do	
J. Larrivée.....	do	do	366 66	40 00	do	
Maxime Thierry.....	Land taken, &c., for Lachine Canal enlargement.....	23rd July, 1877....	4,629 51	4,629 00	29th Oct., 1877.	
Maxime & A. Latour.	do	do	3,359 92	3,359 00	do	
O. W. Stanton.....	do	do	10,488 50	10,488 50	do	
Estate late Wm. Dow	do	do	2,917 20	2,322 00	do	
Heirs Peter Jackson.	do	do	5,150 90	5,400 00	do	Referred for reconsideration.





Statement of the Awards made by the Dominion Arbitrators, from their Appointments, to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Amount claimed.	Amount awarded.	Date of Award.	Remarks.
F. S. Higginson	Grenville Canal, valuation of land.	\$ 1,500 00	\$ cts.		
Joseph Hamilton	L. C. Railway contract for building a wharf at Pipton Landing.	8,000 00			Claim not sustained by Mr. Compton.
J. B. Chamberland	L. C. Railway, land taken.	1,000 00			Claimant has no right to compensation.
O. & C. Ouellette	do do damages, &c.	300 00			do do
C. Martin	do do do	100 00			do do
Geo. Duncan	do do do	3,925 10			Mr. Cowan thinks claimant entitled to \$1,035.
A. Campbell, jun.	do do do	200 00			Mr. Cowan reported claimant not entitled to anything.
J. B. McNutt	do do do	800 00			Mr. Cowan reported and will report again after further enquiry.
P. Dumont	do do do	100 00			Mr. Cowan reported claimant be offered \$85 as full payment.
Jean Rousseau	do do do	150 00			Claim abandoned.
Jules Tessier	do do do	150 00			Claimant not entitled to damage.
Alex. St. Laurent	do do do	400 00			do do
G. W. Bartholomew	do do do	400 00			Claim abandoned.
Donald Smith	do do do	500 00			Claimant signed receipt in full for all damages.
J. Beaulieu	do do do	68 00			Mr. Cowan reported recommending claim be paid in full.
Pierre Odté	do do do	150 00			Claimant not entitled to anything.
Alex. Forbes, (Forbes & Hamilton, contractors)	do do do	4,172 48	657 95	28th Feb., 1879.	
Robert Moffitt	Receiving and transporting rails.	5,624 27			Claim withdrawn.
J. & T. Williston	Loss of fish	184 83			
Thomas Nihan	Welland Canal, land taken for enlargement	1,539 00			
A. Brownson	do do do	350 00			
F. Touche	do do do	100 00			
John Bradley	do do do	1,184 00			
Conlon Brothers	do do do	240 00			
Henry Clark	L. C. Railway, loss of property	150 00			
J. B. Dumont	do do damage by accumulation of snow	Not stated.			



STATEMENT of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
Archer & Co.....	Piers, Quebec, timber supplied for construction.....	1,171 32			
Narcisse Gagné.....	Damages resulting from the change of the Temiscouata Road.....	200 00	Amt. offered 1,476 87		Claimant not entitled to any compensation.
Rev. D. F. MacDonald.....	P. E. I. Railway, land expropriated.....	1,962 87	Amt. awarded. 350 00		
P. A. McIntyre.....	do do do.....	500 00			
Mrs. Stark.....	I. C. Railway, barn burned.....	340 00			
Silas Clark.....	do do do for loss of hay.....	246 36			
Jérôme Gagnon.....	do do do water supply.....	150 00			
Irenée Caron.....	do do do do.....	100 00			
Abraham Théberge.....	do do do for land damages.....	300 00			
William Morrice.....	do do do fencing.....	5,165 65			
Thomas B. Smith.....	do do do land damages.....	1,000 00			
Euloge Rioux.....	do do do land damages.....	1,000 00			
L. D. Woodruff.....	Welland Canal do.....				
Isidore M. Doucet.....	I. C. Railway do.....				Transferred to Mr. Simard.
Michel Frenette.....	do do do.....				do
Félix Melançon.....	do do do.....				do
Isidore S. Doucet.....	do do do.....	100 00			do
Laurent Boudreau.....	do do do.....	500 00	Nil.		do
D. Bégin.....	do do do.....	1,046 83			
Stephen Beatty.....	Welland Canal, loss of water supply.....				
J. W. Johnston.....	do do damage to property.....				
Mrs. Elizabeth Holditch.....	do do Turnpike road traffic cut off.....				
D. Gibbons.....	do do damage to property and business.....				
Marshall Wood.....	Parliament Building, services preparing plans.....	15,000 00	1,350 00		
Mrs. Sarah Russell.....	do do do.....	1,000 00	600 00		
D. J. McDonald.....	Cornwall Canal, land damages.....	346 09			
Marshall Wood.....	I. C. Railway, contract for sleepers.....				
	Public Buildings, Ottawa, pedestal for Queen's Statue.....	1 500 00			

Name	Description	Amount	Date	Remarks
<i>T. Blenkinsop</i>	I. C. Railway, sheep killed	65 00		
<i>Judge Bonsor</i>	do land damages	150 00		
<i>W. W. Pride</i>	do horses killed	140 00		
<i>J. L. Hackey</i>	do cattle killed	54 00		
<i>J. M. McDonald &amp; A. Urquhart</i>	do contract for sleepers	360 00		
<i>Donald Grant</i>	do water diverted from mill	400 00		
<i>W. W. Doherty</i>	do	per annum.		
<i>Patrick Wetican</i>	do damage to land by water	100 00		
<i>Halifax City Railroad Co.</i>	do loss and damages by extension of railway in Halifax	260,000 00		
<i>Ed. Wasell</i>	do infringement of bridge patent	Not stated.		
<i>Mrs. Rufus Fillmore</i>	do cow killed	40 00		
<i>Elic Mailloux</i>	do land damages caused by erection of snow fences	80 00		
<i>Joseph Doucet</i>	do land damages	200 00		
<i>Grégoire Frenette</i>	do do	4,318 09		
<i>George C. Sutherland</i>	do claim contracts for sleepers for extras, etc., on a contract for snow sheds	4,000 00	12th May, 1882.	
<i>C. H. Mann</i>	do land damages	Not stated.		
<i>Marc Devereux</i>	do sheep killed	4 00		
<i>Thomas Hair</i>	do dwelling-house burned	800 00		
<i>Paul Foster</i>	do horse killed	20 00		
<i>Capt. Crowell</i>	do barn burned	264 75		
<i>John Robinson</i>	do damage by delay carrying freight	167 00		
<i>Edward Fisker</i>	do land expropriated	Not stated.		
<i>John Mulroney</i>	do Welland Canal, damages resulting from injuries to Port Robinson Dry Dock	20,000 00		
<i>Gabriel Lemieux</i>	do Welland Canal, damages by water	275 00		
<i>Andrews &amp; Co.</i>	do Welland Canal, damages by water	2,500 00		
<i>Thadée Ancill</i>	do interest	1,500 00		
<i>John McDonagh</i>	do I. C. Railway, damage to land by water	25 00		
<i>Phelps Bros.</i>	do bull killed	50 00	12th Feb, 1881.	
<i>Jos. Boudreau</i>	do cow killed	368 70	2nd Sept., 1880.	
<i>Cyr. Thériault</i>	do land taken for temporary ballast line	8 00	do	
<i>Rufus Brown</i>	do do	12 00	do	
<i>Lucien Morin</i>	do do	do	do	
<i>Joseph Levesque</i>	do do	do	do	
<i>Eugène Robichaud</i>	do do	do	do	
<i>Mrs. Widow Charrois</i>	do do	do	do	
<i>Germain Pelletier</i>	do do	do	do	
<i>Onézime Pelletier</i>	do do	\$100 p-arp/nt	do	
<i>J. B. Castonguay</i>	do do	\$100 per year	do	
<i>W. A. Doherty</i>	do horse killed	25 00	6th Sept., 1881.	

Nothing is due to claimant.  
Referred to Mr. Cowan.

Mr. Compton recommends no compensation.  
Failed to appear, 3rd May. Case settled.

Claimant is entitled to \$209, with interest, from 1st January, 1878.  
With use of water of the canal when completed.  
Entitled to \$20.

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Statement of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
H. M. Hamilton .....	I. C. Railway, damages for failure on part of Government to carry out his contract .....	1,000 00	.....	18th Feb., 1881...	Hamilton to refund \$142.91 in full settlement of the lease. Award sent to Minister, December, 1881.
Hon. R. Boak .....	do land expropriated .....	Not stated.	1,300 00	14th July, 1881...	
Charles Pelletier .....	do damages to his crops by fire .....	90 00	Nil.	18th Nov., 1880...	
Hezekiah Davis .....	Welland Canal, refund of moneys paid by him for a grist mill .....	1,063 00	400 00	14th Jan., 1882...	
A. W. Thompson .....	do damages by overflow of lands caused by the Dunnville Dam .....		.....	.....	
D. A. Frudenburg .....	do do .....		.....	.....	
C. Rittenhouse .....	do do .....		.....	.....	
O. Barham .....	do do .....		.....	.....	
Walter Carnes .....	do do .....		.....	.....	
E. W. Evans .....	do do .....		.....	.....	
J. Evans .....	do do .....		.....	.....	
P. Nashinder .....	do do .....		.....	.....	
R. C. Lymburner .....	do do .....		.....	.....	
G. A. Gibson .....	do do .....		.....	.....	
G. A. Windecker .....	do do .....		.....	.....	
G. Sixsmith .....	do do .....		.....	.....	
J. Sutor .....	do do .....		.....	.....	
A. Nevills .....	do do .....		.....	.....	
J. D. Rae .....	do do .....		.....	.....	
R. H. Bruce .....	do do .....		.....	.....	
D. Reid .....	do do .....		.....	.....	
J. Smith .....	do do .....		.....	.....	
E. Beamsley .....	do do .....		.....	.....	
T. Morgan .....	do do .....		.....	.....	
J. Sweet .....	do do .....		.....	.....	
R. Reid .....	do do .....		.....	.....	
J. Baker .....	do do .....		.....	.....	
R. Gibson .....	do do .....		.....	.....	
J. Granger .....	do do .....		.....	.....	
W. Burnham .....	do do .....		.....	.....	

Claimants estimate damages caused at \$8,000.00.

<i>Merritt Estate</i>	do	Not stated.					
<i>W. pt. 5 of Ind. Res. Tp. of Canboro'</i>	do	200 00	15 00	18th Nov., 1880...			Report sent direct by Mr. Cowan to Department.
<i>C. Burnham</i>	do	Not stated.	200 00	19th Jan., 1882...			This case settled by authority.
<i>Joseph Rae</i>	do	140 00	Nil.				Case settled by Department of Railways at Moncton, 9th September, 1881.
<i>John Brown Estate</i>	do	50 00					Case withdrawn.
<i>McFarlane</i>	do	Not stated.					
<i>Martin</i>	do	do					
<i>Mrs. Gibson</i>	do	do					
<i>Canans</i>	do	do					
<i>Stevens</i>	do	do					
<i>Jas. Bradshaw</i>	do	do					
<i>Ware</i>	do	do					
<i>Great Western Railway Co.</i>	do	do					
<i>W. pt. of N. pt. of 2 Con. N. of Dover Road, Tp. of Dunn.</i>	do	do					
<i>J. C. Linois</i>	do	200 00	15 00	18th Nov., 1880...			Report sent direct by Mr. Cowan to Department.
<i>D. D. Everardo</i>	do	Not stated.	200 00	19th Jan., 1882...			This case settled by authority.
<i>Edouard Côté</i>	do	140 00	Nil.				Case settled by Department of Railways at Moncton, 9th September, 1881.
<i>P. J. Hackey</i>	do	50 00					Case withdrawn.
<i>G. Lemieux</i>	do	Not stated.					
<i>Alex. Madore</i>	do	do					
<i>James S. Evans</i>	do	do					
<i>R. Balfour</i>	do	do					
<i>Oliver A. Felch</i>	do	do					
<i>Joseph White</i>	do	200 00	200 00	8th Nov., 1881...			Withdrawn.
<i>Felix Utican</i>	do	120 00	100 00	16th Feb., 1881...			
<i>Mrs. N. Chouinard</i>	do	do	100 00	12th Sept., 1881...			Report sent to Minister, 30th Sept., 1881.
<i>J. Caron</i>	do	do	5 00	24th Sept., 1881...			do do 8th Oct., 1881.
<i>J. McGillivray</i>	do	do	Nil.	10th Aug., 1881...			do do do
<i>Richard Colburn</i>	do	Not stated.	Nil.	19th March			Claim settled.
<i>Joseph Bullock</i>	do	180 25	6,884 50	28th Nov., 1881			Transmitted to Department.
<i>F. A. &amp; H. A. Jones</i>	do	6,914 50	Nil.	10th Aug., 1881...			Referred to do
<i>Charles Gallagher</i>	do	100 00	4,350 00	14th July, 1881...			
<i>G. C. Tunstall</i>	do	do	7,175 00	do do			
<i>O. Chevreils</i>	do	do	150 00	do do			
<i>David Madore</i>	do	do	do	do do			
<i>C. P. Snider</i>	do	200 00	do	do do			
<i>John Fitzgerald</i>	do	\$50 a year.	200 00	10th Aug., 1881...			
<i>John W. Grote</i>	do	do	Nil.	14th Aug., 1881...			

Statement of the Awards made by the Dominion Arbitrators, from their Appointment, 30th June, 1882.—*Con.*

Claimant.	Subject of Claim.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
Auguste Pelletier .....	Alleged damage to property by an I. C. Railway locomotive.....	18 00	21 00	10th Aug., 1881...	
Andrew Northwood.....	Land offered to build Dominion Buildings at Chatham, Ont.....	8,000 00	8,000 00	30th May, 1881...	
The Manager of Presbyterian Church.....	Land offered to build Dominion Buildings at St. Thomas, Ont.....	7,000 00	7,000 00	do .....	
Robert Cochrane.....	Damages, I. C. R., to ship material, burnt at Moncton, N. B.....	1,341 50	Nil.	24th Sept., 1881...	
Matthew Orr.....	Cornwall Canal, land required for.....	\$450 per-acre	746 00	14th July, 1881...	
William Mattice.....	do do.....	\$450 do	250 00	13th July, 1881...	
William Fraser.....	Damage by fire from Intercolonial Railway engines.....	166 00	106 00	12th July, 1882...	
John Gunn.....	do do.....	63 25	22 56	13th July, 1882...	
Tully's, or Darby's Wharf.....	Expropriation of land for the Intercolonial Railway at Halifax.....	1,600 00	1,095 00	1st June, 1882...	Amicably settled.
M. J. Anderson.....	Land expropriated for Cornwall Canal.....	577 50	Nil.	19th Jan., 1882...	
John Toschke.....	Damages for loss by flooding, Welland Canal.....	400 00	Nil.	5th Sept., 1881...	
Rev. Matthew Smith.....	Loss by destruction of a mill.....		100 00	9th Nov., 1881...	
Thomas Nixon.....	Welland Canal, damages.....				
The Ste. Catharine's Macadamized Road Co.....	do do by lessening receipts of toll.....				
Robert Pugsley.....	Land taken and damage by water.....		1,000 00	7th Aug., 1882...	
Mrs. Mary Patton.....	Graving Dock, Point Lewis, damages by expropriating a right of way.....		Nil.	19th Oct., 1881...	
Samuel Platt.....	Goderich Harbour, right of way.....	12,000 00	9,000 00	2nd Sept., 1882...	
Chas. D. Fillmore.....	I. C. Railway, damage for two horses killed.....	200 00	20,510 00	24th Feb., 1882...	
Indians, certain number of.....	Welland Canal, damage to land by flooding Dunville Dam.....		200 00	21st Feb., 1882...	
			\$8,433 14	5th Aug., 1882...	
			with 40 years interest, amounting to		
			\$28,672.67.		





STATEMENT of the Awards made by the Dominion Arbitrators, from their Appointment, to 30th June, 1882.—Cont.

Claimant.	Subject of Claim.	Amount claimed. \$ cts.	Amount awarded. \$ cts.	Date of Award.	Remarks.
Geo. B. Spencer.....	Pembina Branch, C. P. Railway, land taken for.....	Not stated.	800 00	14th Oct., 1882 ..	
Thos. F. Bradley.....	do	5,568 00	1,246 66	do	
Duncan Campbell.....	do	.....	41 40	do	
A. W. Russell.....	do	.....	292 00	do	
Sam. Sullivan.....	do	.....	.....	.....	Withdrawn.
Thos. B. Whitby.....	do	.....	.....	.....	Wants a farm crossing.
Hugh Carmichael.....	do	.....	.....	.....	do
Rev. Geo. Young and J. H. Ashdown.....	do	.....	.....	.....	Withdrawn and settled.
S. I. B. Legimonière.....	do	.....	.....	.....	do
Ed. L. Drewry (for Meg. Brown).....	do	.....	.....	.....	do
Christopher MacIntosh.....	do	.....	.....	.....	do
Duncan McArthur <i>et al.</i> , executors of the estate of the late Dr. Bird.....	do	.....	.....	14th Oct., 1882...	Not patented yet.
D. McArthur <i>et al.</i> , executors to estate Dr. Bird.....	do	.....	.....	.....	Withdrawn.
D. McArthur <i>et al.</i> , executors to Mrs. Gunn, heirs of Dr. Bird.....	do	.....	.....	.....	do
John Gunn.....	do	617 60	15 00	14th Oct., 1882...	
W. R. Sutherland.....	do	82 00	41 40	do	
E. Metcalf.....	do	Not stated.	30 00	do	

CHAS. THIBAUT, Secretary to Official Arbitrators.

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APPENDIX No. 36.

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**STATEMENT**

SHOWING

- 1st. PROPERTIES PURCHASED OR SOLD BY THE DEPARTMENT.
  - 2nd. PROPERTIES TRANSFERRED OR ABANDONED BY THE DEPARTMENT.
  - 3rd. PROPERTIES TRANSFERRED BY THE DOMINION GOVERNMENT TO LOCAL GOVERNMENTS, OR BY LOCAL GOVERNMENTS TO THE DOMINION GOVERNMENT.
  - 4th. PROPERTIES LEASED BY THE DEPARTMENT.
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APPENDIX No. 36.

1st STATEMENT of Property Purchased or Sold by the Department.

Date of Sale.	Vendors.	Purchasers.	Property Purchased or Sold.	For what purpose used.	Area.	Price of Sale.	Remarks.
Sept. 6, 1867.	Geo. Bryson .....	Her Majesty .....	Part of Lots Nos. 8, 9, 10, 11 and 12, in 4th Concession of Mansfield, County of Pontiac, on the Coulonge River.	Slides, &c. ....	59 acres .....	\$ 4,342 18	
Oct. 14, 1867.	Her Majesty .....	Corporation of the Counties of York and Peel	Materials, tools and plant on the York Roads.	.....	.....	7,167 00	
Aug. 20, 1867.	Bank of Upper Canada.	Her Majesty .....	W. part of Lot No. 6, on corner of Duke and George streets, Toronto.	Govt. offices ..	200 x 140 ft.	16,000 00	
April 23, 1868.	Thos. Jenkins .....	Her Majesty .....	Deed of <i>mitoyenneté</i> in a wall adjoining Post Office, Montreal.	P.O. property ..	.....	455 38	
Mar. 23, 1868.	Her Majesty .....	James Wells .....	Lot No. 34, on east side of John street, and a lain 16 feet in rear, Toronto, being part of No. 13, Simcoe Place.	.....	3,772 sup. ft	615 00	
June 9, 1868.	do .....	St. Lawrence Town Boat Co., Que.	Bill of sale of the steamer "Advance" ...	.....	.....	4,050 00	
July 28, 1868.	T. C. Keefer <i>et al</i>	Her Majesty .....	Conveyance, of "Rideau Hall" property, New Edinburgh.	Governor's residence, ..	87 a 3 r. 4 f 6 perches.	82,000 00	
Oct. 28, 1868.	Huntingdon and Lake St. Francis Road Co.	do .....	Conveyance road from Huntingdon to Lake St. Francis.	Defence .....	8 miles .....	.....	
Nov. 13, 1868 } do 16, 1868 }	Rev. C. E. Cartwright <i>et al</i> .	do .....	Conveyance, part of Lot No. 16, in 1st Concession, Kingston, adjoining Rockwood Asylum.	To extend asylum.	3 acres .....	6,000 00	
June --, 1869.	Adam Duncan & others.	do .....	Receipt in full of all claims against Métapédiaac Road.	Damages .....	.....	in all 337 91	
July 8, 1869.	J. B. A. Chamberland <i>et al</i> .	do .....	Discharge of all claims for land taken at St. Patrice, Rivière du Loup.	Temiscouata Road.	.....	447 00	
do 16, 1869.	Corp. College, Ste. Anne.	do .....	Discharge of all claims for seigniorial dues, which they will pay in future on land taken from them.	do ..	.....	25 00	

Jan. 14, 1869.	Hon. A. T. Gait, et al.	do	.....	Lot on Common and McGill streets, Custom House	49,277 ft.	78,843 20
do	Incumbent and Churchwardens, St. Paul's Cathedral.	do	.....	do	{ 108 x 79' 2 } { 120 x 80' 0 }	8,000 00
Aug. 12, 1869.	Royal Insurance Co.	do	.....	Sale of Royal Insurance Building, Commissioner and Commune streets, Montreal.	214 x 226 x 142 ft.	200,000 00
February, May, June, September, 1870.	Heirs J. B. Lawlor.	do	.....	Sale of Lawlor's Island, at entrance of Halifax Harbor, N.S.	.....	8,000 00
Sept. 8, 1870.	F. X. Leclaire	do	.....	Sale of part of lot No. 8, 3rd Concession Shawenigan, St. Maurice Works.	1 acre, 24 perches.	120 00
Oct. 6, 1869.	G. Côté	do	.....	Release of all claims for building Sherbrooke jail, District of St. Francis.	.....	744 20
May 19, 1871.	Mrs. G. O'Kill Stuart.	do	.....	Part of lot on Buade and Fort streets, Quebec.	45 x 79 ft.	12,000 00
June 1, 1870.	Hon. D. L. Macpherson et ux.	do	.....	Four lots on Adelaide and Stanley streets, Toronto.	.....	10,953 42
July 14, 1870.	G. McLeod and A. Keith et al.	do	.....	The city lots Nos. 21, 22, 23, 24 and 25, Prince William and St. John streets, at St. John, N.B.	80 x 90 ft., & 40 x 90 ft.	75,000 00
Sept. 1, and 28, March, 1871.	Hudson Bay Co. and Imperial Government to Dominion of Canada.	do	.....	Transfer of Rupert's Land, Hudson Bay Co.'s rights, &c. (correspondence).	.....	£300,000 stg.
Nov. 19, 1869.						1870, pp. 75 to 85.
May 17, 1872.	Hon. H. Black	do	.....	Mitoyenneté in a wall on Fort street.	Quebec Post Office.	130 50
Sept. 23, 1871.	Bank of New Brunswick.	do	.....	Lot of land on Prince William, Princess and St. John streets.	St. John, N.B., 60 x 90 ft.	14,000 00
Oct. -- 1871.	La Banque du Peuple.	do	.....	Lot of land on Great St. James, St. François Xavier streets and Fortification Lane.	Montreal Post Office.	150,000 00
July 1, 1871.	L. Allen et ux.	do	.....	Lot of land on Jourmain Island, N.B.	129 x 94 ft., 17 perches.	200 00
Oct. 14, 1872.	H. Tuck et ux.	do	.....	Lot of land No. 4, block A, Water street, at Newcastle, N.B.	Custom House.	4,000 00
do 16, 1872.	Hon. W. Muirhead et ux.	do	.....	Lot of land, No. 36, S.E. side of Water street, at Chatham, N.B.	do	10,000 00
Dec. 30, 1872.	John Brown	do	.....	Steam tug "Minnie Battle," dredge No. 7, and two scows.	Dredging.	19,350 00
Oct. 23, 1872.	Hon. O. Mowat et ux.	do	.....	Lot on Yonge and Esplanade streets, Toronto, in front of lot No. 2, north side of Front street.	Custom House.	27,800 00

1st STATEMENT of Property Purchased or Sold by the Department.—Continued.

Date of Sale.	Vendors.	Purchasers.	Property Purchased or Sold.	For what purpose used.	Area.	Price of Sale.	Remarks.
Oct. 17, 1872.	Wm. Thompson and J. Burns.	Her Majesty .....	Lot between Front street and a lane in rear, Toronto, west of present Custom House lot.	Custom House.	Strips of 25ft 8 in., in all 4,326 ft.	\$ 8,983 00	
Dec. 31, 1872.	Hon. W. Muir head <i>et ux.</i>	Her Majesty .....	Middle Island or Barratoria, in Miramichi River, Chatham, N.B.	Quarantine....	18 acres .....	1,100 00	
Jan. 30, 1873.	John Walker <i>et ux.</i>	do .....	S.E. part of N <sup>o</sup> 11, Concession C., London, between Great Western Railway and Grand Trunk Railway.	Immigration Buildings.	3½ acres .....	2,500 00	
Nov. 6, 1872.	Chas. Nolin <i>et ux.</i>	do .....	Land at Oak Point, on Lake of the Woods Road, County of Provencher, Manitoba, on River Seine.	do	1 ch. x ½ mile	25 00	
Feb. 27, 1871.	Sam. Barker <i>et ux.</i>	do .....	Part of lots Nos. 10 and 11, on N. of North street, 11 south of North street, and 10 & 11 south of Fullarton street, London, Ont.	Post Office.....	2,700 feet ...	3,000 00	
Dec. 16, 1872.	Wm. Carling & Hon. J. Carling <i>et ux.</i>	do .....	Part of Lot 11, S. of North street, at London, Ont.	do .....	840 feet.....	2 00	
June 17, 1873.	Her Majesty .....	Royal Institution for advancement of learning.	Release of a loan and surrender to them of land on St. Catharines and Cathcart streets, Montreal, &c., and Government to remove Exhibition Buildings therefrom within 75 days.	Formerly used as Exhibition Buildings.	.....	40,000 00	
June 26, 1873.	James Vernon <i>et ux.</i>	Her Majesty .....	Part of Lot No 15, in 11th Concession, Saigmour River, Trent.	Heely's Falls Works.	12 acres and 5 acres.	1,000 00	
Sept. 17, 1872.	Order in Council	Dept. of Public Works.	Transferring the "Platon" at Three Rivers, P. Q.	Custom House.	.....	.....	
June 5, 1873.	Trustees of Public Property, Pictou County, N.S.	Her Majesty .....	Lot known as "Marine Hospital and Quarantine Grounds," at Pictou, N.S., on Harbor Shore.	Quarantine....	35 acres .....	4,000 00	

Date	General Sessions of the Peace, Co. Queen's	do	Report, plan and appraisal of land taken for a road to breakwater at Brooklyn to Fish Point, N.S.	Road	72 feet long 30 ft. wide.	333 00	Paid by locality.
July 15, 1873.	Robert Ross & wife.	do	Lots D. E., on western point of St. Andrews Island, County of Charlotte, N. B.	Peat House	3 acres	300 00	
Aug. 16, 1873.	Bank of New Brunswick.	Her Majesty	Additional strip, 6 x 11 ft., for right of way, at end of passage along and between the Bank and Post Office, St. John, N. B.	Right of way	6 x 11 ft.	650 00	
do 27, 1873.	Joseph H. Belrose.	do	Lot at St. Vincent de Paul, on Rivière des Prairies.	Penitentiary	5,966 ft.	10,000 00	With interest at 6 per cent. since 1st May, 1882.
Feb. 11, 1870.	J. H. Bellerose & C. Germain.	do	Servitude for water works	Right of way		1,000 00	
Nov. 4, 1873.	Her Majesty	Maurice Cuvillier	Promise of sale of old Post Office site, Montreal.			100,000 00	
do 3, 1873.	W. A. Hims worth.	Her Majesty	Release of damages, loss of riparian rights in front of lot No 6, in 3rd Range, Hull, by Little Chaudière station works.	Ottawa River works		800 00	
Oct. 21, 1873.	Eust. H. Lemay.	do	Lot of land at St Vincent de Paul, Rivière des Prairies.	Penitentiary	76 arpents	18,000 00	With interest at 6 per cent. from 11th Dec, 1872.
June 5, 1873.	Her Majesty	Hudson Bay Co.	Land on north side of River Assiniboine, and west of Red River, Manitoba.		45 acres		Fifty acres reserved out of 500 for public purposes.
March 30, 1874.	James Motz	Her Majesty	Lot No. 2,832, on Buade and Frontenac streets, Quebec.	Post Office	1,781 ft. English measure	7,000 00	And ground rent of six francs to Hotel Dieu, Quebec.
May 25, 1874.	D. Fraser	do	Part of lot No. 14, in block 70, official map, Victoria, B. C.	Custom House		1,800 00	
do 22, 1874.	H. A. Ouzo	do	Part of lot No. 16, in block 70, official map, Victoria, B. C.	do		1,800 00	
Aug. 18, 1874.	Joseph Gardner.	do	Land at Brooklyn, Queen's County, N. S., north of breakwater.	Breakwater	180 x 10 feet.	100 00	
Sept. 1, 1874.	A. G. B. Bannetyn & Andrew McDermot & J. T. Wallace & T. Evans.	do	Part of lot No. 248, Hudson Bay Co.'s register, in Winnipeg, Manitoba, fronting on Main and Owen Streets.	Post Office	90 ft. lks. x 1 ch. 8 1/2 lks.	1 00	
do 8, 1874.	T. J. Wallace & T. Evans.	do	Bill of sale of 4 scows—Mabou Harbor Works.	Dredging		1,600 00	

1ST STATEMENT of Property Purchased or Sold by the Department—Continued.

Date of Sale.	Vendors.	Purchasers.	Property Purchased or Sold.	For what purpose used.	Area.	Price of Sale.	Remarks.
Oct. 5, 1874.	J. E. Woodworth	Her Majesty	Shares in Stock of Oak Point Pier Co., for extension of breakwater, N.S., Nos. 2 to 5, 7 to 15, $\frac{1}{2}$ 16, 17, $\frac{1}{2}$ 18, 19 to 146.			\$ 1 00	
do 5, 1874.	T. E. & J. Bigelow	do	Share No. 1, in do	Break-water at		10 00	
do 5, 1874.	C. C. Hamilton.	do	Share No. $\frac{1}{2}$ 6, and $\frac{1}{2}$ 16, in do	Oak Point.		50 00	
do 5, 1874.	S. Sheffield and J. L. Wickwire.	do	Share No. $\frac{1}{2}$ 6, and $\frac{1}{2}$ 18, in do			{ 10 00	
do 5, 1874.	S. Sheffield and J. L. Wickwire.	do	Share No. $\frac{1}{2}$ 6, and $\frac{1}{2}$ 18, in do			10 00	
May 31, 1875.	Oak Pt. Pier Co.	do	Land covered with water, set apart by Court of County Sessions in 1845 do		2 roods, 28 perch.	1 00	
do 26, 1874.	Geo. Botsford et al.	do	House and part of lot No. 31, Palmer's plan, at Sackville, Westcock, N.B.	Marine Hospital.	7 acrs., 3 roods, 3 $\frac{1}{4}$ perch.	3,200 00	
do Dec. 19, 1874.	Lewis McLean	do	Bill of sale of a dredge scow, Port Hood, C. B., N.S.	Dredging.		500 00	
July 3, 1874.	Jane Porter	do	Part of Isle aux Cochons, at mouth of River St. Maurice.	Boomage.	17 acres.	2,080 00	
Mar. 18, 1875.	Hon. T. D. Archibald et al.	do	Land at Cow Bay, C. B., N.S., and breakwater.	Breakwater		25,000 00	
Feb. 20, 1874.	John Walker et al.	do	S. E. part of N. $\frac{1}{4}$ of lot 11, Con. C., London, between G. W. & G. T. Railway	Emigrant sh	3 $\frac{1}{2}$ acres.	2,500 00	
April 27, 1875.	Colonial Building and Investment Assoc.	do	Lots on Brodie farm, St. Henry, near Montreal, along Grand Trunk Railway	do	18,150 feet.	7,300 00	
June 17, 1875.	Wm. Simons	do	Hopper dredger "St. Lawrence," now at Halifax, N.S.	Dredging		£19,600 0	Sterling.
Oct. 6, 1874.	Hudson Bay Co.	do	Lots 11, 12, 13, 14, in Block 3, on Garry St., Winnipeg, Manitoba.	Customs and Land Offices.		3,000 00	
Aug. 17, 1875.	Caroline A. Hart	do	Part of Isle aux Cochons, mouth of River St. Maurice.	Boomage, &c.	12 arpents	1,214 00	
Nov. 2, 1875.	Local Government, P. E. I.	do	List plans and deeds of Deminton Property, Charlottetown, Prince Edward Island.	P. E. Island			
Oct. 2, 1875.	Thos. Keays	do	Part of lot at Souris, Kings County, on road to East Point, Prince Edward Island.	Marine Hospital.	1-00 acre.	300 00	



Date	Her Majesty	City of Montreal	Exchange of lots, part No. 1, west ward Common Street, Montreal.	Principal Interest
Feb. 5, 1876.	do	do	Sale of part of lots do do	{ 113 60 } { 52 81 } do
Feb. 3, 1875.	do	Harbor Commissioners of Montreal.	do do do	{ 5,396 80 } { 2,533 91 } do
Oct. 20, 1874.	do	T. Cramp et al.	The Crystal Palace building, on Cathedral block, Montreal, (lot owned by them.)	53,975 00
July 3, 1875.	Hon. A. J. White et ux.	Her Majesty	Lot on N. E. side of Great Georges street, Sydney, Cape Breton, N. S. (site).	800 00
April 27, 1876.	J. C. McLagan et ux.	do	Part of lot 54 in Canada Co's survey of, lot 20 in J. Macdonald survey of lot B, town of Guelph.	4,000 00
Mar. 2, 1876.	D. G. DesBrisay.	do	Deed of land on N. Beach, Richibucto Harbour.	250 00
May 2, 1876.	G. W. Chandler et ux and Hon. E. B. Chandler	do	Deed of land at Dorchester, N. B.	13,000 00
do 3, 1876.	A. Weidon et ux.	do	do do do	4,400 00
do 3, 1876.	J. A. Buck et ux.	do	do do do	4,200 00
Dec. 14, 1876.	W. E. Cunningham.	do	Deed of land at Ballantyne's (or Mc-Nair's) Cove, Antigonish, N. S.	100 00
Feb. 7, 1877.	Dominion Government.	Ontario Government.	Provisional agreement for sale of Rockwood Asylum, Kingston.	96,500 00
May 1, 1877.	Her Majesty	Port Dover and Lake Huron Railway Co.	Deed to them of the Port Dover Harbour at mouth of Patterson's Creek.	6,200 00
July 23, 1877.	do	Harbor Comm's of Montreal.	Discharge of balance of price of lot No. 1, Common Street, Montreal, sold to them 3rd February, 1876.	{ 16,987 50 } { 1,493 97 } Principal. Interest.
Dec. 17, 1877.	D. McGillis et ux	Her Majesty	Deed to Government of lot 14, 1st range, Allumette Island, Culbute Dam.	100 00
Feb. 27, 1878.	Executors of Nelson Mett.	do	Part of lots 8 and 9, at St John, P. Q.	1,600 00
Aug. 12, 1878.	Her Majesty	Jas McNamara & Robt. McGill.	Lot No. 4 in Block V, City of New Westminster, British Columbia.	2,225 00
Sept. 16, 1878.	Isaac Hodgins	Her Majesty	Part of lot No. 20, N. of Dalhousie St., Brantford, Ont.	3,400 00
Aug. 27, 1878.	J. McKay and J. Ross.	do	Bill of sale of dredge "George McKenzie," now at Malone Bay, N. S.	5,000 00

1ST STATEMENT of Property Purchased or Sold by the Department—Continued.

Date of Sale.	Vendors.	Purchasers.	Property Purchased or Sold.	For what purpose used.	Area.	Price of Sale.	Remarks.
June 19, 1878	Maitland Road Co	Her Majesty	Wharf at entrance of pond at Green Cove, Yarmouth, N.S.	Wharf	150 ft. long.	\$ 1 00	
May 7, 1879.	Trustees Common Lands, Lunenburg, NS	do	Site of Marine Hospital, in Township of Lunenburg, N.S.	Marine Hospital.	2 acres	1 00	
do 21, 1879.	Her Majesty	W. D McKay & T. Forham.	Bill of sale to them of steam tug "Minnie Battle."	Dredging		700 00	
Sept. 11, 1878.	V. Ouellette et al	Her Majesty	Lots 1, 2 and parts of 6 and 7, Block L, (or 81, 82 McNeff's plan) Windsor, Ont	Post Office, &c.	8,846 1/2 feet	1,800 00	
May 9, 1879.	do	do	Balance of lots 6 and 7, Block L, (or 81, 82 McNeff's plan) Windsor, Ont.	do	7,961 do	1,600 00	
do June 14, 1880.	W. J. Buchanan	do	Steam tug "C. W. Dennis"	Dredging		2,500 00	
do do 14, 1880	do	do	Steam dredge "Nipissing" and two dump scoops.	do		11,500 00	
Jan. 27, 1880.	Canada Permanent Loan and Savings Society.	do	Lots 1, 2, 3, 4, corner of George and Sussex Street, Ottawa, with buildings thereon constructed hitherto known as "Clarendon Hotel."	To be converted into a Geological Museum.		20,000 00	
Sept. 27, 1880.	Western Union Telegraph Co.	Her Majesty	Telegraph lines and instruments owned by the Company in British Columbia, and electric cables between Vancouver Island and Swinomish, U.S.			24,000 00	
do 27, 1880.	Thos. Wills	do	Lots 2, 3, 4, 5 and 6, on west side of Pinnacoe street, Belleville, Ont.	Post Office, &c		5,500 00	
Oct. 7, 1880.	Her Majesty	J. K. Suter	Letters Patent of part of lot No. 5, Block XIV., in New Westminster, B. C.	Old Registry Office.		800 00	
Nov. 9, 1880.	H. A. King	Her Majesty	Part of lot No. 8, corner of King and Queen streets, St. Catharines, Ont.	Post Office, &c.	15 perches	3,250 00	
do 9, 1880.	W. L. Copeland.	do	Part of lot, corner of King street and Helliwell's Lane, at St. Catharines, Ont.	do	11 do	2,750 00	
Sept. 6, 1880.	F. A. Almon and others (Heirs Egax).	do	Strip of land in rear of Post Office building, Ottawa.	In connection with Post Office.	4,656 superficial ft.	11,276 44	

Oct. 12, 1880.	Her Majesty	do	Twelve lots in Champlain street, city of Quebec.	To build there- on a retain- ing wall to the Citadel cliff.	21,700 00	Lots Nos. 2304, 2305, 2306, 2308, 2312, 2313, 2314, 2315, 2316, 2320, 2321, 2322.
Dec. 7, 1880.	Dame Sarah J Rankin	do	Lot No. 686, north ward of the City of Sherbrooke.	do	3,500 00	
do 7, 1880.	Eastern Townships Bank.	do	Lot No. 685, north ward of the City of Sherbrooke.	do	5,000 00	
Feb. 11, 1881.	Thos. McGoey	do	Part of lot No. 3, in 6th Range of Township of Hull, Que., and right of way to the public road over lots 3 and 4, a length of 1,374 feet.	In connection with Gatineau Boom Station.	250 00	
Mar. 26, 1881.	W. Turner	do	Right of way over his land in Parish of Dorchester, County of Westmoreland, N.B., to lay, repair and renew water pipes for Dorchester Penitentiary aqueduct.	Aqueduct for Dorchester Penitentiary	350 00	
do 26, 1881.	E. Weldon	do	do	do	200 00	
do 26, 1881.	J. S. Chapman	do	Sale of piece of land on Chapman's property, in the Parish of Dorchester, County of Westmoreland, N.B., containing one acre, and the right to lay water pipes from the piece of land sold; also right of way to renew or repair water pipes.	do	800 00	
do 26, 1881.	W. Milner	do	Right of way over his land in the Parish of Dorchester, N.B., to lay, repair and renew water pipes for aqueduct, Dorchester Penitentiary.	do	200 00	
do 22, 1881.	W. Reay and others.	do	Right of way from public road to Cedars Wharf, Que.	Way to Cedars Wharf.	1 00	
July 4, 1881.	P. Cullen	do	Part of town lots Nos. 1, 53, 54 and 100, at Charlottetown, P.E.I.	Construction of a Marine Hospital.	1,800 00	
do 19, 1881.	D. McInnes	do	Part of lots Nos. 9 and 10, on King and John Streets, Hamilton, Ont.	Post Office, &c.	35,908 32	
Aug. 30, 1881.	A. Northwood	do	Part of lot No. 94, corner of King and Fourth Streets, Chatham, Ont.	do	8,000 00	
Oct. 17, 1881.	Her Majesty	J. & W. Keough	Old building standing on property purchased from A. Northwood, Chatham Street, St. Thomas, Ont.	do	125 00	
Nov. 22, 1881.	Trustees, C. W. Presbyterian Church (St. Thomas).	Her Majesty	Part of lots Nos. 4 and 5, on Talbot Street, St. Thomas, Ont.	Post Office, &c. 132 x 122 ft.	7,000 00	
Dec. 7, 1881.	A. H. Davidson	do	Part of lot No. 16, corner of Pitt and Second Streets, Cornwall, Ont.	do	8,000 00	

1st STATEMENT of Property Purchased or Sold by the Department—Continued.

Date of Sale.	Vendor.	Purchasers.	Property Purchased or Sold.	For what purpose used.	Area.	Price of Sale.	Remarks.
Feb. 28, 1882.	Corporation of Town of Stratford.	Her Majesty .....	Lot on Ontario Street, at its junction with north side of Erie Street, Stratford.	Post Office, &c	.....	\$ Donated.	
Dec. 5, 1881.	His Lordship the Bishop of Chicoutimi.	do .....	Part of lot No. 74, Town of Chicoutimi, Que.	Marine Hospital.	209 x 418 ft.	400 00	
Feb. 24, 1882.	Heins Wright. ...	do .....	Donation of portion of reserve, on Main Street, Hull, Que.	Post Office, &c.	120 x 125 ft	Donated.	
March 31, 1882.	F. A. Vail and others.	do .....	Lot of land in the Parish of Sussex, N.B.	do ...	90 x 130 ft	1,600 00	
Feb. 4, 1882.	Her Majesty .....	G. E. Franklyn.	Crown Grant of portion of Penitentiary Land, at Halifax, N.S., between Franklyn Street and the Harbour.	.....	100 x 100 ft	900 00	
April 12, 1882.	Roman Catholic Episcopal Corporation of Arichat.	Her Majesty .....	Lot known as St. Francis Xavier College Lot, corner College and Main Streets, at Antigonish, N.S.	Post Office, &c.	240 sq. yds. ...	1,750 00	

No. 2.—Properties Transferred or Abandoned by Dominion Government.

Page and Date of Proclamation in the <i>Canada Gazette</i> .	Date of Order in Council.	Works Abandoned.	Counties in which Works are Situated.	To whom Abandoned.	Remarks.
589	Feb. 10, 1870.	Route to Berthier Pier.....	Berthier.....	Mun. of the locality and road officers thereof.	
274	Feb. 27, 1868.	Slides and works on south branch, Petewawa River. Swing bridge over Kettle Creek, Port Stanley Harbor.	Elgin.....	Mun. and road officers thereof	Collection abolished.
701	May 27, 1868.	Bridge over River Batiscan.....	Champlain.....	do	
141	Feb. 20, 1867. Feb. 20, 1867. May 4, 1868.	Bridge over Gatineau River, Township of Hull..... 1st That part (14 miles) of the Métapédicac Road, from Ste. Flavie, on River St Lawrence, passing through the seigniory of LePAGE and Théberge, the township of Fleurian and Rief Pachot. 2nd. And (13½ miles) from the residence of Daniel Frazer, on the 96th mile, in the township of Restigouche, to Cross Point Ferry, in Bate des Chaleurs, on the 111th mile.	Ottawa..... Rimouski.....	Mun. Township of Hull..... Mun. and road officers of the locality.	Abandoned from 28th Sept., 1869.
643	Mar. 19, 1869.	The bridge over River Batiscan.....	Champlain.....	do	do
734	do 30, 1869.	Declaring the Huntingdon and Lake St. Francis Road a public work.	Huntingdon.....	do	Abandoned from 23rd March, 1869.
	do 15, 1869.	The bridge over River Petite Nation, at Ste. An- gélique.	Ottawa County.....	Municipalities.....	For military purposes. To be abandoned.

No. 2.—Properties Transferred or Abandoned by Dominion Government.—Continued.

Date of Order in Council.	Published in "Canada Gazette," at page.	Property Abandoned or Transferred.	To whom.	Remarks.
1st Dec., 1873....	.....	Huntingdon and Lake St. Francis Road.....	Village of Huntingdon and other Municipalities through which the road passes.....	Transferred.
30th Oct., 1873...	.....	Jesuit Barracks, Quebec.....	Government of Quebec.....	do
19th June, 1873...	2035	Hamilton and Port Dover Road and Caledonia Bridge....	Municipalities.....	Abandoned.
5th Nov., 1873...	500	Hamilton and Brantford Road, Brantford Bridge, London and Brantford Road, &c.....	Municipal and Road authorities of the localities in which they are situated.....	do
8th Jan., 1875...	846	L'Islet Pier, on Telegraph Rock.....	do	do
do	846	Huntingdon and Lake St. Francis Road.....	do	do
4th June, 1875...	846	Portage du Fort Bridge, on Ottawa River.....	do	do
22nd April, 1876...	.....	Transfer of Goderich Harbour, Ont. (by Order in Council)	Department of Marine and Fisheries.....	do
26th May, 1876...	166	Wharf at St. Alphonse de Bagotville, River-Saguenay, P.Q.	Municipal Council of Bagotville.....	Transferred.
26th May, 1876...	.....	Bridge over timber slides and Buchanan Channel of River Ottawa, Ottawa City, Ont.....	Municipal Council of Ottawa.....	Abandoned from 20th May, 1876.
14th June, 1876...	1536	Deschênes Rapids Slide, River Ottawa.....	Harbour Commissioners, Montreal.....	Abandoned.
26th Mar. 1877...	.....	Transfer of Isle Ronde, opposite Montreal, Que.....	Corporation Town of Dundas.....	Transferred for ever.
26th Oct., 1877...	512	The Desjardins Canal, transferred subject to provisions of the Act 39 Vic., cap. 17, 1876.....	.....	Abandoned.
.....	.....	The Government works at the Iroquois Falls of Vermillion River, a tributary of the River St. Maurice.....	.....	.....
19th Feb., 1879...	.....	Authorizing the Municipality of Parish of Ste. Anne de la Pérade, to close their swing-bridge over River Ste. Anne until Government orders the swing to be rebuilt.	Parish of Ste. Anne de la Pérade.....	.....

No. 3.—Properties transferred from the Dominion to Local Government, or from Local Government to the Dominion Government.

Date of Order in Council.	Work Transferred.	County in which works are situated.	To whom Transferred.	Remarks.
6th April, 1868...	Reformatory Prison, at St. Vincent de Paul.....	Laval.....	Provincial Government, Que.	
do	New Jail and lot, at Sherbrooke.....	Town of Sherbrooke.....	do	
15th June, 1868...	Jail and Court House, at Sault Ste. Marie.....	District of Algoma.....	Government of Ontario.....	
25th May, 1872...	Old Government House, Jacques Cartier Normal School.....	Montreal.....	Provincial Government.....	
26th June, 1872...	Reformatory Prison and lands retransferred.....	St. Vincent de Paul.....	Dominion Government.....	
19th June, 1874...	Government House.....	Charlottetown.....	Government P. E. I. ....	
27th May, 1876...	Lots of land and building at Victoria, New Westminster, Nanaimo, Hope, Yale, Lytton, Lilloet, Quesnelle, Richfield, Baker-ville, Vaa-winkle, and Longley, B. C.....	.....	Government of B. C. ....	
6th Jan., 1877...	Asylums at Toronto and Orillia, the Reformatory at Penetanguishene, and the Jail and Court House at Sault Ste. Marie.....	.....	Government of Ontario.....	
19th Jan., 1877...	Lands appropriated for Penitentiary, Province of Manitoba.....	.....	Dominion Government.....	
23rd Aug., 1878...	Lands appropriated for Penitentiary on Camp Reserve, at New Westminster, B. C.....	.....	do	
8th Oct., 1878...	Treat River works, transferred unconditionally.....	.....	Ontario Government.....	Cancelled by another Order in Council, 13th June, 1879.

No. 4.—GENERAL STATEMENT showing Property leased on Public Works, from 1868 to 1882 (excluding Railways and Canals).

Date.	Term of Lease.	Lessees.	Description of Property leased. — Situation and Nature.	For what purpose used.	Area of Property.	Date from which lease is reckoned	Annual rental. \$ cts.
Sept. 1, 1867	1 year.....	Mrs. Ann Mackay to Her Majesty the Queen.	Lots the "Triangle" and the "Bay," New Edinburgh.	Boat Landing.....	.....	Sept. 1, 1867	180 00
do 30, 1868	do .....	Mrs Olive Stewart.....	The old Upper Canada Bank, Toronto. ....	School house.....	.....	Aug. 29, 1868	600 00
May 10, 1869	do .....	Samuel Percy.....	The tolls on the Huntingdon and Lake St. Francis Road.	.....	.....	May 10, 1869	290 00
July 5, 1869	During the navigation season.	St Lawrence Tow Boat Co.	Permission to use the Government coal-box on pier at Rivière du Loup.	Depot for coal.....	.....	(On condition of restoring all iron fastenings to make it safe.	230 00
Sept. 3, 1870	1 year.....	Michael Kerby.....	The tolls on the Huntingdon and Lake St. Francis Road.	Tolls.....	.....	Sept 3, 1870	426 00
Oct. 2, 1871	do .....	M. S. McCoy.....	do do do .....	do .....	.....	Oct. 10, 1871	5 00
Jan. 26, 1872	Pleasure of Government.	Montreal Telegraph Co.....	To place poles on piers above bridge, River des Prairies.	For their wires.....	.....	Jan. 26, 1872	3 00
do 31, 1872	do .....	Dominion do .....	do do do .....	do .....	.....	do 31, 1872	50 00
do 11, 1873	do .....	Hon. Jas. Skead.....	To continue his boomage on Ottawa River, in front of lot No. 30, Con. A, Nepean.	Nepean new mills .....	.....	Dec. 1, 1872	200 00
Aug. 27, 1873	During his life..	Henry Ogden to Government.	Land at S. W. end of Rang des Grandes Prairies, north shore, River St. Maurice.	Booming. ....	.....	Sept. 2, 1871	50 00
Oct. 29, 1873	21 years and renewable.	Government to John Rochester.	Two strips of Government Reserve on lot No. 39, broken front Con. A, Nepean, on River Ottawa.	.....	.....	do 8, 1873	1st 10 years 20 00 2nd 11 years 40 00 3rd and after 100 00
Mar. 7, 1874	do .....	Government to George Strling.	Strip of Ordnance Land at foot of Major's Hill, Ottawa City.	.....	152 x 76 ft	Jan. 1, 1874	1st period 25 00 2nd period 32 00 3rd period 40 00 4th period 50 00
Nov 12, 1874	19 years and renewable 3 times 21 years, in all 82 years.	M. K. Dickinson.....	License to build a stone Arch-Way, 18 feet wide over wedge shaped lot, near Sappers' Bridge, Ottawa, near Rideau Canal.	Warehouses .....	.....	Date of lease	1 00
Aug. 7, 1874	Pleasure of Government.	D. Moore & Co.....	Part of beach, at mouth of Matiland River, Goderich Harbour.	Service ground..	.....	do	



June 4, 1875	21 years renew-able.	M. Staunton & Co. of Toronto.	Lease and release to Government of part of lot 40, Esplanade St., Toronto.	Examining ware-house.	Nov. 1, 1866	125 00
do 25, 1875	do	Wm. Myles & Co., Toronto.	do 39 do	do	Dec. 18, 1863	125 00
do 25, 1875	do	Hon. O. Mowat	do 39 do	do	Nov. 5, 1874	.....
Nov. 5, 1874	During pleasure.	Corporation of City of Ottawa.	To occupy Major's Hill and road along same.	Park and road	.....	.....
May 29, 1875	do	H. Pruneau	To tie a boat-house and boom, in Ottawa River, at foot of St Patrick St., and lot adjoining.	Boat-house, etc.	Date of lease	1 00
Sept. 1, 1860	20 years.	Her Majesty	Lot and house of F. M. & J. Walker, Canterbury St., St. John, N.B.	Post Office	May 1, 1860.	800 00
Apr 1 29, 1876	Pleasure of Government.	Hon. James Skead	Three small islands, opposite lot 33, Con. A, Nepean.	Ottawa River	do 1, 1876	24 00
May 14, 1867	10 years.	Her Majesty	Mary Gregg's house, Carleton St., Fredericton, N.B.	Post Office	do 1, 1866	240 00
Mar. 29, 1877	Pleasure of Government.	H. Holbrook	Three sheds and a cottage at the camp, New Westminster, B.C.	.....	Mar. 1, 1877	{ 120 00
Oct. 14, 1875	do	A. Peele	Part of Assay Office at the camp, New Westminster, B.C.	.....	Oct. 1, 1875	{ 24 00
Dec. 1, 1875	do	J. Maury	do do do	.....	Dec. 1, 1875	60 00
do 28, 1876	1 year	E. Dickenson	Government house and entrance cottages, New Westminster, B.C.	.....	Mar. 31, 1877	36 00
Sept. 6, 1876	Pleasure of Government.	H. Pruneau	To attach his boat-house to shore Ordnance property, south side of Cathcart street, Ottawa River.	Pleasure boats	Sept. 1, 1876	1 00
Aug. 22, 1877	3 or 5 years	Harbour Commissioners, Montreal.	Lease to Government of three rooms in their building on lot No. 1, Common St., Montreal.	Lachine Canal Offices	Nov 1, 1877	1,250 00
April 2, 1878	Pleasure of Government.	H. Holbrook	Buildings, wharf, &c., at camp reserve, New Westminster, B.C.	.....	Dec. 25, 1877	156 00
do 23, 1879	5 years	T. E. Normand to Government.	Three rooms on Craig St., Three Rivers, and vault and yard.	Government Offices, St. Maurice Works.	Apr 1 23, 1879	100 00
May 27, 1873	7 years and 8 months.	Hudson Bay Co. to Government.	Order in Council fixing rent for house at Fort Garry, Manitoba.	Lieut-Governor's residence.	Sept. 1, 1870	{ \$2,250 for 2 years, from 1870 to 1872 \$860 for 8 mo's, from Sept. 1872 to May, '73. \$2,000 for 1 year, from 1st May, '73
July 5, 1878	4 months.	Government to Delta Can-ning Co.	The Dominion Str. "Georgie" to run in Fraser River, B.C.	.....	July 5, 1878	400 00
Feb. 6, 1879	25 years.	Government to Quebec Har-bour Commissioners.	Act between the new Custom House and Dalhousie, Leaden-hall and Aylmer Sts., Quebec.	Open air exchange.	Sept. 1, 1878	1 00
Jan. 1, 1879	1 year.	Montreal Telegraph Co. to Government.	Four telephones and use of wire between East Block, Ottawa, and Rideau Hall.	.....	Jan. 1, 1879	60 60

No. 4.—GENERAL STATEMENT showing Property leased on Public Works, from 1868 to 1882.

Date.	Term of Lease.	Lessees.	Description of Property leased. — Situation and Nature.	For what purpose used.	Area of Property.	Date from which lease is reckoned.	Annual rental. \$ cts.
Sept. 4, 1878	7 months. ....	Government to Ed. Dickenson.	A cottage near Camp Reserve, New Westminster, B. C.	.....	.....	Sept. 1, 1878	36 00
Oct. 19, 1878	.....	Government to Hy. Holbrook.	Officers' quarters, near Camp Reserve, New Westminster, B. C.	.....	.....	Nov. 1, 1877	24 00
Dec. 13, 1880	During pleasure, terminable at 3 months notice.	C. E. Wright .....	Permission to him to cut an opening in the railing of the slide bridge at Hull, P. Q.	.....	.....	Dec. 13, 1880	1 00
Mar. 28, 1881	do .....	Perley & Patee.....	Part of Government Reserve at the head of Chaudière Island, Ottawa River.	.....	.....	Jan. 1, 1881	96 00
May 3, 1881	do .....	Lake St. Francis Tow Boat Co.	Government pier and freight shed at St. Dominique, P. Q.	.....	.....	Nov. 1, 1880	50 00

Appendix No. 36 showing the properties purchased or sold, etc., has been compiled from the printed reports of the Department of Public Works from 1867 to 1882. Canal and railway properties have been omitted.

G. F. BAILLAIRGÉ, D.M.P.W.

APPENDIX No. 36½.

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ORDNANCE PROPERTY

TRANSFERRED BY

IMPERIAL TO CANADIAN GOVERNMENT

SINCE

30th JUNE, 1867.

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## APPENDIX No. 36½.

GOVERNMENT HOUSE, OTTAWA

Monday, 20th October, 1879.

PRESENT:

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

Whereas by an Act passed in May, 1879, by the Parliament of the Dominion of Canada, (42nd Vic., chap. 33), intituled: "An Act respecting certain Ordnance and Admiralty Lands in the Provinces of New Brunswick and Nova Scotia," it is enacted that the lands comprised in the Schedule to the said Act annexed should be divided by the Governor in Council into two classes: Class One (1) to consist of such parts of the said lands as may, from time to time be placed in that Class by Order of the Governor in Council; and Class Two (2) to consist of such parts of said lands as may not be in Class One (1); the same to be dealt with in accordance with the provisions of the said Act.

Now, therefore, His Excellency the Governor General, by and with the advice of the Queen's Privy Council for Canada, and on the recommendation of the Hon. the acting Minister of the Interior, acting in concurrence with the Hon. the Minister of Militia and Defence, has been pleased under the authority of the said Act, to approve and confirm the classification set forth in the Schedules marked Class I. and Class II. respectively, hereunto annexed, and the same is hereby approved and confirmed accordingly.

J. O. COTÉ,

*Asst. Clerk, P.C.*

Class I.—Classification of War Department properties, as per Schedule to Act 42 Vic., cap. 33, 15th May, 1879.

PROVINCE OF NEW BRUNSWICK.

Local Name of the Property.	Origin of the Title.	Contents (nearly).		Remarks.
<i>County of St. John.</i> (St. John and Vicinity.)	COMMON LANDS.	A.	P.	
Infantry and Artillery Barracks, with accessories thereto, &c. All burnt down 20th June, 1877.	By a reservation in the City Charter, the Crown had the right to erect barracks, works of defence, &c., commencing about 1794. <i>Vide</i> also agreement with the Corporation of St. John, 16th January, 1858, the original in Common Clerk's Office.	11	25	The remainder of this property, about 14a. 1r. 0p., sold to the Corporation, 27th October, 1876, and 16th April, 1877, per O. C. 26th June, 1876. ( <i>Vide</i> Class II.)
Fort Howe, Portland, and land attached.	Acquired by deed of exchange, 9th June, 1789. Place of deposit unknown. <i>Vide</i> Registry Office Book B, page 170, No. 317.	16	0	(revised.)
Carleton Martello Tower and Old Block House properties, and site of "Old Fort Point."	Acquired partly by purchase in 1837, and partly by undisputed military occupation. Also, by Act of Provincial Legislature, 1st May, 1856.	5	3	(per schedule.)
Reserve Z, Carleton, &c.....	Reserve Z, as shown on the City Record Plan.....	4	2	(not given)
Negro Point Battery, Carleton, commands the harbour. Re-named Fort Dufferin.	Conveyed by the Provincial to the Imperial Government, 15th December, 1864, under certificate of the Solicitor General of New Brunswick.	7	0	NOTE.—To be known in future as "Fort Dufferin." <i>Vide</i> <i>Canada Gazette</i> , 16th March, 1878.
Red Head Battery, east side of entrance to the harbour.	Conveyed by the Provincial to the Imperial Government, 15th December, 1864, under certificate of the Solicitor General of New Brunswick.	8	1	3
Partridge Island Battery, barracks, wharves, and rights of way to Battery, &c.	Works of defence by virtue of a reservation in the City Charter. The free use of landing places and rights of way were also conceded to the War Department, 19th July, 1869, by the Board of Health.	0	2	8

Class I.—Classification of War-Department properties, as per Schedule to Act 42 Vic., cap. 33, 15th May, 1879.

PROVINCE OF NEW BRUNSWICK.

Local Name of the Property.	Origin of the Title.	Contents (nearly).		Remarks.
<p><i>County York.</i> (Fredericton City.)</p> <p>Infantry "Stone Barracks" Officers' Barracks, and various accessories thereto, complete. Lying between Queen Street and River St. John.</p>	<p>Originally a military reservation, also by deeds of exchange in 1866 between the War Department and City Corporation. Together with Provincial Acts, 9 Vic., chap. 43, and 28 Vic., chap. 61, &amp;c.</p>	8	0	3.
<p>Artillery Park Barracks, and accessories on George and Regent Streets.</p>	<p>There has been no record furnished how this property came into possession of the War Department.</p>	1	2	26
<p><i>County of Charlotte.</i> (St. Andrews and Vicinity.)</p>	<p>Reserved for military purposes in the Campbell grant, 11th October, 1823.</p>	2	0	3½
<p>West Battery Block House, &amp;c.....</p>	<p>Reserved for military purposes in the Campbell grant, 11th October, 1823.</p>	1	0	0
<p>Joe's Point Block House, near River Ste. Croix</p> <p>Fort Tipperary Barracks, and accessories, &amp;c., on Tompkin's Hill.</p>	<p>Acquired under Legislative enactment, 7th March, 1814, and by deed of exchange and conveyance, dated 11th March, 1815.</p>	9	1	34

The whole of this property, including that transferred to Department of Interior, 8th October, 1875, is put in Class I. under the provisions of the Act of last session, except the portion disposed of, viz.: 300 feet along Queen street, from York street, by the perpendicular depth, containing 2½ acres.

Class II.—Classification of War Department properties, as per Schedule to Act 42 Vic., cap. 33, 15th May, 1879.

PROVINCE OF NEW BRUNSWICK.

Local Name of the Property.	Origin of the Title.	Contents (nearly).			Remarks.
		A.	R.	P.	
<p><i>County of St. John.</i> (St. John.)</p> <p>Lower Cove grounds, store buildings, Queen's slip, batteries, R.E. workshops, fuel yard, Commissariat buildings and all the water frontage of the Soldiers' barrack property.</p>	<p>By a reservation in the City Charter, the Crown had the right to erect barracks, works of defence, &amp;c., commencing about 1794. <i>Vide</i> also agreement with the Corporation of St. John, 16th January, 1868, the original in Common Clerk's Office.</p>	14	1	0	<p>Sold to the Corporation: Deed of sale dated 27th October, 1875, and supplement 16th April, 1877. Order-in-Council, 26th June, 1875.</p>
<p><i>County Charlotte.</i></p> <p>Simpson Reserve on the River St. Croix.</p>	<p>No record of title furnished by the Imperial Government.....</p>	23	1	12	
<p>Beaver Harbour, East of L'Etang ...</p>	<p>Reserved for military purposes in 1784 .....</p>	8	0	0	
<p>Pomeroy Bridge, Magaguadavic River.</p>	<p>Reserved or acquired for military purposes. Title dated 14th July, 1837. Place of deposit unknown.</p>	6	2	0	
<p><i>County Senberry.</i></p> <p>Oromocto, or Three Mile Creek.....</p>	<p>Reserved for military purposes, but no date furnished by the War Department.</p>	200	0	0	
<p><i>County Carleton.</i></p> <p>Presqu'île, on the River St. John (or Presqu'île).</p>	<p>Reserved for military purposes in the Wakefield grant, dated 20th June, 1809. Also Lieutenant Governor's Warrant of Survey, dated 22nd October, 1827, in the Provincial Surveyor General's Office.</p>	676	0	0	

CLASS II.—Classification of War Department Properties, as per Schedule to Act 42 Vic., cap. 33, 15th May, 1879.

PROVINCE OF NEW BRUNSWICK.

Local Name of the Property.	Origin of the Title.	Contents (nearly).	Remarks.
<p><i>County Victoria.</i> Grand Falls, on the River St. John.</p>	<p>Reserved for military purposes since 1800, as shown on plan in the Surveyer General's Office. Also Provincial grant to the Ordnance, dated 23rd April, 1845.</p>	<p>(by schedule.) 1848 1 0 or (by title deed.) 1871 3 0</p>	
<p><i>County Victoria.</i> (Now Madawaska.) Little Falls, on the Madawaska River, near its junction with the River St John.</p>	<p>Site of old Block House and land attached. By deed of sale from Joseph Hébert to the Ordnance, dated 22nd August, 1843, No. 3649. Louis Panet, N.P., Quebec.</p>	<p>(by title deed.) 24 3 6 (by survey.) 30 3 23</p>	<p>In 1852 the plans show accommodation in the Block House for 1 officer and 50 N. C. officers and men. Also a guard house.</p>
<p><i>County Restigouche.</i> Dalhousie, on the Bay Chaleur or Baie des Chaleurs.</p>	<p>Provincial Grant to the Ordnance as a Military Reserve, dated 7th August, 1838.</p>	<p>18 0 0</p>	
<p><i>County Westmoreland.</i> Fort Cumberland, on the north-east shore of the Bay of Fundy.</p>	<p>Site of old military works captured from the French in June, 1755, known at that time as Fort Beauséjour.</p>	<p>72 0 0</p>	

PROVINCE OF NOVA SCOTIA.

ADMIRALTY LANDS.			
<p>Shelburne Harbour, Navy and Commissary Islands.</p>	<p>Under Order-in-Council 26th June, 1874, and by deed of conveyance, from the Admiralty, dated 28th November, 1874.</p>	<p>(Approximately.) 27 3 0</p>	



GOVERNMENT HOUSE, OTTAWA,  
Monday, 19th May, 1879.

*Present:*

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

Whereas, by an Act passed in April, 1877, by the Parliament of the Dominion of Canada, (40th Vic., Cap. 8), intituled: "An Act respecting certain Ordnance and Admiralty Lands in the Provinces of Ontario and Quebec," it is enacted that the lands comprised in the Schedule to the said Act annexed, should be divided by the Governor in Council, into two classes: Class One (1) to consist of such parts of the said lands as may from time to time be placed in that class by order of the Governor in Council, and Class Two (2) to consist of such parts of said lands as may not be in Class One (1),—the same to be dealt with in accordance with the other provisions of the said Act.

Now, therefore, His Excellency the Governor General, by and with the advice of the Queen's Privy Council for Canada, and on the recommendation of the Hon. the Minister of the Interior, acting in concurrence with the Hon. the Minister of Militia and Defence, has been pleased, under the authority of the said Act, to approve and confirm the classification set forth in the Schedules marked Class I. and Class II., respectively hereunto annexed, and the same is hereby approved and confirmed accordingly.

(Certified),

W. A. HIMSWORTH,  
*Clerk, Privy Council.*

Class I.—War Department Property, as per Schedule, Consolidated Statutes of Canada, 22 Victoria, Chapter 36.

PROVINCE OF ONTARIO.

Local Name of the Property.	Origin of the Title.	Contents (nearly).			Remarks
		A.	R.	P.	
NIAGARA.					
Fort Mississauga.....	Partly by Crown reservation in 1784 and 1787, and partly by exchange with James Crooks, shown on old plan, dated 1766.	66	2	14	A strong military position at the mouth of the Niagara River, built after the destruction of Fort George, in the war of 1812-14.
KINGSTON.					
1004 "The Little Catarqui Redoubt," on east side of Little Catarqui.	South half and broken front of lot No. 16, in the Township of Kingston, purchased by the Imperial Government in 1812.	142	1	31	A strong military position commanding the Little Catarqui Bay, about 3 miles west of Kingston.
Murney tower and redoubt.....	Crown reservation, and partly by deed of exchange.....	6	3	13	For the protection of Kingston harbour
"Market Battery".....	do do .....	1	2	39	To protect the city and harbour of Kingston.
"Shoal tower and submerged land in front of 'Market Battery,'"	Granted by Order in Council, 18th November, 1845, and 26th June, 1846, but no letters patent issued.	12	0	10	For protection of the city and harbour.
"Tête de Pont Barracks" and accessories.	By right of conquest and military appropriation, on site of old Fort Frontenac, and works attached.	4	3	31	East side of the city, river front.
No. 3, fuel yard, on site of outworks of old Fort Frontenac.	Held for military purposes since the conquest; no written title yet found.	0	3	8	Near Place d'Armes, with store buildings erected thereon
Artillery park and barracks, stables, workshops, &c.	Crown reservation, as delineated on plan in the office of Crown Lands; no date.	4	3	7	By Order in Council, 3rd December, 1876, permission given to open street through park strongly recommended to be rescinded.
Water lot on the Great Catarqui, north-east of the city.	By letters patent from the Crown, 22nd November, 1845, to the Hon. Board of Ordnance.	5	2	25	Called also the Inner Bay, owing to an embankment of the Grand Trunk Railway through it.
Military burial ground, Section G., Catarqui cemetery.	Deed of donation from the trustees to the War Department, 31st January, 1866.	71	0	0	About 4 miles north-west of the city.
"Point Frederick," formerly used as a dock yard, &c., by the Admiralty.	Crown reserve set apart by letters of 11th September, 1783, and 22nd May, 1785, by Gen. Haldimand and Lieut.-Governor Hamilton. Also, the inlets Haldimand Cove and Hamilton Cove.	2	0	14	All occupied by the Military College.

Fort Frederick and land attached ...	Crown Reserve, as above quoted .....	8	2	0	Tower and ramparts commanding water front
Fort Henry, advanced battery and accessories.	do do also known as Barrieffield Common.	566	0	0	Also used for rifle ranges and target practice, including 40 acres held by Major Gen. Lightfoot for 99 years.
Cedar Island, tower and glacis .....	do do .....	23	0	0	Commanding harbour and River St. Lawrence.
Part of lot 20, western addition of Pittsburg, Barrieffield.	Purchased from Robert McDonald and wife, 6th July, 1844 .....	125	2	1	Extension of the Fort Henry Reserve, or Barrieffield Common, northwards, for defensive purposes.
Part of lot 21, western addition of Pittsburg, Barrieffield.	Purchased from Robert David Cartwright and his wife, by deed of exchange, 20th March, 1840.	102	0	0	
Front part of lot No. 16, western addition of the Township of Pittsburg.	Purchased by the Admiralty from Richard O'Connor, R.N., 23rd August, 1818. (Consolidated Statutes, cap. 37).	4	2	0	Fronting on the Great Ca-raqui River.
PROVINCE OF QUEBEC.					
MONTREAL.					
Champ de Mars, or parade ground for the troops.	Field since the conquest in 1760, a part of the old fortifications, fronting on Craig street.	4	1	28	Open to the public.
Military burial ground .....	Acquired by purchase, 30th December, 1814 .....	1	1	24	Within the city on the east side of Papineau Road.
St. Helen's Island, *Ile Ronde, Ile aux Fraises, all in the Seignioriy of Longueuil.	Acquired by deed of exchange from the Hon. Charles W. Grant and Dame Marie C. J. Lemoine, Baronne de Longueuil, 8th April, 1818. Joseph Plante, Notary Public, Quebec.	123	3	20	In the River St. Lawrence, opposite Montreal
Quebec City, &c.		28	1	10	*Ile Ronde transferred to Board of Works, Order in Council, 3rd March, 1877.
Exercising ground, Plains of Abraham.	Leased from the Ursuline Nuns for 99 years, from 1st May, 1802.	1	2	19	
No. 3 Tower Field, north-west side la Grande Allée.	Leased from the nuns of the Hotel Dieu for 99 years, from 1st May, 1790. Site covered by Martello tower is freehold.	71	3	1	Outside the city limits. Annual rent of £20 11s. payable to the nuns.
No. 4 Tower Field, St. John's Road	Leased from the nuns of the Hotel Dieu for 99 years, from 1st May, 1790, including a freehold strip of 40½ perches.	37	0	12	Annual rent of £11 14s. 8d. payable to the nuns. Within the city limits.
Nos. 1 and 2 towers and land attached, south-east of Grande Allée.	Acquired from the Ursuline Nuns, 15th June, 1811. Joseph Plante, N. P., Quebec.	18	1	24	Chiefly within the city limits. *Vide Order in Council, 3rd November, 1877.
Cove Field, south-east of the Grande Allée, between the Citadel and Nps. 1 and 2 towers.	Greater part purchased from various individuals and partly by right of conquest, including site of old French works, south-west of the citadel. On part of this land a ground rent of £1 17s. per annum is payable to the Fief de Villeroiy.	7	2	20	Part of frontage sold, per Order in Council, 26th April, 1875. Quantity unknown. Former quantity reduced by sale, under Order in Council, 26th April, 1875.

CLASS I.—War Department Property, as per Schedule, Consolidated Statutes of Canada, 22 Victoria, Chapter 36—*Concluded.*

PROVINCE OF QUEBEC—*Concluded.*

Local Name of the Property.	Origin of the Title.	Contents (nearly).			Remarks.
		A.	R.	P.	
QUEBEC CITY, &c.— <i>Concluded.</i> Citadel, glacis and works, as far as St. Louis Gate and St. Louis street. Esplanade and ramparts in front and between St. Louis and St. John's Gates. Ramparts and town works, glacis, &c.; artillery barracks, from St. John's Gate to St. Valier street; Palace Gate, &c. Officers' barracks, St. Louis street, and garrison hospital adjoining. Mount Carmel, site of the Windmill redoubt, east side of garrison hospital. Commissariat premises, fronting on St. Louis street, and in rear by Mount Carmel street. Town works along the Cime du Cap, between the Citadel and Prescott Gate, on Mountain street, including Governor's Garden, site of old Fort St. Louis, and all buildings attached thereto. Magazine F. and store buildings attached, north of Grand Battery. Magazine E, and land attached, Hotel Dieu Magazine, Rampart street.	Chiefly by right of conquest and military appropriation, and partly by purchase: on the north-west side of the Citadel. Acquired chiefly by conquest and military appropriation; small portions outside the ramparts by purchase. Acquired chiefly by conquest. The lots fronting on St. Valier street were purchased by the Ordnance in 1846-7, to prevent the erection of buildings under the cliff against the ramparts. Acquired by purchase, 5th April, 1811, from Mrs. Elmsey, per Hon. John Bell, procurator. Joseph Plante, N.P., Quebec. Acquired by purchase, 25th November, 1780, from Hon. George Pownall. J. Pinguet, N.P., Quebec. Acquired by purchase from Peter Bréhaüt, 11th August, 1815. F. Tétu, Notary Public, Quebec. Part of the Crown Domain, by right of conquest and military appropriation, together with smaller portions at either end, acquired by purchase in 1781 and about 1827-9. Also the cliff underneath not occupied by buildings, &c., as a part of the ramparts. By right of conquest and military appropriation, within the Seminary domaine. Acquired by purchase from the nuns of the Hotel Dieu, 17th June, 1809. J. Plant, N.P., Quebec.	45 10 13 1 0 0 9 0 0 0	0 3 2 2 2 2 0 2 0 0	0 0 0 0 0 0 10 30 12 22	The present Citadel built between 1821 and 1832. Reduced from 18a. 3r. 13p. to 10a. 3r., by Order in Council, 26th April, 1875. In addition to this content, two roods of the glacis were sold to the Young Men's Christian Association, per Order in Council, 9th November, 1877. Fronting on St. Louis street and in rear by St. Génervève street. This has been held principally to prevent the erection of buildings overlooking the hospital and space for convalescent patients. Used for offices, &c., by the Department of Militia and Defence. Of this content about 3a. 3r. is composed of cliff, not mentioned in the Act 40 Vic., cap. 8. East end of St. George's street, facing the Grand Battery. Between Hope and Palace Gates.



CLASS II.—War Department Property, as per Schedule, Consolidated Statutes of Canada, 22 Victoria, Chapter 36—Continued.

PROVINCE OF ONTARIO.		Origin of the Title, &c.	Contents (nearly).			Remarks.
Local Name of the Property.	A.		R.	P.		
KINGSTON.						
Fuel yards and barrack office, Lot 19, Place d'Armes, on site of works of old Fort Frontenac. Artillery Park, to be opened as a street, with stables and other buildings on the premises.	Fuel yards, Nos. 1, 2, barrack office, &c., and Lot 19, acquired by patent from Provincial Government in exchange for other lots, 28th January, 1861. A Crown reservation delineated on a plan in the Crown Lands Department, signed by A. Aitken, but no date.	1	2	14	Sold to Kingston and Pembroke Railway Company. Order in Council, 28th December, 1872. By Order in Council, 3rd December, 1875, strongly recommended to be rescinded on account of the damage to the whole property.	
MONTREAL CITY.						
Quebec Gate Barracks, artillery stables, commissariat stores, fuel yard, and beach in front. Garrison hospital, land and accessories. N.W. side of Dalhousie square; site of buildings burnt down in July, 1852. Logan's Farm; used many years for an exercising ground for the troops. Hochelaga barracks, military prison, and artillery and cavalry stables.	Principally held by conquest; a few perches only adjoining the commissariat store building purchased in 1834. Acquired by purchase in 1836, and by deed of exchange with the Corporation of the city, 19th September, 1870. Acquired by deed of purchase 25th May, 1838; partly on the site of the old Citadel hill J. Guy, N.P., Montreal. Purchased in 1845-6 for a defensive barrack establishment to accommodate 1,000 men. Acquired by the Admiralty, 29th May, 1817. H. Griffin, N.P., Montreal.	8	0	36	Sold to the City Corporation by Order in Council, 8th February, 1871.	
		1	0	26		
		0	0	25		
		116	0	0	Transferred to the Department of the Interior by Order in Council, 25th March, 1876.	
		2	3	8		

MONTREAL AND DISTRICT.

Longueuil Reserve for a tête de pont	Purchased from various individuals in 1846-7 by the Honorable Board of Ordnance for the purpose of a tête de pont on the east side of Hochelaga Bay, below St Helen's Island, for the defence of Montreal.	190	0	14	Transferred to the Department of the Interior by Order in Council, 25th Mar., 1875. In this property is included a deed of donation of 0 1 36 of land to Her Majesty by Joseph Simmons (for ever), and not to be sold or alienated, dated 3rd May, 1814.
St. Luc or Blairfinde, on the Little Montreal River, Barony of Longueuil.	Acquired by the Imperial authorities for a military post.....	14 or 15	0	0	<i>Vide</i> Report from the D. M. Militia and Defence to Department of Interior, 26th October, 1876.
SOREL.					
Victoria street Reserve or "Common," in rear of the town.	All the unconceded land south of Victoria street and between Lot 25 and le Chemin de ligne, ou du Pot au beurre, or from other sources.	143	1	4	Transferred by Order in Council, 26th June, 1874, and by Order in Council, 26th March, 1875, to the Department of the Interior.
do do	Rents or profits from conceded lands, ditto. All acquired by purchase of the seignory, 13th November, 1780.	54	1	31	
Commonly known as the Barrack Reserve, or Barrack property.	Land situated between St Elizabeth street and the River Richelieu; partly by purchase of seignory, 13th November, 1780, and partly by deed of exchange with the Fabrique, 27th December, 1858, and in part by military appropriation. Included in the purchase of the seignory by General Haldimand, 13th November, 1780.	14	2	6	Transferred to the Department of the Interior by Order in Council, 26th June, 1874, and by Order in Council, 25th March, 1875.
Government cottage and farm on the right bank of the Richelieu. Reserve at the Point. The part facing the Richelieu for ship building and repairs of war vessels, &c., &c.	Reserve at the Point, fronting the Rivers St Lawrence and Richelieu, exclusive of transfer to the Provincial Government, under 13th Vic, cap. 45.	116	0	0	
The use of the "Slip" secured for repairs of vessels, &c., &c.	Also rents or profits from conceded land, Lot O, at the Point.....	100	0	0	
Ile aux Cochons.....	Unconceded land at entrance of channel, between Ile du Pad and Ile St. Ignace, opposite the reserve at the Point.	6	0	0	All transferred to the Department of the Interior. <i>Vide</i> Order in Council, 26th March, 1875.
Ile St. Ignace.....	Conceded land to Laforêt, 1st December, 1795, with conditions of resumption at any time for defensive purposes; partly on site of old French redoubt.	140	0	0	
Ile Ronde commands the "Ship Channel" between Ile aux Ours and Ile de Grace.	Unconceded land, purchased with the seignory of Sorrel, 13th November, 1780. J. Pinguet, N P., Québec.	160	0	0	Order in Council, 18th February, 1875.

CLASS II.—War Department Property, as per Schedule, Consolidated Statutes of Canada, 22 Victoria, Chapter 36—*Concluded.*

PROVINCE OF QUEBEC—*Continued.*

Local Name of the Property.	Origin of the Title, &c.	Contents (nearly).			Remarks.
		A.	R.	P.	
<b>SOREL—Continued.</b>					
Ile de Grace commands the channels on either side of the Island.	Detached portions of land, all included in the purchase of the seigniory of Sorel, 13th November, 1780.	23	0	12	Upper end (South).
		100	0	0	Lower end (North).
		70	0	0	Lowest end (North). Order in Council, 25th March, 1875.
	Total.....	193	0	12	
Ile aux Corbeaux, near Ile a la Pierre &c. ou le Chenail du Moine.	Acquired with the seigniory of Sorel, by General Haldimand in 1780, (13th November, 1780).	(Unknown)			Not shown on plans in Department of Militia and Defence.
QUEBEC CITY, &c.					
No. 4 Tower Field.....	Freehold. Strip of land included in the lease from the Nuns of the Hotel Dieu for 99 years, from 1st May, 1790.	0	0	40½	Transferred to the Department of the Interior by Order in Council, 3rd November, 1877.
Part of the Cove Field, &c. S.E. of the Grande Allée.	Land fronting on the south-east side of the Grande Allée, from near Perrault's Hill towards St. Louis Gate, acquired from various sources.	(Approximately.)			Transferred to the Department of the Interior by Order in Council, 26th April, 1875.
Cricket Field, outside St. Louis Gate	Acquired by deed of Exchange in 1835, and by purchase in 1846-7.	20	0	0	
Works between St. Louis and St. John's Gates.	In front of the Town Works, between St. Louis and St. John's Gates; acquired principally by conquest.	5	3	22	To Department of Interior, by Order in Council, 9th November, 1877.
Strip of the Glacis, outside St. John's Gate.	Acquired by conquest and military appropriation.....	(Approximately.)			
Commonly known as the Fuel Yard for the troops, &c., St. Roch's Suburbs.	Site of the Intendant's Palace, and land attached. By conquest and military appropriation.	8	0	13	To Department of Interior, by Order in Council, 26th April, 1875.
"Jésuit Barracks" and land attached in the Upper Town, fronting on the Market square.....	Site of the Intendant's Palace, and land attached. By conquest and military appropriation.	0	2	0	
		4	3	28	To Department of Interior, by Order in Council, 26th April, 1875.
		6	1	10	Disposed of by Order in Council, 30th October, 1873, and Order in Council, 26th April, 1875.



	10	0	22		
POINT LEVIS, &c. Government Wharf, Pontoon, &c., Seignory of Leuzon, County of Levis and District of Quebec.	Acquired by the War Department in 1868-7 for landing stores, war material generally, troops, &c., in connection with the building of the new forts, and other works in front, near the river side.	10	0	22	Disposed of by Order in Council, 27th December, 1877. To be used for building a graving dock.
NAVAL RESERVES.					
Commonly known as Port Maitland	At the mouth of the Grand River, Township of Sherbrooke, fronting on Lake Erie. Site of old naval depôt. Recorded October, 1820.	219	0	0	An important naval and military position.
Pointe au Barbet, Lake Erie.....	Reserve nearly two miles east of Grand River, Township of Sherbrooke. Recorded October, 1820.	48	2	33	
Mohawk Bay, Lake Erie.....	Reserve a little over three miles east of Grand River. The position of this reserve is said to be taken from plan, dated Surveyor-General's Office, Toronto, 19th January, 1837, though recorded in 1820.	20	0	0	
Pointe Pelée, Lake Erie.....	Crown reserve, on the north shore of Lake Erie, date unknown. About 450 acres of this reserve was leased by the Provincial Government to Thos. Paxton, of Amherstburgh, during pleasure, 17th January, 1846.	3000	0	0	All transferred to the Department of Interior, per Order in Council, 25th March, 1875.
Penetanguishene Harbour, County Simcoe.	Reserves in the Townships of Tiny and Tay, County of Simcoe, south-easterly side of Penetanguishene Harbour. It would appear from surveys made in 1852-3, that this reserve lies at the extreme S.W. end of the harbour, being 437a. lr. 38p. instead of 389 acres, all in the Township of Tiny. Vide letter to C. R. E., 19th June, 1861, from Ordnance Lands Agent.	389	0	0	
County of Simcoe—Town-plot Gwil- limbury.	Land on the east branch of Holland River—Town-plot of Gwil- limbury—Lots 49, 50, 51, 52, west side of Meadow street.	4	0	0	
County of Simcoe, Township of Vespra.	Reserve Lot 13, Concession 11, in the Township of Vespra.....	200	0	0	All transferred to the Department of the Interior, per Order in Council, 26th March, 1875.
Sault Ste. Marie, Island of St. Joseph, Lake Huron.	Lots No. 1, in the 1st and 2nd concessions of the Island of St. Joseph, in Lake Huron, with the broken fronts south of the said lots. The remains of a fort still visible.	50	0	0	
Island of St. Joseph, Lake Huron....	South half of Lot No. 6, in the 9th concession of said island; on Milford Haven.	106	0	0	

Compiled from various sources.  
18-3-78.

(Signed,) CHARLES WALKER, S. & D.

GOVERNMENT HOUSE,  
TUESDAY, 16th November, 1869.

PRESENT :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

Whereas by section 3 of the 24th chapter of the Consolidated Statutes of Canada, it is enacted that a class of the Ordnance Lands to be denominated Class B should be created which should "consist of such buildings or portions of the lands or property included in the second Schedule to (that) Act as may from time to time be placed in Class B, by the authority of the Governor in Council, and which shall be retained by the Provincial Government for the defence of the Province."

And it is further enacted by the 4th section of the same Act, that "a third Class, to be denominated C, should be made up of the remainder of the lands, buildings and property enumerated in the second schedule to (that) Act which Class C may be sold, leased or otherwise used as to the Governor in Council from time to time "seems meet."

And whereas by the "British North America Act of 1867," section 108, it is provided that the Ordnance Lands shall be the property of Canada.

And it appearing to be now a fit and proper time to make the classification above referred to, and to declare, under the authority of an Order in Council, which of the above ordnance properties or lands should be placed for the purposes mentioned in Class B and in Class C respectively.

His Excellency in Council, on the recommendation of the Hon. the Secretary of State, and with the concurrence of the Hon. the Minister of Militia and Defence, has been pleased to Order, and it is hereby Ordered, that the following of the Ordnance Lands, buildings and other properties shall be and they are hereby placed in Class B, and transferred to the charge, keeping and management of the Minister of Militia and Defence, to be retained for the defence of the Dominion, until further ordered, that is to say :

#### CLASS B.

TEMISCOUATA, on Lake Fort Ingall, Stockaded Barracks.

LAPRAIRIE—Barracks and Common.

ST. JOHN'S—Old Fort, Infantry Barracks and land contiguous.

ISLE AUX NOIX and land at South River.

CHAMBLY—So much of the land as lies to the north of the Queen's Highway, between the Highway and the water of Chambly Basin, between the Chambly Canal on the west and the eastern boundary of the said property, excluding property known as the Barrack-Master's quarters and field.

CHATEAUGUAY RESERVE.

PRESCOTT—Fort Wellington, with ditch and glacis, and lots from 13 to 36, inclusive.

KINGSTON—Cartwright's Field, occupied by militia volunteer drill shed, and used as drill ground.

TORONTO—Bathurst Street Barracks and the Ordnance Reserve.

NIAGARA—Reserve Barracks and Hospital, and Fort Mississauga.

QUEENSTON—Reserve now occupied by the Trustees of Brock's Monument.

NAVY ISLAND—In the River Niagara.

LONDON—Artillery and Infantry Barracks, Hospital and remainder of Reserve.

CHATHAM—Infantry Barracks and Reserve.

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PENETANGUISHENE—So much of Reserve and also buildings now occupied by Juvenile Reformatory.

AMHERSTBURG—Fort Malden, Reserve and buildings now occupied as a Lunatic Asylum, also lot letter A, Dalhousie Street, Amherstburg.

OTTAWA—Part of lot D, Concession C, Nepean, known as the Militia Drill Ground, and fenced in by the Militia Department.

CLASS C.

Consisting of the remainder of the lands, buildings and property enumerated in the second Schedule to the above mentioned Act, and not included in Class B, as above constituted—which said remaining lands, buildings and property may be sold, leased, or otherwise used, as to the Governor in Council from time to time may seem meet.

W. H. LEE,  
*Clerk P.C.*

To the Honourable  
The Minister of Militia and Defence.

A - C A N A D A .

SCHEDULE of War Department and Naval Property surrendered to the Dominion Government in 1870-71, with reference to War Office Instructions, dated 12th May, 1870.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	R.	P.	
<b>TORONTO.</b>					
Crown Reservation	New Barracks—Buildings for one Field Battery of Artillery, viz :—gun-shed, stables, harness-room, forge, infirmary, stables, work-shops, guard-house, battery store, forage darn, water supply, drains, &c., complete, and shoeing-shed for military train.	.....	.....	.....	N.B.—The whole of the Military Reserves at Toronto, with the Buildings and Works, were transferred to the Provincial Government in 1856, under Provincial Act 19 and 20 Vict., cap. 45. A portion known as the Garrison Common was re-occupied by Imperial Troops in 1861.  Handed over to the Dominion Government, 15th July, 1870. Shown on Plan No. 1.
	Two wooden huts for married soldiers, cook-house and latrinea.	.....	.....	.....	
	Two huts for soldiers.	.....	.....	.....	
	Shoemakers' and tailors' shops, schools, quartermaster's stores, and orderly room.	.....	.....	.....	
	Hospital—Additional storey to do.	.....	.....	.....	
	Ablution and bath rooms.	.....	.....	.....	
	Ablution room and women's wash house.	.....	.....	.....	
	Fenel to military burial ground.	.....	.....	.....	
	Commissariat fuel yard, storehouse, &c.	.....	.....	.....	
	Military store buildings, viz : Gun-carriage shed, storehouse, office, magazine, latrine and wood shed.	.....	.....	.....	
Between Old Fort and New Barracks.	Old Fort—Auxilliary battery for 2 guns, west of Commissariat fuel yard, and battery for 7 guns within the Fort.	.....	.....	.....	Shown in Plan No. 2. Handed over to the Dominion Government, 26th Sept., 1870.
	Hut barracks.	.....	.....	.....	
	Farracks, store, fence and latrine.	.....	.....	.....	
	Ablution house, near D barracks, west of No. 1 block house.	.....	.....	.....	
	Tank near D barracks.	.....	.....	.....	
	Armourer's shop.	.....	.....	.....	
	Latrines for N. C O. and women, and do in dry earth system.	.....	.....	.....	
	Canteen.	.....	.....	.....	
	Tailors' and shoemakers' shop and mess pantry.	.....	.....	.....	
	Ash-pits.	.....	.....	.....	
<b>KINGSTON.</b>					
Purchased in 1812 from Andrew Stewart.	Little Cataraqui—South half and broken front of Lot No. 16, 1st Concession, Township of Kingston, consisting of farm land and bush.	142	1	31	Shown on General Plan No. 6. Handed over to the Dominion Government, with Deeds, Leases, &c., on 2nd August, 1870.
	Murney Tower property.	6	3	13	
Deed of Exchange 27th October, 1840, and Crown Reservation.	Murney Tower, &c.	.....	.....	.....	Shown in Large Scale Plan No. 2. Handed over to the Dominion Government, 10th Aug., 1870.
	Market Battery land, &c.	1	2	39	
Crown Reservation, and partly by Deed of Exchange, 11th May, 1848.	Market Battery.	.....	.....	.....	

SCHEDULE of War Department and Naval Property—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	R.	P.	
<i>KINGSTON — Continued.</i>					
Order in Council, 1845-6.	Market Battery, &c.....	12	0	10	
	Shoal Tower in front of Market Battery.				
Right of Conquest and Military Appropriation.	Tête-de-pont Barracks, &c.—				*Offices, Stores, Schools, &c.  Shewn on Plan No. 2. Handed over to the Dominion Government, 14th October, 1870.
	Soldiers' Barracks, A, B, C, and D				
	Officers' quarters, mess, and E, F, G.				
	Servants' quarters, scullery, latrines, &c.				
	Soldiers' barracks, H, I, &c.....				
	Wash-house and latrines in rear, and other latrines.				
	Soldiers' barracks, &c., K, L, M, N.				
	Soldiers' barracks, cells, &c., O, P.				
	Cook house.....				
	Ablution rooms.....				
	Expense magazine.....				
	Commissariat store.....				
	Queen's wharf.....				
	Various small buildings, &c.....				
Enclosure wall and fence.....					
Land on which barrack premises stand.	4	2	24		
Chiefly by right of Conquest and Military Appropriation. Place d'Armes.	Catarqui Bridge, W. end—				Ditto.
	Officers' stables, R. E. stores, &c.				
	Old engine house and meat store.				
	Land attached to do, and water front reclaimed.	0	1	33	
Place d'Armes and Barrack Street.	Barrack, Office, Premises, &c.—				
	Office, &c.....				
	Kitchen, cook-house, stable and latrines.				
	Barrack yard and fuel yards, Nos. 1 and 2.	1	1	38½	
	Cedar and boarded fences round yards, &c.				
	Lot 19, straw shed, land, &c.....	0	0	16	
	Forage barn.....				
Crown Reservation and Military Appropriation.	Granary.....				Shewn on Plan No. 1. Handed over to the Dominion Government, 19th July, 1870.
	Fuel yard, No. 3, fences, &c.....	0	3	8	
	Artillery Park, &c.....	5	2	25	
	Guard-house, cells, &c.....				
	Soldiers' barracks, A, B, C.....				
	Hospital (part of A Barracks)....				
	Cook house, &c.....				
	Commanding officers' quarters, and outbuildings.				
	Engine house, latrines attached, dustbins, &c.				
	Gun-shed, and stores attached ..				
Wheelers' and collarmakers' shops.					
Armorer's shop, shoeing shop and forge.					
Officers' stables.....					
Stables.....					
Infirmaries stables.....					

SCHEDULE of War Department and Naval Property—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	R.	P.	
	<i>KINGSTON—Continued.</i>				
Crown Reservation and Military Appropriation.— <i>Con.</i>	Artillery Park, &c.— <i>Continued.</i>				Shewn on Plan No. 1. Handed over to the Dominion Government, 19th July, 1870.
	Men and women's latrines ..... Fences and walls enclosing the park .....				
Crown Patent to Board of Ordnance, 22nd Nov., 1845.	Water Lot, Cataraqui Bay— Acquired for defensive purposes, but the project afterwards abandoned by the Ordnance.	71	0	0	Shewn on Plan No. 3, as well as on General Plan No. 6. Handed over with deeds and leases to the Dominion Government, 2nd August, 1870.
Deed of agreement between Government and Trustees of Bridge, 27th Dec., 1827.	Use of Cataraqui Bridge (560 yards long) without limit as to the time, but subject to a yearly rent of £300.				Handed over with deeds and other records to the Dominion Government, 2nd August, 1870.
Deed of donation, 31st Jan., 1865.	Cataraqui Cemetery— Military burial ground, section G, about 4 miles N.W. of Kingston.	2	0	14	
Set apart from Crown Reserves for defensive purposes, in 1783-5.	Fort Henry—				Shewn on Plan No. 4, and General Plan No. 6. Handed over to the Dominion Government, 10th August, 1870.
	Buildings of the fort.....				
	Water tank, in solid rock.....				
	Advanced battery.....				
	Water tank, in solid rock.....				
	East branch tower.....				
	West do .....				
	Branch ditches.....				
	Hospital premises .....				
	Hospital .....				
	Guard-house, stores, dead house, root house, &c. ....				
	Enclosure picket fence.....				
	Ordnance Yard—				
	Foreman of Stores' Quarters.....				
	Gun-sheds, Nos. 1 and 2.....				
Three storehouses .....					
Various other buildings .....					
Guard house, latrines, &c .....					
Enclosure picket fences.....					
Detached officers' stables, &c.....					
Cedar Island.....					
Tower .....					
Latrines .....					
do ...	Fort Henry Reserve— Exercising Ground .....	30	0	0	Shewn on General Plan, No. 6. Handed over with leases and other papers to the Dominion Government, 2nd August, 1870.
do ...	Barrie Field Common, including sites of works and buildings.	522	0	0	
do ...	Fort Frederick Reserve— Tower, fort and magazine..... Battery magazine .....				Shewn on Plan No. 5, and on General Plan No. 6. Handed over to the Dominion Government on the 5th September, 1870.
	Artillery side-arm store and ammunition-room.....				
	Cooking-shed and wash-house ..				
	Officers' and men's latrines.....				
	Defensible guard-house .....				
	Reserve .....	8	2	0	
	Water-tank and metal pump .....				

SCHEDULE of War Department and Naval Property—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.	
		A.	R.	P.		
<i>KINGSTON—Continued.</i>						
Purchased from R. Macdonald 6th July, 1844, and from R. D. Cartwright in exchange for lots in Kingston, 20th March, 1840.	Portions of Lots 20 and 21—Western addition of the Township of Pittsburgh, opposite Kingston, adjoining the Village of "Barriefield," and north of Barriefield Common, or Fort Henry Reserve, County of Frontenac.	*227	2	0	Shown on General Plan, No. 6. Handed over with deeds and leases, &c., to the Dominion Government, 2nd August, 1870. * Ordnance survey measurement; 200s. 2r. 3p. by title deeds.	
Purchased by the Admiralty, 23rd August, 1819.	Naval Reserves— Lot No. 16, broken front, 1st Concession, western addition of Pittsburgh, on east side of river Cataragui.	4	2	0	Shown on Plan No. 5, and General Plan No. 6. Handed over to the Dominion Government in accordance with War Office letter, dated 18th October, 1870, _____, on _____, 113 24th January, 1871. † Partly fitted up for schools, &c.	
Crown Reservation under letters of Gen'l Haldimand, 11th Sept., 1783, and Lieut.-Governor Hamilton, 22nd May, 1785; also the inlets of Haldimand Cove and Hamilton Cove.	Dockyard premises and other naval property at Point Frederick, east side of Kingston Harbour. † Commodore's house, &c., and draw-well. Military store, quarters and out-buildings, draw-well, &c. Naval cottages and out-buildings attached, well-house, &c. Dockyard, &c, guard-house, alarm-bell, messenger's quarters, old storehouse (near gate), and bouching-shed.	56	3	0		
Set apart from Crown Reserve for defensive purposes in 1783-85.	Foreman's quarters and out-buildings attached. Carpenter's shop and engine-house. Coal store ..... Smithy and iron-store ..... Boat-house, sail-loft, &c ..... Coal store and guard-house ..... St Lawrence wharf ..... Main storehouse (stone frigate)... Wharf at do ..... Paint store, &c ..... Laboratory (red house) ..... Tar-house (vat in top) ..... Old magazine ..... Dockyard, walls, fences, &c. ....	61	1	0		
<b>MONTREAL.</b>						
Right of conquest and purchase, 19th Nov., 1834.	Quebec Gate Barracks— Commissariat store, and small buildings attached.					Shown on Plan No. 1. Handed over to the Dominion Government on 28th November, 1870, and 1st February, 1871.
Right of conquest and military appropriation in 1760.	Soldiers' barracks (infantry) ..... Stables in basement of do ..... Provost cells and quarters ..... Powder magazine ..... Cavalry stables ..... Infirmary do .....					

SCHEDULE of War Department and Naval Property—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	R.	P.	
	<i>MONTREAL—Continued.</i>				
<i>Right of conquest and military appropriation in 1760—Con.</i>	<i>Quebec Gate Barracks—Continued.</i>				Shown on Plan No. 1. Handed over to the Dominion Government, 28th November, 1870, and 1st February, 1871.
	Cook-houses (two) .....				
	Guard-rooms, &c. ....				
	Wash-houses, smithy, farrier's shop, meat store and old latrines.				
	Water supply, drainage, &c. ....				
	<i>Artillery Barracks—</i>				
	Barracks and gun-shed.....				
	Stables, with barracks above.....				
	Ablution-room, cook-house, &c., and officers' stables.				
	Staff-sergeants' barracks, &c.....				
	Men and women's latrines .....				
	Stables, harness-room, &c. (formerly brigade stores).				
	<i>Cavalry Barracks—</i>				
	Wheeler's and farrier's shops.....				
	District R. E. Office, and out-buildings, &c. ....				
	Water supply and drainage .....				
	<i>Barrack Office, Stores, &amp;c.—</i>				
	Office, &c .....				
	Stores and latrines .....				
	Stables, and married soldiers' quarters above.				
Pharmacy, boiler-house, &c.....					
Latrines .....					
<i>Fuel Yard, &amp;c.—</i>					
Coal-shed.....					
Boundary walls, N.W. side.....					
Fence, N.E. side .....					
Other fences.....					
Land occupied by and attached to the buildings, &c., and rights to beach in front.		8	0 36		
		Approximately			
<i>Purchased from Grant &amp; Douglas, 14th and 24th Nov., 1836.</i>	<i>Garrison Hospital—</i>				Shown on Plan No. 1. Handed over to the Dominion Government, 28th November, 1870, and 1st February, 1871.
	Hospital .....				
	Fuel-store, guard-house, dead-house and latrines.				
	Wooden revetement walls, &c....				
	Old Surgeon's quarters and out-buildings.				
	Water supply and drainage .....				
<i>Deed of exchange with Corporation,* 19th Sept., 1870.</i>	Land adjoining ditto on South side.	0	2	13	*No. 7245, C. F. Papineau, N.P.
<i>Purchased 25th May, 1838.</i>	Two building lots, N.W. of Dalhousie square.	0	0	25	



SCHEDULE of War Department and Naval Property—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	B.	P.	
<b>MONTREAL—Continued.</b>					
Right of conquest and military appropriation.	Champ de Mars .....	4	1	28	Shown on Plan No. 2. Gun-shed and strip of land surrendered to Corporation under deed of exchange dated 19th September, 1870, for land in Water street. W.O. 8th September, 1868. Canada 8  58 Handed over to the Dominion Government, 28th November, 1870.
Purchased in 1845-6, at a cost of about £40,000 sterling.	“Logan’s Farm.” Acquired for the construction of a defensive barrack establishment, but used as an exercising ground.	115	3	39	Shown on General Plan No. 5. Handed over to the Dominion Government, 28th November, 1870.
Purchased 30th Dec., 1814, from D. J. Hennelly.	Military burial ground and old chapel.	1	1	24	
<b>HOCHELAGA.</b>					
Purchased by the Admiralty for naval purposes, 29th May, 1817.	New soldiers’ barracks (brick) .....				Shown on Plan No. 3. Handed over to the Dominion Government, 28th November, 1870.
	Old cavalry stables, &c.....				
	Part of ditto, officers’ stables.....				
	Gun-shed and stable for 16 horses..				
	Infirmary and other stables.....				
	Wheeler’s and saddler’s shops, harness-room, &c.....				
	Harness-room, smithy, pharmacy, guard-house and latrines.....				
	Cook-house and cells .....				
	Hut barracks (river front), including cook-house, workshops, gymnasium, latrines, &c.....				
	Chief Warder’s quarters .....				
	Cells attached to ditto.....				
	Military prison, new cells.....				
	Labour sheds.....				
	Fire engine and storehouse.....				
Cook-house .....					
Warders’ quarters and offices.....					
Prison wards, associated, &c .....					
Latrines, urinals, &c.....					
Drainage and water supply for the Hochelaga establishment.....					
Land occupied by ditto .....		2	3	8	
<b>ST. HELEN’S ISLAND.</b>					
Deed of exchange and purchase, between His Majesty and Baron Grant, Seigneur of Longueuil, 8th April, 1818.	Soldiers’ barracks and officers’ quarters.....				Shown on Plan No. 4. Handed over to the Dominion Government, 28th November, 1870.
	Ablution room, &c.....				
	Latrines and various buildings attached to the barracks.....				
	Expense magazine, &c.....				
	New armoury, &c.*.....				
Old Ordnance store, &c.....					*Site of old military prison.

## SCHEDULE of War Department and Naval Property.—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	R.	P.	
	<b>MONTREAL—Continued.</b>				
Deed of exchange, and purchase between His Majesty and Baron Grant, Seigneur of Longueuil, 8th April, 1818.—Continued.	St. Helen's Island—Continued.				Shown on Plan No. 4. Handed over to the Dominion Government, 28th November, 1870.
	New ordnance store, &c.....				
	Old guard-house, north of store.....				
	Rain-water tank .....				
	Water supply .....				
	New combustible store.....				
	Grand magazine .....				
	Two old block houses and old straw store .....				
	New cottages for workmen of the store department.....				
	Old cottages and workshops.....				
New shot yard, wharf, gun-platforms, &c.....					
Boat house, latrines, and other buildings.....					
	St. Helen's Island, Isle Ronde, Isle aux Fraises, water-power, &c.	153	3	9	Shown on Plan No. 4, and General Plan No. 5.
	<b>LONGUEUIL.</b>				
By purchase from various persons in 1846-7.	Land acquired for defensive purposes in connection with a Tête-de-pont for the defence of Montreal.	189	2	18	Shown on General Plan No. 5. Handed over to the Dominion Government, 26th Nov., 1870.
By deed of donation, 3rd May, 1814.	Land acquired from Joseph Simons, on the condition that it was not to be disposed of to any other party whatever.	0	1	36	
		477	3	26	
	<b>SOREL.</b>				
Right of conquest in 1759-60, purchase of the Seignory of Sorel, 13th Nov., 1780, and deed of exchange, 27th December, 1858.	Barrack Reserve—				Shewn on Plan No. 1. Handed over to the Dominion Government, 2nd August, 1870.
	Soldiers' Barracks, &c.....				
	Old hospital, barracks and hospital stores, &c., Commissariat store, cook-house .....				
	Guard-house and cells, armouries and tailors' shops, canteen, expense magazine and latrines .....				
	Wooden revetement of, barrack premises.....				
	Land, beach, &c., joining barrack reserve.	14	2	6	
Purchase of the Seignory, 13th Nov., 1780, and commutation of lot 0, 4th May, 1853.	Domaine Reserve (commonly called The Point)—				Shewn on Plan No. 2. Handed over to the Dominion Government with Plans, Leases, and other documents, 2nd August, 1870.
	Manor Farm, or "Point," consisting of farm or bush land, ship-building lots, &c., and dilapidated buildings.	106	0	0	
Purchased with Seignory of Sorel, 13th November, 1780, and Sheriff's Sale of Town Lot 509, 14th August, 1868.	Land lying inside the limits of Victoria street, Nooth's farm, and the Pot-au-Beurre road, &c., commonly called the "Victoria Street Reserve," the greater portion of which is under cultivation, and the remainder bush.	142	1	4	

SCHEDULE of War Department and Naval Property.—Continued.

Origin of Title.	Description of Property.	Contents.			Remarks.
		A.	B.	P.	
	<i>SOREL—Continued.</i>				
Purchase, 25th June, 1781, 19th May, 1821, and 28th September, 1824.	Government farm and cottage, with old and dilapidated buildings attached.	116	0	0	Shewn on Plan No. 2. Handed over to the Dominion Government with Plans, Leases, and other documents, 2nd August, 1870.
28th October, 1837....	Town lots, &c., (situated near Victoria Street Reserve)— No. 500 = 4½ Ordinary lots..... Conceded under Seigniorial tenure.	} 0	3	27	
Commuted, 6th Mch., 1849	No. 503 = 4 Ordinary lots .....		0	3	8
Conceded, 23rd Jan., 1839	No. 534 = 3½ do .....	0	2	36	
Commuted, 19th Jan., 1855.	No. 505 = 4 do .....	0	3	8	
Commuted, 6th Jan., 1849.	No. 510 = 2 do .....	0	1	24	
Conceded, 13th Jan., 1840.	No. 511 = 2 do .....	0	1	24	
Conceded, 1st Dec., 1795.	Nooth's Farm.....	50	0	0	Shown on Plan No. 2. Handed over to the Dominion Government, 2nd August, 1870.
Purchased with Seignory of Sorel, 13th Nov., 1780.	Isle aux Cochons .....	10	0	0	
	Isle Ronde .....	160	0	0	
	Isle de Grace (Westerly Point)...	} 193	0	12	
	do (Easterly Point)...				
	Freehold or Unconceded Land...	735	3	22	
	Copyhold and Conceded Lands.	140	0	0	
Deed of Concession 1st December, 1795.	Isle St. Ignace.....				

B.—QUEBEC AND POINT LEVIS AND UPPER CANADA.

STATEMENT of War Department Lands and Buildings, &c., transferred to the Dominion Government in 1871, with reference to War Office Instructions of 12th of May, 1870, and 19th August, 1871, No.  $\frac{57}{\text{Canada}}$

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Origin of Title.	Description of Property.	Contents. (nearly).			Remarks.
		A.	R.	P.	
	QUEBEC.				
Leasehold, 99 years from 1st May, 1802.	Exercising ground (Plains of Abraham).	71	3	0	£20 11s. 0d. per annum, paid to Nuns by W.D.
Leasehold, 99 years from 1st May, 1790.	No. 3—Tower, Field and Tower.....	36	3	39	£11 14s. 8d. per annum, paid to Nuns by W.D.
Leasehold, 99 years from 1790.	No. 4—Tower, Field and Tower.....	18	0	24	
Freehold, from 15th June, 1811.	Nos. 1 and 2—Towers, Field, Clerk of Works, Quarters, &c.	7	1	1	
Freehold, from various sources, and by right of Conquest.	Ball Cartridge or Cove Field, Plains of Abraham, between the line of Nos. 1 and 2 Towers property and the Counterscarp of the Citadel, S.E. of Grande Allée.	100	0	0	£1 17s. 0d. per annum ground rent, paid by W.D. to N. Larue ( <i>en fief</i> ).
do do	Laboratory, Cove Field.....				
Freehold, purchased in 1846-47, and partly in 1836.	Cricket Field, outside St. Louis Gate.	5	3	22	
Freehold, by purchase in 1822, 1827, 1828, 1829, 1830, and 1831, and by right of Conquest and Military Appropriation.	Royal Engineers' Office..... do Tanks and Wells. Messengers' Quarters..... Citadel Glacis, Royal Engineers' Yard, and a portion of Town Works to St. Louis Gate, including road to Citadel.	44	3	29	
	Citadel :—				
	Magazine A.....				
	do B.....				
	Officers' Quarters, &c.....				
	Mann's Barracks.....				
	Hospital, &c.....				
	Itch Ward attached to do ...				
	Mann's Store, and Shot Shed attached.....				
	Armoury and Gun Carriage Store, &c.....				
	Ammunition Stores.....				
	Old Provost Prison and Staff Sergeants' Quarters.....				
	Drill Shed.....				
Sites acquired by right of Conquest.	Ablution Rooms, No. 1 Wash-house, do No. 2, and Sergeants' Mess Kitchen.....				
	Latrines near Magazine A.....				
	Ball Court.....				
	Tenaille, &c.....				
	Armourer's Shop.....				
	Observatory, &c.....				
	Latrines, Dalhousie Bastion....				
	Engine House.....				
	Cavalier Stores and Expense Magazine.....				
	Guard house, S. W. ravelin, and Jebb's redoubt.				
	Redoubt and defensible guard-house.				

## QUEBEC AND POINT LEVIS AND UPPER CANADA.

## STATEMENT of War Department Land and Buildings, &amp;c.—Continued.

Origin of Title.	Description of the Property.	Contents. (nearly.)			Remarks.
		A.	B.	P.	
	QUEBEC.—Continued.				
	Citadel—Continued.				
Sites acquired by right of conquest. —Con.	Citadel lines, &c.....				
	Wells and tanks (13 in number).....				
	Military prison, premises, &c.....				
	Six cells and 60 dormitories.....				
	Town lines, &c.....				
Purchased in 1811.....	St. Lewis street, officers' quarters, &c, and purveyor's establish- ment.....				
	Garrison Hospital.....				
	Dead-house, stores, kitchen, &c....				
	Latrines, guard-house, &c.....				
	Water tank, drainage, &c.....				
Purchased Nov. 1780.	Land attached, &c.....	1	1	36	
	Mount Carmel. (No buildings).....	0	1	36	
Purchased in 1815....	Commissariat office and quarters....				
	Garden, &c. &c.....	0	2	30	
Purchased, 6th June, 1781.	Stable, coach-house, engine- house, latrines, &c.....				
	Bonnefield property, near Durham Terrace.....	0	0	31	
By conquest .....	Guard-house, Carronade Battery....				
	Magazine F, Grand Battery.....				
	Store-house, land, &c.....	0	0	12	
Purchased, 17th June, 1809.	Hope gate, guard-house, bar- racks, &c.....				
	Grand magazine E (Hôtel Dieu)....				
By conquest .....	Land attached to do.....	0	1	22	
	Palace Gate, guard and store- house, &c.....				
By conquest, and by purchase in 1846-7.	Military store, offices and premises.				
	Artillery Barracks, &c., Palace Gate—				
	Soldiers' Barracks, &c.....				
	Billiard-room attached.....				
	Detached officers' quarters, &c., &c.....				
	Guard-house and building at- tached (and stables).....				
	Dauphin barracks, &c.....				
	Engine-house, draw-well, ar- mourer's shop.....				
	Gun-shed, store, stable, &c.....				
	Cook-house and latrines, &c.....				
	Ablution-house.....				
	Women's wash-house.....				
	Water supply, drainage, &c.....				
	Magazine D; lower park.....				
	Ordnance store, draw-well.....				
	St John's gate, &c.....				
	Guard-house at do.....				
	Married soldiers' quarters.....				
	Land N. St. John's Gate to St. Vallier street (lots in St. Vallier street, purchased in 1846-7).	13	3	2	

W. O. 30th July, 1888.  
Quebec 8

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QUEBEC AND POINT LEVIS AND UPPER CANADA.

STATEMENT of War Department Land and Buildings, &c.—Continued.

Origin of Title.	Description of the Property.	Contents. (nearly.)			Remarks.
		A.	R.	P.	
<b>QUEBEC.—Continued.</b>					
By conquest .....	Fuel-yard, St. Rochs..... Fence surrounding do .....	4	3	28	
	Issuers' quarters, &c..... Coal store.....				
Purchased in 1846-7. Conquest, and by Purchase, 1847.	St. Charles and Canoterie streets... Magazine C, shifting-room, &c (Esplanade). Water tank, well, &c., in do..... Land between St. Louis and St. John's Gates (including Esplana- nade).	2 2	2	36	
		17 0	3 3	19 34*	* By purchase, 11th March, 1847.
Conquest .....	Bouching shed .....				
	Queen's Wharf, &c — Commissariat and military stores, and foreman's quarters, water supply, &c. With land, including path oppo- site side of street.	1 0	2	27 31	
By purchase, 24th September, 1781.	Wharf and lot, inclined plane.....	1 2	3 1	18 30	
Conquest.....	Jesuit Barracks, &c.— Expense magazine..... Cook, wash-house, stables, &c.... Meat and straw store, &c..... Ball court..... Barrack office and stores, &c..... Commissariat Bakery, &c..... Guard-house, armourer's shop... Engine-house..... Privies .....				
	Tanks and wells..... Water supply and hydrant..... Drainage, &c .....				
	Boundary wall..... Land of the Jesuit B. property....	5	1	10	
Purchased 26th June, 1818.	Jacques Cartier Reserve— Bush land, and on the west bank of the river about 5 miles from its junction with the St. Law- rence..	38	0	3	£0 3s. 1d. ground rent per annum payable on this land, but never demanded. Sal- mon fisheries in this river.
<b>POINT LEVIS.</b>					
Purchased from var- ious individuals during 1863 to 1868. Deeds all passed before J. G. Clap- ham, N.P., Quebec.	Portions of the Seigneurie of Lau- zon, consisting of cleared land and bush, with several valuable buildings upon it, acquired for the erection of the Forts and other Defensive Works.	1,252	2	37	
Servitudes under As- signment of Clear- ance Rights in 1867-8.	Portions of Land adjoining the above, purchased only for keeping the ground free from buildings and other obstructions.	69	1	35	

## QUEBEC AND POINT LEVIS AND UPPER CANADA.

## STATEMENT of War Department Land and Buildings, &amp;c.—Continued.

Origin of Title.	Description of Property.	Contents. (nearly).			Remarks.
		A.	R.	P.	
	POINT LEVIS— <i>Concluded.</i>				
	R. E. Hut Barracks, comprising Officers' Quarters and Mess-rooms, 4 Soldiers' Barracks, Canteen, Offices, Workshops, Servants' Quarters, Cook-house, N.-C. Mess, Store-house, School-house, Hospital, Magazine, Guard-house, and Stables—all chiefly of wood.	18	0	0	
	Pontoon Wharf, &c., &c .....	.....	.....	.....	
	Fort No. 1, 11 rooms, 12 men in each	.....	.....	.....	
	do No. 2.....	.....	.....	.....	
	do No. 3.....	.....	.....	.....	
	ONTARIO.				
	Naval Reserves—				
	Lake Erie—Mouth of the Grand River, Port Maitland	219	0	0	
	do At Barbet Point.....	48	2	32	
	do At Mohawk Bay.....	20	0	0	
	Penetanguishene Harbour, Gloucester Bay.	389	0	0	
	Holland River, East Branch, county Simcoe, Lots No. 49, 50, 51, and 52 (Town Plot of Gwillimbury).	4	0	0	
	Pointe Pelée (Lake Erie)—				
	Township of Mersea, county Essex	3,000	0	0	
	do Vespra, county Simcoe, Lot 13, Concession 11.	200	0	0	
	Lake Huron, Island of St. Joseph, Lots 1 in 1st and 2nd Concessions, with broken fronts to south of said Lots.	500	0	0	
	do do in Milford Haven, south half of Lot 6 Concession 9.	106	0	0	

## REMARK.

For list of Ordnance or Military Properties and Canals in Canada, transferred or proposed to be transferred by the Imperial to the Provincial Government prior to 1st July, 1867, see Appendices Nos. 58 and 60, pages 444 to 448 and 449 to 451 of Appendix to General Report of the Commissioners of Public Works, up to 30th June, 1867.

OTTAWA, 1st February, 1883.

G. F. BAILLAIRGE,  
Deputy Minister, Public Works.





APPENDIX No. 37.

—  
PUBLIC ACTS

OF THE

PARLIAMENT OF CANADA

HAVING REFERENCE TO THE

PUBLIC WORKS DEPARTMENT

ETC., ETC.

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## APPENDIX No. 37.

ALPHABETICAL LIST of some of the Public Acts of the Parliament of Canada, from 1867 to 1882, having reference to the Public Works Department or works under its charge.

Subject.	Full Title of the Statute.	Year.	Chapter of Statute.	Page of Statute.
BREAKWATERS—The transfer of their management to Marine and Fisheries Department.	An Act to transfer the management of certain Harbors, Piers and Breakwaters from the Department of Public Works to the Department of Marine and Fisheries.	1877	40 Vic., cap. 17	133
BRIDGES—Their construction.....	An Act respecting Bridges.....	1872	35 Vic., cap. 25	93
do do .....	An Act to make provision for the crossing of navigable waters by Railways or other Road Companies incorporated under Provincial Acts.	1876	39 Vic., cap. 15	39
do When constructed under Provincial authority.	An Act respecting Bridges over navigable waters constructed under the authority of Provincial Acts.	1882	45 Vic., cap. 27	187
BUOYS AND BEACONS.....	An Act to make further provisions respecting Lighthouses, Buoys and Beacons.	1882	45 Vic., cap. 36	186
CIVIL SERVICE.....	An Act respecting the Civil Service of Canada.	1882	45 Vic., cap. 4.	48
CONTINGENCIES .....	An Act to regulate and restrict the Contingent charges of the Departments of the Public Service.	1868	31 Vic., cap. 35*	49
COW BAY BREAKWATER—Purchase	An Act to authorize the purchase of the Pier or Breakwater at Cow Bay, and to provide for its maintenance.	1874	37 Vic., cap. 18	132
GRAVING DOCKS— Esquimalt, B. C., granting \$250,000.	An Act to authorize the advance of a certain sum to the Province of British Columbia for the construction of a Graving Dock at Esquimalt.	1874	37 Vic., cap. 17	131
Esquimalt, B. C., manner of paying grant.	An Act to confirm a certain Order of the Governor in Council respecting the Graving Dock at Esquimalt.	1880	43 Vic., cap. 15	53
Quebec, granting \$500,000.....	An Act respecting the Graving Dock in the Harbor of Quebec, and authorizing the raising of a Loan in respect thereof.	1875	38 Vic., cap. 56	301
To encourage their construction	An Act to encourage the construction of Dry Docks, by granting assistance on certain conditions to Companies constructing them.	1882	45 Vic., cap. 17	106
HARBORS— Montreal, grant of \$1,500,000 ...	An Act to make further provision for the improvement of the River St. Lawrence between Montreal and Quebec.	1873	36 Vic., cap. 60	257
do further grant of \$280,000.	An Act do do ...	1882	45 Vic., cap. 44	195
do reduction of interest above from 5 p.c. to 4 p.c.	An Act to amend 36 Vic., cap. 60, respecting the Montreal Harbor Commissioners.	1881	44 Vic., cap. 7.	62
North Sydney, N.B.....	An Act respecting the Harbor of North Sydney, N.S.	1879	42 Vic., cap. 30	212
do .....	An Act to amend the Act do ...	1882	45 Vic., cap. 50	212
Pictou, N.S.....	An Act respecting the Harbor of Pictou, N.S.	1872	36 Vic., cap. 63	278
do .....	An Act to amend do ...	1879	42 Vic., cap. 29	212
do .....	An Act do do ...	1880	43 Vic., cap. 33	250

\*Section 2.

## ALPHABETICAL LIST of some of the Public Acts of the Dominion, &amp;c.—Continued.

Subject.	Full Title of the Statute.	Year.	Chapter of Statute.	Page of Statute.
<b>HARBORS—Continued.</b>				
Quebec .....	An Act to amend (22 Vic., cap. 32) an Act to provide for the improvement and management of the Harbor of Quebec.	1868	31 Vic., cap. 79	318
do grant of \$1,200,000 .....	An Act further to amend the Acts to provide for the improvement and management of the Harbor of Quebec.	1873	36 Vic., cap. 62*	270
do further grant of \$250,000 .....	An Act to authorize the raising of a further sum to enable the Quebec Harbor Commissioners to complete their Tidal Dock.	1880	43 Vic., cap. 17	60
do do \$375,000 .....	An Act further to amend the Acts to provide for the improvement and management of the Harbor of Quebec	1882	45 Vic., cap. 47	208
St. John, N.B. ....	An Act relating to the Harbor of St. John, N.B.	1882	45 Vic., cap. 51	215
Three Rivers .....	An Act to provide for the improvement and management of the Harbor of Three Rivers.	1882	45 Vic., cap. 42	229
LIGHTHOUSES .....	An Act to make further provisions respecting Lighthouses, &c.	1882	45 Vic., cap. 36	186
OAKVILLE HARBOR (sale) .....	An Act to authorize the sale of the Oakville Harbor.	1871	34 Vic., cap. 28	105
OTTAWA RIVER—Works under Dominion legislative authority.	An Act respecting certain works on the Ottawa River.	1870	33 Vic., cap. 24	76
<b>PRESERVATION OF PEACE IN VICINITY OF PUBLIC WORKS.</b>				
do do ...	An Act for the better preservation of the peace in the vicinity of Public Works.	1869	32 Vic., cap. 24	248
do do ...	An Act to amend do do ...	1870	33 Vic., cap. 28	82
do do ...	An Act do do do ...	1875	38 Vic., cap. 38	223
<b>PUBLIC WORKS—</b>				
Original Act .....	An Act respecting the Public Works of Canada.	1867	31 Vic., cap. 12	258
Official Arbitrators .....	do do ...	1867	do	265
do reference of certain claims to them.	An Act to extend the powers of the Official Arbitrators to certain cases therein mentioned.	1870	33 Vic., cap. 23	75
do appeal from their decision to Exchequer Court.	An Act respecting the Official Arbitrators.	1879	42 Vic., cap. 8.	35
do employment of a Stenographer.	An Act further to amend the Act respecting the Public Works of Canada.	1878	41 Vic., cap. 8.	68
Appropriation of land .....	An Act respecting the Public Works of Canada.	1867	31 Vic., cap. 12	262
do .....	An Act to amend do do ...	1874	37 Vic., cap. 13	113
Defining works under control of Department.	An Act to remove doubts under the Act respecting the Public Works of Canada.	1872	35 Vic., cap. 24	92
Public Works and Railways and Canals Departments (creation).	An Act respecting the offices of Receiver-General and Minister of Public Works.	1879	42 Vic., cap. 7.	31
RIVERS AND STREAMS—Descent of timber; tolls; amending Cap. 68, C.S.C.	An Act to amend the Act respecting Joint Stock Companies to construct works to facilitate the transmission of timber down rivers and streams.	1880	43 Vic., cap. 9.	19
SECURITY BY PUBLIC OFFICERS—Nature .....	An Act respecting the security to be given by Officers of Canada.	1868	31 Vic., cap. 37	55

\*Section 17.

ALPHABETICAL LIST of some of the Public Acts of the Dominion, &c.—*Concluded.*

Subject.	Full Title of the Statute.	Year.	Chapter of Statute.	Page of Statute.
<b>SECURITY BY PUBLIC OFFICERS—</b>				
<i>Continued.</i>				
Registration .....	An Act to amend an Act respecting the security to be given by Officers of Canada	1870	33 Vic., cap. 5.	30
<b>Form</b> .....	An Act do do do ...	1872	35 Vic., cap. 19	47
Registration .....	An Act further to amend do do ...	1880	43 Vic., cap. 3.	5
<b>SUPERANNUATION—Establishment.</b>				
do	An Act for better ensuring the efficiency of the Civil Service by providing for the superannuation of persons employed therein in certain cases.	1870	33 Vic., cap. 4.	27
do	Deduction to be 2 p.c.	1873	36 Vic., cap. 32	100
do	If anterior service not satisfactory.	1875	38 Vic., cap. 8.	64
<b>TELEGRAPHS—Declaration by Government Telegraph employees</b>				
	An Act to prescribe a declaration to be taken by employees on telegraph lines under the control of the Government, and to provide for the punishment of telegraph operators and employees who divulge the contents of certain telegrams.	1881	44 Vic., cap. 26	169

A. GOBELL.

Acts of the Imperial and Canadian Parliaments, and Imperial Orders in Council, having reference to the Confederation of the Provinces now constituting the Dominion of Canada.

Name of Province or District.	Date of Admission into Confederation.	Statutes having reference thereto.		Imperial Orders in Council or Acts authorizing Admission into Confederation.
		Year.	Designation of Statute.	
Quebec .....	July 1, 1867	1867	Imperial Act. 30 and 31 Vic, cap. 3, British North America Act.....	By British North America Act.
Ontario .....	do ...	do	do ...	do
New Brunswick.....	do ...	do	do ...	do
Nova Scotia .....	do ...	do	do ...	do
*Manitoba and N. W. Territories .....	July 15, 1870	1870	Canadian Acts. 33 Vic., cap. 3 .....	By 146th sect. B.N.A. Act and Imperial O.C. of 23rd June, 1870.
British Columbia.....	do 20, 1871	.....	.....	do do 16th May, 1871.
Prince Edward Island	do 1, 1873	1873	36 Vic., cap. 40.....	do do 26th June, 1873.

All other British Territories in B. N. A. and Islands adjacent thereto, excepting Newfoundland, were declared to be part of the Dominion by Imperial Order in Council of 31st July, 1880.

\*N.B.—The N. W. Territories were given a distinct organization in 1871 by the Act 34 Vic., cap. 16. The District of Keewatin was created in 1876 by the Act 39 Vic., cap. 21.

A. GOBEIL



APPENDIX No. 38.

—  
**LIST**

OF

**PLANS, PROCES-VERBAUX AND OTHER DOCUMENTS**

CONNECTED WITH

**GOVERNMENT AND OTHER PROPERTY**

IN

**QUEBEC AND ELSEWHERE**

SELECTED BY

**G. F. BAILLAIRGE,**

**Deputy Minister of Public Works,**

**IN THE CROWN LANDS DEPARTMENT, LAVAL UNIVERSITY, ROYAL  
ENGINEERS OFFICE, AND CADASTRE OFFICE, QUEBEC,  
DURING THE MONTHS OF NOVEMBER  
AND DECEMBER, 1869.**

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## APPENDIX No. 38

LIST OF PLANS, PROCÈS-VERBAUX, TITLES AND OTHER DOCUMENTS CONNECTED WITH GOVERNMENT AND OTHER PROPERTY IN QUEBEC, AND ELSEWHERE, SELECTED BY G. F. BAILLAIRGÉ, DEPUTY MINISTER OF PUBLIC WORKS,—IN THE CROWN LANDS DEPARTMENT, LAVAL UNIVERSITY, ROYAL ENGINEERS' OFFICE AND CADASTRE OFFICE, QUEBEC, DURING THE MONTHS OF NOVEMBER AND DECEMBER, 1869.

No. 8862.

QUEBEC, 9th December, 1869.

*To F. Braün, Esq., Secretary of Public Works, Ottawa :*

SIR,—I beg to transmit you herewith the Lists of the Plans, Procès-Verbaux, Titles and other Documents, selected by me at Quebec, in the Crown Lands Department, Laval University, Royal Engineers' Office at the Jesuits' Barracks, and in the Cadastre Office at the former St. George's Hotel.

Many of the above documents do not relate to Government property; they will be useful, however, for the construction of historical plans of the cities of Quebec, Montreal and Three Rivers, where many of the Government properties are situated.

A copy of these Lists has been furnished to Mr. Rosa, to whom I have left a note of the documents that should be first copied, being the most useful to the Department, such as the original Plans and Procès-Verbaux of the Cascades, Carillon, Grenville, Chute à Blondeau and Lachine Canals, townships laid out along the Témiscouata, Métapédiac and Gulf roads, Hudson's Bay forts, &c., &c.

The plans of the Fortification Surveys of Canada, at Point Lévis, Quebec, Sorel, Montreal and Lachine, Lachine and Caughnawaga, Vaudreuil and Kingston, by the Royal Engineers, from 1864 to 1870, will probably be obtained from Col. Hamilton, commanding Royal Engineers, Canada, at his headquarters in Montreal, as explained at page 1036 of Lists.

At page 1041, I have noted various properties, of which plans may possibly be procured hereafter, for the Jails and Court Houses and other public buildings in Lower Canada.

I have also given the titles of five volumes that should be applied for by the Department for future reference; the most important of these is a large atlas, published lately in Paris, by Jomard, member of the "Institut de France," a copy of which has been obtained by the Laval University, through the Rev. Mr. Casgrain, of Quebec, who should be applied to, if the Department wishes for a copy, as the work is not yet on the market; it contains some of the most ancient maps of La Nouvelle France, &c.

Another work, which will contain valuable maps for historical purposes, is "Champlain," now in course of publication in the Seminary of Quebec, under the direction of Rev. Mr. Laverdière, Professor of History at the Laval University. As only 1,000 copies of this work are to be published, a copy should be applied for immediately, if it has not been applied for already.

Having got through with my examination of old Plans, Titles, Procès-Verbaux and other documents such as it was possible for me to procure at the places already



named, in the city of Quebec, I shall leave for Montreal to-morrow, and will call at the Royal Engineers' Office, before proceeding to Cornwall, which I expect to reach early next week.

I have the honour to be, Sir,

Your most obedient servant,

G. F. BAILLAIRGÉ.

LAVAL UNIVERSITY.

LIST OF PLANS set aside to be copied, in case they are required, in the Library of the Laval University, under the care of the Reverend Mr. Laverdière, Professor of History.

No.	Title.	Date.	Authority.	Description.
1	Ile. aux Noix.....	1760	.....	.....
2	Siège de Québec.....	1759	.....	Lithography.
3	Palais de l'Intendant.....	1717	.....	Tracing.
4	Château St. Louis.....	1779	.....	Paper drawing.
5	Couvent et terrain des Pères Récollets de Québec.....	.....	.....	do
6	Plan de Québec.....	1664	.....	do
7	Terrain de l'Evêché.....	1714	.....	do
8	Plan de Québec.....	1660	.....	Tracing.
9	Château St. Louis.....	1689	.....	.....
10	do.....	1700	.....	.....
11	Couvent et terrain des Pères Récollets-Québec.....	.....	The original of this plan belongs to Joseph Hamel, Provincial Surveyor..... Proposed by the late Captain Boxer.....	.....
12	Bassins de Flot et de Radoub à Québec.....	.....	.....	.....
13	Terrain de l'Evêché et du Séminaire de Québec, en 1693 et en 1714.....	.....	.....	.....
14	Façade—Château St. Louis.....	1683	.....	.....
15	Québec en 1722.....	.....	By Chaussegros de Léry.....	.....
16	Palais de l'Intendant—Québec.....	.....	.....	.....
17	Ile de Montréal.....	1721	.....	Paper drawing.
18	Montréal et Rivière St. Pierre.....	1733	.....	Tracing.
19	Fortifications de Montréal.....	.....	.....	Engraving.
20	do.....	1758	.....	do
21	Ancien Canal Lachine et Rivière St. Pierre. De la Galissonnière.....	1749	By Mr. de la Morandière.....	Tracing.
22	Fort, Lac des Deux Montagnes.....	.....	.....	do
23	Trois Rivières.....	1704	.....	do
24	Fortifications de Montréal.....	1752	By Franquet.....	do
25	Montréal.....	1680	.....	do
26	Trois Rivières.....	1689	.....	do
27	Fort Churchill—Baie d'Hudson.....	.....	.....	do
28	Floride—De Beaujeu.....	1685	.....	do
29	Lac Winnipeg—Rivière Assiniboine.....	.....	.....	.....
30	Lac Ontario.....	1688	.....	do
31	Fort Chambly et autres.....	.....	.....	do
32	Anticosti.....	1638	.....	Engraving.
33	Lac Winnipeg et Rivière Rouge.....	.....	.....	Drawing.
34	Anticosti.....	1822	.....	.....
35	Fort York—Baie d'Hudson.....	1783	.....	Tracing.
36	Lac Quinipeg.....	1737	.....	do
37	Pointe aux Lièvres.....	1710	.....	do
38	Plan Espagnol de Québec, 1690 ou 1670.....	1670	.....	do
39	Elevation et Profil—Palais Episcopal.....	.....	.....	do
40	Fort de Chambly.....	1721	.....	do
41	Baie d'Hudson.....	1783	.....	do
42	Québec.....	1698	.....	do
43	do Bataille.....	1760	.....	do

N.B.—Any plans, titles, &c., not considered requisite by the Department, or already in their possession, should be struck out of the lists, and a note of the same should be sent to Mr. Rosa.

Several of the above plans are copies taken from the originals in France by Mr. P. L. Morin, who has also furnished copies to the Library of the Parliament of Canada.

G. F. B.

#### FORTIFICATION SURVEYS OF CANADA AT

Pointe Lévis and environs towards.....	1864-5.
Quebec.....	1864-5.
Sorel.....	1865-6.
St. Lambert and Longueuil.....	1865-6-7.
Lachine and Caughnawaga.....	1866-7-8.
Montreal Island (from Long Point to Lachine).....	1865-6-7-8-9.
Kingston.....	1867-8-9.
Vaudreuil.....	

The above were surveyed under the direction of Lieutenant H. S. Sitwell, R.E., and under the superintendence of Wm. F. Drummond Jervais, R.E., C.B., Deputy Director of Works (Fortifications).

These plans are completed, excepting a portion of Pointe Lévis Survey, which is still in progress; they are all zincographed, excepting the plans of the Montreal and Côte St. Paul section, which have been sent to England for the purpose of being zincographed, and will be ready only next summer (say June, 1870).

Application for the above plans must be made to Col. Hamilton, R.E., Commanding Royal Engineers in Canada, at Head Quarters, Dalhousie Square, Montreal; or to Sir Henry James, Southampton, England, Director of Ordnance Surveys.

Standard chains graduated to 38 degrees of temperature, and similar to those used for measuring base lines of Ordnance Surveys, can be purchased from Elliott and Brothers, No. 449, Strand, London. Length 66 feet, divided into long links of about 30-inches by  $\frac{1}{2}$ -inch of steel, with point carriers. The variation of length from 60 to 38 degrees is equal to one-eighth of an inch.

G. F. B.

#### CADASTRE OFFICE, QUEBEC.

##### REGISTER BOOK A.

###### PAGE.

5. King's Wharf and Old Custom House, 23th and 29th May, 1765.
7. Part of garden—Intendant's Palace.
14. Latitudes and Longitudes.
26. King's Wharf, 1st April, 1766.
36. Lot adjoining King's Wharf, 5th May, 1767.
40. Fort Chambly, 12th October, 1770; John Collins, D.S.G.
42. St. John's Fort, 16th October, 1770; John Collins, D.S.G.
- 103-104. Court House, Quebec, 23th March, 1804; Joz. Bouchette, S.G.
- 106 107. English Cathedral and Court House, Quebec.
- 122-123. Portion Old Quebec Jail property, 4th May, 1822.
125. Cascades Canal. Orders to Col. By to lay off 100 feet on each side of Canal, upon its entire length, except on north side of Canal, where a reservation of 200 feet in depth by 300 feet in length is to be laid off for Barrack and Guard House—all French measure. By order of J. H. Craig, Governor. (Plan was annexed to warrant.) 14th October, 1808.
- 127-128-129 Report of Col. By, with description of property belonging to Government on Cascades Canal.

## PAGE

- 144-5-6-7. Old Custom House Wharf, Quebec.  
 163. Part of Old Quebec Jail.  
 230. Order by Governor J. H. Craig to Col. By (same as at page 125) to survey Cascades Canal according to plan thereto annexed; 14th October, 1808.  
 231. Plan of Cascades Canal.  
 232. Report, Col. By, Cascades Canal.  
 285. Order to establish Astronomical Meridians, N.E. and S.W., N.W. and S.E., by George Pownall, Registrar of Records.  
 266. Plan of a lot at Three Rivers, corner of Notre Dame and Lottenville Streets.

## REGISTER B.

22. Plan of land granted for Marine Hospital Quebec, dated 21st March, 1832; J. Bouchette, D.S.G.  
 23. Procès-Verbal, of land granted for Marine Hospital, Quebec, do., do.  
 27. Description and plan of ground, Marine Hospital, Quebec.  
 30-31. Description and plan of Government Land, Sorel.  
 53-54. Plan and description of Queen's Wharf or Woolsey's Wharf, Quebec.  
 62-63. Plan and description, Old Custom House Wharf, Quebec.  
 72. Description of land granted to Board of Ordnance, Quebec, being part of Crown Reserve, lot No. 8; first range Township of Grenville, 13 acres, 1 rood, 31 perches, English measure. See Book of Descriptions E, folio 60, for description of grant to the Ordnance in Grenville, 27th August, 1844. Also Chute à Blondeau Island Grant.  
 100-1-6-7. Procès-Verbal, Beach Lot, John Bonner. Patent 7th July, 1837.  
 138-9. Procès-Verbal and Plan, Mont Louis, 30th March, 1839.  
 168-9. Block House, Little Falls, River Madawaska.  
 170. Plan, Marine Hospital, Quebec.  
 176-7. Procès-Verbal and Plan of Common of Montreal, by André Trudeau, P.L.S., July, 1831, indicating entrance of Lachine Canal.  
 186-7-8-9. Copy of Original Procès-Verbal of Survey of Grenville Canal by Anthony Swalwell, D.P.S., with a plan showing the land taken and occupied from each proprietor from Greece's Point to head of Canal. Scale, 5 chains per inch. Dated 30th October, 1843.  
 N.B.—The original Procès-Verbal is with Mr. Bouchette, at Crown Lands Department, and the Plan is in the Baron's room, in a drawer. (Baron's room or young Bouchette's room.)

G. F. B.

- 190-7. Order in Council to take possession of lands required for military purposes, 3rd August, 1844 for Grenville Canal. Lands taken and required are shown on Plan of 30th October, 1843.  
 204-5. Plan and Procès-Verbal of land of John Bonner, on Grande Allée, 16th June, 1845. (The plan of the Plains of Abraham can be obtained, I am told, from the Reverend Mr. Lemoine, Chaplain of Ursuline Convent, Quebec.)  
 216-7. Plan and Procès-Verbal, Seigniorship of Grand Etang conceded by the King of France, 20th September, 1697. Variation 23° 45' W. apparently in 1843.

G. F. B.

## REGISTER C.—Examined on 1st December, 1869.

- 3-4. Procès-Verbal and Plan of land granted to T. C. Lee, at La Vacherie.  
 87. Procès-Verbal and Plan of land granted to Corporation of City of Quebec for streets at Pointe aux Lièvres (Hare Point), January, 1858; Joseph Bouchette.

*Second Part of Volume.*

Page 18 after 236. Plan and Procès-Verbal of land granted at La Vacherie to the Fabrique de St. Roch.

N.B.—Most of the Register C contains Beach Lots.

REGISTER D.—Examined throughout on the 2nd December, 1869.

This volume is chiefly filled with plans and descriptions of Beach Lots in the district of Quebec and downwards to Baie des Chaleurs.

## GENERAL REMARKS.

Registers A, B, C, on 1st December, 1869, were under the care of P. L. Morin, in the Cadastre Office, at the St. George's Hotel, now belonging to Messrs. Côté and Cauchon, opposite the *Place d'Armes*, Quebec.

Register D, on 2nd December, 1869, was in the office of Joseph Bouchette, Esq., Deputy Surveyor-General, in the Kent House, St. Louis Street.

G. F. B.

## CROWN LANDS DEPARTMENT, KENT HOUSE, QUEBEC.

LIST OF PLANS selected, 2nd December, 1869, being under the custody of Mr. McKeddy, in the third story of the Crown Lands Department, and relating chiefly to the Jesuits' Estates, formerly under the care of Mr. Judah.

## PLANS IN A DRAWER IN MR. MCKEDDY'S OFFICE.

Page 20 of Index.—No. 7. Channel River, St. Charles, by Dunlevie.

No. 8-9. Ground appropriated for use of Banal Mill, at Laprairie, and plan of building.

Page 40 of Index. } No. 13. Plan of Three Rivers.

Crown Domain } No. 16. Plan of the City of Montreal, by the Royal Engineers,  
and Miscellan- } prior to 1844.

ous. } No. 29. Plan of Harbour of Quebec, by Wallace, 1861.

No. 33. Plan of Jesuits' Estates, Lower Canada, 1790.

NOTE.—Plans, &c., Nos. 43 to 61 were sent to Cadastre Office, Quebec on 28th May, 1869, amongst which is a plan showing site of Jesuits' Church, Quebec.

Also Plans of La Vacherie and Hare Point, &c., from 1821 to 1847, viz. :—

1.—Plan of Hare Point by Larue, 1829.

2.—Plan of Hare Point by Joseph Hamel, 1847, divided into ship yards.

3.—Plan of Quebec, 1734, care of P. L. Morin.

4.—Plan of La Vacherie, 1821, by Sax.

G. F. B.

## BOOK No. 3.

Plans of Jesuits' Estates. View of Church House, Chapel, &c., of Jesuits in Montreal. 8th September, 1788. By Ls. Guy, Dep. Arp.

Fragment de Plan de Québec, Terrains concédés par les Pères Jésuites. Par Franquet, 6 août, 1753.

Plan of Pointe aux Lièvres, by Vondelveldein.

BOOK No. 2.—(Two books numbered alike.)

These books contain a general abstract of titles of estates of the late Order of the Jesuits. Amongst the titles is a grant of La Vacherie to the Pères Jesuites. Unconfirmed 15th January, 1637.

**LIST OF PLANS, Procès-Verbaux, and Titles, &c., under the custody of Mr. McKeddy, in the various boxes painted green, about 24" x 12" x 12", locked, the keys being with Mr. McKeddy.**

**BOX.—JESUITS ESTATES, TOWN OF QUEBEC, &c.**

- Procès-Verbal du terrain entre les Ursulines et les Jésuites, 19 juillet, 1698.  
 Procès-Verbal du terrain derrière l'enclos des Jésuites, 15 juillet, 1667.  
 Titre accordé pour l'emplacement du Collège des Jésuites et de leur Eglise par la Compagnie de la Nouvelle France, le 18 mars, 1637. Sur parchemin, Enregistré.  
 Liste des Titres des Jésuites pour leurs acquisitions de terrains, pour Collège, etc.  
 Permission de fortifier la maison des Pères Jésuites par Mr. de Lauzon, 10 août, 1653.  
 Concession à la Fabrique de Québec de 140 perches de terre adjoignant l'Eglise Paroissiale, le 5 mai, 1652.  
 Cession par Couillard aux Pères Jésuites (1 paquet de titres, etc., avec Cotte). Package with endorsation.  
 Explication de ce qui s'est fait pour l'Emplacement de l'Eglise de Jésuites, 1666.  
 Plan d'une partie de Québec, avec la vieille Prison de Québec, par Samuel Holland, 18 mars, 1786.  
 Plan figuratif du Terrain des Jésuites à Québec.  
 Copie du Plan de la Censive de la Paroisse de Québec (non exacte).  
 Plan du terrain des Jésuites à Québec, 1663 4 5-6-7.  
 Petit Plan du terrain derrière l'enclos des Jésuites.  
 Terrain des Dames Ursulines.  
 Emplacements de Messieurs Boutteville et Louvigny vis-à-vis la Paroisse.  
 Dédicace de l'Eglise des Jésuites, le 23 août, 1676.  
 Pierre Angulaire de l'Eglise des Jésuites, par Mr. de Courcelles, en 1666.  
 Terrain accordé pour l'Emplacement de l'Eglise des Jésuites, le 8 mai, 1666. y compris 11 pieds de terrain, extra en largeur, accordé par l'Evêque de Pétrée. Donation par Mr. de Tracy, 21 avril, 1666.

**REMARQUE.—Les titres et plans, ci-dessus sont attachés ensemble dans la Boîte Verte.**

**BOX.—JESUITS ESTATES, LA VACHERIE.**

- 20th November, 1658. — Concession par le Chevalier d'Argenson, à Simon Denis.  
 10th July, 1667. — Donation par Simon Denis à l'Hôpital Général des Terrains près de la Vacherie.  
 29th August, 1677. — Echange entre les R.P. Jésuites et l'Hôpital Général, etc. (Voir l'Index indiquant les diverses pièces dans cette boîte).

**REMARKS.—**On the 4th December, 1869, Mr. Rosa and myself examined the documents, &c., in the two boxes Nos. 1 and 2, in reference to the Seigniories belonging formerly to the Jesuits' Order at Notre Dame des Anges, but have not found anything that would be of service at present. We have not deemed it necessary to examine the documents of the Belair and St. Gabriel Seigniories, formerly the property of the Jesuits.

G. F. B.

DOCUMENTS under care of Joseph Bouchette, Esq., Crown Lands Department, Kent House, Quebec.

In 1128. Original Procès-Verbal of lands belonging to Government on line of Grenville Canal, &c., by Anthony Swalwell, D.P.S., 1844. (See Pigeon Hole F. G.)

In 3442. A. Procès-Verbal and Plan of Survey of the Ordnance Land forming part and parcel of the Crown Reserve, lot No. 8, first range of Grenville, 1844.

Village of Grenville, on the Crown Reserve, No. 8, first range, Township of Grenville.

Letter of Jos. Bouchette, giving variation of needle.

#### TOWNSHIP SURVEYS OF MÉTAPÉDIAC ROAD.

In Room next to Mr. Bouchette's.

Humqui .....	measured by Roy,	D.P.S.	
Assametquagan.....	" Legendre,	"	1862.
Matalik.....	" L. S. Grondin,	"	1869.
Cabot .....	" Fortin,	"	1852.
" .....	" Bradley,	"	1863.
Causapsal.....	" Legendre,	"	1862.
" .....	" D'Auteuil,	"	1867.
Nemtayer .....	" Poudrier,	"	1869.
Awantjish .....	" Thos. Breen,	"	1869.
Lepage.....	" D'Auteuil,	"	1867.
Restigouche.....	" W. McDonald,	"	1840.
Milnikek (unfinished)....	" Morrison,	"	1869.
Métapédiac.....	" Legendre,	"	1859-1867-8.
Seigneurie du Lac Méta- pédiac.....	" D'Auteuil	"	1869.

The Township Surveys along Témiscouata Road and the Gaspé and St. Lawrence Road, from St. Anne des Monts to Great Fox River, should also be copied, if time permits. They can be procured in the Crown Lands Department at Quebec.

#### *Drawer of Canal Plans in Room of Mr. Bouchette, Junior.*

Plan No. 19.—Showing the lands taken from each lot on line of Grenville Canal, from Greece's Point to head of Canal. Scale, 5 chains per inch. By Anthony Swalwell, D.P.S., Carillon. 30th October, 1843. Variation, 7° 45' W.

Plan showing do. do. Carillon Canal. Scale, 5 chains per inch. By A. Swalwell. 2nd November, 1844. Variation, 8° 55' W.

Plan Showing do. do. Chute à Blondeau Canal. Scale, 1 chain per inch. By A. Swalwell. Variation, 8° 55' W. September, 1843, at Village of Carillon.

Plan No. 19.—Proposed and old Lachine Canal. By John Adams, under direction of Thomas Burnett, C.E., 1820.

Plan No. 19.—Profile of River Richelieu, from St. John's to Chambly, by Alex. Stevenson, dated Chambly, 30th January, 1816. And plan of River St. Lawrence and Richelieu in duplicate.

Application for the following plans was made at Mr. P. Gauvreau's Office, Quebec, none of them having been found at the Crown Lands Department and Laval University up to 8th December, 1869:—

Ground Plan, Old Post Office, Quebec.

" Sewall Property, Quebec. Plan at Public Works, Ottawa.

" Old Court House. Old plan may probably be had at Prothonotary's Office.

- Ground Plan, Spencer Wood, St. Louis Road, Quebec. Plan at Public Works, Ottawa.
- “ House of Assembly, Quebec. At Bishop's Palace probably.
- “ New Custom House, Quebec. Plan at Public Works, Ottawa.
- “ Bonner Property, New Jail, Quebec.
- “ Old Custom House, Quebec.
- “ Old Jail, Quebec.
- “ Old Castle, St. Louis, Quebec.
- “ Monument Garden, Quebec
- “ Marine Hospital, Quebec. Plan probably at Ottawa.
- “ Jails and Court Houses, Lower Canada. A vote is to be applied for this Session (1869) from Local Government, Quebec, for surveys of the land belonging to each of the district jails and court houses of Lower Canada.
- “ Property of Harbour Commissioners, Quebec. A copy of this plan may be obtained on application to J. B. Martel, Secretary Harbour Commissioners, Lower Town, Quebec.

N.B.—Mr. P. Gauvreau, Architect of the Local Government, Quebec, has promised to furnish copies of the surveys of the properties of the jails and court houses of Lower Canada, when completed, if they are required, and will give Mr. Rosa any information he can, respecting plans of Government property, &c.

G. F. B.

Application should be made at Library, House of Commons, Ottawa, for a Blue Book, containing “Titles and Documents relating to Seigniorial Tenure,” printed by E. R. Frechette for Legislative Assembly, 1851, prior to Confederation.

Also for “Catalogue des Ouvrages sur l'Amérique.” Index Général, 1858. Bibliothèque du Parlement, Ottawa, Canada.

Also for “Plans et Ouvrage de Franquet, à la Bibliothèque Fédérale du Canada, Ottawa.”

Also for “Les Monuments de la Géographie ou Recueil d'Anciennes Cartes Européennes et Orientales, etc., etc,” par Mr. Jomard, Membre de l'Institut de France à Paris, chez M.M. Duprat, Libraire de l'Institut, et de la Bibliothèque Impériale, Rue du Cloître, St. Benoît, No. 7.

“La seconde Partie en un Volume de Format in Quarto, qui sera public séparément, contiendra les recherches et un texte explicatif, mis en ordre, complété ou suppléé, par Mr. D'Arvezag.”

Also for “Champlain” publié au Seminaire de Québec, sous la direction du Rév. Mr. Laverdière, Professeur d'Histoire à l'Université Laval de Québec.

G. F. BAILLAIRGÉ.

Quebec, 9th December, 1869.

### LIST OF PLANS COPIED.

#### PLANS OF QUEBEC.

- On tracing linen 1.—Plan of Quebec in 1660.
- “ 2.— “ “ 1664.
- “ 3.—Plan and portion of the Fief and Seigniorly belonging to the Reverend Gentlemen of the “Seminaire des Missions Etrangères,” in the City of Quebec, 1804.
- On drawing paper } Plan (cadastral) of the property where the Provincial Parliament, the Post Office, and the property belonging to the  
and tracing linen. } Hon. H. Black are erected, with copy.
- On drawing paper.—Plan of the City of Quebec, by P. L. Morin, 1854.
- On tracing linen.—Plan of the environs of the Parliament House, Quebec.
- “ Parliament House—front elevation, rear elevation and ground plan—Quebec, 1850.

- On tracing linen.—Parliament House—ground floor, first story, second story—  
Quebec, 1870.
- “ Plan of the Seminary of Quebec in 1714.
- “ Bishop’s Palace Yard, 1786.
- “ Plan of the Quebec Post Office.
- “ Plan of the ground appropriated for the Metropolitan Church  
and Court House in 1826.
- “ Sewell House and dependencies, 1856.
- “ Fort St. Louis, called the Château, 1779.
- “ Sketch of the ground formerly occupied by the Jesuits, 1844.
- “ Plan of Spencer Wood (ground plan), 1870.
- “ “ “ Henry Atkinson, 1870.
- “ “ “ “ elevation, 1870.
- “ Spencer Wood (cove plan), 1854.
- On drawing paper.—Montreal Island, 1721.
- On tracing linen — “ “
- “ Map of a portion of Montreal Island, 1733.
- “ Fortifications of Montreal, &c.
- “ Ville Marie, on Montreal Island, 1680.
- “ Plan of the Common of Montreal, 1831.
- “ Plan of the proposed canal between Lachine and Montreal,  
1750.
- “ Plan of the proposed canal between Lachine and Montreal,  
1820.
- “ Plan of new locks and canal at Cascades, 1808.
- “ Plotting of a certain lot of ground, No. 15, in the Village of  
Grenville.
- “ Plan of part of the River St. Lawrence and of the Richelieu,  
1816.

QUEBEC, 16th May, 1872.

SIR,—As requested, I transmit you a copy of the plans, procès-verbeaux, &c., concerning the Grenville, Carillon, and Chute à Blondeau Canals, for the use of Mr. Page, the Chief Engineer of your Department.

You will receive enclosed herewith the procès-verbeaux, &c., but the plans I will send by express.

The plans you will receive by express are the following:—

1st plan.—Project of village lots on lot No. 8 in the first range of the Township Grenville. Scale 200 feet to an inch. Signed by J. Bouchette.

2nd plan.—Plan of Crown Reserve, lot No. 8, in the first range of Grenville. Scale, 5 chains 1 inch. Signed by Anthony Swalwell, Deputy Provincial Surveyor.

3rd plan.—Plan showing the land taken and occupied upon each lot or property for the use of the Grenville Canal, between Greece’s Point, in the Township of Chatham, and the head of the Canal in the Township of Grenville. Signed by Anthony Swalwell, D.P.S. Dated Carillon, 30th October, 1843.

4th plan.—Plan showing the boundaries of the Ordnance land at the Chute à Blondeau section of the Ottawa Canals, situated in the Township of Chatham, District of Montreal, Canada East, as surveyed by Anthony Swalwell, D.P.S. 2nd November, 1844.

5th plan.—Plan showing the boundaries of the Ordnance lands at the Carillon section of the Ottawa Canals, situated in the Seigniorship of Argenteuil and Township of Chatham in the District of Montreal, Canada East, as surveyed by Anthony Swalwell, D.P.S. 2nd November, 1844.

At Mr. Page’s request I have addressed a copy of the above plans and procès-verbeaux to Mr. J. G. Sippell, at the office of the Lachine Canal, Montreal.

I have the honour to be, Sir, your humble servant,

JOSEPH ROSA.

F. BRAUN, Esq., Secretary, Department of Public Works, Ottawa.



APPENDIX No. 39.

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ALPHABETICAL INDEX

OF

CONTRACTS

LET BY THE

DEPARTMENT OF PUBLIC WORKS

FROM

1ST JULY, 1867, TO 1ST DECEMBER, 1882.

(EXCLUDING RAILWAYS AND CANALS.)

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COMPILED BY

A. GOBEIL.

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## APPENDIX No. 39

No. 36,025.

ALPHABETICAL Index of Contracts let by the Department of Public Works, from 1st July, 1867, to 1st Decéber, 1882.

Work.	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
<i>Dredge Vessels.</i>			
Dredging machine N.B.....	Pounds Manufacturing Co.....	Nov. 10, 1869.	7,000 00
Dredge vessels and scows, N.B.....	Clark & Stackhouse.....	Feb. 1, 1870..	5,931 00
Dominion Dredge, N.B.—Alterations.....	G. Fleming & Sons.....	June 3, 1871.	222 00
Re-fitting dredge at Sarnia, Ont.....	Sarnia Ship-building Co.....	Dec. 16, 1873.	9,350 00
Building Hopper Dredge, N.S.....	Wm. Simmons & Co.....	May 1, 1873.	95,452 00
Construction of 4 scows, N.B.....	D. & A. Campbell.....	April 12, 1882.	2,936 00
do do .....	H. J. Olive.....	June 10, 1882.	9,000 00
Mud punts, Victoria, B.C.....	G. G. Walker.....	Jan. 11, 1873.	2,000 00

## HARBORS AND RIVERS.

ONTARIO.			
Bayfield—Construction of piers and dredging .....	J. S. McEwan & Co.....	Dec. 24, 1874.	50,690 00
Bay of Quinté—Dredging .....	C. Daly .....	Aug. 9, 1873.	4.95 p. hr.
Chantry Island—Construction of a breakwater .....	Reed & Walker .....	Jan. 31, 1871.	78,157 00
do do do .....	A. Lindsay .....	Nov. 11, 1873.	114,452 00
Cobourg—Construction of a pier .....	Row & Koyl.....	Sept. 16, 1874.	87,286 00
do Extension of western pier.....	J. Harvey .....	Dec. 1, 1880.	8,989 00
do do eastern pier.....	J. Waddell .....	Sept. 2, 1881.	7,700 00
Collingwood—Construction of breakwater .....	C. W. Moberly.....	Oct. 10, 1873.	52,657 00
do Dredging .....	J. D. Silcox.....	June 19, 1880.	7,654 00
do do .....	W. Pearse .....	Aug. 14, 1878.	6.35 p. hr.
do Construction of breakwater .....	J. D. Silcox .....	do 9, 1882.	26,950 00
Darlington—Improvement of the harbor... ..	C. Daly.....	do 28, 1875.	4,562 00
Goderich do do .....	Harvey & Korman .....	Jan. 31, 1871.	158,768 00
do do do .....	D. Moore & Co.....	April 15, 1874.	212,540 00
do Dredging .....	Canan & Conlon.....	do 16, 1880.	1,330 00
do Pile protection work to harbor .....	Geo. Graham .....	Feb. 6, 1882.	8,395 00
Inverhuron—Repairs to works.....	P. S. McLaren .....	July 2, 1874.	1,975 00
Kincardine—Extension of piers .....	W. Hall .....	Sept. 20, 1871.	4,455 00
do Construction of a pier.....	J. H. Johnston .....	Oct. 23, 1873.	6,709 00
do Extension of a pier.....	McLaren & Walker.....	Sept. 8, 1875.	8,085 00
do Improvement of harbor .....	do .....	Oct. 15, 1875.	2,200 00
do Construction of a pier.....	do .....	Aug. 23, 1877.	11,469 00
do Dredging .....	Canan & Conlon.....	Nov. 26, 1879.	6,092 12
do Protection to entrance of harbor .....	Rooklidge & McLaren.....	do 16, 1881.	5,490 00
Meaford—Extension of pier and dredging.. ..	John S. Tolton.....	Mar. 30, 1874.	20,297 00
do Dredging .....	W. Pearse .....	Aug. 14, 1878.	6.35 p. hr.
do Repairs to pier.....	Robert Reed.....	Nov. 11, 1882.	9,999 00
Michael's Point, Manitoulin Island—Light-house .....	R. A. Lyon & Co.....	Aug. 16, 1869.	195 00
Napanee River—Dredging of .....	C. Daly .....	July 23, 1875.	12,500 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*HARBORS AND RIVERS—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
<b>ONTARIO—Continued.</b>			
Owen Sound—Dredging of harbor.....	Toronto, Grey & Bruce Railway	Aug. 12, 1873.	2,656 00
do do .....	T. M. Hubbell.....	May 26, 1875.	7,282 00
do do .....	W. Pearse.....	Aug. 14, 1878.	6.35 p. hr.
do do .....	Canan & Conlon .....	Nov. 26, 1879.	1,795 44
do Protection work to harbor.....	P. Larkin .....	Jan. 15, 1881.	28,985 00
Pickering—Dredging and construction of a pier .....	J. A. Munson.....	Oct. 20, 1878.	3,919 50
Picton—Dredging .....	C. Daly .....	Aug. 7, 1874.	5,792 00
Port Burwell—Dredging.....	J. Castleman .....	May 26, 1876	7,500 00
Port Colborne—Improvement of harbor.....	Geo. Neilson & Co.....	Dec. 26, 1871.	101,677 00
Port Elgin—Construction of a breakwater	Sutton & McKnight .....	Nov. 17, 1881.	17,795 00
Port Hope do piers and dredging.....	C. W. Moberly & Co.....	Dec. 4, 1874.	18,567 00
do do of a breakwater	McNeely & Walters.....	Oct. 19, 1882.	11,261 65
Port Maitland—Repairs to pier .....	A. McDonald.....	Aug. 26, 1870.	14,986 00
Port Stanley—Addition to pier .....	J. Ellison & Son.....	July 3, 1875.	6,707 00
Presqu'île—Improvement of harbor.....	A. E. Munson.....	Dec. 7, 1871.	16,200 00
Rondeau—Improvement of harbors and piers.....	John Brown .....	Jan. 26, 1871.	120,741 00
do Pile protection work &c.....	F. E. McNamee & Co.....	Nov. 11, 1880.	13,000 00
Saugeen River—Improvement of.....	Wm. Hall .....	Sept. 9, 1870.	2,500 00
Shannonville—Dredging .....	C. Daly .....	Oct. 22, 1874.	2,831 00
Thames River—Dredging of .....	John Brown .....	do 24, 1870.	4,800 00
do do .....	Wilcox, Stock & Co.....	Jan. 15, 1875.	3,007 00
Thornbury—Improvement of harbor, &c.....	Robert Reed .....	Nov. 15, 1881.	13,900 00
Thunder Bay—Dredging .....	Hunter, Morse & Co.....	Aug. 3, 1876.	5,999 00
Toronto do .....	Hunter & Murray .....	do 3, 1876.	17,700 00
do do .....	Jas. Murray .....	do 11, 1880.	11 cts p c.y.
Toronto—Improv. of Harbor, Contract A.....	Cooke & Jones.....	Aug. 18, 1882.	101,822 50
do do do B.....	do .....	do .....	101,563 00
Trent River—Construction of a dwelling house.....	A. Brough.....	April 20, 1872.	360 00
Warton—Docking and wharfing.....	D. Porter.....	Sept. 26, 1882.	42,500 00
<b>QUEBEC.</b>			
Baie St. Paul—Construction of pier .....	A. Gagnon.....	Nov. 6, 1873.	7,316 00
Berthier (en bas)—Gates for lighthouse.....	D. Bernier.....	Aug. 1, 1870.	235 00
do Supply of timber for pier.....	Archer & Co .....	Aug. 1877 .....	702 50
Cap à l'Aigle—Construction of a pier.....	Tremblay, Savard <i>et al.</i> .....	Oct. 13, 1880.	3,000 00
Chicoutimi— do .....	H. Dufour.....	Oct. 28, 1873.	2,713 00
do do .....	do .....	Mar. 5, 1873.	3,400 00
do Completion of pier.....	W. Warren.....	Dec. 1874.....	1,819 00
Côteau Landing—Construction of mooring pier .....	P. B. Coutlée.....	Oct. 6, 1870.	3,161 00
do Extension of do .....	F. B. McNamee.....	Feb. 9, 1872.	7,249 00
Eboulements—Construction of a lighthouse	June 18, 1870.....		300 00
do Repairs to pier.....	Raymond Tremblay .....	June 20, 1870.	1,813 00
Gatineau River—Dredging .....	John Heney.....	Oct. 14, 1872.	12,577 00
do do .....	do .....	Oct. 14, 1873.	30,183 00
do do .....	do .....	Oct. 12, 1874.	4,059 00
Grosse Ile—Construction of pier.....	A. Mathieu.....	Aug. 7, 1871.	3,800 00
do Repairs to pier.....	J. C. Richard.....	Sept. 7, 1875.	6,001 00
Ile aux Coudres—Construction of pier.....	H. Pednaud <i>et al.</i> .....	Dec. 14, 1880.	4,000 00
Ile aux Grues—Addition to pier.....	Langlois & Aikman .....	Nov. 2, 1881.	10,500 00
L'Islet—Gates for lighthouse.....	P. Plourde .....	Aug. 4, 1870.	260 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*HARBOURS AND RIVERS—*Continued.*

Work	Name of Contractor.	Year	Amount of Contract.
<b>QUEBEC—Continued.</b>			
			\$ cts.
L'Islet—Supply of timber for pier.....	Archer & Co.....	Aug., 1877...	2,107 50
Malbaie—Construction of lighthouse.....	Jos. Laviole.....	May 25, 1870..	300 00
Nicolet—Pile protection work, &c.....	R. P. Oboke.....	Oct. 25, 1881..	67,350 00
Pointe-à-Pic—Repairs to pier.....	H. Brassard.....	June 20, 1870..	991 00
Pointe aux Orignaux—Gates for lighthouse	Geo. Lévéque.....	Aug. 3, 1870..	290 00
Pointe St. Laurent—Construction of do	S. Peters.....	Oct. 8, 1867..	11,990 00
Richelieu River—Maintenance of buoys, &c.	J. U. Francoeur.....	Mar. 16, 1880..	393 75
Rimouski—Repairs to pier.....	J. Lepage.....	Oct. 18, 1870..	927 00
do Extension of pier.....	Cross & Dwyer.....	Sept. 21, 1876..	17,000 00
River du Loup—Gates, &c., for lighthouse.	A. G. Côté.....	Aug. 2, 1870..	295 00
St. Lawrence River, near Quebec—Con- struction of a lifting barge.....	Martineau & Gingras.....	Oct. 29, 1874..	1,850 00
St. Maurice River—Construction of a dam.	O. Z. Hamel.....	Sept. 9, 1872..	13,143 00
do do of two piers..	T. E. Normand.....	Nov. 15, 1881..	2,800 00
Yamaska—Lock and dam at Ile à Cardin...	Breckon, Gaherty & Davis.....	Aug. 27, 181..	32,229 00
<b>NEW BRUNSWICK.</b>			
Beacon Block—Construction of lighthouse.	J. McLachlan.....	April 1, 1868..	3,100 00
Clifton—Extension of breakwater.....	Reed, Stevenson & Co.....	Feb. 14, 1878..	9,000 00
Cocagne—Construction of a wharf.....	Smith & Nickerson.....	Oct. 28, 1881..	2,828 28
Dipper Harbor— do .....	Clark & Stackhouse.....	Sept. 20, 1873..	19,950 00
Herring Cove— do .....	W. H. Duffy & Co.....	May 3, 1873..	12,800 00
Jourmain Island—Construction of light- house.....	John Duffy.....	Oct. 8, 1869..	2,974 00
Machias Seal—Construction of lighthouse.	Clark & Stackhouse.....	Sept. 6, 1869..	2,450 00
Oromocto Shoals—Construction of dam ..	J. E. Simmons.....	Sept. 18, 1877..	9,700 00
do Extension do ..	Mersereau & Wood .....	Oct. 28, 1879..	2,200 00
Partridge Island—Construction of wharf...	Clark & Stackhouse.....	Sept. 10, 1871..	3,500 00
Pointe du Chêne, Shediac—Construction of breakwater..	A. Wilson.....	Mar. 4, 1875..	13,682 00
do Further length do ..	W. Taylor.....	Sept. 21, 1880..	1,675 00
do Repairs to do ..	Nickerson & Smith.....	Sept. 13, 1879..	2,992 00
Quaco—Construction of breakwater .....	Clark & Stackhouse.....	Mar. 26, 1872..	15,990 00
do do do .....	D. W. Clark & Co.....	Jan. 28, 1882..	13,490 00
Richibuctou— do do .....	S. S. Mayes.....	Feb. 17, 1873..	8,000 00
do Extension of do .....	F. McManus & Sons.....	Dec. 28, 1874..	19,339 00
Rocher Bay—Outer block to do ..	S. Martin.....	Oct. 5, 1878..	2,390 00
St. Andrews—Block and beacon .....	A. Fisher.....	Dec. 9, 1881..	1,600 00
St. John, Negro Point—Construction of breakwater..	J. Duffy & Co.....	Oct. 31, 1874..	224,940 00
do Repairs to do ..	Steeves, Duffy & Steeves.....	Nov. 17, 1881..	96,400 00
Shippagan Gully—Improvement of.....	W. Faye.....	Oct. 27, 1875..	18,700 00
do Harbor—Extension of breakwater	D. A. McDonald.....	Dec. 8, 1877..	9,964 00
Stoney Creek—Construction of do ..	Duffy, Steeves, Shaw & Co.....	Nov. 25, 1872..	10,450 00
<b>NOVA SCOTIA.</b>			
Bayfield—Construction of a breakwater....	J. W. McKenzie.....	Ang. 12, 1878..	4,439 00
Black Rock Point—Construction of a light- house.....	R. Purves.....	July 20, 1877..	1,750 00
Brooklyn—Construction of a breakwater...	Parker & Parker.....	Dec. 8, 1871..	20,750 00
do Addition to do ..	Gardner, McLeod & McLeod.....	Sept. 6, 1873..	26,750 00
do do do ..	N. R. Freeman.....	Oct. 31, 1881..	8,850 00
Cape St. Mary's—Construction of a light- house.....	Dexter & Robichau.....	June 26, 1867..	2,800 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*HARBOURS AND RIVERS—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
<b>NOVA SCOTIA—Continued.</b>			
Cariboo Island—Construction of a light-house.....	R. Purves.....	July 20, 1867.	1,450 00
Cow Bay—Repairs to breakwater.....	Archibald & Co.....	May 14, 1875.	47,640 00
Digby—Repairs to pier.....	N. R. & Z Freeman.....	June 14, 1879.	1,944 00
do Reconstruction of pier.....	G. S. Mayes.....	Nov. 8, 1882.	3,708 00
Hampton—Construction of a breakwater.....	T. R. Brooks.....	July 29, 1878.	3,000 00
Jordan Bay— do do .....	Sutherland & Cochrane.....	Jan. 7, 1875.	21,700 00
do do do .....	N. R. Freeman.....	Oct. 31, 1882.	4,650 00
L'Ardoise—Construction of breakwater.....	H. McDonald.....	Feb. 8, 1876.	8,500 00
Little Hope Island— do .....	Grant, Sutherland & Co.....	Jan. 24, 1871.	5,892 00
do do do .....	S. B. Cochrane & Co.....	March 1, 1872.	11,919 00
McNair's Cove— do .....	M. G. McLeod & Co.....	April 11, 1872.	14,822 00
do Addition to breakwater.....	Beaton & McDonald.....	Aug. 18, 1877.	3,945 00
Mabou—Improvement of harbor.....	Thos. Evans.....	Nov. 25, 1871.	26,203 00
do Dam and cribwork.....	L. J. McKean.....	July 22, 1875.	5,595 00
Main-à-Dieu—Construction of breakwater.....	Beaton & McDonald.....	Feb. 11, 1881.	9,874 00
Merigomish— do of wharf .....	J. Cameron.....	Jan. 18, 1881.	887 00
Metéghan Cove—Extension of breakwater.....	J. Babin.....	Oct. 22, 1880.	1,950 00
Moser's Island—Construction of lighthouse.....	Murphy and Lawlor.....	June 20, 1867.	1,230 00
Oak Point— do of breakwater.....	W. Wickwire.....	March 25, 1875.	16,320 00
Peggy's Point— do of lighthouse.....	Murphy & Lawlor.....	June 20, 1867.	1,690 00
Pomket Island— do do .....	E. G. Randall.....	July 20, 1867.	898 00
Pudding Pan—Repairs to breakwater.....	Zoeth Freeman.....	Sept. 19, 1878.	5,495 00
Somerville—Construction of breakwater.....	N. R. Freeman.....	do 18, 1878.	4,444 00
South Ingonish—Cribwork and dredging... ..	F. W. McKenzie.....	July 22, 1873.	78,208 00
do do .....	Ross & McKay.....	April 10, 1874.	78,208 00
West Arichat— Works of improvement.....	Beaton & McDonald.....	Feb. 8, 1879.	8,945 00
Yarmouth—Construction of cribwork.....	R. Churchill.....	do 12, 1873.	9,000 00
<b>PRINCE EDWARD ISLAND.</b>			
Big Miminigash—Works at .....	L. Perry.....	March 31, 1879.	3,670 00
Campbell's Cove—Extension of breakwater.....	McDonald & McLean.....	Jan. 4, 1882.	9,450 00
Malpéque—Construction of breakwater.....	P. Doyle.....	do 9, 1878.	12,575 00
New London— do do .....	G. & H. McKay.....	Dec. 16, 1874.	3,800 00
do Extension of do .....	G. McKay.....	Sept. 20, 1879.	1,550 00
Rustico—Construction of two breakwaters.....	P. Doyle.....	Dec. 28, 1881.	16,675 00
St. Peter's Bay—Construction of break-water.....	J. Mullally & Co .....	Oct. 16, 1877.	3,477 00
do Repairs to breakwater.....	P. McAarty.....	Jan. 26, 1881.	1,795 00
Souris, East— do do .....	A. Wilson.....	Sept. 22, 1875.	67,000 00
do Reconstruction of do .....	J. E. Poole.....	Jan. 22, 1879.	22,750 00
do Repairs to do .....	Mullally & Sinnott.....	do 26, 1881.	3,699 00
Tignish— do do .....	D. G. McDonald.....	do 26, 1875.	8,245 00
do Works of improvement.....	Arsenault & Perry.....	Dec. 30, 1881.	6,990 00
Wood Islands—Construction of a break-water.....	J. M. Stewart.....	Aug. 3, 1878.	2,998 00
do Extension of breakwater.....	S. Hume.....	Jan. 24, 1881.	1,200 00
<b>BRITISH COLUMBIA.</b>			
Cowichan River—Removal of drift piles, &c.....	J. Nicholson.....	June 28, 1878.	1,345 00
Fraser River—Removal of rocks.....	Thos. Spence .....	Dec. 3, 1872.	5,500 00
Victoria Harbor—Improvement of harbor... ..	do .....	April 12, 1875.	11,950 00
do Removal of Beaver rock.....	.....	.....	.....

## ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &amp;c.—Con.

## PUBLIC BUILDINGS GENERALLY.

Work.	Name of Contractor.	Year.	Amount of Contract.
ONTARIO.			
Brantford Post Office, &c.—Construction of	A. J. Brown.....	Oct. 17, 1878.	16,985 00
do do Fittings.....	John Graham.....	Feb. 16, 1880.	1,250 00
do do Heating apparatus.....	W. L. Appley.....	June 26, 1880.	2,350 00
Belleville do Construction of	Northcott & Alford.....	Nov. 5, 1881.	30,675 50
Chatham do do ...	J. E. Askwith.....	Sept. 20, 1882.	27,640 00
Cornwall do do ...	Gordon & Ross.....	July 28, 1882.	27,698 63
Guelph do do ...	Dobbie & Grierson.....	do 21, 1876.	18,641 00
Hamilton Old Post Office—Excavation and masonry.....	Jas. Webster.....	Dec. 5, 1873.	3,569 00
do do Carpenters' work	P. Brass.....	do 16, 1873.	1,944 00
do do Roof and out-buildings.....	Brass, North & Freeborn.....	July 27, 1874.	3,034 00
do do Fittings.....	E. Van Allen.....	April 19, 1881.	950 00
Hamilton New Post Office—Construction of	Van Allen, Brown & Love.....	Aug. 15, 1882.	231,000 00
Kingston Immigration Shed—do ...	T. Overend.....	do 8, 1871.	3,700 00
do Military College do ...	John Cunningham.....	Oct. 19, 1875.	9,493 00
do do Heating apparatus	Matheson, Young & Co.....	Nov. 23, 1877.	6,500 00
do do Additional buildings.....	W. Irving.....	Oct. 21, 1876.	4,874 00
do do Educational block, construction of...	do .....	April 18, 1877.	45,475 00
Kingston Military College—Stables, Tête-de-Pont Barracks	J. Waddell.....	Sept. 4, 1877.	2,598 00
do do Engine and boiler house.....	do .....	Dec. 4, 1880.	2,010 00
London Custom House—Construction.....	Chas. Dunnett.....	Nov. 26, 1876.	32,500 00
do Immigrant Depot do .....	J. Christie.....	June 16, 1873.	5,195 00
do Post Office—Alterations.....	John Christie.....	Sept. 20, 1882.	5,490 00
Prescott, Fort Wellington—Repairs.....	D. J. Grant.....	do 26, 1873.	2,383 00
St. Catharines Post Office, &c.—Construction.....	Nelson Carter.....	Nov. 4, 1881.	27,950 00
St. Thomas do do ...	H. Lindop.....	July 22, 1882.	38,850 00
Stratford do do ...	J. E. Askwith.....	Jan. 16, 1882.	21,000 00
Toronto Custom House—Construction.....	Ben. Walton.....	April 30, 1873.	161,130 00
do do Heating apparatus.	Matheson, Young & Co.....	May 29, 1876.	5,565 00
do do Emigrant shed—Construction.....	Grant & Yorke.....	April 28, 1870.	6,625 00
do do Examining warehouse do .....	Ben. Walton.....	Oct. 30, 1874.	150,000 00
do do Post Office (old)—Alterations.....	Withrow & Hillock.....	Jan. 13, 1869.	800 00
do do do Heating apparatus.....	D. S. Keith & Co.....	June 2, 1874.	3,769 00
do do (new)—Construction.....	John Elliott.....	Mar. 16, 1871.	60,123 00
do do do Heating apparatus.....	Geo. Harding.....	Sept. 29, 1873.	6,000 00
do do (old)—Alterations.....	Elliott & O'Connor.....	April 25, 1874.	14,917 00
Windsor—Post Office—Construction.....	W. Toms.....	Oct. 15, 1878.	25,900 00
do do do Fittings.....	Bailey & Walker.....	Mar. 13, 1880.	3,175 00
do do do Heating apparatus.	Jos. Wright.....	May 16, 1880.	2,423 00
QUEBEC.			
Chicoutimi Marine Hospital—Construction.	W. Warren.....	May 10, 1882.	4,000 00
Grosse Isle—Dwelling house, &c. do ...	J. Mathieu.....	Aug. 15, 1871.	4,300 00
do do Quarantine buildings do ...	Piton & Co.....	Jan. 6, 1873.	14,500 00
do do chapel, bakery, &c.—Construction...	T. C. Richard.....	Oct. 6, 1877.	4,842 00
do do additions, &c.—Construction...	J. E. Askwith.....	April 16, 1881.	8,150 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*PUBLIC BUILDINGS GENERALLY—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
<i>QUEBEC—Continued.</i>			
Lachine Emigrant Shed—Construction.....	J. Laplante.....	Aug. 4, 1871.	4,863 00
Levis do do .....	J. Jobin.....	do 18, 1871.	5,375 00
do do Repairs to roof.....	do .....	Oct. 11, 1873.	1,378 00
do Roofs over Casemates, Forts 2 and 3.....	N. Piton .....	Sept. 27, 1881.	5,698 00
Hull Post Office, &c.—Construction.....	W. Toms .....	July 6, 1882.	15,000 00
Montreal Custom House—Alterations.....	Jean Laplante .....	Sept. 15, 1870.	9,400 00
do do .....	Laberge et fils .....	do 1, 1871.	3,528 00
do Doors and sashes.....	Laird Paton .....	Oct. 8, 1871.	550 00
do Furniture and fittings.....	Geo. Roberts .....	Mar. 9, 1871.	1,825 00
do Plumber's work.....	Garth & Co.....	Jan. —, 1872.	680 00
do Repairs.....	M. Marin .....	Aug. 22, 1881.	3,921 00
Montreal Examining Warehouse—Construction.....	Bourgoin & Lamontagne.....	June 12, 1875.	166,865 00
do Elevator for.....	W. P. Bartley & Co.....	Aug. 22, 1877.	11,613 00
do Heating apparatus.....	Robt. Mitchell & Co.....	Sept. 4, 1877.	2,690 00
do Roadways, &c.....	J. Howley.....	do 5, 1877.	3,270 00
do Reconstruction.....	R. Forayth .....	May 9, 1882.	2,600 00
Montreal Geological Museum—Alterations.....	R. Weir .....	July 17, 1871.	963 00
do Inland Revenue Offices do .....	Jas. Howley.....	June 24, 1875.	1,291 00
do do Additions, &c.....	H. J. Beemer .....	Aug. 4, 1881.	12,479 00
do do Heating apparatus.....	R. Mitchell & Co.....	July 25, 1882.	1,745 00
do Post Office—Construction.....	Allard & Dufort .....	Nov. 12, 1872.	182,000 00
do do Carpenter work.....	do .....	Mar. 31, 1874.	84,500 00
do do Fittings, &c.....	do .....	Dec. 20, 1875.	7,922 00
do do Heating apparatus.....	R. Mitchell & Co.....	Nov. 17, 1874.	6,450 00
Quebec Cartridge Factory—Construction of laboratory buildings.....	H Hatch .....	do 17, 1881.	2,910 00
do Cartridge Factory—Construction of fulminate mixing buildings.....	N. Piton.....	do 17, 1881.	4,070 00
do Citadel—Roof over casemates of Richmond bastion.....	Costolow & Lortie.....	June 9, 1882.	5,004 00
do Citadel—Reception room, Governor General's Quarters.....	W. J. Piton.....	Mar. 18, 1882.	5,937 00
do Commissariat Bakery—Conversion into a temporary post office.....	H. G. Mead.....	April —, 1871.	700 00
do Custom House—Slip in wharf.....	S. Peters .....	Mar. 22, 1872.	1,100 00
do do Alterations to wharf.....	J. B. LeFrançois .....	Sept. —, 1873.	4,770 00
do do do in attic.....	J. O'Leary .....	April 18, 1881.	2,224 00
do Dufferin Improvements—Construction of St. Louis gate.....	L. Z. Mallette .....	Aug. 6, 1878.	14,867 00
do Dufferin Improvements—Reconstruction of Kent gate.....	do .....	do 6, 1878.	14,622 00
do Dufferin Improvements—Completion of L. Mallette's contract, St. Louis gate.....	H. J. Beemer .....	Nov. 25, 1879.	*14,367 00
do Dufferin Improvements—Completion of L. Z. Mallette's contract, Kent gate.....	do .....	do 25, 1879.	*14,622 00
do Dufferin Terrace Walls—Mason's work.....	F. Jobin.....	Sept 20, 1879.	7,680 00

\*Less previous payments to Mallette.

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*PUBLIC BUILDINGS GENERALLY—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
<b>QUEBEC—Continued.</b>			\$ cts.
Quebec Fortification Walls—Reconstruction and repairs.	A. Giroux.....	Sept. 24, 1879.	7,500 00
do do do	Parent & Lortie.....	do 29, 1879.	7,850 00
do do do	Chas. Jobin.....	July 30, 1881.	4,360 00
do do do	do.....	do 30, 1881.	3,820 00
do do do	Chas. Jobin.....	Sept. 13, 1882.	3,732 00
do do do	Owan Kelly.....	July 30, 1881.	1,775 00
do do do	W. J. Piton.....	do.....	3,660 00
do Observatory—Construction.....	A. Mathieu.....	July 16, 1873.	4,980 00
do Marine Hospital—Painting.....	Gauthier & frère.....	May 14, 1875.	2,095 00
do Post Office—Construction.....	Breton & frère.....	Dec. 10, 1870.	43,315 00
do do Heating apparatus.....	Garth & Co.....	Jan. 29, 1872.	3,368 00
Sherbrooke Post Office, &c—Construction.	Robillard & Murphy.....	Oct. 17, 1881.	22,250 00
St Helen's Island Military Buildings—Repairs.....	Wm. McDonald.....	Aug. 7, 1882.	9,416 00
St. John's Post Office, &c—Construction.	A. Paquette.....	June 21, 1878.	5,400 00
do Additional buildings and fittings.	A. P. McDonald & Co.....	Jan. 16, 1880.	3,876 00
do Heating apparatus.....	Jas. Howie.....	Sept. 28, 1881.	1,450 00
St. Vincent de Paul Penitentiary—Girders for new dining hall.....	Carrier, Laine & Co.....	June 28, 1882.	1,940 00
Three Rivers Custom House—Construction.	Chs. Dugré.....	Oct. 10, 1873.	8,975 00
do Old Barracks—Construction and repairs.....	Pothier & Dussault.....	Aug. 10, 1881.	4,600 00
<b>NEW BRUNSWICK.</b>			
Chatham Custom House—Conversion of a building into.....	P. Loggie.....	Aug. 26, 1873.	1,500 00
Dorchester Penitentiary—Construction.....	A. McKenzie.....	Oct. 3, 1876.	117,432 00
do Heating apparatus.....	Wisdom & Fish.....	Oct. 21, 1879.	7,480 00
do Additional buildings.....	Killam & McKay.....	Sept. 22, 1880.	20,400 00
do New cell-wing and boiler house.....	T. S. McManns & Sons.....	Nov. 23, 1880.	57,628 75
Fredericton Post Office—Completion.....	Snow & Scoullar.....	Nov. 25, 1878.	16,814 00
do Finishing of first floor.....	W. Lawlor.....	Oct. 20, 1880.	1,294 00
do Interior fittings.....	Joshua Limerick.....	July 23, 1880.	2,351 00
Middle Island Quarantine Buildings—Construction.....	J. Stohart.....	May 3, 1873.	2,982 00
Newcastle Custom House—Alterations.....	Geo. Brown.....	Aug. 21, 1873.	600 00
St. Andrews Marine Hospital—do.....	A. Stinson.....	Sept. 25, 1873.	4,520 00
St. John Custom House (old)—Repairs.....	Quinton & Tilley.....	Sept. 10, 1871.	7,630 00
do do (new)—Foundations of.....	B. Mooney & Son.....	Nov. 14, 1877.	24,677 00
do do (new)—Construction.....	Williams, Anderson & Williams.....	Oct. 19, 1878.	218,000 00
do do (new)—Enclos' re walls.....	W. Causey.....	Oct. 13, 1881.	4,650 00
do do (new)—Fittings, &c.....	A. Christie & Co.....	Jan. 12, 1881.	4,636 00
do do (new)—Heating apparatus.....	W. L. Appley.....	Sept. 30, 1880.	13,500 00
do Fort Dufferin—Repairs to retaining wall and glacis.....	Rainnie & DeBoo.....	June 3, 1882.	4,500 00
do Marine Hospital—Construction.....	W. Lawlor.....	May 12, 1882.	24,888 00
do Military Grounds—Gates & fences.....	S. O. & A. Fowler.....	Oct. 3, 1877.	691 00
do Military Storehouse—Repairs.....	B. Mooney & Son.....	Nov. 14, 1877.	6,073 00
do Post Office (old)—Construction.....	Causey, Stirling & Emery.....	June 7, 1873.	116,486 00
do do Heating apparatus.....	Walker, Pratt & Co.....	Sept. 30, 1875.	2,860 00



ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*PUBLIC BUILDINGS GENERALLY—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
<i>NEW BRUNSWICK—Continued.</i>			\$ cts.
St. John Post Office (old) Fittings.....	Bowman & Lelacheur.....	Dec. 16, 1874.	1,528 00
do do (new)—Construction, mason's, carpenter's work, &c.....	Jones, Booth & Doddridge.....	June 13, 1878.	75,452 00
do do Construction, iron work.....	R. Flaherty & Co.....	June 18, 1878.	24,000 00
do do Fittings.....	J. H. Fitzgibbons.....	Jan. 11, 1881.	3,400 00
do do Heating apparatus.....	T. H. McAvity.....	Nov. 8, 1880.	2,900 00
do Savings Bank (old)—Alterations..	Tilley & Redfern.....	Aug. 22, 1872.	9,330 00
do do (new)—Construction.....	Geo. Grant.....	Aug. 26, 1878.	33,200 00
do do Heating apparatus.....	Macdonald & Co.....	Dec. 3, 1879.	1,830 00
do do Vault doors.....	J. & J. Taylor.....	July 7, 1880.	1,500 00
Sussex Post Office, &c.—Construction.....	W. Toms.....	July 6, 1882.	12,500 00
<i>NOVA SCOTIA.</i>			
Halifax, Dominion Building—Alterations..	Robt. Brunton.....	Oct. 19, 1881..	4,300 00
Lawlor's Island, Quarantine Station—Steamer for.....	J. Bowser.....	Dec. 11, 1871.	7,077 00
Lunenburg Marine Hospital—Construction.	Hopps & Mitchell.....	April 14, 1879.	3,471 00
Pictou Custom House—do .....	Dodge & Dodge.....	Aug. 28, 1874.	18,500 00
Pictou Marine Hospital—do .....	McDonald & Stewart.....	Aug. 14, 1882.	5,735 00
Sydney do do .....	W. A. McKeen.....	Mar. 29, 1875.	6,720 00
<i>PRINCE EDWARD ISLAND.</i>			
Charlottetown, Dominion Building—Heating apparatus.	McDonald & Co.....	Oct. 13, 1876.	4,420 00
do do Alterations.....	Paul Lea.....	Oct. 28, 1881.	2,700 00
Souris Marine Hospital—Construction.....	J. McCormack.....	April 7, 1875..	2,600 00
<i>MANITOBA.</i>			
Brandon Immigrant Shed—Construction...	Grant & Gelley.....	Jan. 10, 1882.	8,200 00
Stoney Mountain Penitentiary do .....	Morrison & Barclay.....	July 16, 1874.	116,440 00
Winnipeg Post Office, &c. do .....	Jos. Wood.....	Oct. 22, 1873..	52,000 00
do do Alterations.....	Grant & Gelley.....	Jan. 12, 1882.	4,858 00
do Immigrant Hospital—Construction	Bowles & Sutherland.....	Aug. 2, 1880..	7,680 00
do do Shed do .....	Grant & Gelley.....	Jan. 10, 1882.	7,459 00
do Lieutenant Governor's Residence—Construction.....	Bowles & Williams.....	May 15, 1881.	23,995 00
Winnipeg Parliament Buildings—Construction.....	J. & P. Lyons & Co.....	April 25, 1881.	54,950 00
<i>NORTH-WEST TERRITORIES.</i>			
Qu'Appelle Immigrant Shed—Construction.....	J. McCallum.....	Oct. 23, 1882...	8,873 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con-*

PUBLIC BUILDINGS GENERALLY—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
BRITISH COLUMBIA.			\$ cts-
Nanaimo Post Office, &c.—Construction...	Smith & Clark.....	Sept 18, 1882...	23,250 00
New Westminster Penitentiary— do ...	Kinsman & Styles.....	Nov., 1874.....	139,305 00
do Post Office— do ...	Chs. Hayward.....	Dec. 6, 1881...	15,474 00
Victoria Custom House— do ...	Smith, Clark, McKay & Burgess...	June 24, 1874...	27,830 00
do Marine Hospital— do ...	Kinsman & Styles.....	Oct. 11, 1873...	14,686 00
do do Repairs.....	Smith & Clark.....	May 6, 1881...	1,148 00
do Post Office, &c.— do .....	do .....	Sept. 13, 1881...	7,975 00

PUBLIC BUILDINGS, OTTAWA.

Drill Hall—Construction .....	R. Whyte.....	Feb. 24, 1879...	18,870 00
do Fittings.....	P. Veale .....	Aug. 8, 1880...	1,193 00
do Latrines, &c.....	W. Toms .....	May 25, 1882...	965 00
do Winter sashes.....	L. Gratton.....	Oct. 6, 1880...	225 00
Geological Museum—Conversion of Clar- endon Hotel into a ..	Thos. Askwith.....	July 26, 1880...	8,950 00
do Counters and show cases.	J Burns.....	June 10, 1881...	1,874 00
do Heating apparatus.....	N. S. Blasdell & Co.....	Nov. 5, 1881...	3,500 00
do Main drain .....	B. Dunning .....	May 26, 1880...	181 90
Guard House on Major's Hill—Construc- tion of.....	T C. Pidgeon .....	Feb. 18, 1869...	660 00
Military Hospital—Conversion of a house into a .....	J. Cummings .....	Dec. 18, 1868...	1,200 00
Post Office—Construction.....	Hatch Bros .....	Nov. 25 and Dec. 4, 1872...	105,000 00
do Carpenter's work.....	Cameron & Mudie .....	May 23, 1874...	33,154 00
do Foundations and masonry.....	J. W. Webster.....	May 7, 1874...	50,122 00
do Iron work .....	G. Chapleau.....	June 13, 1874...	26,594 00
do Plumber's work .....	Blyth & Kerr .....	Oct. 14, 1875...	875 00
do Heating apparatus.....	R. Mitchell & Co.....	Sept 16, 1875...	5,220 00
Powder Magazine—Construction.....	Thos. Painter.....	Aug. 27, 1868...	678 00
Public Buildings—Central tower, lantern portion completion...	J. W. Webster .....	Oct. 28, 1871...	10,037 00
do Coal supply for 1870-71...	Coward & Co.....	Aug. 20, 1870...	1,450 00
do do 1871-72...	Evans Bros.....	Aug. 5, 1871...	1,450 00
do do 1872-73...	John Heney.....	Oct. 30, 1872...	1,900 00
do do 1873-74...	Geo. Thompson.....	Aug. 22, 1873...	12,440 00
do do 1874-75...	F. Clemow .....	Sept. 16, 1874...	3,250 00
do do 1875-76...	Beattie & Co.....	Oct. 19, 1875...	67,914 00
do do 1876-77...	E. J. Charlton .....	Oct. 13, 1876...	1,886 00
do do 1876-77...	J. W. McRae .....	Oct. 11, 1876...	1,840 00
do do 1878-79...	A. McIntosh.....	Aug. 9, 1878...	2,196 00
do do 1878-79...	L. Fauteux .....	Aug. 10, 1878...	759 00
do do 1880-81...	McRae, Ahern & Co.....	Sept. 4, 1880...	2,195 00
do do 1881-82...	G. W. McCullough.....	Aug. 15, 1881...	2,921 40
do do 1881-82...	E. J. Charlton .....	do .....	1,100 00
do do 1882-83...	G. W. McCullough.....	Aug. 22, 1882...	3,605 00
do East Block, iron staircase.....	A. Fleck .....	Aug. 4, 1874...	1,863 00
do do Repairs to roof.....	E. G. Laverdure.....	Aug. 10, 1874...	2,089 00
do do Vault for Finance Department .....	W. Toms .....	July 19, 1880...	7,000 00



ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*PUBLIC BUILDINGS, OTTAWA—*Continued.*

Work	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
Public Buildings—Sheds—Conversion into a Laboratory	Veale & Adams.....	July 30, 1881.	1,100 00
Rideau Hall Fire Engine.....	A. LePAGE.....	Apr. 13, 1872.	350 00
do Gas supply.....	Ottawa Gas Co.....	Oct. 2, 1872.	10,000 00
do Gas holders.....	James Perry.....	Aug. 22, 1877.	3,400 00
do Gas pipes.....	Blyth & Kerr.....	Oct. 30, 1872.	6,555 00
do Gate house.....	T. C. Pidgeon.....	Aug. 31, 1868.	1,300 00
do Ice for 1882.....	D. N. Charlebois.....	Feb. 14, 1882.	60 00
do Lodge—Addition to.....	John Stewart.....	Aug. 31, 1868.	875 00
do Shed for fire engine.....	T. C. Pidgeon.....	Apr. 13, 1872.	1,050 00
do Snow removal, 1870-71.....	J. Devlin.....	Feb. 1, 1869.	550 00
do do 1871-72.....	H. F. Sims.....	Dec. 18, 1871.	250 00
do do 1872-73.....	do.....	do 11, 1872.	450 00
do do 1873-74.....	J. Corbett.....	Nov. 4, 1873.	450 00
do do 1874-75.....	J. & W. McAdam.....	do 11, 1874.	650 00
do do 1875-76.....	A. Devlin.....	do 9, 1875.	525 00
do do 1876-77.....	L. Beaucage.....	do 3, 1876.	475 00
do do 1877-78.....	M. Curran.....	do 14, 1877.	310 00
do do 1879-80.....	P. Sicord.....	do 25, 1879.	385 00
do do 1880-81.....	Thomas Morris.....	Oct 26, 1880.	420 00
do do 1881-82.....	A. Devlin.....	do 28, 1881.	369 00
do do 1882-83.....	J. A. Hunter.....	Dec. 1, 1882.	365 00
do Trenches for water pipes.....	B. Gibson.....	Oct 28, 1874.	2,768 00
do Wash-house and laundry.....	Thomas Cundell.....	Nov. 7, 1878.	1,925 00

## SLIDES AND BOOMS.

OTTAWA DISTRICT.			
Calumet Slides—Repairs.....	M. Aubrey.....	Feb. 18, 1871.	635 00
do Piers—Construction.....	W. Davis.....	July 14, 1871.	1,644 00
Calumet and Mountain Slides—Repairs.....	Wm. McKnight.....	Feb. 12, 1872.	1,597 00
do do do.....	do.....	do 7, 1873.	1,223 00
Cedar Lake Dam—Construction.....	D. Fox.....	Nov. 24, 1873.	9,075 00
Black River Slide do.....	W. Davis.....	do 3, 1870.	5,778 00
do Repairs.....	R. O'Neil.....	Feb. 21, 1873.	1,421 00
Chats Slide—Repairs.....	M. Aubrey.....	do 18, 1871.	1,129 00
do Dam—Construction.....	W. Davis.....	July 14, 1871.	2,087 00
Chaudière, Hull & Gatineau Slides—Repairs	John Soulier.....	Feb. 16, 1871.	2,626 00
do do do.....	do.....	Feb. 6, 1872.	3,610 00
do do do.....	L. Turpine.....	Mar. 15, 1873.	1,768 00
Chenaux Boom—Extension of.....	A. H. Johnson.....	Dec. 10, 1872..	14,195 00
Coulouge River, High Falls Piers—Construction of.....	John Harvey.....	Feb. 9, 1871.	1,175 00
Coulouge and Black River Slides—Repairs.	John Proudfoot.....	Feb. 22, 1872.	2,271 00
Deschênes Rapids Bulkhead—Construction	John Harvey.....	Dec. 28, 1867.	4,000 00
DesJoachims Slide—Repairs.....	Wm. Richards.....	Oct. 24, 1874.	7,000 00
Dumoine River Slide at High Falls—Construction.....	Wm. Davis.....	July 14, 1871.	14,005 00
Dumoine Booms and Piers—Repairs.....	John Harvey.....	Feb. 3, 1872.	1,450 00
Gatineau River do Construction.....	Jas. Murphy.....	Feb. 18, 1874.	16,550 00
Grand Calumet Dam do.....	J. Harvey.....	July 25, 1878.	8,260 00
Hull Slide Bulkhead do.....	L. Turpine.....	Feb. 17, 1873.	1,259 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*SLIDES AND BOOMS—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
<b>OTTAWA DISTRICT—Continued.</b>			\$ cts.
Madawaska River, Nagle Dam—Reconstruction .....	John Harvey.....	Nov. 15, 1870.	2,215 00
do Dams and Slides—Construction and repairs. do .....	do .....	Mar. 1, 1871.	2,011 00
do do do .....	do .....	do .....	9,464 00
do Booms and Piers—Repairs. ....	do .....	Mar. 22, 1872.	6,228 00
do Grassey Bay—Construction of booms and piers.....	do .....	do .....	1,350 00
do Dam—Repairs.....	R. O'Neil.....	Feb. 7, 1873.	1,723 00
do Piers and Booms—Repairs.....	West & O'Connor.....	Feb. 13, 1874.	2,384 00
Mountain Slide Piers—Construction .....	W. Davis.....	Aug. 12, 1871.	1,068 00
do Repairs .....	W. Thompson.....	Feb. 7, 1874.	1,496 00
Petewawa River Slides—Repairs.....	M. Aubrey.....	Feb. 18, 1871.	1,865 00
do do .....	J. Rowan.....	Mar. 3, 1873.	6,899 00
do (lower) Piers and Booms—Repairs .....	West & O'Connor.....	Feb. 13, 1874.	2,129 00
do (upper) do .....	John Harvey.....	Feb. 17, 1874.	6,855 00
Portage du Fort Dam & Pier—Construction .....	W. Davis.....	July 14, 1871.	1,191 00
do Bulkhead, Slide, Dam, Piers—Construction and repairs .....	J. Proudfoot.....	Dec. 18, 1874.	5,966 00
Rivière des Prairies Piers—Construction .....	F. B. McNamee .....	July 17, 1871.	5,235 00
do do Repairs .....	R. Stanley.....	Sept. 25, 1874.	2,321 00
Rocher Capitaine, Crib, Slide, Piers and Booms—Construction .....	J. Soulier.....	Nov. 2, 1872.	23,155 00
<b>TRENT DISTRICT.</b>			
Brooks Rapids—Improvement.....	Jas. Dimwoodie.....	June 3, 1868.	1,200 00
Fenelon River Piers and Booms—Construction .....	John Boyd .....	Dec. 15, 1873	3,090 00
Trent River Works—Repairs .....	Thos. Watters.....	Oct. 8, 1870.	3,825 00
Whitelaws Dam and Piers—Repairs.....	H. Calcutt.....	Sept. 16, 1873.	2,350 00
<b>ST. MAURICE DISTRICT.</b>			
Grandes Piles Dam—Construction.....	O. Z. Hamel.....	Sept. 9, 1872.	13,143 00
do Flat Dam— do .....	do .....	Oct. 24, 1874.	9,736 00
La Tuque Falls Pier— do .....	J. W. Ormsby.....	July 3, 1871.	2,450 00
St Maurice River Booms and Piers—Construction .....	Richard & fils.....	July 8, 1871.	33,890 00
<b>SAGUENAY DISTRICT.</b>			
Lake St. John Booms and Dam—Repairs...	H. Dufour.....	Oct. 28, 1873.	2,713 00

## ROADS.

Metapedia Road—Repairs .....	Daniel Fraser.....	July 15, 1867.	1,044 00
do Keep in repair .....	do .....	May 28, 1868.	\$800 per year
do Construction of portion..	do .....	April 8, 1870.	17,126 00
Metapedia Bridge—Rebuilding.....	do .....	Aug. 10, 1870.	1,000 00
do do .....	Riby and others.....	Aug. 11, 1870.	1,200 00
do Keep in repair.....	D. Fraser.....	Dec. 29, 1874.	800 00

ALPHABETICAL INDEX of Contracts let by the Department of Public Works, &c.—*Con.*ROADS—*Continued.*

Work.	Name of Contractor.	Year.	Amount of Contract.
			\$ cts.
St. Lawrence Gulf Road—Construction.....	Marcel Leclerc.....	July 11, 1870.	588 00
do do do .....	do .....	July 18, 1870.	448 00
do do do .....	do .....	Aug. 2, 1870.	1,610 00
do do do .....	do .....	Aug. 6, 1870.	72 00
do Western Division do .....	Jos. Fournier and others.....	Sept. 5, 1870.	868 00
do do do .....	Marcel Leclerc .....	Sept. 10, 1870.	515 00
do do do .....	do .....	Oct. 3, 1870.	1,980 00
do do do .....	do .....	Oct. 4, 1870.	930 00
do do do .....	Malory & Gagnon.....	do	968 00
Red River Route—Launches and boats for.	Wm. Watts.....	Mar. 7, 1873.	1,400 00
do Launch for.....	A. A. Benway.....	do	700 00
do Engines and boilers for.	Gregory, Burley & Co.....	do	3,000 00
do Operation of line .....	W. H. Carpenter & Co.....	May 4, 1874.	75,000 00
do Bridging Muskeg at N. W. angle.....	D. F. Begg.....	Oct. 8, 1874.	562 00
do Care of plant.....	W. H. Carpenter & Co.....	Oct. 21, 1874.	16,000 00
do Operation of line (for 2 years from Nov. 1, '74)	do .....	Feb. 18, 1875.	166,000 00

## BRIDGES.

Belœil Bridge—Approaches.....	Bonneville & O'Brien.....	Feb. 21, 1874.	8,097 00
DesJoachims Bridge—Construction.....	Starrs, Herbert & O'Hanly.....	Sept. 8, 1882.	25,300 00
Manotick do do .....	J. R. O'Connor.....	Aug. 21, 1867.	6,354 00
Portage du Fort Bridge do .....	Row & Koyl.....	Nov. 21, 1871.	15,500 00
Union Suspension Bridge—Reconstruction of roadway.....	Geo. Crain.....	July 22, 1881.	4,890 00

## TELEGRAPHS.

Anticosti and Magdalen Islands Telegraph Lines—Supply of poles.....	T. J. Lamontagne.....	July 7, 1880.	8,175 00
Anticosti and Magdalen Islands Telegraph Lines—Construction of line.....	Bertrand & Kennedy.....	Nov. 23, 1880.	16,198 00
British Columbia Telegraph Barge—Construction .....	Warren, Simpson & Smith.....	July 7, 1880.	2,970 00
Baie St. Paul to Chicoutimi Telegraph Line—Distribution of poles.....	F. Gauthier .....	Sept. 18, 1880.	2,007 00
do do Construction.....	A. Sylvain .....	Sept. 28, 1880.	4,050 00
do do Completion .....	Montreal Telegraph Co.....	October, 1881.	9,000 00
Murray Bay to mouth of River Saguenay Line—Supply of poles.....	Tremblay, Dallaire & Morin.....	Sept. 20, 1880.	945 00
do do Construction.....	A. Sylvain .....	Sept. 28, 1880.	1,760 00
do do Completion .....	Montreal Telegraph Co.....	October, 1881.	4,400 00
North Sydney to Cape North (N.S.) Telegraph Line—Construction and operation	Dominion do .....	April 18, 1881.	.....

N.B.—The above list comprises only the contracts for works executed under a written agreement with the Department, and does not include the contracts for railways and canals.

APPENDIX No. 40.

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MEMORANDUM

ON

CANADIAN CANALS

AND

PLANS AND MODELS

SENT TO THE

PARIS EXHIBITION IN 1878.

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 APPENDIX No. 40.
 

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 MEMORANDUM ON CANADIAN CANALS AND PLANS AND MODELS  
 SENT TO THE PARIS EXHIBITION IN 1878.

No. 35694.

MEMORANDUM on our artificial lines of navigation in connection with the representation of Canada at the Paris Exhibition of 1878. (Written in May, 1878.)

The immense line of navigation formed by the River St. Lawrence and the chain of the great western lakes, unrivalled in the eyes of the tourist in search of the picturesque and landscapes at once beautiful and majestic, is also unsurpassed by any other on the northern portion of the American Continent as regards the advantages it affords.

If we bear in mind its extent, 1,398 miles from Fond du Lac at the head of Lake Superior to Montreal, the commercial metropolis of Canada, and nearly 1,000 miles from that city to the ocean, we shall easily realize its great importance from a commercial and industrial point of view.

Its width is necessarily unequal; on the great lakes, the distance between the two shores, at some points, is 150 miles, while in some parts of the river it is less than one-fourth of a mile. There is also throughout its whole course a difference in depth, due in part to the conformation of soil.

Some idea may however be formed of the advantages afforded to Canada by this splendid line of water communication, from the fact that the depth of water, varying as it does, is still sufficient to furnish at ordinary water to vessels drawing 12 feet, a certain and secure line of navigation.

Nevertheless, and from the very fact that this waterway presents to the traveller desirous of beholding beautiful landscapes, scenes of unrivalled beauty, in its falls, its cascades, its rapids, and natural harbors, the establishment throughout its whole course of an uninterrupted line of navigation required an amount of skill and labor of no ordinary character. In some places it was necessary to enlarge by means of dredging, the entrance to ports difficult of access; to overcome extensive rapids with violent currents, by means of canals of great dimensions, to deepen the rivers, construct piers, and, in short, carry out a vast number of important improvements of various kinds.

By those means, the chain of the great lakes and the River St. Lawrence have been made a great artery of navigation, serving as a direct line of communication between the town and villages along its course, and furnishing also the means of forwarding to the cities of Europe the products of our markets.

Towards the end of last century, the necessity of establishing easy and direct communication between all points on the river was clearly recognized, and the first step in that direction, was the removal of obstructions from the River St. Pierre, between Montreal and Lachine, across the marshes now traversed by the Lachine Canal, the construction of four canals at the places known as "Faucilles," "Trou du Moulin," "Rocher Fendu," and "Côteau Rapids," between Lakes St. Louis and St. Francis, on the River St. Lawrence, and of another at the village of Mille Roches, on the south side of the Cornwall Canal. These canals were of small dimensions, and, were designed to serve only for boats carrying thirty barrels of flour. The locks which were of cut stone, were only 6 feet wide, with  $2\frac{1}{2}$  feet of water on the sills.

The frequent struggles, of which the colony was then the scene, prevented the Governors from giving their whole attention to these attempts at artificial navigation,



but in 1804, and subsequently in 1817, these old canals were repaired and enlarged. Their width was increased to 12 feet and their depth to  $3\frac{1}{2}$  feet on the sills of the locks, so as to accommodate vessels with a load of 100 barrels of flour. Then, little by little, the spirit of progress made itself more sensibly felt, and the various Governments commenced the erection of our great canals, such as the Lachine and the Welland, which, after various improvements and enlargements, are about to become true works of art, magnificent proofs of the spirit of enterprise and the intellectual and commercial advancement of the Canadian Confederation.

Some details will now be given respecting the canals constructed for the purpose of linking together the several navigable water stretches along the course of the River St. Lawrence and the great lakes of the West. Much of the following matter has been derived from the various reports of the Engineer in Chief of the Public Works Department, Mr. John Page, as also from that valuable compilation, "The Public Works Report for 1867," prepared with much care and singular ability by the able Assistant Engineer in Chief, Mr. G. F. Baillaigé.

#### *Lachine Canal.*

Immediately above the City of Montreal are the first rapids which obstruct navigation. They are the Sault St. Louis Rapids, and the necessity of overcoming them caused the construction of the Lachine Canal. This canal extends from Montreal to Lachine, and lies on the south side of the island of Montreal.

During the last century a boat canal with  $2\frac{1}{2}$  feet of water was formed *via* River St. Pierre to Montreal, being the first attempt to overcome the Sault St. Louis Rapids by artificial navigation. Subsequently, in the year 1815, an application was made to the Legislature for power to establish a Joint Stock Company for the construction of a canal of larger dimensions, which Company was in fact formed in 1819, with a capital of \$150,000. But, for various reasons, the commencement of the work was continually delayed, until in 1821, the Legislature of Lower Canada appointed Commissioners, who were entrusted with its execution. The canal was completed and opened in 1825. It was eight and one-half miles in length, its breadth at bottom was 28 feet, and at water surface it varied from 36 to 48 feet, with a depth of 5 feet. The locks, 100 feet long and 26 feet wide, were seven in number, and were sufficient to accommodate vessels drawing  $4\frac{1}{2}$  feet of water.

The commercial growth of the country necessitated, in 1843, the enlargement of the canal to 80 feet at bottom and 120 feet at water surface, and of the locks, which were reduced in number from seven to five and increased in dimensions to 200 feet in length by 45 feet in breadth.

For the same reason, during subsequent years, new improvements had to be made, until in 1871, the Government decided to give the whole line of navigation a sufficient depth to admit of the passage of vessels drawing 12 feet of water. The new enlargement of the Lachine Canal was commenced in 1874, and these works which are now being completed will in every respect be fit to be cited as a model for works of the kind.

When finished, the locks will be 270 feet in length, by 45 in breadth. The length of the Canal when enlarged will be  $8\frac{1}{2}$  miles, and the number of locks remains the same. The depth on the sills will be 18 feet for the two lower locks and 14 feet for the three others, the draught of water having been, however, limited for the present to 12 feet, to be eventually increased to 14 feet when trade requires it. The canal is protected on either side and throughout its entire length by a stone wall.

#### *Beauharnois Canal.*

The object in constructing this canal was to connect Lake St. Louis with Lake St. Francis, and to avoid the rapids known as the "Cascades," "Buisson," "Chute à Bonleau," "Cedars," and "Coteau," the length of which, seven miles, coupled with the

shallowness of the water and the great force of the current, rendered the ascent of vessels impossible.

As stated above, and as an initial step, the Government constructed four small boat canals on the north side of the St. Lawrence; but notwithstanding the arrangements made for towing and the successive enlargements made in 1804 and 1817, they were soon found insufficient for the requirements of the trade.

Nevertheless, it was only in 1833 that the Government of Lower Canada ordered preliminary surveys to be made. Several plans were submitted by Messrs. Mills, Stephenson, Phillpotts, and Keefer, some recommending the north shore and others the south, and after examination it was determined in 1842 to adopt the plan of Mr. Stephenson. The works were commenced that same year on the south shore of the St. Lawrence.

As the construction of that work was admitted to be a matter of great necessity, it was pushed on with vigor; and this canal was first navigated in 1845. The breadth at bottom was 80 feet and at the water surface 120 feet. The locks number seven, distributed over a length of  $1\frac{1}{4}$  miles (total length of canal), with a depth of water of 9 feet on the lock sills; and the total rise of lockage from Lake St. Louis to Lake St. Francis was and is now  $82\frac{1}{2}$  feet.

From 1872 to 1876 the Government of Canada caused surveys to be made on the north shore of the river, with a view to ascertain the possibility and probable cost of a canal to connect the two lakes, from Cascades Bay (Lake St. Louis) to McIntyre's Point (Lake St. Francis). Those surveys were made under the direction of G. F. Baillargé, Esq., Assistant Chief Engineer of Public Works, who submitted first in 1874, and subsequently in 1875, reports and estimates based on the said surveys. A survey was also made from 1874 to 1876 on the south shore in order to ascertain the probable cost of enlarging the Beauharnois Canal. No definite result has, however, been yet reached in the matter.

#### *Cornwall Canal.*

Navigation is interrupted from the town of Cornwall to the village of Dickinson's Landing by a series of rapids known as the Long Sault, causing the river to flow with great violence, and presenting a formidable obstacle to ascending vessels. The rapids, however are navigated with perfect safety by descending vessels.

Considering that it was absolutely necessary to secure an uninterrupted line of navigation from Lake Erie to Montreal, the Legislature of Upper Canada turned its attention, in 1816, to the task of overcoming these rapids by means of a canal.

But it would seem that, from various causes, the Commission appointed in 1818 to examine the question, was unable to attain any result whatever, until 1833, at which period its members submitted definite plans for the execution of the works, which were commenced in 1834.

Serious financial embarrassment, however, weighed so heavily on the Commission that, after several interruptions in 1837 and 1838, the work of construction was suspended in 1839. After the Legislative Union of the two Canadas, this canal was placed under the control of the Board of Works, who succeeded in bringing the undertaking to a successful issue at the close of the year 1842.

The length of this artificial line of navigation was then, and still is, eleven and a-half miles, overcoming a fall of 48 feet, by means of seven locks, each 200 feet in length by 55 in breadth, and a depth of water of 9 feet. The bed of the canal was 100 feet in breadth, and the width at the water surface was 150 feet. But, like all the other works of this nature, it became, after a certain lapse of time, insufficient, and, in 1876, it was decided to enlarge the canal in accordance with the scale proposed by the Canal Commissioners, that is to say: locks  $270 \times 45$ , with 15 feet of water in the canal and 14 feet on the sills of the locks; this scale had already been applied to the Lachine and Welland Canals, with the exception stated, namely, that the navigable draft throughout the canal has been limited to 12 feet for the present requirements of the trade.

The works are now in progress of construction.

*Williamsburgh Canals.*

The three following canals are known under this collective name, viz: the "Farran's Point," the "Rapide Plat," and the "Galops."

The Farran's Point Canal, and that of Rapide Plat, were constructed to overcome the rapids of the same name, and the Galops Canal avoids the Pointe aux Iroquois, the Pointe Cardinal and the Galops Rapids.

The violence of these currents is not such as to prevent their being descended by vessels, so that the canals are only used to furnish a route for vessels proceeding up the river. It was in 1833 that the idea of building these canals was first discussed, and their construction was commenced in 1844.

Farran's Point Canal is about three-quarters of a mile in length and has one lock, and that of Rapide Plat is four miles long and has two locks.

The Galops Canal has experienced many changes before reaching its present condition. There were at first two distinct canals, one to avoid the Iroquois Rapid, the second to avoid the Galops Rapid. But after a few years experience it was found that the Iroquois Canal was not deep enough and it was in consequence decided to connect it with the Galops Canal. The work was begun in 1851 under J. Page as resident Engineer, and completed in 1856 under G. F. Baillairgé who succeeded him in that capacity after his appointment as Chief Engineer in October, 1853, and the whole work was subsequently known under the collective name of the Galops Canal.

The dimensions of the locks (200 feet x 45 feet) the width of the Canal at bottom (50 feet) and that at the water level (90 feet) are the same throughout the three canals which are frequently called the Williamsburgh Canals.

Further than the ordinary works of repair and maintenance, these works have experienced no new transformation since their original construction.

In order, however, to give greater facilities to vessels which descend the rapids and to test the practicability of establishing navigation for vessels ascending, the Government has commenced to deepen the shallowest portion of the rapids towards the head of the Galops Canal.

*Welland Canal.*

This canal is, without denial, the most important and the largest of all the great works by means of which an uninterrupted navigation between the St. Lawrence and the western lakes has been established. It surpasses all others in its extent, by the fall overcome by it and the numerous difficulties which had to be surmounted in order to ensure its completion.

Between Lake Erie and Lake Ontario, the St. Lawrence, taking here the name of Niagara River, runs with great velocity to within seventeen miles of its mouth. At this point the current, having grown violent in the extreme, precipitates itself in boiling cascades from a height of nearly 160 feet and forms the finest falls in the world—the Niagara Falls.

Naturally, continuous navigation is impossible through this river, and the Legislature of Upper Canada clearly saw that in the interest of the section of the country between the two lakes, it was necessary to establish an artificial route for its requirements.

The first step was taken in 1816, but it was not very successful, and the project passed through a variety of phases up to 1824, when a Joint Stock Company with a capital stock of \$150,000 undertook the construction of a canal of small dimensions. But the smallness of the project soon caused it to be abandoned, and in 1825 it was proposed to construct a canal sufficiently large to admit schooners and sloops. The entrance on Lake Ontario was to be at the mouth of Twelve Mile Creek (Port Dalhousie) and the upper terminus at the Welland River. The canal was to be supplied from the Welland River; vessels passing from Lake Erie to Lake Ontario were to descend the Niagara River as far as the mouth of the Welland, and thence ascend that river about eight and three-quarter miles and enter the canal at Port Robinson;

then cross a ridge by means of a deep cut, and gradually descend to Lake Ontario by means of locks.

These locks were to have been of wood, 110 feet in length and 22 feet in breadth; the cross section was to be 26 feet at bottom and 58 feet at the water surface, except at the Deep Cut, where for a distance of two miles it was to be only 15 feet at bottom.

The depth was to be 8 feet.

But it was admitted, even at that period, that the navigation of the Niagara River would present great drawbacks, and as the current was very strong it was a matter of doubt whether vessels with considerable cargoes would be able easily to ascend it. Then great difficulties, due to the want of money and to a terrible epidemic which caused great mortality among the laborers, frequently stopped the progress of the work, and in addition to all this, a land-slide filled up nearly the whole of the Deep Cut just when the work of excavation was all but finished. This accident, a consequence of the looseness of the soil, caused the abandonment of the plan of feeding the Canal with the waters of the Welland River.

Amongst the various plans proposed at this period for the feeding of the Canal, that which recommended the use of the waters of the Grand River for the purpose, while retaining Port Robinson as the upper terminus and Port Dalhousie as the lower, was selected. The water was thus brought to the Canal by means of a feeder the length of which was 22 miles, the breadth at bottom and at surface respectively, 20 feet and 40 feet, and the depth 5 feet.

The works were finished in 1829, and vessels passed from one lake to the other on the 30th November, 1829.

This was, however, only the first step, and it soon became necessary to prepare for improvements and enlargements. The length of the principal section of the Canal was first increased by extending it to Port Colborne, on Lake Erie, and a length of five miles of the feeder was incorporated with the Canal after a previous enlargement. The Canal proper was  $27\frac{1}{2}$  miles in length, overcoming a fall of nearly 30 feet. All the locks, numbering forty, were 110 feet by 22, with the exception of the three first, above Port Dalhousie, which were 130 x 32 and one at Port Colborne 125 x 24.

From 1833 to 1841, no improvement was undertaken, but from 1842 to 1848, the Government which then had the Canal under its control, widened the bottom to 21 feet and replaced the 36 wooden locks by 27 cut stone locks, their dimensions being  $150 \times 26\frac{1}{2}$  with  $8\frac{1}{2}$  feet of water on the sills.

The Grand River feeder was converted into a navigable Canal, with a breadth of 26 feet at bottom and 60 to 70 feet at the water's surface; the harbors of Port Dalhousie and Port Colborne were enlarged; the locks at these ports were rebuilt in stone, and were 200 feet in length by 45 in breadth with  $9\frac{1}{2}$  feet water on the sills. Finally the Port Maitland branch was constructed ( $1\frac{3}{4}$  miles) with a stone lock  $185 \times 45$  overcoming a fall of  $8\frac{1}{2}$  feet.

During the construction of these works it was found that the Grand River could not constantly furnish the required water, especially during periods of great drought, and in order to remedy this, it was decided to carry out the old plan, of feeding the Canal from the waters of Lake Erie, by adopting its level as the summit level of the Canal—which was to be lowered 8 feet—and a lock was also constructed descending from the feeder into the main line. This work was begun in 1846. In 1853, the bottom width of the summit reach was widened to 50 feet, and the whole section of the Canal was deepened so as to give 10 feet of water on the lock sills.

In 1860 the Government, seeing that the capacity of the Welland Canal was no longer proportioned to the requirements of commerce, decided to carry on fresh improvements, and the following scale for all the canals was fixed by a Commission appointed to examine the lines of navigation generally, and to ascertain the best means to be adopted to increase their usefulness, viz.: for the locks, 270 x 45 feet, average width at bottom of canals 100 feet, general depth 13 feet, and 12 feet water on the lock sills.

The Chief Engineer of Public Works, Mr. J. Page, submitted in 1872, to his Department, a plan for the enlargement of the Welland Canal based on that scale. The conclusions of that Report, though keenly opposed by Messrs. Keefer, Gzowski and McAlpine were wholly accepted by the Department, and the works were commenced in 1873. On recommendation made to the Government in April 1875, the original plan of enlargement was modified to the extent of giving a depth of 14 feet on the lock sills. This was approved and adopted by the Government, and steps were taken to place the sills of the locks at the required depth.

The works will probably be finished in 1880, and the total length of the enlarged Canal will be 26½ miles, and the total rise of lockage 336½ feet.

#### *The Paris Exhibition.*

It is comparatively easy for the inhabitants of our country to form an idea of the amount of labor and energy necessary to undertake and carry out to completion, works of such magnitude, but for the inhabitants of Europe, who sometimes know little of Canada, it is evident that something more than a simple enumeration of facts is needed, it being highly important to make it known abroad that Canada is no longer what it was represented to be—but a short time ago—a country comparatively but little advanced.

An exact representation by means of maps, drawings and models, at the Universal Exhibition to be shortly opened in Paris, of the great works constructed in this country, up to the present date, was deemed to be the best means of popularizing in France and abroad, the resources of Canada.

Early last autumn the Hon. Mr. Mackenzie directed the Chief Engineer, Mr. Page, to cause drawings to be prepared, showing the general configuration and the details of construction of the Lachine and Welland Canals, these two works being the most important and combining the most recent improvements—and in order to furnish a still clearer idea of the works, two models in wood were constructed, representing a lock complete with gates, working and suspension gear, feeders, weirs, towpaths, &c. They were finished about the 8th instant, and the public were admitted to view them before their shipment to Europe.

The number of persons who visited the rooms when these models were exhibited, is estimated at more than 2,000.

#### *Map of the Welland Canal.*

This map, 13 feet by 9 feet, was prepared under the direction of Mr. Munro, C.E., by Messrs. O'Donnell and Howard.

The drawing is superb, and the series of photographs surrounding the map constitutes a most attractive feature and were greatly admired. They represent the Falls of Niagara, the Suspension Bridge and some of the most important works of the Canal.

The main portion of the map shows the entire line of the Canal and the surrounding country. Beneath is the new line from Port Dalhousie to Thorold, and a complete profile of the section in course of enlargement. To the right and left are grouped detailed drawings of the following structures:—The Welland aqueduct, Port Colborne, a lift-lock, a regulating weir, and a tunnel for the Great Western Railway.

The appearance of the whole work is very fine, and those who shared in its preparation may well be proud of their success.

#### *Map of the Lachine Canal.*

This map first gives a general view of the line of the Canal from the port of Montreal to Lachine, then a complete profile of the line, and various detailed drawings and sections, both vertical and horizontal, showing the bridges, aqueducts,

weirs, gates, &c., tastefully grouped around the main design. This is a complete pen and ink drawing. We do not exaggerate in asserting that it is a true work of art, exquisitely done, and faultlessly exact in every particular. The harmony preserved between the various parts, the delicacy of the lines, the elegance and general finish of the work, denote the possession of rare talent and thorough knowledge of their art, by those who took part in it. Its value is enhanced by the fact that it is not, as might be supposed, a mere copy, but, in fact, an entirely original compilation. This map was prepared by Mr. Michaud, assisted by Messrs. Boulay and Bourgeois, under the direction of Mr. G. F. Baillairgé, Superintending Engineer of Canals, etc., of the Province of Quebec.

#### *The Models.*

The lock models—two in number—were constructed for the purpose of explaining to the visitor better than could be done by means of drawings, the general arrangement of a lock, with its sluices, weirs, tow-paths and bridges, gates, &c.

The largest one is 12 feet in length, 3 feet 9 inches wide and about 8 inches in height. It shows on a scale of 0·01 (1 to 100) a lock 270 feet by 45 feet, with its recess walls and part of its upper and lower wing-walls, as well as the supply weir, with its regulating sluices which serve to maintain a uniform height of water when vessels are being locked through. This model, though entirely of wood, is so skillfully painted that the imitation of cut-stone, rubble masonry and tow-paths is calculated to deceive even a practised eye.

The second model, which is  $5\frac{1}{2}$  feet in length by  $4\frac{1}{2}$  feet in width, and 3 feet in height, represents the gates of a lock with their working gear, on a scale of 0·05 (1 in 20). This is a reproduction in miniature of the utmost exactness. Nothing that forms part of the structure, such as bolts, bands, chains, &c., has been forgotten. The suspension gear for the gates is that which has recently been invented and patented by Mr. T. B. Townsend, one of the Engineers of the Department of Public Works, and is a very important improvement. The steel and brass work, which is remarkably well finished, is from the workshops of Mr. Chanteloup, of Montreal.

The designs of these two models were prepared under the orders of Mr. Page by Mr. R. Steckel, a distinguished mathematician, employed as one of the Assistant Engineers of the Department. He was assisted by Mr. J. C. Taché, as draughtsman, and by Mr. Jos. Vincent as modeller.

A. GOBEIL.

MAY, 1878.

APPENDIX No. 41.

EXPENDITURE

BY

PROVINCIAL GOVERNMENT

OF

PRINCE EDWARD ISLAND

ON

HARBOUR WORKS

PRIOR TO CONFEDERATION 1st JULY, 1873.

ALSO

REVENUE COLLECTED BY PROVINCIAL GOVERNMENT FROM HAR-  
BOUR WORKS AND BRIDGES, FROM 1st APRIL, 1873  
TO 31<sup>st</sup> DECEMBER, 1882.

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## APPENDIX

STATEMENT of Expenditures by Local Government of Prince Edward Island  
federation, 1st

No. 32454.

TABLE I

No.	Name of Harbour, &c.	1831.	1832.	1833.	1834.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Bedeque.....				129 78
2	Brudenell and Montague.....		122 47	97 33	171 96
3	Charlottetown Harbour.....	1,402 00	1,651 45	1,849 33	3,210 31
4	Crapaud.....				
5	Hillsboro' and Elliott Rivers.....	162 22	97 33		
6	Malpeque or Richmond Bay.....	369 87	95 30	32 04	32 04
7	New London.....				
8	Orwell.....				
9	Pinette.....				
		1,934 09	1,966 55	1,978 70	3,544 09

TABLE II

No.	Name of Harbour, &c.	Brought down, 1831-40.	1841.	1842.	1843.	1844.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Bedeque.....	1,401 60	882 49	788 40	697 55	
2	Brudenell and Montague.....	2,324 63	195 48	109 50	181 69	207 65
3	Cable Head.....			103 82	178 44	
4	Cardigan.....			64 89		38 93
5	Charlottetown Harbour.....	10,916 05	1,248 03	2,476 57	2,422 17	4,784 43
6	Crapaud.....	194 66	129 77	113 56	64 89	
7	Grand River, Lot 55.....		97 33	303 35	207 64	184 93
8	Hillsboro' and Elliott Rivers.....	622 92				
9	Malpeque or Richmond Bay.....	2,913 91	363 38	64 89	64 89	454 22
10	Murray Harbour.....			48 67	25 96	
11	New London.....	827 33		22 71		97 33
12	Orwell.....	64 89			162 22	268 20
13	Pinette.....	324 44	162 22			81 11
14	Pownall Bay.....					
15	Rustico.....					
16	St. Peter's Bay.....					
17	Souris.....			145 46	81 11	
		19,590 43	3,078 70	4,241 82	4,086 56	6,116 79



## No. 41.

on Harbours, Piers, &c., from 1831 to date of entry of Province into Con-  
July, 1873.

—1831-40.

1835.	1836.	1837.	1838.	1839.	1840.	Total, 1831-40. Carried down.	No.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
149 24	551 56	194 67	162 22	162 22	752 71	1,401 60	1
		97 33	956 30	97 33	81 11	2,324 63	2
	1,750 38	454 22	486 67	79 25	32 44	10,916 05	3
				162 22	32 44	194 66	4
			363 37			622 92	5
	146 00		405 55	788 40	1,044 71	2,913 91	6
	454 22		324 44	48 67		827 33	7
				64 89		64 89	8
			324 44			324 44	9
149 24	2,902 16	746 22	3,022 99	1,402 98	1,943 41	19,590 43	

—1841-50.

1845.	1846.	1847.	1848.	1849.	1850.	Total, 1831-50, Carried down.	No.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
480 44						4,255 48	1
		32 60	64 89	48 67	48 67	3,213 78	2
19 47		48 67				350 40	3
38 93						142 75	4
561 29	764 83	397 72	48 67		81 11	23,700 86	5
					32 44	535 32	6
						793 25	7
		38 93	97 33			759 18	8
107 07		97 33	48 67			4,114 36	9
64 89						139 52	10
185 73		64 89	97 33			1,265 32	11
8 11	8 11			129 78	129 78	771 09	12
				9 73	9 73	587 23	13
		97 33	81 11			178 44	14
97 33		55 16	162 22		25 96	340 67	15
81 11		259 55	64 89	22 71	19 47	447 73	16
			324 44	162 22	162 22	875 45	17
1,614 37	772 94	1,092 18	989 55	373 11	509 38	42,465 83	

STATEMENT of Expenditure by Local Government

TABLE III

No.	Name of Harbour, &c.	Brought down.	1851.	1852.	1853.	1854.
		1831-50.				
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Bedeque .....	4,250 48			506 95	194 67
2	Brudenell and Montague.....	3,213 78	324 44	129 78	1,004 96	343 91
3	Cable Head.....	350 40				
4	Cardigan.....	142 75	120 44	164 65		138 87
5	Cascumpec.....				113 39	97 33
6	Charlottetown Harbour.....	23,700 86	32 44	1,080 40	935 00	496 40
7	Crapaud.....	535 32	129 78	328 60	330 06	380 24
8	Grand River, Lot 55.....	793 25	16 22	48 67	50 12	22 71
9	Hillsboro' and Elliott Rivers.....	759 18			97 33	
10	Malpeque or Richmond Bay.....	4,114 36	71 38	240 08	313 74	506 14
11	Murray Harbour.....	139 52		32 44	60 02	71 38
12	New London.....	1,265 32	32 44		75 27	
13	Orwell.....	771 09	32 44	379 59	77 22	
14	Pinette.....	587 23		210 89		
15	Pownall Bay.....	178 44	48 67	32 44	486 67	
16	Rustico.....	340 67		81 11		
17	St. Peter's Bay.....	447 73	64 89	146 00	149 24	199 53
18	Souris.....	875 45	162 22	61 64	19 47	25 96
19	Wood Islands.....					
		42,465 83	1,035 36	2,936 29	4,381 66	2,477 14

TABLE IV

No.	Name of Harbour, &c.	Brought down.	1861.	1862.	1863.	1864.
		1831-60.				
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Bedeque.....	6,538 01	421 78	470 44	274 15	2,101 87
2	Brudenell and Montague.....	6,118 57	115 02	554 48	130 83	427 93
3	Cable Head.....	350 40				
4	Cardigan.....	1,669 20			40 23	90 03
5	Cascumpec.....	729 99		41 69	69 43	16 22
6	Charlottetown Harbour.....	42,104 23	430 58		55 16	1,849 53
7	Cove Head.....					
8	Crapaud.....	3,496 23	35 28	32 44	1,609 25	859 78
9	Grand River, Lot 55.....	1,644 47	12 67	8 27	92 96	142 00
10	Hillsboro' and Elliott Rivers.....	3,797 84	623 74	335 80	221 43	
11	Malpeque or Richmond Bay.....	6,503 28	174 55	210 89	220 62	536 42
12	Murray Harbour.....	957 12			186 55	97 33
13	New London.....	1,533 63	64 89	21 90		
14	Orwell.....	2,684 33	100 58	54 02		479 24
15	Pinette.....	863 01	25 96	97 41	8 84	
16	Pownall Bay.....	1,029 46	97 33		16 22	162 52
17	Rustico.....	504 35		29 20	95 70	
18	St. Peter's Bay.....	1,837 79	48 67	83 54		908 44
19	Souris.....	1,423 76	38 56	257 93	530 47	783 25
20	Tignish.....					
21	West Point.....					
22	Wood Islands.....	282 10				205 58
		84,067 87	2,189 61	2,198 01	3,551 84	8,660 14

of Prince Edward Island, &c.—Continued.

—1851-1860.

1855.	1856.	1857.	1858.	1859.	1860.	Total, 1831-60, Carried down	No.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
163 11	949 12	121 66	64 89	214 13	73 00	6,538 01	1
284 05	247 04	293 87	40 55	86 95	149 24	6,118 57	2
.....	.....	.....	.....	.....	.....	350 40	3
389 33	227 11	.....	280 20	32 44	60 02	1,689 20	4
162 22	308 22	.....	.....	.....	.....	729 99	5
1,887 90	6,519 51	5,868 22	1,003 53	203 36	376 71	42,104 38	6
431 51	398 09	210 89	294 27	231 98	225 49	3,496 23	7
194 67	204 13	184 93	32 44	.....	97 33	1,644 47	8
622 93	343 91	279 02	470 44	554 40	670 63	3,797 84	9
558 05	68 13	24 66	162 22	116 80	327 72	6,503 28	10
146 00	131 40	32 44	107 07	129 78	107 07	957 12	11
.....	.....	.....	.....	.....	.....	160 60	12
270 59	19 47	532 09	308 22	77 87	215 75	2,684 33	13
.....	19 47	.....	.....	16 22	29 20	863 01	14
.....	87 60	.....	.....	.....	195 64	1,029 46	15
.....	.....	.....	17 68	64 89	.....	504 35	16
170 33	178 44	74 62	60 02	32 28	314 71	1,837 79	17
.....	246 58	32 44	.....	.....	.....	1,423 76	18
.....	.....	.....	.....	282 10	.....	282 10	19
5,280 69	9,948 22	7,654 84	2,841 53	2,043 20	3,003 11	84,067 87	

—1861-1870.

1865.	1866.	1867.	1868.	1869.	1870.	Total, 1831-70, Carried down	No.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
2,167 29	48 67	37 93	260 63	1,509 61	2,362 07	16,192 45	1
949 52	999 01	715 40	255 58	1,185 84	2,942 99	14,395 17	2
.....	.....	.....	.....	.....	.....	350 40	3
88 33	.....	73 65	741 90	536 42	631 16	3,870 92	4
.....	178 44	255 49	1,780 39	.....	.....	3,071 65	5
1,149 59	347 15	3,073 98	2,061 92	783 41	444 01	52,299 66	6
.....	.....	.....	.....	243 33	259 55	502 88	7
404 74	112 18	506 14	.....	1,307 51	103 26	8,466 81	8
276 92	43 64	243 34	246 57	431 11	201 16	3,343 11	9
752 71	1,209 09	2,183 79	1,968 30	2,735 26	1,744 54	15,572 50	10
258 74	505 08	744 92	682 95	414 20	1,390 07	11,641 72	11
42 18	.....	.....	680 04	192 56	760 50	2,916 28	12
.....	248 19	130 81	1,003 34	212 11	595 84	3,810 71	13
51 91	31 47	360 06	.....	1,531 38	.....	5,292 99	14
1,566 25	535 33	127 34	.....	.....	1,081 95	4,306 09	15
65 21	.....	413 66	.....	.....	441 65	2,226 05	16
81 11	569 40	.....	145 36	777 04	304 57	2,506 73	17
97 33	116 80	509 38	473 69	2,350 28	801 38	7,327 30	18
441 25	251 20	1,740 81	986 31	421 78	637 00	7,512 32	19
.....	.....	.....	.....	1,395 11	2,280 41	3,675 52	20
.....	.....	1,460 00	1,575 99	470 44	.....	3,506 43	21
950 62	1,794 17	136 27	378 52	1,078 65	566 97	5,392 88	22
9,343 70	6,989 82	12,712 97	13,241 49	17,576 04	17,549 08	178,080 57	

STATEMENT of Expenditure by Local Government of P. E. Island, &c.—*Concluded.*

TABLE V.—1871-1873.

No.	Name of Harbour, &c.	Brought down	1871.		1872.		1873.		Total, 1831
		1831-70.	\$	cts.	\$	cts.	\$	cts.	to 1st July, 1873.
1	Bedeque.....	16,192 45	340 01	55 75	315 50	16,903 71			
2	Brudenell and Montague.....	14,395 17	1,894 37	1,198 43	104 09	17,591 97			
3	Cable Head.....	350 40				350 40			
4	Campbell's Cove.....			4,030 11	500 00	4,530 11			
5	Cardigan.....	3,876 92		24 61	17 00	3,912 53			
6	Cascumpec.....	3,071 65	34 06			3,105 71			
7	Charlottetown Harbour.....	52,299 66	1,563 64	376 82	672 33	54,912 45			
8	Cove Head.....	502 88				502 88			
9	Crapaud.....	8,466 81	972 92	1,167 42	610 00	11,217 15			
10	Grand River, Lot 55.....	3,343 11	232 46	2,340 18	275 00	6,190 75			
11	Hillsboro' and Elliott Rivers....	15,572 50	376 36	1,596 49	345 26	17,890 61			
12	Malpeque or Richmond Bay.....	11,641 72	2,860 93	1,092 82	10 00	15,605 47			
13	Murray Harbour.....	2,916 28	34 05	223 00	541 08	3,714 41			
14	New London.....	3,810 71	64 89		200 00	4,075 60			
15	Orwell.....	5,292 99	1,010 00	2,097 77		8,400 76			
16	Pinette.....	4,306 09	2,107 19			6,413 28			
17	Pownall Bay.....	2,226 05	12 98	567 93		2,806 96			
18	Rustico.....	2,506 73	15 41	94 56		2,616 70			
19	St. Peter's Bay.....	7,227 30	54 83	8 11		7,290 24			
20	Souris.....	7,512 32	2,590 68	1,643 78		11,746 78			
21	Tignish.....	3,675 52	1,216 66	2,660 17	596 71	8,149 06			
22	West Point.....	3,506 43		2,946 33	149 00	6,601 76			
23	Wood Islands.....	5,392 88	897 09	3,561 76		9,851 73			
		178,080 57	16,278 53	25,686 04	4,335 88	224,381 02			

STATEMENT of Expenditure by Local Government of Prince Edward Island on Harbours, Piers, &c., from date of entry of Province into Confederation, 1st July, 1873, to 31st December, 1882.

No.	Name of Harbour, &c.	1874.		1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		Total.	No.
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.		
1	Bedeque (Summerside).....	1,546	54	274	68	1,954	95	280	00	.....	.....	182	40	627	53	57	50	50	35	12,084	44
2	Brudenell (Georgetown).....	515	37	1,807	39	558	40	97	70	512	00	1,804	25	98	00	248	25	1,044	21	10,904	00
3	Belle Creek.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	281	81	281	82	281	82	.....	.....	845	45
4	Campbell's Cove.....	100	00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	00
5	Cardigan.....	33	00	4	00	1,064	00	145	00	2,300	00	1,290	73	32	00	22	00	50	00	4,974	70
6	Casumpec.....	134	00	.....	.....	116	00	.....	.....	.....	.....	513	48	96	58	63	28	.....	.....	982	34
7	Charlottetown.....	2,930	67	5,497	27	1,342	96	4,514	89	1,853	97	2,310	23	2,126	24	1,685	44	2,645	88	25,763	32
8	Crapaud.....	1,099	95	3,571	21	2,268	20	250	00	3,094	00	28	00	54	00	581	50	1,189	25	14,340	56
9	Grand River.....	50	00	.....	.....	679	67	891	00	.....	.....	448	00	211	55	225	38	264	50	6,286	67
10	Little Sands.....	.....	.....	.....	.....	.....	.....	.....	.....	831	90	831	90	831	90	.....	.....	.....	.....	1,663	80
11	Malpeque.....	168	00	890	18	2,005	60	1,230	00	10	00	2,577	00	30	00	14	50	234	00	7,608	68
12	Montague.....	155	34	910	75	25	00	.....	.....	353	00	1,288	75	11	00	11	75	358	45	3,162	54
13	Murray Harbour.....	509	15	267	67	89	00	.....	.....	598	00	194	00	355	00	214	00	72	25	3,848	10
14	New London.....	98	00	937	00	343	00	197	50	5	00	15	00	392	66	260	84	60	00	2,239	00
15	Orwell.....	1,665	65	1,126	71	1,132	29	3,310	71	173	23	1,464	10	10	50	203	16	944	66	11,596	85
16	Pinette.....	250	00	.....	.....	12	50	1,535	00	29	00	40	00	.....	.....	28	00	97	00	1,991	50
17	Port Hill.....	125	00	44	00	.....	.....	.....	.....	.....	.....	72	00	.....	.....	970	10	.....	.....	1,211	10
18	Portual.....	913	52	320	25	61	10	573	00	778	90	224	00	221	00	38	92	176	13	4,277	02
19	Rustico.....	24	00	100	00	627	05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	00	760	05
20	St. Peter's Bay.....	50	06	143	86	92	72	1,449	00	4	00	78	00	38	00	635	00	25	00	3,217	58
21	Souris.....	526	00	525	00	12	00	.....	.....	.....	.....	.....	.....	55	00	.....	.....	.....	.....	77	50
22	Tigniah.....	135	26	.....	.....	.....	.....	2,625	06	567	50	483	90	.....	.....	.....	.....	.....	.....	135	26
23	West Point.....	.....	.....	.....	.....	1,061	05	1,061	05	1,061	06	1,061	06	.....	.....	.....	.....	.....	.....	4,286	40
24	Wood Islands.....	10,501	45	18,560	17	19,340	89	18,159	85	12,171	56	14,328	68	5,472	77	6,091	44	7,213	68	126,450	08

STATEMENT showing Tolls and Dues, collected by Local Government of Prince Edward Island, at the undermentioned Piers, from 1st April, 1873, to 31st December, 1882.

No.	Name of Harbour, &c.	Year											Total.		
		1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1882.			
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Bedeque (Summerside).....	1,102 47	1,047 60	994 77	17 00	48 00	52 00	54 00	60 46	84 92	54 60	3,515 72	1		
2	Brudenell (Georgetown).....	6 25	339 21	247 78	179 25	199 00	238 66	162 75	141 70	134 05	135 25	1,783 90	2		
3	Cardigan.....	19 47	16 52	.....	9 05	18 00	21 50	70 00	42 00	200 00	.....	224 54	3		
4	Casampec.....	.....	130 00	.....	.....	201 00	160 00	130 00	100 00	100 00	70 00	881 00	4		
5	Charlottetown.....	22 71	84 89	70 53	102 00	125 78	90 22	117 99	94 05	37 43	45 00	791 30	5		
6	Crapaud.....	.....	62 00	52 00	12 00	120 00	105 00	130 00	200 85	112 47	.....	794 32	6		
7	Grand River.....	19 59	18 62	9 00	42 00	10 00	10 00	65 50	82 52	113 88	193 40	564 51	7		
8	Malpeque or Richmond Bay	.....	.....	.....	.....	.....	.....	.....	.....	52 81	32 34	85 15	8		
9	Montague.....	.....	64 50	.....	.....	.....	.....	.....	.....	.....	.....	64 50	9		
10	Murray Harbour.....	.....	35 00	45 50	36 20	85 60	32 00	22 00	43 00	22 00	.....	321 30	10		
11	New London.....	.....	14 00	18 00	10 00	71 00	48 00	52 50	20 00	45 00	16 00	294 50	11		
12	Orwell.....	69 00	128 00	73 54	74 80	117 33	140 00	139 00	65 00	155 00	60 00	1,621 67	12		
13	Pinette.....	.....	.....	1 63	11 00	1 04	.....	.....	.....	.....	.....	13 67	13		
14	Port Hill.....	.....	.....	15 00	.....	.....	21 00	.....	.....	21 00	.....	82 00	14		
15	Pownall Bay.....	29 00	23 25	.....	72 00	45 00	45 00	25 00	45 00	46 00	46 00	377 25	15		
16	St. Peter's Bay.....	.....	.....	.....	.....	12 00	4 64	2 00	.....	.....	.....	18 64	16		
17	Souris.....	.....	10 00	11 00	.....	.....	12 50	.....	.....	6 15	.....	39 65	17		
18	West Point.....	.....	.....	.....	.....	.....	.....	.....	20 20	.....	.....	20 20	18		
		1,268 49	1,973 59	1,538 75	565 30	1,053 75	982 22	960 74	914 78	958 71	677 49	10,893 82			

STATEMENT showing Tolls and Dues, collected by Local Government of Prince Edward Island, at the undermentioned Piers and Bridges, from 1st April, 1873, to 31st December, 1882.

No.	Name of Harbour, &c.	1882											
		1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	Total.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Cardigan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	Charlottetown.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Montague.....	138 26	.....	15 00	20 00	331 67	285 00	341 00	290 00	42 39	45 50	211 72	2,088 79
4	Murray Harbour.....	.....	.....	154 00	206 36	10 00	30 00	27 00	28 00	38 50	40 00	165 00	30 00
5	New London.....	20 25	.....	14 00	3 00	21 00	25 50	31 00	38 50	175 00	30 00	233 77	30 00
6	Orwell.....	63 38	.....	82 00	167 00	144 00	145 50	164 50	175 00	178 50	22 00	1,354 50	185 50
7	Pinette.....	.....	.....	58 00	89 70	42 00	49 00	51 00	32 00	22 00	23 72	394 70	6 00
8	Rustico.....	12 40	.....	51 32	103 46	8 42	.....	36 77	8 00	.....	.....	267 08	7 00
		234 29	.....	374 32	589 52	583 09	607 50	705 10	613 89	635 72	258 50	4,864 56	.....

**ABSTRACT Statement of Expenditure by Local Government of Prince Edward Island  
on Harbours, Piers, &c., from 1831 to 31st December, 1882.**

Name of Harbour, &c.	1831 to 1st July, 1873.	1st July, 1873 to 31st Dec., 1882.	Total.	Remarks.
	\$ cts.	\$ cts.	\$ cts.	
Bedeque (Summerside).....	16,903 71	12,084 44	28,988 15	Includes \$1,250.08 for Egmont Bay. Includes \$2,346.03 for St. Mary's Bay; \$1,398.91 for Sturgeon.
Brudenell (Georgetown).....	*8,795 98	10,904 00	19,699 98	
Belle Creek.....		845 45	845 45	
Cable Head.....	350 40		350 40	
Campbell's Cove.....	4,530 11	100 00	4,630 11	
Cardigan.....	3,912 53	4,974 70	8,887 23	
Cascumpec.....	3,105 71	992 34	4,098 05	
Charlottetown.....	54,912 45	25,762 32	80,674 77	
Cove Head.....	502 88		502 88	
Crapaud.....	11,217 15	14,340 56	25,557 71	Includes \$12,978.11 for Cape Traverse, \$1,003.95 for Nine Mile Creek, and \$3,413.15 for Tryon.
Grand River.....	6,190 75	6,286 67	12,477 42	
Hillsboro' and Elliott Rivers.....	17,890 61		17,890 61	Includes \$1,339.17 for Bay Fortune.
Little Sands.....		1,663 80	1,663 80	
Malpeque or Richmond Bay.....	15,605 47	7,508 68	23,114 15	
Montague.....	*8,795 99	3,162 54	11,958 53	
Murray Harbour.....	3,714 41	3,848 10	7,562 51	
New London.....	4,075 60	2,239 00	6,314 60	
Orwell.....	8,400 76	11,596 85	19,997 61	
Pinette.....	6,413 28	1,991 50	8,404 78	
Port Hill.....		1,211 10	1,211 10	
Pownall Bay.....	2,806 96	4,277 02	7,083 98	
Rustico.....	2,616 70	760 05	3,376 75	
St. Peter's Bay.....	7,290 24	3,217 58	10,507 82	
Souris.....	11,746 78	77 50	11,824 28	Includes \$2,562.36 for Rollo Bay.
Tignish.....	8,149 06	135 26	8,284 32	
West Point.....	6,601 76	4,226 40	10,828 16	
Wood Islands.....	9,851 73	4,244 22	14,095 95	
<b>Total.....</b>	<b>224,381 02</b>	<b>126,450 08</b>	<b>350,831 10</b>	

\*From 1831 to 1873 the expenditures on Brudenell and Montague were kept as one. In this Statement one half the total amount has been placed against each.



## APPENDIX No. 42.

—  
PART I.  
—

## STATEMENT

SHOWING

- 1st. REVENUE DERIVED FROM PUBLIC WORKS MENTIONED.
- 2nd. DEDUCTIONS FROM REVENUE FOR WORKING EXPENSES, REPAIRS, MANAGEMENT, &c.
- 3rd. THE NUMBER AND TONNAGE OF VESSELS WHICH PASSED THROUGH THE CANALS OF THE DOMINION—ALSO, THE NUMBER OF PASSENGERS CONVEYED THROUGH THE SAME.

FROM

1ST JULY, 1867.

TO

30TH JUNE, 1877.

BY

O. DIONNE Accountant.

No. 36,026.

## APPENDIX

STATEMENT showing Revenue derived from  
RAIL

Number.	Name of Work.	Year ended									
		1868.		1869.		1870.		1871.		1872.	
		I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.
1	Nova Scotia .....	26	247,220 98	26	260,285 25	19	273,028 56	20	292,667 27	21	354,728 80
2	New Brunswick.....	26	166,758 42	26	179,827 42	19	198,525 29	20	251,456 37	21	294,059 16
3	Intercolonial .....										
4	P. E. Island.....										
	Totals, Railways.....		413,979 40		440,112 67		471,553 85		544,123 64		648,787 96

CAN  
TOLLS,

1	St. Peter's Canal ...										
2	St. Lawrence Canals	9	71,747 58	9	72,362 24	45	76,791 06	71	91,935 21	72	98,315 78
3	Welland Canal .....	5	230,444 29	5	242,660 69	41	251,482 39	67	287,046 54	77	256,838 03
4	Burlington Bay do	17	14,862 75	17	8,004 54	53	8,459 79	75	7,550 09	82	8,873 27
5	Ottawa and Rideau.	25	18,582 59	25	17,255 96	61	20,427 95	85	27,026 73	97	38,427 00
6	St. Anne's Lock...	21	8,046 12	21	8,034 14	57	10,049 51	79	7,445 20	87	2,991 98
7	Rideau Canal.....										
8	Chambly & St. Ours	13	35,358 93	13	33,312 00	49	41,809 36	82	36,948 07	92	30,669 60
9	Newcastle District.										
	Totals, Tolls, &c.....		379,042 16		381,629 57		409,020 06		457,951 84		436,115 66

## HYDRAULIC AND

1	St Lawrence, viz.:										
	Lachine.....							(20	13,436 00	25	11,483 00
	Beauharnois .....							(20	1,257 00	25	1,357 00
	Cornwall .....							(20	880 00	25	510 00
	Williamsburgh.)	9	15,211 62	9	13,040 42	45	7,389 78	(20	662 00	25	640 00
2	Welland .....	21	6,443 36	5	3,527 71	41	9,194 93	20	7,242 93	25	6,023 69
3	Burlington Bay.....	17									
4	Ottawa Canals .....	25	1,265 00			61	245 53			25	692 00
5	St. Anne's Lock.....										
6	Rideau Canal.....							20	696 50	25	1,154 59
7	Chambly & St. Ours	13	20 00	13	20 00	49	26 67	20	70 00	25	50 00
8	Newcastle District.							20	60 00	25	40 00
9	Sundry .....									25	1,896 31
	Totals, Rents.....		122,939 98		116,588 13		116,856 91		24,304 43		23,845 59
	Grand Totals, Canals.....		401,982 14		398,217 70		425,876 97		482,256 27		459,9 61

\*By Order in Council, dated 9th November, 1872, these railways were reconstructed under the name of "Intercolonial."

†Compiled from the "Trade and Navigation Returns."

‡This and the following years were compiled from the "Returns of the Inland Revenue."

§Including Rideau Canal.

No. 42.

Public Works mentioned for the following years.

WAYS.

30th June.											Total for Ten Years ended 30th June, 1877.	Number.
1873.		1874.		1875.		1876.		1877.		\$ cts.		
I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.		\$ cts.	
19	703,458 26	21	893,430 17	23	879,913 11	23	878,077 52	23	1,154,445 35	{ 1,427,930 86 1,090,626 66 4,509,324 41 273,219 87	1	
				23	24,493 99	23	118,060 96	23	130,664 92		2	
											3	
	703,458 26		893,430 17		904,407 10		996,138 48		1,285,110 27		4	
										7,301,101 80		

ALS.

FINES, &c.

100	244 84	95	497 55	100	647 87	108	654 90	.....	.....	2,045 16	1
79	98,120 85	79	100,741 33	83	90,091 81	91	88,534 27	97	81,369 84	870,009 97	2
74	259,461 12	75	302,891 49	79	228,125 69	87	215,326 81	03	218,779 13	2,493,056 18	3
84	6,626 37	82	4,523 41	87	4,368 00	95	4,013 66	101	3,792 65	71,074 53	4
89	31,727 79	86	45,990 96	91	40,123 55	99	34,867 95	105	43,361 93	317,792 41	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36,566 95	6
99	28,125 61	94	9,236 83	99	6,982 96	107	6,153 43	113	5,259 09	55,757 92	7
94	34,961 34	90	27,129 45	95	22,066 93	103	22,612 92	109	20,727 24	305,595 74	8
.....	.....	.....	.....	.....	.....	109	100 34	115	663 78	764 12	9
.....	459,267 92	.....	491,011 02	.....	392,406 81	.....	372,264 28	.....	373,953 66	4,152,662 98	

OTHER RENTS.

23	11,981 00	25	11,148 00	27	11,169 00	27	11,206 70	27	10,879 00	{ 135,655 17	1
23	1,387 00	25	1,710 35	27	1,257 00	27	1,289 30	27	1,017 00		
23	610 00	25	160 00	27	1,763 50	27	282 50	27	1,075 00		
23	664 00	25	650 00	27	580 00	27	608 00	27	351 00		
23	2,841 46	25	2,927 85	27	5,082 09	27	3,085 00	27	2,457 40	48,826 42	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
23	580 00	25	680 00	27	601 00	27	584 00	27	585 00	5,232 53	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
23	818 00	25	666 00	27	810 50	27	899 25	27	810 25	5,855 09	6
23	10 00	25	112 00	27	100 00	27	270 00	27	100 00	778 67	7
23	20 00	25	.....	27	100 00	27	.....	.....	24 00	244 00	8
23	1,871 00	25	1,889 50	27	1,982 08	27	1,856 00	27	438 00	9,931 89	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	20,782 46	.....	19,943 70	.....	23,445 17	.....	20,080 75	.....	17,736 65	206,523 77	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	480,050 38	.....	510,954 72	.....	415,851 98	.....	392,345 03	.....	391,690 31	4,359,186 75	

Compiled from the "Returns, &c., of the Inland Revenue."

Canal closed for enlargement.

N.B.—The above and following statements, except where otherwise indicated, have been compiled from the "Public Accounts."

STATEMENT showing Revenue derived

PUBLIC

Number.	Name of Work.	Year ended									
		1868.		1869.		1870.		1871.		1872.	
		I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.
1	St. John, N.B., Pub. Buildings.....									20	1,850 00

HARBOURS

1	Amberst Harbour.....									31	439 70
2	Bathurst do .....									31	705 90
3	Berthier Pier.....							20	20 00	22	40 00
4	Chatham, Har. N.B.....									31	4 10
5	Cow Bay, N.S.....										
6	Eboulements Pier.....							20	13 34	22	30 00
7	Gaspé Harbour .....									31	26 10
8	House do .....									31	56 00
9	Ingouish, N.S.....										
10	Jordan Bay.....										
11	L'Islet Pier.....										
12	Maitland, N. S.....										
13	Malbaie Pier.....							20	66 67	22	200 01
14	Oak Point do N.S.....										
15	Oakville do .....										
16	Port Colborne.....	26	1,442 22	26	1,418 67	18	1,357 22	20	1,044 00	22	1,589 35
17	Port Dalhousie.....	26	1,274 43	26	1,232 41	18	1,055 71	20	808 64	22	34 93
18	Port Dover.....	26	1,909 38	26	2,318 12	18	2,226 41	20	2,116 38	22	1,279 38
19	Richibucto Harbour, N.S.....									31	1,087 00
20	Rimouski Pier.....									22	50 00
21	Rivière du Loup Pier.....										
22	Rivière Ouëlle.....							20	76 00	22	228 00
23	Whitby Harbour.....	26	72 00					20	6 66	22	10 00
	Totals, Harbours, &c .....		4,698 03		4,969 20		4,629 34		4,151 69		5,780 47

SLIDES AND

1	Saguenay District..	26	1,371 24	26	1,233 92	18	1,188 40	19	1,236 92		
2	St. Maurice do ...	26	7,635 98	26	7,151 25	18	15,706 89	19	9,430 42	23	11,297 14
3	Ottawa do ...	26	62,326 41	26	55,618 50	18	75,888 74	19	84,874 47	23	80,055 11
4	Newcastle do ...	26	91 00	26	58 00						
5	Generally.....									23	285 55
	Totals, Slides & Booms.....		71,424 63		64,061 67		92,784 03		95,541 81		91,637 80

from Public Works.—Continued.

BUILDINGS.

30th June.										Total for Ten Years ended 30th June, 1877.	Number.
1873.		1874.		1875.		1876.		1877.			
I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	\$ cts.	
						25	1,810 00	25	1,810 00	5,470 00	1

AND PIERS.

32	235 90	34	326 60	36	436 90	36	498 10	36	525 48	2,462 68	1
32	880 10	31	314 30	36	761 60	36	972 00	25	252 14	3,886 04	2
21	90 00	23	30 00	25	60 00	25	60 00	25	60 00	360 00	3
				36	307 00			36	427 00	738 10	4
						36	5,053 42	36	4,209 72	9,263 14	5
21	60 00	23	20 00	25	40 00	25	40 00	25	40 00	243 34	6
32	58 40	34	16 80	36	11 10	36	20 40	36	28 80	161 60	7
32	75 30	34	73 60			36	95 90			300 80	8
								36	17 82	17 82	9
								36	7 41	7 41	10
				25	20 00	25	20 00	25	20 00	60 00	11
						25	3 86	25	109 08	112 94	12
21	238 33	23	105 00	25	210 00	25	210 00	25	210 00	1,240 01	13
								25	103 00	103 00	14
21	926 92			25	265 78					2,782 05	15
21	26 18	23	42 24			25	57 54	25	58 74	5,582 76	16
		23	213 25		101 02					4,584 44	17
21	769 07	23	340 17							10,958 91	18
32	1,965 70	34	2,038 60	36	1,833 50	36	2,000 20	36	1,573 02	10,558 02	19
21	40 00	23	40 00	25	80 00	25	80 00			290 00	20
21	115 00	23	115 00	25	230 00	25	230 00	25	230 00	1,324 00	21
21	30 00	23	10 00		20 00	25	20 00	25	20 00	116 66	22
		23	5,407 85			25	157 79			5,637 64	23
	5,510 90		9,093 41		4,376 90		9,579 21		7,892 21	60,691 36	..

BOOMS.

21	4,162 62	23	2,037 59	25	631 50	25	2,094 98	25	76 80	14,033 07	1
21	12,188 41	23	11,108 12	25	15,363 80	25	13,900 16	25	11,338 48	115,120 63	2
21	86,274 63	23	84,942 39	25	66,223 73	25	69,810 33	25	100,434 05	766,448 36	3
						25	54 65	25	1,118 46	1,322 11	4
21	962 46									1,248 01	5
	103,588 12		98,088 10		82,219 03		85,860 12		112,967 79	898,173 10	...

STATEMENT showing the Revenue derived  
ROADS AND

Number.	Name of Work.	Year ended									
		1868.		1869.		1870.		1871.		1872.	
		I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.
1	Brantford & London .....										
2	Dundas & Waterloo .....			26	1,000 00						
3	Dunnville Bridge ...	26	307 00	26	391 00	18	166 00	20	1,280 79	22	640 08
4	Huntingdon & Port Louis .....					18	217 00	20	131 00	22	163 50
5	Ottawa Union Suspension Bridge ...	26	3,201 72	26	3,472 90	18	3,421 76	20	3,568 37	22	3,600 00
6	York & Peel .....	26	3,245 50	26	2,885 06	18	2,620 12				
	Totals, Roads & Bridges .....		6,754 22		7,748 96		6,424 88		4,980 16		4,403 58

TELEGRAPH

1	Telegraph Lines, B.C. ....										
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FER

1	Gatineau .....						21	25 00			
2	Hull .....						21	30 00	23	30 00	
3	Restigouche .....										
4	Sandwich .....								23	100 00	
	Totals .....							55 00		130 00	

MISCEL

1	Earnings of dredges Maritime Provinces .....										
2	Government Lifting Barge .....										
	Totals, Miscellaneous .....										

from PUBLIC WORKS—Continued.

BRIDGES.

30th June.										Total for Ten Years ended 30th June, 1877.	Number.
1873.		1874.		1875.		1876.		1877.			
I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	\$ cts.	
21	6,738 72	23	640 08	25	59 95	25	1,394 40	25	640 08	59 95	1
21	640 08	23	640 08	25	480 06	25	533 40	25	640 08	9,133 12	2
21	300 00	23	85 76	25	249 00	25	110 00	25		1,256 26	4
21	3,604 60	23	2,554 10	25	2,639 65	25	2,270 92	25	2,042 48	30,376 50	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,750 68	6
.....	11,283 40	.....	3,279 94	.....	3,428 66	.....	4,308 72	.....	2,682 56	55,295 08	...

LINES.

23	14,310 48	25	10,120 72	27	9,489 18	27	9,257 08	27	7,325 92	50,503 38	...
----	-----------	----	-----------	----	----------	----	----------	----	----------	-----------	-----

RIES.

21	75 00	23	50 00	25	75 00	25	25 00	25	100 00	350 00	1
21	30 00	25	30 08	25	30 00	25	30 00	25	205 00	385 00	2
.....	.....	25	20 00	25	20 00	25	20 00	25	20 00	88 00	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100 00	4
.....	105 00	.....	100 00	.....	125 00	.....	75 00	.....	325 00	915 00	.....

LANEOUS.

.....	I.	.....	I.	.....	I.	.....	.....	.....	.....	.....	.....
.....	37	975 00	.....	.....	52	1,300 00	54	4,425 42	.....	6,700 42	1
.....	.....	.....	.....	.....	.....	*839 81	.....	*1,761 53	.....	2,601 34	2
.....	.....	975 00	.....	.....	.....	2,139 81	.....	6,186 95	.....	9,301 76	.....

\* See "Report of the Minister of Public Works" for 1880-81, Appendix No. 14, page 133.

ABSTRACT Statement of Revenue on PUBLIC

Number.	Name of Work.	Year ended									
		1868.		1869.		1870.		1871.		1872.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Railways.....	413,979	40	440,112	67	471,553	85	544,123	64	648,787	96
2	Canals, Tolls, &c...	379,042	16	381,629	57	409,020	06	457,951	84	436,115	66
3	Canals, Hydraulic Rents.....	22,939	98	16,588	13	16,856	91	24,304	43	23,845	59
	Totals Railways and Canals....	815,961	54	838,330	37	897,430	82	1,026,379	91	1,108,749	21
4	Public Buildings ...										1,850
5	Harbours and Piers.....	4,698	03	4,969	20	4,639	34	4,151	69	5,780	47
6	Slides and Booms....	71,424	63	64,061	67	92,784	03	95,541	81	91,637	80
7	Roads and Bridges..	6,754	22	7,748	96	6,424	88	4,980	16	4,403	58
8	Telegraph Lines ...										
	Miscellaneous—										
9	Ferries.....							55	00		130
10	Government Lift- ing Barge .....										
11	Earnings of dred- ges, Maritime Provinces .....										
	Totals Public Works .....	82,876	88	76,779	83	103,848	25	104,728	66	103,801	85
	Grand Totals .....	898,838	42	915,110	20	1,001,279	07	1,131,108	57	1,212,551	06



WORKS for the undermentioned years.

30th June.						Total for Ten Years ended 30th June, 1877.	Number.
1873.	1874.	1875.	1876.	1877.			
\$	\$	\$	\$	\$	\$	\$	
cts.	cts.	cts.	cts.	cts.	cts.	cts.	
703,458 26	893,430 17	904,407 10	996,138 48	1,285,110 27	7,301,101 80	1	
459,267 92	491,011 02	392,406 81	372,264 28	373,953 66	4,152,662 98	2	
20,782 46	19,943 70	23,445 17	20,080 75	17,736 65	206,523 77	3	
1,183,508 64	1,404,384 89	1,320,259 08	1,388,483 51	1,676,800 58	11,660,288 55		
			1,810 00	1,810 00	5,470 00	4	
5,510 90	9,093 41	4,376 90	9,579 21	7,892 21	60,691 36	5	
103,588 12	98,088 10	82,219 03	85,860 12	112,967 79	898,173 10	6	
11,283 40	3,279 94	3,428 66	4,308 72	2,682 56	55,295 08	7	
14,310 48	10,120 72	9,489 18	9,257 08	7,325 92	50,503 38	8	
105 00	100 00	125 00	75 00	325 00	915 00	9	
			839 81	1,761 53	2,601 34	10	
	975 00		1,300 00	4,425 42	6,700 42	11	
134,797 90	121,657 17	99,638 77	113,029 94	139,190 43	1,080,349 68		
1,318,306 54	1,526,042 06	1,419,897 85	1,501,513 45	1,815,991 01	12,740,638 23		

STATEMENT showing *Revenue* and *Expenditure* for working expenses on GOVERNMENT RAILWAYS, for the undermentioned fiscal years.

## NOVA SCOTIA RAILWAY.

Year ended 30th June.	Gross Revenue.	Expenditure.	Deficit.	Net Revenue.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1868.....	247,220 98	228,276 11	.....	18,944 87
1869.....	260,285 25	261,398 76	1,113 51	.....
1870.....	273,028 56	305,524 76	32,496 20	.....
1871.....	292,667 27	272,409 60	.....	20,257 67
1872.....	354,728 80	339,324 14	.....	15,404 66
	1,427,930 86	1,406,933 37	33,609 71	54,607 20
Deduct Deficits.....	.....	.....	.....	33,609 71
Total Net Revenue.....	.....	.....	.....	20,997 49

N.B.—For following years, see "*Intercolonial Railway.*"

## EUROPEAN AND NORTH AMERICAN RAILWAY—NEW BRUNSWICK.

Year ended 30th June.	Gross Revenue.	Expenditure.	Net Revenue.
	\$ cts.	\$ cts.	\$ cts.
1868.....	166,758 42	131,684 97	35,073 45
1869.....	179,827 42	126,149 71	53,677 71
1870.....	198,525 29	139,683 99	58,841 30
1871.....	251,456 37	170,583 71	80,872 66
1872.....	294,059 16	255,752 08	38,307 08
	1,090,626 66	823,854 46	.....
Total Net Revenue.....	.....	.....	266,772 20

N.B.—For following years, see "*Intercolonial Railway.*"

STATEMENT showing *Revenue* and *Expenditure* for working expenses on GOVERNMENT RAILWAYS, for the undermentioned fiscal years.

## INTERCOLONIAL RAILWAY.

Year.	Gross Revenue.	Expenditure.	Deficit.
	\$ cts.	\$ cts.	\$ cts.
1873 .....	703,458 26	1,011,892 60	308,434 34
1874 .....	893,430 17	1,847,175 24	953,745 07
1875 .....	879,913 11	1,532,589 62	652,676 51
1876 .....	878,077 52	1,277,197 79	399,120 27
1877 .....	1,154,445 35	1,661,673 55	507,228 20
	4,509,324 41	7,330,528 80	2,821,204 39

## PRINCE EDWARD ISLAND RAILWAY.

Year.	Gross Revenue.	Expenditure.	Deficit.
	\$ cts.	\$ cts.	\$ cts.
1874 .....		750 00	750 00
1875 .....	24,493 99	49,344 62	24,850 63
1876 .....	118,060 96	219,930 42	101,869 47
1877 .....	130,664 92	228,595 25	97,930 33
	273,219 87	498,620 30	225,400 43

**ABSTRACT STATEMENT of Revenue and Expenditure for working expenses on GOVERNMENT RAILWAYS, for the undermentioned years.**

		Year ended 30th June.										Total for ten years ended 30th June 1877.											
Number.	1868		1869		1870		1871		1872		1873		1874		1875		1876		1877				
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.			
1	413,979	40	440,112	67	471,553	85	544,123	64	648,787	96	703,458	26	893,430	17	904,407	10	996,138	48	1,285,110	27	7,301,101	80	1

**EXPENDITURE.**

2	358,981	08	387,548	47	445,208	75	442,993	31	595,076	22	1,011,892	60	1,847,925	24	1,581,934	24	1,497,128	22	1,890,268	80	10,059,936	93	2
---	---------	----	---------	----	---------	----	---------	----	---------	----	-----------	----	-----------	----	-----------	----	-----------	----	-----------	----	------------	----	---

**NET REVENUE.**

3	54,018	33	52,564	20	26,345	10	101,130	33	53,711	74	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
---	--------	----	--------	----	--------	----	---------	----	--------	----	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	---

**DEFICIT.**

4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4																					
Total Deficit on Railways to 30th June, 1877																						.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	
																						.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
																						.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4

STATEMENT showing GROSS REVENUE on CANALS, from all sources, for Ten Years from 1st July, 1867, to 30th June, 1877.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages and Fines.	Total Revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
1868.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Lawrence Canals, viz.:							
Lachine .....							(a)
Beauharnois .....							
Cornwall .....	9,101 95	53,449 04	2,899 30	65,450 29	15,211 62	6,297 29	86,959 20
Williamsburgh .....							
Welland Canal .....	27,618 87	195,245 29	679 13	223,543 29	6,443 36	6,901 00	236,887 65
Burlington Bay Canal .....	962 05	13,610 28	290 42	14,862 75			14,862 75
Ottawa and Rideau Canals, viz.:							
St. Anne's Lock .....	1,187 37	6,787 66	66 09	8,041 12		5 00	8,046 12
Carillon .....							
Chute à Blondeau .....	5,044 07	13,477 54	60 98	18,582 59	1,265 00		19,847 59
Grenville .....							
Rideau .....							
St. Ours Lock .....	5,040 88	30,220 52	34 88	35,296 28	20 00	61 55	35,378 83
Chambly Canal .....							
Total .....	48,955 19	312,790 33	4,030 80	365,776 32	22,939 98	13,265 84	401,982 14
1869.							
St. Lawrence Canals, viz.:							
Lachine .....							
Beauharnois .....							
Cornwall .....	8,978 51	51,961 63	2,774 49	63,714 63	13,040 42	8,647 61	85,402 66
Williamsburgh .....							
Welland Canal .....	28,430 92	208,221 77	648 66	237,301 35	3,527 71	5,359 34	246,188 40
Burlington Bay Canal .....	632 33	7,167 93	204 28	8,004 54			8,004 54
Ottawa and Rideau Canals, viz.:							
St. Anne's Lock .....	1,197 95	6,780 53	55 66	8,034 14			8,034 14
Carillon .....							
Chute à Blondeau .....	4,814 16	12,387 47	54 33	17,255 96			17,255 96
Grenville .....							
Rideau .....							
St. Ours Lock .....	5,154 27	28,058 88	33 05	33,246 20	20 00	65 80	33,332 00
Chambly Canal .....							
Total .....	49,208 14	314,578 21	3,770 47	367,556 82	16,588 13	14,072 75	388,217 70

(a) Not included in above, for wheat, corn, flour, iron, ore, passed free, having paid full toll on Welland and Chambly Canals, \$10,727.63.

## STATEMENT showing Gross Revenue on CANALS, &amp;c.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages and Fines.	Total Revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1870.							
St. Lawrence Canals, viz.:							
Lachine.....				(a)			
Beauharnois.....	11,109 90	62,826 26	2,755 33	76,691 54	7,389 78	99 52	84,180 84
Cornwall.....							
Williamsburgh.....							
Welland Canal.....	30,762 43	218,558 99	721 97	(b) 250,043 39	9,194 93	1,439 00	260,677 32
Burlington Bay Canal....	801 47	7,507 80	150 52	8,459 79			
Ottawa and Rideau Canals, viz.:							
Ste. Anne's Lock....	1,387 20	8,581 07	81 24	10,049 51			10,049 51
Carillon.....				(c)			
Chute à Blondeau.....	5,260 80	15,117 81	49 34	20,427 95	245 53		20,673 48
Grenville.....							
Rideau.....							
St. Ours Lock.....	6,430 94	35,327 35	32 75	41,791 04	26 67	18 32	41,836 03
Chambly.....							
Total.....	55,752 74	347,919 28	3,791 20	407,463 22	16,856 91	1,556 84	425,876 97
1871.							
St. Peter's Canal.....							
St. Lawrence Canals, viz.:							
Lachine.....				(a)			
Beauharnois.....	12,268 97	66,767 69	2,742 67	81,779 33	16,235 00	10,155 88	108,170 21
Cornwall.....							
Williamsburgh.....							
Welland Canal.....	35,722 37	249,782 75	727 07	(b) 286,232 19	7,242 93	814 35	294,289 47
Burlington Bay Canal....	1,058 15	6,369 16	122 78	(c) 7,550 09			7,550 09
Ottawa and Rideau Canals, viz.:							
Ste. Anne's Lock.....	1,132 54	6,234 90	77 76	7,445 20			7,445 20
Carillon.....				(d)			
Chute à Blondeau.....	5,614 85	21,003 15	33 35	26,651 35	696 50	375 38	27,723 23
Grenville.....							
Rideau.....							
St. Ours Lock.....	5,691 06	31,144 03	43 38	36,878 47	70 00	69 60	37,018 07
Chambly.....							
Newcastle District.....					60 00		60 00
Total.....	61,487 94	381,301 68	3,747 01	446,536 63	24,304 43	11,415 21	482,256 27

1870—(a) Not including \$31,475 81 for goods passed free.

(b) do 5,835 50 do

(c) do 157 82 do

\$37,469 13

1871—(a) Not including \$35,047 34 for goods passed free.

(b) do 6,186 15 do

(c) do 2,438 84 do

(d) do 71 00 do

\$43,743 33

## STATEMENT showing Gross Revenue on CANALS, &amp;c.—Continued.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages and Fires.	Total Revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
1872.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Lawrence Canals, viz :							
LaCline .....				(a)			
Beauharnois .....	13,621 28	68,717 58	2,336 23	84,675 09	13,990 00	13,640 69	112,305 78
Cornwall .....							
Williamsburgh .....							
Welland Canal .....	32,351 62	221,786 69	643 61	(b) 254,781 92	6,023 69	2,056 11	262,861 72
Burlington Bay Canal .....	1,067 93	7,670 69	129 08	(c) 8,867 70		5 57	8,873 27
Ottawa and Rideau Canals, viz :							
St. Anne's Lock .....	523 02	2,321 10	147 86	(d) 2,991 98			2,991 98
Carillon .....				(e)			
Chute à Blondeau .....	5,394 28	32,584 51	38 35	38,017 14	1,846 59	409 86	40,273 59
Grenville .....							
Rideau .....				(f)			
Ste. Ours Lock .....	5,645 66	24,906 79	57 93	30,610 38	50 00	59 22	30,719 60
Chambly Canal .....					40 00		40 00
Newcastle District .....					1,895 31		1,895 31
Sundry .....							
Totals .....	58,603 79	357,987 36	3,353 06	419,944 21	23,845 59	16,171 45	459,961 25
1873.							
St. Peter's Canal .....	119 96	124 88		244 84			244 84
St. Lawrence Canals, viz :							
Lachine .....				(a)			
Beauharnois .....	14,692 72	68,031 15	2,228 01	84,951 88	14,642 00	13,168 97	112,762 85
Cornwall .....							
Williamsburgh .....							
Welland Canal .....	31,749 23	227,144 32	515 69	(b) 259,409 24	2,841 46	51 88	262,302 58
Burlington Bay Canal .....	1,791 12	4,764 79	70 46	(c) 6,626 37			6,626 37
Ottawa Canals, viz :							
Ste. Anne's Lock .....				(d)			
Carillon .....	3,751 33	27,767 50	128 96	31,647 79	580 00	80 00	32,307 79
Chute à Blondeau .....							
Grenville .....							
Rideau Canal .....	4,036 83	23,671 15	37 08	(e) 27,745 06	818 00	380 55	28,943 61
St. Ours Lock .....	6,186 91	28,633 87	50 21	(f) 34,870 99	10 00	90 35	34,971 34
Chambly Canal .....							
Newcastle District .....					20 00		20 00
Sundry .....					1,871 00		1,871 00
Totals .....	62,328 10	380,137 66	3,030 41	445,496 17	20,782 46	13,771 75	480,050 38

1872—(a) Not including \$38,198 25 for goods passed free.

(b)	do	8,483 27	do
(c)	do	2,310 06	do
(d)	do	9 75	do
(e)	do	30 18	do
(f)	do	148 70	do

\$49,180 21

1873—(a) Not including \$39,273 10 for goods passed free.

(b)	do	8,421 99	do
(c)	do	3,528 24	do
(d)	do	17 73	do
(e)	do	10 35	do
(f)	do	18 00	do

\$51,269 41

STATEMENT showing Gross Revenue on CANALS, &c.—Continued.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages and Fines.	Total Revenue from all Sources.
	Vessels.	Merchandise.	Passengers.				
1874.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal .....	390 55	107 00	.....	497 55	.....	.....	497 55
St. Lawrence Canals, viz :							
Lachine .....				(a)			
Beauharnois .....							
Cornwall .....	16,294 69	66,352 10	2,179 45	81,826 24	13,668 35	15,915 09	114,409 68
Williamsburgh .....				(t)			
Welland Canal .....	34,246 22	265,979 23	616 04	300,841 49	2,927 85	2,050 00	305,819 34
Burlington Bay Canal.....	4,523 41	.....	.....	4,523 41	.....	.....	4,523 41
Ottawa Canals, viz :							
Ste. Anne's Lock.....				(c)			
Carillon .....	5,167 47	40,506 09	189 40	45,862 96	680 00	128 00	46,670 96
Chute à Blondeau.....				(d)			
Grenville.....							
Rideau Canal .....	2,068 17	5,858 24	12 50	7,938 91	666 00	1,297 92	9,902 83
St. Ours Lock .....				(e)			
Chamby Canal.....	3,936 71	23,096 23	55 81	27,088 75	112 00	40 70	27,241 45
Sundry.....	.....	.....	.....	.....	1,889 50	.....	1,889 50
<b>Totals .....</b>	<b>66,627 22</b>	<b>401,898 89</b>	<b>3,053 20</b>	<b>471,579 31</b>	<b>19,943 70</b>	<b>19,431 71</b>	<b>510,954 72</b>
1875.							
St. Peter's Canal .....	512 50	135 37	.....	647 87	.....	.....	647 87
St. Lawrence Canals, viz :							
Lachine .....				(a)			
Beauharnois.....	14,772 93	59,308 67	2,364 67	76,446 27	14,769 50	13,645 54	104,861 31
Cornwall .....				(b)			
Williamsburgh .....							
Welland Canal .....	25,359 76	199,560 00	456 93	225,406 69	5,082 09	2,719 00	233,207 78
Burlington Bay Canal.....	4,368 00	.....	.....	4,368 00	.....	.....	4,368 00
Ottawa Canals, viz :							
Ste. Anne's Lock .....				(c)			
Carillon .....	4,863 24	35,032 58	206 75	40,102 55	601 00	21 00	40,724 55
Chute à Blondeau.....				(d)			
Grenville.....							
Rideau Canal .....	1,845 89	4,743 40	25 46	6,614 75	810 50	368 21	7,793 46
St. Ours Lock .....				(e)			
Chamby Canal.....	3,088 41	18,884 23	64 33	22,036 97	100 00	29 96	22,166 93
Newcastle District.....	.....	.....	.....	.....	100 00	.....	100 00
Sundry .....	.....	.....	.....	.....	1,982 08	.....	1,982 08
<b>Totals .....</b>	<b>54,840 73</b>	<b>317,664 23</b>	<b>3,118 14</b>	<b>375,623 10</b>	<b>23,445 17</b>	<b>16,783 71</b>	<b>415,851 98</b>

1874—(a) Not including \$42,790 05 for goods passed free.

(b) do	4,609 75	do
(e) do	2 61	do
(d) do	19 02	do
(e) do	39 83	do

\$47,461 26

1875—(a) Not including \$32,089 33 for goods passed free.

(b) do	3,038 48	do
(e) do	3 18	do
(d) do	38 46	do
(e) do	56 97	do

\$35,226 42



STATEMENT showing Gross Revenue on CANALS, &c.—Continued.

Name of Canal.	Tolls collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages and Fines.	Total Revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1876.							
St. Peter's Canal .....	510 04	144 86		654 90			654 90
St. Lawrence Canals—							
Lachine .....				(a)			
Beauharnois .....	14,638 12	56,932 97	2,408 66	73,979 75	13,386 50	14,554 52	101,920 77
Cornwall .....				(b)			
Williamsburgh .....				(b)			
Welland Canal .....	23,067 06	189,813 19	186 43	213,066 68	3,085 00	2,260 13	218,411 81
Burlington Bay Canal .....	4,013 66	(c)		4,013 66			4,013 66
Ottawa Canals—							
Ste. Anne's Lock .....				(d)			
Carillon .....	4,013 27	30,547 38	226 30	34,796 95	584 00	71 00	35,451 95
Chute à Blondeau .....				(e)			
Grenville .....				(e)			
Rideau Canal .....	1,728 70	3,936 18	49 80	5,714 68	899 25	438 75	7,052 68
St. Our's Lock .....				(f)			
Chambly Canal .....	2,810 62	19,695 01	92 29	22,597 92	270 00	15 00	22,882 92
Newcastle District .....	46 50	53 34		99 84		0 50	100 34
Sundry .....					1,856 00		1,856 00
<b>Total .....</b>	<b>50,827 97</b>	<b>301,122 93</b>	<b>2,973 48</b>	<b>354,924 38</b>	<b>20,080 75</b>	<b>17,339 90</b>	<b>392,345 03</b>
1877.							
St. Peter's Canal .....							
St. Lawrence Canals—							
Lachine .....				(a)			
Beauharnois .....	14,742 19	50,840 12	2,901 63	68,483 94	13,322 00	12,885 90	94,691 84
Cornwall .....				(b)			
Williamsburgh .....				(b)			
Welland Canal .....	26,328 23	191,367 77	406 73	218,102 83	2,457 40	676 30	221,236 53
Burlington Bay Canal .....	3,792 65			3,792 65			3,792 65
Ottawa Canals—							
Ste. Anne's Lock .....				(c)			
Carillon .....	4,993 84	37,958 80	382 07	43,334 71	585 00	27 22	43,946 93
Chute à Blondeau .....				(d)			
Grenville .....				(d)			
Rideau Canal .....	1,544 47	3,340 86	60 91	4,946 24	810 25	312 85	6,069 34
St. Ours Lock .....				(e)			
Chambly Canal .....	2,892 56	17,671 65	94 63	20,658 84	100 00	68 40	20,827 24
Newcastle District .....	284 50	379 15		663 65	24 00	0 13	687 78
Sundry .....					438 00		438 00
<b>Totals .....</b>	<b>54,578 54</b>	<b>301,558 35</b>	<b>3,845 97</b>	<b>359,982 86</b>	<b>17,736 65</b>	<b>13,970 80</b>	<b>391,690 21</b>

1876—(a) Not included \$35,413 03 for goods passed free.  
 (b) do 2,500 70 do  
 (c) Freight free as per Order in Council.  
 (d) Not included 9 31 for goods passed free.  
 (e) do 83 85 do  
 (f) do 83 50 do  
\$38,090 39

1877—(a) Not included \$32,276 05 for goods passed free.  
 (b) do 3,921 55 do  
 (c) do 37 90 do  
 (d) do 5,329 00 do  
 (e) do 778 60 do  
\$42,343 10

\*Canal closed for enlargement. No business on it during the year.

STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the CANALS of the Dominion; the Gross Revenue from Tolls collected thereon, and from all other sources; the cost of Maintenance, Management, Collection of Tolls, &c., and the Net Revenue, for each Fiscal Year from 1st July, 1867, to 30th June, 1877.

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandise \$			Maintenance and Repairs. \$ cts.	Management \$ cts.	Collection of Tolls, &c. \$ cts.			Miscellaneous. \$ cts.
St. Lawrence Canals— Lachine..... Beauharnois..... Cornwall..... Williamsburgh..... Welland Canal..... Burlington Bay Canal.....	1,176,466 1,240,366 264,532	932,066 1,161,821 138,837	2,108,532 2,402,187 403,369	86,959 20 236,887 65 14,862 75	10,431 51 6,216 98 3,774 18 6,442 41 38,852 96 57 32	13,742 05 9,349 99 11,244 47 5,745 97 37,679 05 500 00	10,745 35 776 08 650 25 1,125 00 6,119 81 5 10	80,244 24 82,651 82 562 42	6,714 96 154,235 83 14,300 33	
Ottawa and Rideau Canals Ste. Anne's Lock..... Carleton..... Chute à Blondeau..... Grenville..... Rideau..... St. Ours Lock..... Chambly Canal..... Miscellaneous.....	474,944 604,237 425,465	373,583 520,563 455,553	848,527 1,124,800 881,018	8,046 12 19,847 59 35,378 83	432 47 8,911 28 16,475 21 783 74 9,365 70	778 16 6,301 88 18,397 28 1,532 75 8,312 90	654 20 64 12 373 32 403 22 1,810 92	1,864 83 50,523 09 22,169 23 8,205 51	6,181 29 13,209 60 194,642 01	
<b>Totals.....</b>	<b>4,186,010</b>	<b>3,582,423</b>	<b>7,768,433</b>	<b>401,982 14</b>	<b>101,703 76</b>	<b>113,684 50</b>	<b>22,727 37</b>	<b>246,221 14</b>	<b>194,642 01</b>	
				Deduct excess of expenditure over Revenue at Ottawa and Rideau Canals.....		\$30,675 50				
				do do Miscellaneous.....		6,205 51		38,881 01		
				do do				155,761 00		
				<b>Net Revenue for 1868.....</b>				<b>155,761 00</b>		





STATEMENT showing the Total Tonnage of Vessels and Merchandize which passed through the CANALS of the Dominion, &c. — Con.

1871.

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue.	Maintenance and Repairs.		Deduct.			Total Deductions.	Net Revenue.
	Vessels.	Merchandize.			\$ cts.	\$ cts.	Management	Collection of Tolls, &c.	Miscellaneous.		
St. Peter's Canal					555 78	225 36				781 14	
St. Lawrence Canals, viz.:											
Lachine					15,093 25	17,478 52	9,440 83				
Beauharnois					5,722 36	12,316 53	785 42				
Cornwall	1,339,000	1,146,275	2,485,275	108,170 21	8,891 61	11,848 39	657 21			95,074 69	13,095 52
Williamsburgh					5,308 41	6,382 17	1,150 00				
Welland Canal	1,554,118	1,485,640	3,039,758	294,289 47	53,381 02	42,353 33	6,593 39			102,357 74	191,931 73
Burlington Bay Canal	262,411	141,882	404,293	7,550 09	94 68	479 70				574 39	6,975 70
Ottawa and Rideau Canals, viz.:											
St. Anne's Lock	420,607	358,962	779,569	7,445 20	1,539 02	1,285 84	720 01			3,544 87	3,900 33
Carleton											
Chute à Blondeau	633,676	593,435	1,223,111	27,723 23	8,218 24	8,676 90	740 40			59,973 81	
Greenville											
Rideau					18,120 52	22,814 58	1,403 17				
St. Ours Lock	458,415	519,442	1,007,857	37,018 07	1,210 98	1,414 48	431 36			37,967 00	
Chambly Canal					22,426 33	10,214 71	2,266 14				
Newcastle District											
Miscellaneous										2,109 71	60 00
Totals	4,658,227	4,281,636	8,939,863	482,256 27	140,562 21	135,520 51	24,190 92			302,383 35	215,963 28
Deduct excess of Expenditure over Revenue at St. Peter's Canal											
										\$	781 14
											32,250 58
											948 93
											2,109 71
											36,090 36
											179,872 92
											Net Revenue for 1871

STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the CANALS of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct.			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandise.			Maintenance and Repairs. \$ cts.	Management. \$ cts.	Collection of Tolls, &c.			
							\$ cts.			\$ cts.
<b>St. Peter's Canal.</b> .....				6,122 07	280 00		6,402 07			
<b>St. Lawrence Canals—</b>										
Lachine.....				12,334 69	16,076 93	8,654 18				
Beauharnois.....				15,733 38	11,732 46	796 51				
Cornwall.....	1,186,766	681,278	1,868,044	8,163 70	10,594 30	672 71	9,741 87	17,563 91		
Williamsburgh.....				3,230 07	5,642 94	1,150 00				
Welland Canal.....	1,377,815	1,263,223	2,641,038	50,276 90	37,085 37	6,351 15	93,713 42	169,148 30		
Burlington Bay Canal.....	265,826	122,473	388,299	1,014 27	373 39		1,387 66	7,485 61		
<b>Ottawa and Rideau Canals</b>										
St. Anne's Lock.....	94,891	100,665	195,559	1,393 83	1,106 80	726 78	3,227 21			
Carillon.....				17,235 31	8,324 51	542 61	63,482 81			
Chute à Blondeau.....	386,154	517,953	904,107	14,005 32	22,139 48	1,245 58				
Grenville.....				1,263 19	1,565 80	400 17				
Rideau.....				22,327 99	9,628 50	2,193 19	37,378 84			
St. Ours Lock.....	408,909	344,641	754,550	40 00				40 00		
Chambly Canal.....				1,895 31			1,896 84			
Newcastle District.....										
Miscellaneous.....				153,100 52	124,510 48	32,732 88	302,240 72	194,237 82		
<b>Totals</b> .....	3,721,364	3,030,233	6,751,597	459,961 25	124,510 48	32,732 88	6,402 07			
Deduct excess of Expenditure over Revenue at										
St. Peter's Canal.....	do	do	do	do	do	do	do	235 23		
St. Anne's Lock.....	do	do	do	do	do	do	do	23,219 22		
Ottawa and Rideau Canals.....	do	do	do	do	do	do	do	6,659 24		
Chambly Canal and St. Ours Lock.....	do	do	do	do	do	do	do	1 53		
Miscellaneous.....	do	do	do	do	do	do	do	36,517 29		
<b>Net Revenue for 1872</b> .....										
194,237 82										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
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1,896 84										
302,240 72										
194,237 82										
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17,563 91										
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3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
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6,659 24										
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36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										
63,482 81										
37,378 84										
1,896 84										
302,240 72										
194,237 82										
6,402 07										
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6,402 07										
235 23										
23,219 22										
6,659 24										
1 53										
36,517 29										
17,563 91										
7,485 61										
3,227 21										

STATEMENT showing the total Tonnage of Vessels and Merchandize which passed through the CANALS of the Dominion, &c.—Con.

1873.

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue.	Deduct			Total Deductions.	Net Revenue.
	Vessels.	Merchandize.			Maintenance and Repairs.	Management.	Collection of Tolls, &c.		
				\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
St. Peter's Canal.....	5,998	2,814	8,812	244 84	6,539 58	343 32	6,882 90	143,705 27	
St. Lawrence Canals, viz.:								6,326 37	
Leachine.....					34,300 60	23,601 03			
Beauharnois.....					9,882 06	12,210 73			
Cornwall.....	1,267,047	1,009,262	2,276,309	112,762 85	12,467 65	13,042 25	131,105 78		
Williamsburgh.....					7,317 75	6,424 49			
Welland Canal.....	1,397,388	1,391,692	2,789,080	262,302 58	66,550 73	45,382 99	118,597 31	143,705 27	
Burlington Bay Canal.....	243,827	161,794	405,621	6,626 37	.....	300 60	300 00	6,326 37	
Ottawa Canals, viz.:									
St. Anne's Lock.....					1,264 40	2,199 64			
Carillon.....	320,900	473,851	794,751	32,307 79	8,781 50	10,068 28	24,131 80	8,175 99	
Oubite & Blondeau.....					.....	.....			
Greenville.....					.....	.....			
Rideau Canal.....	275,949	351,874	627,723	28,943 61	26,074 49	22,841 51	50,375 35	6,175 51	
St. Ours Lock.....	422,789	369,235	792,024	34,971 34	1,575 10	2,076 50	28,795 83	20 00	
Chambly Canal.....					11,789 27	10,396 44			
Newcastle District.....					.....	.....			
Miscellaneous.....					.....	.....			
<b>Totals</b> .....	<b>3,933,798</b>	<b>3,760,522</b>	<b>7,694,320</b>	<b>480,050 38</b>	<b>186,573 13</b>	<b>148,881 18</b>	<b>368,341 42</b>	<b>164,403 14</b>	
Deduct excess of Expenditure over Revenue at St. Peter's Canal..... 6,638 06									
St. Lawrence Canals..... 18,342 93									
Rideau Canal..... 21,431 74									
Miscellaneous..... 6,281 45									
<b>Net Revenue for 1873..... 111,708 96</b>									

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STATEMENT showing the Total Tonnage of Vessels and Merchandize which passed through the CANALS of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue.	Deduct.				Total Deductions.	Net Revenue.
	Vessels.	Merchandize.			Maintenance and Repairs.	Management.	Collection of Tolls, &c.	Miscellaneous.		
				\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1874.										
St. Peter's Canal.....	19,528	10,700	30,228	497 55	1,558 57	725 93	9,197 17	.....	2,284 80	\$ cts.
St. Lawrence Canals, viz:										
Leachine.....					22,828 66	25,811 07	896 78	.....	122,428 15	
Beauharnois.....	1,377,989	1,010,397	2,388,386	114,409 68	10,990 06	16,332 51	867 39	.....		
Cornwall.....					7,610 70	13,405 20	1,175 00	.....		
Williamsburgh.....					7,395 92	6,857 19	.....	.....		
Welland Canal.....	1,572,113	1,540,081	3,112,194	305,819 34	103,666 99	50,968 48	7,063 12	.....	162,596 59	143,223 75
Burlington Bay Canal.....	266,936	197,563	464,499	4,523 41	55 91	300 00	.....	.....	256 91	4,166 50
Ottawa Canals, viz:										
St. Anne's Lock.....					7,208 63	2,614 90	874 84	.....	33,321 39	13,449 57
Carillon.....	357,334	548,767	906,101	46,670 96	.....	.....	.....	.....		
Chute à Blondeau.....					.....	.....	.....	.....		
Grenville.....					10,605 82	10,710 88	1,406 82	.....		
Rideau Canal.....	197,152	262,927	460,079	9,902 83	22,957 40	26,816 44	2,039 37	.....	51,812 21	
St. Ours Lock.....	288,822	275,426	564,248	27,241 45	2,363 42	2,219 13	502 26	.....	35,524 29	
Chambly Canal.....					16,427 19	11,675 67	2,336 62	.....		
Newcastle District.....					.....	.....	.....	.....		
Miscellaneous.....					.....	.....	.....	6,546 96	6,546 96	
Totals.....	4,099,874	3,785,861	7,885,735	510,954 72	213,670 77	167,494 40	27,058 87	6,546 96	414,771 00	130,838 82
Deduct excess of expenditure over Revenue at St. Peter's Canal..... \$ 1,786 95										
do do St. Lawrence Canals..... 8,018 47										
do do Rideau Canal..... 41,909 38										
do do Chambly Canal and St. Ours Lock..... 8,282 84										
do do Miscellaneous..... 4,657 46										
Net Revenue for 1874..... \$66,183 72										



STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the CANALS of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue.	Deduct.			Total Deductions.	Net Revenue.	
	Vessels.	Merchandise.			Maintenance and Repairs.	Collection of Tolls, &c.				Miscellaneous.
						\$ cts.	\$ cts.			
St. Peter's Canal.....	25,625	13,537	39,162	\$ 647 87	\$ 889 35	\$ 560 00	\$ 1,449 35	\$ cts.		
St. Lawrence Canals, viz: .....										
Lachine.....					30,057 34	28,592 01	9,418 42			
Beauharnois.....				12,253 01	14,395 32	14,395 32	901 49			
Cornwall.....	1,302,634	957,771	2,260,405	7,087 34	13,351 91	13,351 91	888 67			
Williamsburgh.....				4,110 29	6,547 52	6,547 52	1,175 00			
Wendland Canal.....	1,177,020	1,142,853	2,319,873	2,320 78	86,539 99	52,585 00	8,008 64			
Burlington Bay Canal.....	258,786	137,793	396,579	4,368 00	369 05	300 00	669 05	84,064 15		
Ottawa Canals, viz: .....								3,698 95		
St. Anne's Lock.....				4,506 68	1,859 20	894 40	894 40			
Carleton.....				18,520 44	10,378 57	1,046 03	1,046 03			
Chute à Blondeau.....	384,147	566,911	951,058	40,724 55				37,205 32		
Greenville.....										
Rideau Canal.....	189,183	181,031	370,214	7,793 46	19,699 81	26,553 37	2,227 85	48,481 08		
St. Ours Lock.....	232,810	233,374	466,184	22,166 93	1,245 69	1,352 22	523 00			
Chambly Canal.....					16,306 91	12,201 99	2,370 72	34,010 55		
Newcastle District.....				100 00						
Miscellaneous.....				1,982 08				100 00		
Totals.....	3,570,205	3,233,270	6,803,475	415,851 98	208,595 90	168,701 21	27,434 22	401,877 23	91,382 33	

Deduct excess of expenditure over Revenue at St. Peter's Canal.....		\$
do	St. Lawrence Canals.....	801 48
do	Rideau Canal.....	23,911 11
do	Chambly Canal and St. Ours Lock.....	40,687 57
do	Miscellaneous.....	11,843 60
		163 82
	Net Revenue for 1875.....	77,407 58
		13,974 75

STATEMENT showing the Total Tonnage of Vessels and Merchandize which passed through the CANALS of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue.	Deduct			Total Deductions.	Net Revenue.	
	Vessels.	Merchandize			Maintenance and Repairs.	Management	Collection of Tolls, &c.			Miscellaneous.
St. Peter's Canal .....	25,502	14,486	39,988	654 90	641 55		641 55	13 35		
St. Lawrence Canals, viz.:										
Lachine .....					33,797 73	9,248 89				
Beauharnois .....					14,465 86	1,200 05	146,088 14			
Cornwall .....	1,310,242	604,719	1,914,961	101,930 77	13,320 61	1,007 47				
Williamsburgh .....					11,690 98	7,418 39				
Welland Canal .....	1,077,804	1,097,198	2,175,002	218,411 81	81,376 12	57,623 31	148,124 73	70,287 08		
Burlington Bay Canal .....	236,415	109,571	345,986	4,013 66	1,490 86		1,490 86	2,522 80		
Ottawa Canals, viz.:										
Ste. Anne's Lock .....					4,033 72	922 44				
Carillon .....	300,764	440,298	741,062	35,451 95			30,643 55	4,808 40		
Chute à Blondeau .....					11,475 96	1,494 91				
Greenville .....					14,428 25	26,430 77				
Rideau Canal .....	183,883	147,166	331,049	7,052 68			42,965 85			
St. Ours Lock .....	241,731	238,818	470,579	22,882 92	1,601 71	523 70	29,759 49			
Chambly Canal .....					13,273 56	2,363 46				
Newcastle District .....	4,680	5,316	9,996	100 34				100 34		
Miscellaneous .....				1,856 00			3,193 23			
<b>Totals .....</b>	<b>3,381,021</b>	<b>2,617,602</b>	<b>6,028,623</b>	<b>392,345 03</b>	<b>178,411 80</b>	<b>29,233 06</b>	<b>402,907 40</b>	<b>77,731 97</b>		

Deduct excess of expenditure over Revenue at St. Lawrence Canals .....		\$44,167 37
do Rideau Canal .....		35,913 17
do Chambly Canal and St. Ours Lock .....		6,876 57
do Miscellaneous .....		1,337 23
		88,294 34
Deficit for 1876 .....		10,562 37

STATEMENT showing the Total Number of Vessels and Merchandize which passed through the CANALS of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct.			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandize \$			Maintenance and Repairs. \$ cts.	Management \$ cts.	Collection of Tolls, &c. \$ cts.			Miscellaneous. \$ cts.
St. Peter's Canal.....				17 45	600 00		617 45			
St. Lawrence Canals, viz.:										
Lechne.....				19,824 33	33,148 86	10,105 65				
Beauharnois.....	1,341,166	867,783	2,208,949	15,807 36	14,377 63	1,094 80	133,470 46			
Cornwall.....				6,440 54	13,375 70	1,303 90				
Williamsburgh.....				10,053 61	7,388 08	1,180 00				
Welland Canal.....	1,216,659	1,126,429	2,343,088	49,783 93	59,963 47	7,224 35	116,971 75	104,264 78		
Burlington Bay Canal.....	231,752	116,016	347,768	489 34	303 78	13 40	806 52	2,986 13		
Ottawa Canals, viz.:										
St. Anne's Lock.....				1,756 93	1,982 65	949 07				
Carillon.....				10,304 06	11,050 27	1,982 86				
Chute & Blondeau.....				43,946 93			28,025 84	15,921 09		
Grenville.....				6,069 34	25,959 56	2,122 69	42,280 43			
Rideau Canal.....				14,198 18	1,533 40	519 57				
St. Ours Lock.....				750 80	10,281 76	2,458 41	25,655 28			
Chambly Canal.....				10,111 32						
Newcastle District.....								687 78		
Miscellaneous.....							3,098 46			
<b>Totals</b> .....	<b>3,576,698</b>	<b>3,047,981</b>	<b>6,624,679</b>	<b>138,937 85</b>	<b>179,965 18</b>	<b>28,924 70</b>	<b>350,926 19</b>	<b>123,859 78</b>		

Deduct excess of Expenditure over Revenue, at St. Peter's Canal..... 617 45  
do do St. Lawrence Canals..... 38,778 63  
do do Rideau Canal..... 36,211 09  
do do Chambly Canal and St. Ours Lock..... 4,828 04  
do do Miscellaneous..... 2,660 46

Net Revenue for 1877..... 83,095 66

40,764 12

STATEMENT showing the Number of Vessels of all kinds which passed through the CANALS of the Dominion during each Fiscal Year, from 1st July, 1867, to 30th June, 1877.

YEARS.	CANADIAN.										AMERICAN.										Total Number of Canadian and American Vessels of all kinds.								
	Sailing and other Vessels.					Steam Vessels.					Sailing and other Vessels.					Steam Vessels.													
	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 tons to 400 tons.	Total Number.	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 to 400 tons.	Total Number.	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 to 400 tons.		Total Number.							
1868.....	163	353	253	63	43	113	988	75	41	15	9	7	16	163	20	227	25	34	70	142	518	15	5	2	1	4	28	55	1,724
1869.....	192	374	199	71	44	107	987	90	35	14	12	12	17	189	24	200	30	38	62	139	493	11	7	1	2	2	27	50	1,710
1870.....	239	453	334	96	38	96	1,366	82	28	15	7	5	12	149	22	293	20	30	63	131	559	11	5	1	3	7	29	56	2,020
1871.....	235	371	261	85	36	91	1,090	70	27	11	6	9	10	133	11	218	24	21	65	172	511	21	1	1	2	1	25	51	1,785
1872.....	192	469	376	95	41	106	1,270	98	37	18	8	11	20	192	36	353	51	32	74	177	723	15	6	4	3	2	29	59	2,244
1873.....	191	496	406	104	45	139	1,981	141	48	17	12	12	36	266	46	507	71	56	96	255	1,031	20	8	9	4	2	39	82	2,769
1874.....	293	525	493	132	54	186	1,652	145	42	20	15	13	29	264	28	798	130	27	59	184	1,226	45	14	7	2	2	31	101	3,243
1875.....	196	388	382	120	52	160	1,288	135	44	24	12	12	31	258	19	586	133	14	54	191	997	39	15	2	2	2	30	90	2,633
1876.....	326	418	418	102	50	136	1,450	160	52	25	16	11	35	299	13	682	205	15	42	168	1,125	44	14	4	1	2	19	84	2,958
1877.....	306	477	406	96	53	130	1,468	146	54	19	10	10	31	270	12	576	220	14	39	153	1,014	29	10	4	...	1	21	65	2,817
Totals...	2,323	4,315	3,548	964	456	1,224	12,830	1,142	408	178	107	102	237	2,174	231	4,440	909	891	624	1,712	8,197	250	85	35	20	25	278	693	23,894

2011

STATEMENT showing the Number of Passengers conveyed through the CANALS of the Dominion, from 1st July, 1867, to 30th June, 1877.

No.	Name of Canal.	Year ended 30th June,										Total for Ten Years ended 30th June, 1877.
		1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
1	St. Peter's Canal .....	47,346	46,764	50,671	48,568	38,942	16	12	24	71	•	123
2	St. Lawrence Canals.....	7,636	6,611	9,934	8,147	9,466	55,473	32,965	35,129	40,381	61,637	457,866
3	Welland Canal.....	16,555	20,428	15,052	12,278	12,908	7,629	6,919	5,653	5,735	13,293	80,923
4	Burlington Bay Canal.....	26,436	21,264	32,496	27,316	24,189	8,703	11,065	16,027	14,327	22,273	149,656
5	Ste. Anne's Lock.....	2,222	2,102	1,969	1,307	1,450	†	†	†	†	†	132,701
6	Ottawa Canals .....	†	†	†	†	†	23,835	40,996	37,485	32,328	41,230	184,914
7	Rideau Canal.....	†	†	†	†	†	1,526	700	1,030	1,906	2,458	7,620
8	Chambly Canal & St. Ours Lock	1,969	2,144	2,013	2,761	3,689	3,192	3,218	3,858	5,479	5,484	33,807
	Totals .....	102,864	100,303	112,125	100,377	90,644	100,374	95,895	99,208	106,227	146,375	1,047,590

• Canal closed for enlargement.  
 † Included in "Ottawa Canals."  
 do do

ABSTRACT STATEMENT showing the Number of Vessels and Passengers, the Gross Dominion, the Gross and Net Revenue collected thereon, derived from all 30th June, 1877.

		NUMBER OF VESSELS			
Number.		YEAR ENDED			
		1868.	1869.	1870.	1871.
1	Canadian—				
2	Sailing vessels .....	988	987	1,256	1,090
3	Steam do .....	163	180	149	133
4	American—				
5	Sailing vessels .....	518	493	559	511
6	Steam do .....	55	50	56	51
	Totals.....	1,724	1,710	2,020	1,785
		NUMBER OF			
7	Passengers.....	102,064	100,303	112,125	100,377
		TON			
8	Tonnage of vessels.....	4,186,010	4,207,708	4,742,222	4,658,227
9	do merchandize.....	3,582,423	3,456,577	4,015,402	4,281,636
	Totals.....	7,768,433	7,664,285	8,757,624	8,939,863
		GROSS			
10	From Tolls, &c.....	\$ cts.	\$ cts.	\$ cts.	\$ cts.
11	Rents.....	379,042 16	381,629 57	409,020 06	457,951 84
12		22,939 98	16,588 13	16,856 91	24,304 43
	Totals.....	401,982 14	398,217 70	425,876 97	482,256 27
		DEDUCTIONS			
13	For Repairs .....	101,703 76	119,157 25	150,223 97	140,562 21
14	Management .....	113,584 50	116,569 76	120,903 02	135,520 51
15	Collection of Tolls, &c. ....	22,727 37	23,034 66	21,776 22	24,190 92
16	Miscellaneous .....	8,205 51	3,203 51	8,583 48	2,109 71
	Totals.....	246,221 14	261,965 18	301,486 69	302,383 35
		NET RE			
17	Net Revenue.....	155,761 00	136,252 52	124,390 28	179,872 92

Tonnage of Vessels and Merchandize which passed through the CANALS of the sources, with the Deductions specified, for each fiscal Year from 1st July, 1867, to

OF ALL KINDS.

30TH JUNE.						Total for Ten Years ended 30th June, 1877.	Number.
1872.	1873.	1874.	1875.	1876.	1877.		
1,270	1,381	1,652	1,288	1,450	1,468	12,830	1
192	266	264	258	299	270	2,174	2
723	1,031	1,226	997	1,125	1,014	8,197	3
59	82	101	90	84	65	693	4
2,244	2,760	3,243	2,633	2,958	2,817	23,894	

PASSENGERS.

90,644	100,374	95,895	99,206	100,227	146,375	1,047,590	5
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TONNAGE.

3,721,364	3,933,798	4,099,874	3,570,205	3,381,021	3,576,698	40,077,127	6
3,030,233	3,760,522	3,785,861	3,233,270	2,617,602	3,047,981	34,841,507	7
6,751,597	7,694,320	7,885,735	6,803,475	6,028,623	6,624,679	74,918,634	

REVENUE.

\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
436,115 66	459,267 92	491,011 02	392,406 81	372,264 28	373,953 66	4,152,662 98	8
23,845 59	20,782 46	19,943 70	23,445 17	20,080 75	17,736 65	206,523 77	9
459,961 25	480,050 38	510,954 72	415,851 98	392,345 03	391,690 31	4,359,186 75	

FROM REVENUE.

153,100 52	186,573 13	213,670 77	203,595 90	192,069 31	138,937 85	1,599,594 67	10
124,510 48	148,881 18	167,494 40	168,701 21	178,411 80	179,965 18	1,454,542 04	11
22,732 88	24,734 66	27,058 87	27,434 22	29,233 06	28,924 70	251,847 56	12
1,896 84	8,152 45	6,546 96	2,145 90	3,193 23	3,098 46	47,136 05	13
302,240 72	368,341 42	414,771 00	401,877 23	402,907 40	350,926 19	3,353,120 32	

REVENUE.

157,720 53	111,708 96	96,183 72	13,974 75	.....	40,764 12	1,016,628 80	14
				Deficit.....	10,562 37	10,562 37	
						Net Revenue for the ten years.....	1,006,066 43

STATEMENT showing the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., and the Net Revenue on SLIDES, for the undermentioned years.

## SAGUENAY DISTRICT SLIDES.

Year ended 30th June	Gross Revenue.	Deduct.			Total Deductions.	Net Yearly Revenue.	Deficit.
		Repairs.	Management.	Collection of Tolls.			
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1868.....	1,371 24	3,297 01	838 16	.....	4,135 17	.....	2,763 95
1869.....	1,233 92	165 35	712 05	.....	877 40	356 52	.....
1870.....	1,188 40	119 20	690 80	.....	810 00	378 40	.....
1871.....	1,236 92	83 90	752 39	.....	836 29	400 63	.....
1872.....	.....	818 28	691 05	.....	1,509 33	.....	1,509 33
1873.....	4,162 62	541 50	684 05	.....	1,225 55	2,937 07	.....
1874.....	2,037 59	3,455 44	684 03	.....	4,139 47	.....	2,101 88
1875.....	631 50	1,372 81	932 80	.....	2,305 61	.....	1,674 11
1876.....	2,094 98	4,025 20	716 05	400 23	5,141 48	.....	3,046 50
1877.....	76 80	518 08	741 05	.....	1,259 13	.....	1,182 33
	14,033 97	14,396 77	7,442 43	400 23	22,239 43	4,072 62	12,278 08
Deduct Net Revenue.....							4,072 62
Total Deficit to 30th June, 1877.....							8,205 46

## ST. MAURICE DISTRICT SLIDES.

1868.....	7,635 98	6,351 81	9,914 15	.....	16,265 96	.....	8,629 98
1869.....	7,151 25	3,258 51	9,668 64	.....	12,927 15	.....	5,775 90
1870.....	15,706 89	7,258 72	9,166 57	577 40	17,002 79	.....	1,295 90
1871.....	9,430 42	5,183 99	11,489 30	282 51	17,055 80	.....	7,625 38
1872.....	11,297 14	5,522 19	12,311 53	398 33	18,232 05	.....	6,934 91
1873.....	12,188 41	7,092 48	16,356 80	428 00	23,877 03	.....	11,688 62
1874.....	11,108 12	9,560 48	17,767 31	443 60	27,771 39	.....	16,663 27
1875.....	15,363 80	9,036 51	17,851 96	571 60	27,460 07	.....	12,096 27
1876.....	13,900 16	4,490 87	18,251 84	568 00	23,310 71	.....	9,410 55
1877.....	11,338 48	5,892 27	13,675 28	618 00	20,185 53	.....	8,847 05
	115,120 65	63,647 78	136,453 26	3,987 44	204,088 48	.....	.....
Total Deficit to 30th June, 1877.....							88,967 83



STATEMENT showing the Gross Revenue, the expenditure for Repairs, Management, &c.—Continued.

OTTAWA DISTRICT SLIDES.

Year ended 30th June	Timber passed through Slides.		Gross Revenue.	Deduct		Total Deductions.	Net Yearly Revenue.
	Square and Flatted Timber.	Saw Logs.		Repairs.	Management		
	Pieces.	Pieces.		\$ cts.	\$ cts.		
1868.....	186,377	1,972,109	62,326 41	10,910 35	13,991 65	24,902 00	37,424 41
1869.....	217,047	1,891,293	55,818 50	17,135 38	14,419 70	31,555 08	24,063 42
1870.....	266,407	1,170,076	75,888 74	23,993 54	15,931 20	39,834 74	36,054 00
1871.....	286,804	1,168,794	84,874 47	28,860 31	17,185 00	46,045 31	36,829 16
1872.....	289,473	1,874,042	80,055 11	81,301 40	15,203 94	46,505 34	33,549 77
1873.....	303,268	2,024,980	86,274 63	17,946 39	14,295 58	32,241 97	54,032 66
1874.....	280,390	2,264,126	84,942 39	29,206 34	21,786 98	50,993 32	33,949 07
1875.....	299,218	1,905,936	66,223 73	60,060 76	21,826 70	81,887 46	.....
1876.....	244,591	1,748,493	69,810 33	13,115 09	20,104 79	33,219 88	36,590 45
1877.....	445,430	1,132,073	109,434 05	20,525 65	21,168 36	41,694 01	58,740 04
	2,919,005	16,951,862	766,448 36	252,965 21	175,913 90	428,879 11	353,332 98

Deduct excess of expenditure over Revenue for 1875..... 15,663 73

Total Net Revenue to 30th June, 1877..... 327,569 25

NEWCASTLE DISTRICT SLIDES.

Year ended 30th June	Gross Revenue.	Deduct			Total Deductions.	Deficit.
		Repairs.	Management	Mis-cellaneous.		
		\$ cts.	\$ cts.	\$ cts.		
1868.....	91 00	4,377 61	844 61	.....	5,222 22	5,131 22
1869.....	58 00	3,249 49	486 00	.....	3,735 49	3,677 49
1870.....	.....	2,336 49	507 28	.....	3,442 77	3,442 77
1871.....	.....	6,987 21	994 50	.....	7,981 71	7,981 71
1872.....	.....	7,964 08	621 65	.....	8,285 73	8,285 73
1873.....	.....	5,393 23	690 18	.....	6,083 41	6,083 41
1874.....	.....	5,869 47	1,976 28	.....	7,945 75	7,945 75
1875.....	.....	2,716 26	2,250 52	.....	4,966 78	4,966 78
1876.....	54 65	2,302 75	2,300 82	60 00	4,663 57	4,608 92
1877.....	1,118 46	3,540 89	2,325 03	7 20	5,873 12	4,754 66
	1,322 11	45,136 48	12,996 87	67 20	58,206 55	56,878 44

ABSTRACT Statement of Revenue and Expenditure on SLIDES for the undermentioned Years.  
REVENUE.

Number.	Year ended 30th June,										Total for ten years ended 30th June, 1877.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
1	\$ cts. 71,424 63	\$ cts. 64,061 67	\$ cts. 92,784 03	\$ cts. 95,541 81	\$ cts. 91,637 80	\$ cts. 103,588 12	\$ cts. 98,088 10	\$ cts. 82,219 03	\$ cts. 85,860 12	\$ cts. 112,967 79	\$ cts. 898,173 10

EXPENDITURE.

2	For Repairs .....	24,936 78	23,808 73	34,216 95	41,116 41	45,305 95	30,973 56	48,191 73	73,186 34	23,933 91	30,476 89	376,146 24
3	Management .....	25,588 57	25,286 39	26,295 95	30,421 19	28,828 17	32,026 41	42,214 60	42,861 98	41,373 50	37,909 70	332,806 46
4	Collection of Tolls, &c. ....	.....	.....	577 40	382 51	398 33	428 00	443 60	571 60	968 23	618 00	4,387 67
5	Miscellaneous .....	.....	.....	.....	.....	.....	.....	.....	.....	60 00	7 20	67 20
	Total Deductions ....	50,525 35	49,095 12	61,090 30	71,919 11	74,532 45	63,427 96	90,849 93	116,619 92	66,335 64	69,011 79	713,407 57

NET REVENUE.

6	.....	20,899 28	14,966 55	31,693 73	23,622 70	17,105 35	40,160 16	7,238 17	.....	19,524 48	43,956 00	219,166 42
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DEFICIT.

7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34,400 89
	Total Net Revenue on Slides to 30th June, 1877. ....											184,765 53

STATEMENT showing Revenue and Expenditure on OTTAWA UNION SUSPENSION BRIDGE, from 1st July, 1867, to 30th June, 1877.

Fiscal Year ended 30th June	Gross Revenue.	Expenditure.	Net Revenue.
	\$ cts.	\$ cts.	\$ cts.
1868.....	3,201 72	1,091 98	2,109 74
1869.....	3,472 90	721 94	2,750 96
1870.....	3,421 76	25 00	3,396 76
1871.....	3,568 37	100 00	3,468 37
1872.....	3,600 00	1,045 91	2,554 09
1873.....	3,604 60	902 04	2,702 56
1874.....	2,554 10	2,649 27	.....
1875.....	2,639 65	100 87	2,538 78
1876.....	2,270 92	225 00	2,045 92
1877.....	2,042 48	.....	2,042 48
	30,376 50	6,862 01	23,609 66
Deduct :—Excess Expenditure over Revenue for 1871.....			95 17
Total Net Revenue to 30th June, 1877.....			23,514 49



## APPENDIX No. 42.

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PART II.  
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## STATEMENT

SHOWING

1st. REVENUE DERIVED FROM PUBLIC WORKS MENTIONED.

2nd. DEDUCTIONS FROM REVENUE FOR WORKING EXPENSES, REPAIRS, MANAGEMENT, &amp;c.

3rd. THE NUMBER AND TONNAGE OF VESSELS WHICH PASSED THROUGH THE CANALS OF THE DOMINION—ALSO, THE NUMBER OF PASSENGERS CONVEYED THROUGH THE SAME.

FOR THE FIFTEEN YEARS ENDED

30th JUNE, 1882.

BY

O. DIONNE, *Accountant.*

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STATEMENT showing Revenue on Public Works mentioned, for the following Years.  
RAILWAYS.

Number	Name of Railway.	Year ended 30th June.												Total Fifteen Years ended 30th June, 1882.		
		1877.		1878.		1879.		1880.		1881.		1882.				
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.			
	Revenue from 1st July, 1867, to 30th June, 1877.															
1	Intercolonial.....	4,509,324	41	1,378,946	78	1,294,099	69	1,506,298	48	1,760,393	82	2,079,262	66	12,528,325	94	
2	do Windsor Branch.....	273,219	87	136,899	60	135,855	91	14,011	97	17,462	84	21,053	19	52,578	00	
3	Prince Edward Island.....	1,427,930	86	.....	.....	.....	.....	113,851	11	131,131	43	137,267	54	917,225	46	
4	Pacific, Pembina Branch.....	1,090,626	66	.....	.....	.....	.....	108,375	69	294,076	09	16,151	16	418,692	91	
5	Nova Scotia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,427,930	86	
6	European and North American.....	7,301,101	80	1,514,846	38	1,419,955	60	1,742,537	25	2,203,064	28	2,253,734	55	16,435,239	86	
	Totals, Railways.....															

CANALS.

TOLLS, &c.

1	St. Peter's Canal.....	2,045	18	*	.....	*	.....	*	.....	118	894	77	138	926	74	3,866	67	
2	St. Lawrence Canals, viz:— Lachine..... Beauharnois..... Cornwall..... Williamsburg..... Welland Canal..... Burlington Bay Canal..... St. Anne's Lock..... Ottawa Canals..... 7 Rideau Canal..... 8 Chambly Canal and St. Ours Lock..... 9 Newcastle District Canals.....	870,009	97	77,749	38	73,671	76	99	86,130	32	101	101,377	77	113	100,023	00	1,308,963	20
	Totals.....	4,152,662	98	361,052	48	325,392	22	.....	326,036	64	.....	339,802	23	.....	304,014	40	5,808,960	95

\* Canal closed for enlargement.  
† Included in "Ottawa Canals" since 1st July, 1872.  
N.B.—The above and following statements, except where otherwise indicated, have been compiled from "Public Accounts."

STATEMENT showing Revenue on Public Works mentioned, for the following Year—Concluded.  
CANALS—Concluded.

HYDRAULIC AND OTHER RENTS.

Number	Name of Canal.	Year ended 30th June,												Total for fifteen Years ended 30th June, 1882.			
		1878.		1879.		1880.		1881.		1882.							
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.						
1	St. Peter's Canal.....																
2	St. Lawrence Canal, viz. :—																
	{ Lachine.....																
	{ Beauharnois.....																
	{ Cornwall.....																
	{ Williamburgh.....																
3	Welland Canal.....	48,826	42	27	2,863	25	27	4,205	26	27	5,397	71	29	7,985	53	71,405	92
4	Ottawa Canal.....	5,232	63	27	346	00	27	370	00	27	1,173	00	29	631	00	8,111	63
5	Ottawa Canal.....	5,855	69	27	508	25	27	1,183	00	27	1,756	91	29	730	50	9,567	00
6	Rideau Canal.....	778	87	27	100	00	27	150	00	27	20	00	27	.....	.....	1,393	67
7	Chambly Canal and St. Ours Lock.....	244	00	27	40	00	27	40	00	27	.....	.....	.....	.....	.....	324	00
8	Newcastle District Canals.....	9,931	89	27	854	75	27	854	75	27	330	00	.....	.....	.....	12,791	14
	Sundries.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	206,523	77	.....	12,896	87	.....	16,673	02	.....	21,902	28	.....	25,047	03	304,311	97
	Grand Totals "Canals".....	4,369,186	75	.....	382,321	48	.....	338,289	09	.....	342,709	66	.....	329,061	43	6,113,272	92

†Computed from "Returns, &c., of the Inland Revenue."

Number 1113







STATEMENT showing Revenue derived from Public Works mentioned in the following years—Continued.  
SLIDES AND BOOMS.

Number.	Name of Slide.	Year ended 30th June.												Total for Fifteen Years ended 30th June, 1882.										
		1877.			1878.			1879.			1880.				1881.			1882.						
		\$	cts.	I.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.		\$	cts.	I.	\$	cts.	I.				
	Revenue from 1st July, 1867, to 30th June, 1877.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.	\$	cts.	I.		
1	Seguenay District	14,033	97	25	7,913	40	25	5,730	31	23	489	32	25	6,719	36	25	9,319	91	25	14,033	97	25	14,033	97
2	St. Maurice do	115,120	65	25	90,086	91	23	69,400	63	23	55,611	04	23	74,278	84	25	85,629	27	25	115,120	65	25	145,295	95
3	Ottawa do	766,448	36	23	363	71	25	455	40	23	500	00	25	240	76	25	230	00	25	766,448	36	23	1,131,369	05
4	Newcastle do	1,222	11	25	1,248	01	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,222	11	25	3,111	98
5	Generally	1,248	01	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,248	01	25	1,248	01
	Totals	896,173	10	.....	98,364	02	.....	65,593	34	.....	56,500	36	.....	81,238	96	.....	95,179	18	.....	896,173	10	.....	1,295,048	96

ROADS AND BRIDGES.

1	Brantford and London Road	59	95	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	59	95
2	Dundas and Waterloo do	9,123	12	25	800	10	25	480	06	25	1,000	00	25	533	40	27	1,000	00	27	9,123	12	25	12,133	12		
3	Dunville Bridge	5,718	57	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,438	91
4	Huntington and Port Louis Road	1,258	28	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,258	26
5	Ottawa Union Suspension Bridge	30,376	60	25	2,390	30	25	1,839	45	25	2,576	16	25	3,661	41	27	2,576	16	25	30,376	60	25	43,795	30		
6	York and Peel Road	8,750	68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,750	68
	Totals	55,295	08	.....	3,190	40	.....	2,319	51	.....	4,002	88	.....	5,194	81	.....	4,431	54	.....	55,295	08	.....	74,434	22		

TELEGRAPH LINES.

1	Land and Cable Telegraph Lines	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	Lower St. Lawrence	50,503	38	27	8,530	57	27	5,179	70	27	8,078	14	27	8,640	74	29	8,078	14	27	50,503	38	27	100,035	95		
	Telegraph Lines, B.C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Totals	50,503	38	.....	8,530	57	.....	5,179	70	.....	8,078	14	.....	8,931	33	.....	20,975	96	.....	50,503	38	.....	102,199	07		

STATEMENT showing Revenue on Public Works mentioned, for the following Years—Continued  
FERRIES.

Number.	Name of Ferry.	Revenue from 1st July, 1867, to 30th June, 1877.		Year ended 30th June,						Total for Fifteen Years ended 30th June, 1882.		
		1878.		1879.		1880.		1881.			1882.	
		I.	\$ cts.	I.	\$ cts.	I.	\$ cts.	I.	\$ cts.		I.	\$ cts.
1	Gatineau and New Edinburgh.....	22	50 00	25	50 00	25	75 00	27	230 00	755 00		
2	Gatineau and Rockliffe.....	.....	.....	.....	.....	.....	.....	.....	45 00	45 00		
3	Hull and Ottawa.....	.....	.....	.....	.....	.....	.....	.....	250 00	635 00		
4	Papineauville and Brown's Wharf.....	.....	.....	25	10 00	.....	.....	.....	10 00	20 00		
5	Pembroke and Allumette Island.....	.....	.....	.....	.....	.....	.....	.....	1 00	1 00		
6	Restigouche.....	25	20 00	25	20 00	27	20 00	.....	20 00	165 00		
7	Sandwich.....	.....	.....	.....	.....	.....	.....	.....	.....	100 00		
8	Thurso and Clarence.....	.....	.....	.....	.....	.....	.....	.....	.....	35 00		
	Totals, Ferries.....	.....	25 00	.....	70 00	.....	50 00	.....	140 00	556 00		
										1,756 00		

MISCELLANEOUS.

1	Earnings of Dredges, Maritime Provinces.....	27	15,863 44	27	6,754 49	27	11,316 36	29	700 00	55,437 94
2	Government Lifting Barge, Quebec.....	*133	1,447 18	*133	3,400 25	.....	.....	25	2,067 45	9,912 42
	Totals, Miscellaneous.....	.....	17,310 62	.....	10,154 74	.....	11,316 36	.....	1,106 20	65,350 36

\* From "Report of the Minister of Public Works" for 1880-81, Appendix No. 14.

ABSTRACT STATEMENT of Revenue on PUBLIC WORKS for the undermentioned years.

Number.	Name of Works.	Revenue from 1st July, 1867, to 30th June, 1877.				Year ended 30th June.				Total for Fifteen Years ended 30th June, 1882.				
		1878.		1879.		1880.		1881.			1882.			
		\$	cts.	\$	cts.	\$	cts.	\$	cts.		\$	cts.		
1	Railways.....	7,501,101	80	1,419,955	60	1,742,537	25	2,203,064	28	2,253,734	55	16,435,239	86	
2	Canals, Tolls, &c.....	4,152,662	98	326,323	22	326,036	64	339,802	23	304,014	40	5,808,960	95	
3	do Hydraulic Rents.....	206,523	77	12,896	87	16,573	02	21,902	28	25,047	03	304,311	97	
	Totals, Railways and Canals..	11,660,288	55	1,758,244	69	2,085,246	91	2,564,768	79	2,582,795	98	22,548,512	78	
4	Public Buildings.....	5,470	00	.....	.....	.....	.....	.....	.....	.....	.....	5,478	38	
5	Harbours and Piers.....	60,691	36	10,625	47	7,452	78	7,958	46	.....	.....	7,826	09	
6	Slides and Booms.....	898,173	10	65,593	34	56,500	36	81,238	96	.....	.....	95,179	18	
7	Roads and Bridges.....	55,295	08	2,319	51	4,002	88	5,194	81	.....	.....	4,431	54	
8	Telegraph Lines.....	50,503	38	5,179	70	8,078	14	8,931	33	.....	.....	20,975	95	
	Miscellaneous:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9	Earnings, Dredges, M. Provinces...	6,700	42	6,754	49	11,316	36	14,103	23	.....	.....	700	00	
10	Ferries.....	915	00	70	00	50	00	146	00	.....	.....	558	00	
11	Gov't Lifting Barge.....	2,601	34	3,400	25	.....	.....	2,057	45	.....	.....	406	20	
	Totals, Public Works.....	1,080,349	68	93,942	76	87,400	52	119,624	24	.....	.....	130,074	96	
	Grand Totals.....	12,740,638	23	1,852,187	45	2,172,647	43	2,684,393	03	.....	.....	2,712,870	94	
													24,136,684	61

STATEMENTS showing Revenue and Expenditure for Working Expenses, &c., on Government Railways, for the undermentioned years.

No. 1.—INTERCOLONIAL RAILWAY.

Year ended 30th June.	Gross Revenue.	Expenditure.	Deficit.	
Up to 30th June, 1877.	\$ 4,509,324 41 cts.	\$ 7,330,528 80 cts.	\$ 2,821,204 39 cts.	
1878.	1,378,946 78	1,811,273 56	432,326 78	
1879.	1,294,099 69	2,010,183 22	716,083 53	
1880.	a 1,520,316 45	a 1,607,956 70	87,645 15	a Including "Windsor Branch".....
1881.	a 1,777,856 76	a 1,780,353 53	2,496 87	do do . \$14,011 97
1882.	a 2,100,315 85	a 2,080,592 37	.....	do do . 17,462 84
Totals...	12,580,853 94	16,620,888 18	4,059,757 72	do do . 21,053 19
				Revenue. Expenditure.
				\$52,528 00 \$35,964 14
			Deduct—Net Revenue for 1882.....	19,723 48
			Total Deficit to 30th June, 1882..	4,040,034 24

N.B.—By Order in Council dated 9th November, 1872, the "Nova Scotia" and "European and North American" Railways became part of the "Intercolonial Railway."

Deficit as above.....	\$4,040,034 24
Deduct—Net Revenue on "Nova Scotia" Railway to 30th June, 1872.....	\$ 20,997 49
do do "European & North American".....	266,772 20
	<u>287,769 69</u>
Total Deficit to 30th June, 1882, on "Intercolonial" as reconstructed...	<u>\$3,752,264 55</u>

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

Year ended 30th June.	Gross Revenue.	Expenditure.	Deficit.
Up to 30th June, 1877.	\$ 273,219 87 cts.	\$ 498,620 30 cts.	\$ 225,400 43 cts.
1878.	135,899 60	221,599 49	85,699 89
1879.	125,855 91	223,313 12	97,457 21
1880.	113,851 11	164,640 55	50,789 44
1881.	131,131 43	203,122 88	71,991 45
1882.	137,767 54	228,259 97	90,492 43
Totals...	917,225 46	1,539,556 31	
			Total Deficit for 15 years ended 30th June, 1882.....
			622,330 85

STATEMENTS showing Revenue and Expenditure for Working Expenses, &c., on Government Railways for the undermentioned years—*Concluded.*

## No. 3.—PACIFIC RAILWAY—PEMBINA BRANCH.

Year ended 30th June	Gross Revenue.	Expenditure.	Net Revenue.	
Up to 30th June, 1877.	\$ cts.	\$ cts.	\$ cts.	
1878.	.....	.....	.....	
1879.	.....	.....	.....	
1880.	108,375 69	78,892 01	29,483 68	
1881.	294,076 09	236,944 98	57,131 11	
1882.	a 16,151 16	2,570 88	13,580 28	a Revenue from previous year collected in 1882.
Totals...	418,602 94	318,407 87	100,195 07	

By Order in Council dated 9th April, 1881 (No. 26,050) the "Pembina Branch" was transferred to the Canadian Pacific Railway Co.

ABSTRACT STATEMENT of Revenue and Expenditure for Working Expenses, &c., on Government Railways, for the undermentioned years.

Number.	Total from 1st July, 1867, to 30th June, 1877.	Year ended 30th June.					Total for Fifteen Years ended 30th June, 1882.
		1878.	1879.	1880.	1881.	1882.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	cts.	\$ cts.	\$ cts.
1	7,301,101 80	1,514,846 38	1,419,955 60	1,742,537 25	2,203,064 28	2,253,734 55	16,435,239 86

## EXPENDITURE.

2	10,059,936 93	2,032,873 05	2,233,496 34	1,851,489 26	2,220,421 39	2,311,423 22	20,709,640 19
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## DEFICIT.

3	2,758,835 13	518,026 67	813,540 74	108,952 01	17,357 11	57,668 67	4,274,400 33
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	Deficit.
Memo.—Intercolonial Railway.....	\$3,752,264 55
Prince Edward Island Railway.....	622,330 85
	<u>\$4,374,595 40</u>
Deduct—Net Revenue, "Pembina Branch".....	100,195 07
Total Deficit, Railways.....	<u>\$4,274,400 33</u>

STATEMENT showing the Gross Revenues on Canals from all sources, from 1st July, 1877, to 30th June, 1882.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages, and Fines.	Total Revenues from all Sources.
	Vessels.	Merchandise.	Passengers.				
1878.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal.....							*
St. Lawrence Canals, viz:							
Lachine .....				(a)			
Beauharnois .....							
Cornwall .....	14,921 48	50,428 48	2,812 42	68,162 38	17,411 50	9,587 00	95,160 88
Williamsburgh .....				(b)			
Welland Canal.....	23,937 25	191,795 40	439 16	216,171 81	2,137 75	1,347 16	219,656 72
Burlington Bay Canal.....	3,826 85			3,826 85			3,826 85
Ottawa Canals, viz:							
Ste. Anne's Lock .....				(c)			
Carillon .....	4,538 93	34,527 41	411 35	39,477 69	359 00	13 00	39,849 69
Chute à Blondeau.....				(d)			
Grenville .....							
Rideau Canal.....	1,488 88	3,380 11	79 21	4,948 20	555 25	161 24	5,664 69
St. Ours Lock .....	2,51E 08	14,394 94	75 60	16,988 62	100 00	93 80	17,182 42
Chambly Canal.....							
Newcastle District.....	63 00	211 73		274 73	40 00		314 73
Sundry.....					665 50		665 50
<b>Totals.....</b>	<b>51,294 47</b>	<b>294,733 07</b>	<b>3,817 74</b>	<b>349,850 28</b>	<b>21,269 00</b>	<b>11,202 20</b>	<b>382,321 48</b>
1879.							
St. Peter's Canal.....							
St. Lawrence Canals, viz:							
Lachine .....				(a)			
Beauharnois .....	14,155 19	48,448 48	3,171 41	65,775 08	8,136 62	7,896 68	81,808 38
Cornwall .....				(b)			
Williamsburgh .....							
Welland Canal.....	19,137 82	166,363 66	342 67	185,844 15	2,853 25	103 13	188,800 53
Burlington Bay Canal.....	3,922 95			3,922 95			3,922 65
Ottawa Canals, viz:							
Ste. Anne's Lock .....				(c)			
Carillon .....	4,349 40	35,392 47	371 78	40,113 65	346 00	42 00	40,501 65
Chute à Blondeau.....				(d)			
Grenville .....							
Rideau Canal.....	1,436 43	3,030 42	101 89	4,568 65	506 25	311 69	5,386 59
St. Ours and Chambly...	2,914 41	13,221 76	117 77	16,253 94	150 00	379 80	16,783 74
Newcastle District.....	14 00	166 50		180 50	40 00		220 50
Sundry.....					864 75		864 75
<b>Totals.....</b>	<b>45,930 10</b>	<b>266,623 30</b>	<b>4,105 52</b>	<b>316,658 92</b>	<b>12,896 87</b>	<b>8,733 30</b>	<b>338,289 09</b>

1878—(a) Not including \$40,644 48 for goods passed free.  
 (b) do 1,616 40 do  
 (c) do 8 20 do  
 (d) do 43 49 do  
 (e) do 580 30 do  
\$42,892 87

Canal closed for enlargement.

1879—(a) Not including \$42,286 98 for goods passed free.  
 (b) do 2,105 63 do  
 (c) do 13 70 do  
 (d) do 48 58 do  
 (e) do 158 10 do  
\$44,612 99

STATEMENT showing Gross Revenues on Canals, &c.—Continued.

Name of Canal.	Tolls Collected on			Total Tolls Collected.	Rents.	Storage, Winterage, Wharfage, Damages, and Fines.	Total Revenues from all Sources.
	Vessels	Merchandise.	Passengers.				
1880.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal.....							(a)
St. Lawrence Canals, viz :							
Lachine.....				(b)			
Beauharnois.....	16,732 16	57,104 35	3,322 63	77,159 14	10,594 76	8,971 18	96,725 08
Cornwall.....				(c)			
Williamsburgh.....				162,649 12	4,205 26	146 80	167,001 18
Welland Canal.....	17,869 34	144,698 36	81 42	3,711 70			3,711 70
Burlington Bay Canal.....	3,711 70						
Ottawa Canals, viz :							
Ste. Anne's Lock.....				(d)			
Carillon.....	5,334 98	43,195 43	378 37	48,908 78	370 00	43 56	49,322 34
Chute à Blondeau.....							
Grenville.....							
Rideau Canal.....	1,641 30	3,417 73	123 84	5,182 87	1,153 00	308 56	6,644 43
St. Ours and Chambly...	3,566 11	15,005 85	91 01	18,662 97	20 00	30 30	18,713 27
Newcastle District.....	5 50	256 16		261 66			261 66
Sundry.....					330 00		330 00
<b>Totals.....</b>	<b>48,861 09</b>	<b>263,677 88</b>	<b>3,997 27</b>	<b>316,536 24</b>	<b>16,673 02</b>	<b>9,500 40</b>	<b>342,709 66</b>
1881.							
St. Peters Canal.....	823 28	71 49		894 77			894 77
St. Lawrence Canals, viz :							
Lachine.....				(a)			
Beauharnois.....	18,152 24	69,355 53	3,630 37	91,138 14	13,691 66	10,239 63	115,069 43
Cornwall.....				(b)			
Williamburgh.....				145,231 72	5,397 71	150 00	150,779 43
Welland Canal.....	16,417 21	128,724 63	89 88	3,978 77			3,978 77
Burlington Bay Canal.....	3,978 77						
Ottawa Canals, viz :							
Ste. Anne's Lock.....				(c)			
Carillon.....	6,400 46	54,657 01	369 45	61,426 92	1,173 00	109 06	62,708 98
Chute à Blondeau.....				(d)			
Grenville.....				5,623 87	756 91	312 41	6,693 19
Rideau Canal.....	1,790 41	3,737 77	95 69	(e)			
St. Ours and Chambly...	4,084 98	16,222 08	56 81	20,363 87	345 00	109 96	20,818 83
Newcastle District.....	3 00	220 12		223 12			223 12
Sundry.....					538 00		538 00
<b>Totals.....</b>	<b>51,650 35</b>	<b>272,988 63</b>	<b>4,242 20</b>	<b>328,881 18</b>	<b>21,902 28</b>	<b>10,921 05</b>	<b>361,704 51</b>

1880—(a)—Canal closed for enlargement. No business done on it during this year.

(b)—Not included \$54,709 28 for goods passed free.

(c) do 5,175 28 do

(d) do 238 27 do

60,122 83

1881—(a)—Not included \$51,181 56 for goods passed free.

(b) do 4,875 65 do

(c) do 15 30 do

(d) do 24 08 do

(e) do 96 07 do

\$56,192 66



STATEMENT showing Gross Revenues on Canals, &c.—*Concluded.*

Name of Canal.	Tolls collected on			Total Tolls Collected.	Rents.	Storage, Winterage Damages and Fines.	Total Revenue from all Sources
	Vessels.	Merchandise.	Passengers.				
1882.	\$ cts	\$ cts.	\$ cts.	\$ cts	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal .....	799 62	127 12	.....	926 74	.....	.....	926 74
St. Lawrence Canals, viz:							
Lachine .....				(a)			
Beauharnois .....	15,800 31	67,989 18	4,039 11	87,828 60	15,239 00	12,194 40	115,262 00
Cornwall .....				(b)			
Williamsburgh .....							
Welland Canal .....	12,513 97	96,039 15	86 51	108,639 13	7,985 53	1,801 44	118,426 60
Burlington Bay Canal .....	3,657 90	.....	.....	3,657 90	.....	.....	3,657 90
Ottawa Canals, viz:							
St. Anne's Lock .....				(c)			
Carillon .....	6,220 10	51,951 83	268 55	58,440 4	631 00	54 57	59,126 05
Chute à Blondeau .....							
Grenville .....							
Rideau Canal .....	1,889 31	3,748 03	144 48	(d) 5,781 82	730 50	354 94	6,867 26
St. Ours and Chambly .....	4,168 28	19,715 79	56 23	(e) 23,940 30	.....	81 90	24,022 20
Newcastle District .....	29 50	282 18	.....	311 68	.....	.....	311 68
Sundry .....	.....	.....	.....	.....	461 00	.....	461 00
Totals .....	45,078 99	239,853 28	4,594 88	289,527 15	25,047 03	14,487 25	329,061 43

(a) Not including \$24,495 91 for goods passed free.

(b) do 4,847 70 do  
(c) do 11 75 do  
(d) do 32 19 do  
(e) do 59 07 do

\$29,446 62

No. 1.—STATEMENT showing the Total Tonnage of Vessels and Merchandize which passed through the Canals of the Dominion, the Gross Revenue from Tolls collected thereon, and from all other sources; the Cost of Maintenance, Management, Collection of Tolls, &c., and the Net Revenue for each Fiscal Year, from 1st July, 1877, to 30th June, 1882.

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandize.			Maintenance and Repairs. \$ cts.	Management \$ cts.	Collection of Tolls, &c. \$ cts.			Miscellaneous. \$ cts.
St. Peter's Canal.....										
St. Lawrence Canals, viz.:										
Lechine .....										
Beauharnois.....										
Cornwall .....	1,792,267	865,883	2,658,150	95,160 88	13,646 41	39,662 97	10,674 08			
Williamsburgh.....					9,861 05	14,383 37	1,001 87			
Welland Canal.....	1,240,176	1,091,898	2,332,074	219,656 72	4,935 21	13,825 50	1,074 07			
Burlington Bay Canal .....	379,524	83,574	463,098	3,826 85	4,449 78	7,430 11	1,150 00			
Ottawa Canals, viz.:					66,383 53	60,138 59	7,610 33			
St. Anne's Lock.....					1,278 06	300 00	24 56			
Carillon .....	502,479	475,175	977,654	39,849 69	511 95	2,057 32	946 55			
Chute à Blondeau .....					5,082 72	11,401 30	1,338 71			
Grenville .....	164,353	115,498	279,791	5,664 69	11,034 22	26,651 51	2,119 85			
Rideau Canal .....	221,367	178,828	400,195	17,182 42	283 77	1,556 65	590 18			
St. Ours Lock.....					6,022 96	10,413 99	2,418 08			
Chambly Canal.....										
Newcastle District .....	10,696	15,842	26,538	314 73						
Miscellaneous .....										
Totals .....	4,310,862	2,826,638	7,137,500	382,321 48	123,529 66	187,821 31	28,948 28	340,289 25		
Deduct excess of Expenditure over Revenue at St. Peter's..... \$ 600 00										
do do St. Lawrence..... 26,333 54										
do do Rideau..... 34,140 89										
do do Chambly and St. Ours..... 4,103 21										
Net Revenue for 1878..... 65,177 64										
42,022 23										

STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Canals of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Gross Revenue.	Deduct.			Total Deductions.	Net Revenue.
	Vessels.	Merchandise.		Maintenance and Repairs.	Management.	Collection of Tolls, &c.		
			\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
St. Peter's Canal.....								
St. Lawrence Canals, viz:								
Lachine.....				12,400 78	9,313 30		631 50	
Beauharnois.....				10,370 71	42,338 84			
Cornwall.....	1,729,616	818,916	81,808 38	4,933 15	15,015 86	978 26		
Williamsburgh.....				3,549 71	13,817 96	1,291 10		
Welland Canal.....	998,247	918,924	188,800 53	56,755 57	7,517 20	1,150 00		
Burlington Bay Canal.....	362,811	81,426	3,922 95	448 06	59,942 23	7,620 21		64,482 52
Ottawa Canals, viz:								
St. Anne's Lock.....				3,259 70	2,202 03	945 17		
Carrillon.....	421,894	455,554	40,501 65	7,629 98	11,501 22	1,019 32		13,944 23
Chute à Blondeau.....								
Grenville.....	155,927	104,268	5,386 59	7,134 55	26,042 52	2,111 20		
Rideau Canal.....	219,938	160,586	16,783 74	456 07	1,581 55	615 99		
St. Ours Lock.....				8,809 77	11,301 53	2,561 40		
Chambly Canal.....								
Newcastle District.....	2,662	11,289	220 50					220 50
Miscellaneous.....								864 75
Totals.....	3,921,095	2,550,933	338,289 09	115,798 05	192,195 06	27,408 95	335,402 06	82,684 27

Deduct excess of Expenditure over Revenue at St. Peter's..... \$ 631 50  
do do St. Lawrence..... 40,921 49  
do do Rideau..... 39,901 68  
do do Chambly and St. Ours..... 8,343 57  
Net Revenue for 1879..... 79,797 24  
2,867 03

STATEMENT showing the Total Tonnage of Vessels and Merchandize which passed through the Canals of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandize.			Maintenance and Repairs. \$ cts.	Management. \$ cts.	Collection of Tolls, &c. \$ cts.			Miscellaneous. \$ cts.
St. Peter's Canal.....										
St. Lawrence Canals, viz:										
Leachine.....										
Beauharnois.....	1,920,312	990,167	2,910,479	96,725 08	38,950 90	10,959 95	123,774 07			
Cornwall.....					15,362 61	1,092 37				
Williamsburgh.....	943,686				14,440 33	1,071 27				
Welland Canal.....	341,672				7,590 77	1,150 00				
Burlington Bay Canal.....			1,839,808	167,001 18	63,198 10	7,652 45	147,285 80	19,715 38		
Ottawa Canals, viz:			434,008	3,711 70	300 00		3,819 80			
St. Anne's Lock.....					1,704 71	942 46				
Carillon.....	473,997	532,795	1,006,792	49,322 34	11,959 14	1,381 63	25,766 05	23,556 29		
Chate & Blondeau.....					7,625 54					
Grenville.....					259 31					
Culbute Lock Rapids.....	161,216	108,699	269,915	6,644 43	26,463 88	2,115 37	461 81			
Rideau Canal.....	302,162	187,459	489,621	18,713 27	1,614 01	624 00	40,013 30			
St. Ours Lock.....	602	19,044	19,646	261 66	11,516 22	2,822 12	29,659 63			
Chambly Canal.....					3,568 50		4,757 81			
Chambly District.....							3,765 28			
Miscellaneous.....										
<b>Totals</b> .....	<b>4,143,647</b>	<b>2,826,622</b>	<b>6,970,269</b>	<b>342,709 66</b>	<b>150,687 32</b>	<b>29,711 62</b>	<b>379,503 55</b>	<b>43,271 67</b>		
Deduct excess of Expenditure over Revenue at St. Peter's..... 400 00										
do St. Lawrence..... 26,848 99										
do Burlington Bay..... 108 10										
do Culbute Lock..... 461 81										
do Rideau..... 33,368 87										
do Chambly and St. Ours..... 10,946 36										
do Newcastle..... 4,436 15										
do Miscellaneous..... 3,435 28										
<b>80,065 56</b>										
<b>36,793 89</b>										
Deficit for 1880.....										

STATEMENT shewing the total Tonnage of Vessels and Merchandize which passed through the Canals of the Dominion, &c.—*Con.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandize.			Maintenance and Repairs. \$ cts.	Man-agement. \$ cts.	Collections of Tolls, &c.			
							\$ cts.			\$ cts.
St. Peter's Canal.....	16,537	7,149	23,686	894 77	959 58	10,461 57	959 58			
St. Lawrence Canals, viz.:										
Lachine.....				19,888 33	39,027 99	1,010 01				
Beauharnois.....	1,997,432	1,052,210	3,049,642	10,770 57	17,659 93	1,086 85	134,346 13			
Cornwall.....				5,524 10	15,173 60	1,150 00				
Williamsburgh.....				5,020 73	7,572 35					
Welland Canal.....	863,096	798,809	1,661,905	69,249 53	56,398 04	7,557 49	133,205 06	17,574 37		
Burlington Bay Canal.....	368,312	117,861	486,173	3,978 77	300 00		300 00	3,678 77		
Ottawa Canals, viz.:										
Ste. Anne's Lock.....				3,257 92	2,553 01	912 93				
Carillon.....	552,876	663,960	1,216,836	8,076 91	13,059 18	1,353 41	29,243 37	33,465 61		
Chute à Blondeau.....										
Greenville.....										
Culbute Lock.....	163,103	114,015	277,118	6,693 19	8,627 00	2,431 59	962 85			
Rideau Canal.....	321,851	202,011	523,862	20,818 82	1,299 77	602 60	37,083 30			
St. Ours Lock.....	410	14,264	14,674	223 12	13,950 47	2,448 91	40,748 89			
Chambly Canal.....				2,233 50	2,489 93		4,723 43			
Newcastle.....				538 00			2,390 74			
Miscellaneous.....										
<b>Totals.....</b>	<b>4,283,617</b>	<b>2,970,282</b>	<b>7,253,899</b>	<b>361,704 51</b>	<b>197,873 62</b>	<b>29,045 36</b>	<b>383,963 35</b>	<b>51,718 75</b>		

Deduct: ex. c. s of Expenditure over Revenue at St. Peter's..... 64 81  
 St. Lawrence..... 19,276 70  
 Rideau..... 30,390 11  
 Culbute Lock..... 962 85  
 Chambly and St. Ours..... 19,930 07  
 Newcastle..... 4,500 31  
 Miscellaneous..... 1,852 74

Deficit for 1881.....

22,268 84

STATEMENT showing the Total Number of Vessels and Merchandize which passed through the Canals of the Dominion, &c.—*Cont.*

Name of Canal.	Tonnage.		Total Tonnage.	Gross Revenue. \$ cts.	Deduct			Total Deductions. \$ cts.	Net Revenue. \$ cts.	
	Vessels.	Merchandize.			Maintenance and Repairs. \$ cts.	Management of Tolls, &c. \$ cts.	Collection of Tolls, &c. \$ cts.			Miscellaneous. \$ cts.
St. Peter's Canal.....	39,981	12,712	52,693	926 74	200 63	1,920 54	2,121 17			
St. Lawrence Canals, viz.:										
Leachine.....					17,116 46	41,158 90	10,296 90			
Beauharnois.....	1,936,896	677,450	2,614,346	115,262 00	20,813 86	18,804 53	1,604 77	148,842 72		
Cornwall.....					6,634 62	15,052 20	1,173 35			
Welland Canal.....					7,447 69	7,589 41	1,150 00			
Williamsburg.....	679,010	608,929	1,287,969	118,426 60	84,374 97	71,641 51	7,321 71	166,338 19		
Burlington Bay Canal.....	336,520	139,505	476,025	3,657 90	240 62	300 00	540 62	3,117 28		
Ottawa Canals, viz.:										
St. Anne's Lock.....	546,671	744,198	1,290,869	59,126 05	2,343 99	2,611 30	1,247 52	29,603 95		
Chute à Blondeau.....					7,562 68	14,387 49	1,330 97			
Grenville.....					162 33	790 00		952 33		
Culbute Lock.....					13,860 28	26,915 29	2,113 01	42,888 58		
Rideau Canal.....	180,174	99,527	279,701	6,867 26	1,902 41	2,802 71	615 69	40,635 66		
St. Ours Lock.....	338,300	245,307	583,607	24,022 20	16,843 60	16,686 78	2,584 47	10,127 42		
Chambly Canal.....	5,665	15,215	20,880	311 68	8,115 50	2,011 92		2,559 41		
Newcastle District.....					2,559 41			2,459 09		
Fort Frances Lock.....								446,969 14		
Miscellaneous.....								32,739 38		
<b>Total.....</b>	<b>4,063,247</b>	<b>2,542,843</b>	<b>6,606,090</b>	<b>329,061 43</b>	<b>190,199 05</b>	<b>224,872 61</b>	<b>29,438 39</b>	<b>446,969 14</b>	<b>32,739 38</b>	

Deduct excess of Expenditure over Revenue.	
St. Lawrence.....	1,194 43
Welland.....	33,680 72
Culbute Lock.....	47,911 59
Rideau.....	952 33
Chambly.....	36,021 32
Newcastle.....	16,613 46
Fort Frances Lock.....	9,815 74
Miscellaneous.....	2,559 41
	1,998 09
<b>Total.....</b>	<b>150,647 09</b>

Deficit for 1882.....	
	<b>117,997 71</b>

STATEMENT showing the Number of Vessels of all kinds which passed through the CANALS of the Dominion during the undermentioned Fiscal Years.

YEARS.	CANADIAN.										AMERICAN.										Total Number of Canadian and American Vessels of all kinds, to 30th June, 1882.								
	Sailing and other Vessels.					Steam Vessels.					Sailing and other Vessels.					Steam Vessels.													
	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 to 400 tons and over.	Total Number.	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 to 400 tons and over.	Total Number.	Under 50 tons.	50 tons and under 100.	100 tons and under 150.	150 tons and under 200.	200 tons and under 250.	250 to 400 tons and over.		Total Number.							
Up to 30 June, 1877 .....	2,323	4,315	3,548	964	456	1,224	12,830	1,142	408	178	107	102	237	2,174	231	4,440	909	281	624	1,712	8,197	250	86	35	20	25	278	693	23,894
1878.....	261	398	412	101	52	142	1,366	139	50	31	10	9	53	292	13	539	282	11	49	167	1,061	17	5	1	1	1	19	44	2,763
1879.....	305	322	342	106	44	126	1,245	150	53	24	12	12	50	301	15	334	219	12	27	128	735	19	11	3	...	20	53	2,334	
1880.....	275	339	335	93	47	124	1,213	146	52	36	12	9	48	303	23	279	226	7	20	108	663	22	7	2	4	1	11	47	2,226
1881.....	286	385	402	139	56	134	1,412	154	49	28	17	14	47	309	10	335	333	7	17	76	778	27	12	1	...	1	3	44	2,543
1882.....	334	395	451	173	39	139	1,531	196	60	39	14	13	52	374	59	234	414	7	13	63	790	44	6	1	...	6	58	2,753	
Totals..	3,794	6,154	5,490	1,676	694	1,869	19,597	1,927	672	336	172	159	487	3,753	351	6,161	2,383	325	750	2,264	12,294	379	126	43	26	28	337	939	36,513

STATEMENT showing the number of Passengers conveyed through the Canals of the Dominion for the undermentioned Years.

Names of Canals.	Number from 1st July, 1867, to 30th June, 1877.	Year ended 30th June,					Total for Fifteen Years ended 30th June, 1882.
		1878.	1879.	1880.	1881.	1882.	
St. Peter's.....	123	(a)	(a)	(a)	666	2,075	2,864
St. Lawrence.....	457,866	59,439	68,648	71,716	77,754	75,221	810,644
Welland.....	80,923	10,065	5,353	5,395	4,950	1,741	108,427
Burlington Bay.....	149,636	36,534	64,684	22,408	12,133	7,239	292,634
Ste. Anne's Lock.....	132,701	*	*	*	*	*	132,701
Ottawa.....	184,914	31,461	20,295	19,304	20,129	16,381	292,484
Rideau.....	7,620	3,247	4,170	5,371	3,784	5,069	29,261
Chambly and St. Ours Lock.....	33,807	3,625	7,251	4,943	3,091	3,061	55,778
Totals.....	1,047,590	144,371	170,401	129,137	122,507	110,787	1,724,793

(a) Canal closed for enlargement.

\* Included in "Ottawa" Canals.



ABSTRACT Statement showing the Number of Vessels and Passengers; the Gross Tonnage of Vessels and Merchandise which passed through the Canals of the Dominion; the Gross and Net Revenue collected thereon, derived from all sources, with the deductions specified, for the Fifteen Years ended 30th June, 1882.

## NUMBER OF VESSELS OF ALL KINDS.

	1st July, 1867, to 30th June, 1877.	Year ended 30th June,					Total for Fifteen Years ended 30th June, 1882.
		1878.	1879.	1880.	1881.	1882.	
Canadian—							
Sailing vessels.....	12,830	1,366	1,245	1,213	1,412	1,531	19,597
Steam do .....	2,174	292	301	303	309	374	3,753
American—							
Sailing vessels.....	8,197	1,061	735	653	778	791	12,224
Steam do .....	693	44	53	47	44	58	939
Totals.....	23,894	2,763	2,334	2,226	2,543	2,753	36,513

## NUMBER OF PASSENGERS.

Passengers.....	1,047,590	144,371	170,401	129,137	122,507	110,787	1,724,793
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## TONNAGE.

Tonnage of vessels...	40,077,127	4,310,862	3,921,095	4,143,647	4,283,617	4,063,247	60,799,595
do merchandise	34,841,507	2,826,638	2,550,963	2,826,622	2,970,281	2,542,843	48,558,855
Totals .....	74,918,634	7,137,500	6,472,058	6,970,269	7,253,899	6,606,090	109,358,450

## GROSS REVENUE.

From Tolls, &c.....	4,152,662 98	361,052 48	325,392 22	326,036 64	339,802 23	304,014 40	5,808,960 95
Rents.....	206,523 77	21,269 00	12,896 87	16,673 02	21,902 28	25,047 03	304,311 97
Totals .....	4,359,186 75	382,321 48	338,289 09	342,709 66	361,704 51	329,061 43	6,113,272 92

## DEDUCTIONS FROM REVENUE.

Repairs.....	1,599,594 67	123,529 66	115,798 05	150,687 32	154,653 63	190,199 05	2,334,462 38
Management.....	1,454,542 04	187,821 31	192,195 06	195,339 33	197,873 62	224,872 61	2,452,643 97
Collection of Tolls, &c	251,847 56	28,948 28	27,408 95	29,711 62	29,045 36	29,438 39	396,400 16
Miscellaneous.....	47,136 05	.....	.....	3,765 28	2,390 74	2,459 09	55,751 16
Totals.....	3,353,120 32	340,299 25	335,402 06	379,503 55	383,963 35	446,969 14	5,229,257 67

## NET REVENUE.

.....	1,006,066 43	42,022 23	2,887 03	.....	.....	.....	1,050,975 69
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## DEFICIT.

.....	.....	.....	.....	36,793 89	22,258 84	117,907 71	176,960 44
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Total Net Revenue up to 30th June, 1882..... 874,015 25

STATEMENT showing the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., and the Net Revenue on Slides, for the undermentioned years.

## SAGUENAY DISTRICT SLIDES.

Fiscal Year.	Gross Revenue.	Deduct			Total Deductions.	Deficit.
		Repairs.	Management	Collection of Tolls.		
Up to 30th June—	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1877.....	14,033 97	14,396 77	7,442 43	400 23	22,239 43	8,205 46
1878.....		597 60	882 85		1,480 45	1,480 45
1879.....		5,491 02	753 05		6,244 07	6,244 07
1880.....		4,611 74	710 05		5,321 79	5,321 79
1881.....		6,210 39	853 68		7,064 07	7,064 07
1882.....		5,064 21	1,438 58		6,502 79	6,502 79
Totals.....	14,033 97	36,371 73	12,080 64	400 23	48,852 60	
Total Deficit for Fifteen Years ended 30th June, 1882 .....						34,818 63

MEMO.—Deficit as above ..... \$34,818 63  
 Deduct Net Revenue from 1860 (date of opening of slide) to 30th June, 1867..... 1,878 20  
 Total Deficit up to 30th June, 1882..... 32,940 43

## ST. MAURICE DISTRICT SLIDES.

Fiscal Year.	Gross Revenue.	Deduct			Total Deductions.	Deficit.
		Repairs.	Management	Collection of Tolls, &c.		
Up to 30th June—	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1877.....	115,120 65	63,647 78	136,453 26	3,987 44	204,088 48	88,967 83
1878.....	7,913 40	6,232 87	12,759 50	550 00	19,542 37	11,628 97
1879.....	5,733 31	4,291 19	13,355 19	559 00	18,205 38	12,472 07
1880.....	489 32	8,497 07	14,823 01	773 52	24,093 60	23,604 28
1881.....	6,719 36	3,831 27	14,993 41	578 50	19,403 18	12,683 82
1882.....	9,319 91	9,167 21	17,768 48	710 00	27,645 69	18,325 78
Totals.....	145,295 95	95,667 39	210,152 85	7,158 46	312,978 70	
Total Deficit for Fifteen Years ended 30th June, 1882 .....						167,682 75

MEMO.—Deficit as above ..... \$167,682 75  
 Add Deficit from 1855 (date of opening of slides) to 30th June, '67. 75,378 40  
 Total Deficit to 30th June, 1882..... 243,061 15

STATEMENT showing the Gross Revenue, the expenditure on Repairs, Management, collection of Tolls, &c.—*Concluded.*

## OTTAWA DISTRICT SLIDES.

Fiscal Year.	Square and Flatted Timber.	Saw Logs.	Gross Revenue.	Deduct		Total Deductions.	Net Yearly Revenue.
				Repairs.	Management		
	Pieces.	Pieces.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Up to 30th June							
1877.....	2,919,005	16,951,862	766,448 36	252,965 21	175,913 90	428,879 11	337,569 25
1878.....	268,243	1,023,958	90,086 91	4,342 24	19,908 37	24,250 61	65,836 30
1879.....	161,437	1,118,958	59,404 63	4,038 81	20,636 73	24,675 54	34,729 09
1880.....	83,154	1,257,106	55,511 04	10,444 90	17,465 29	27,910 19	27,600 85
1881.....	168,817	2,196,084	74,278 84	11,803 02	19,086 06	30,889 08	43,389 76
1882.....	264,136	2,156,653	85,629 27	18,462 89	22,103 22	40,566 11	45,063 16
Totals.....	3,864,792	24,704,621	1,131,359 05	302,057 07	275,113 57	577,170 64	
Total Net Revenue for Fifteen Years ended 30th June, 1882.....							554,188 41

MEMO.—Net Revenue as above ..... \$ 554,188 41  
do from 1845 (date of opening of slides) to 30th June,  
1867 ..... 488,403 38

Total Net Revenue to 30th June, 1882..... 1,042,591 79

## NEWCASTLE DISTRICT WORKS.

Fiscal Year.	Gross Revenue.	Deduct			Total Deductions.	Deficit.
		Repairs.	Management	Mis-cellaneous.		
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Up to 30th June—						
1877.....	1,322 11	45,136 48	12,996 87	67 20	58,200 55	56,878 44
1878.....	363 71	5,963 11	2,366 45	16 22	8,345 78	7,982 07
1879.....	455 40	5,984 78	2,238 21	.....	8,222 99	7,767 59
1880.....	500 00	1,050 34	614 07	.....	1,664 41	1,164 41
1881.....	240 76	.....	529 00	.....	529 00	283 24
1882.....	230 00	3,028 53	582 50	77 93	3,688 96	3,458 96
Totals.....	3,111 98	61,163 24	19,327 10	161 35	80,651 69	
Total Deficit for fifteen years ended 30th June, 1882.....						77,539 71

MEMO.—Deficit as above ..... \$77,539 71  
do from 1845 (date of opening of Slides) to 30th June, 1867.... 3,894 28

Total Deficit up to 30th June, 1882 ..... \$81,433 99

ABSTRACT Statement of Revenue and Expenditure on Slides for the under-mentioned Years.

REVENUE.

	From 1st July, 1867, to 30th June, 1877.	Year ended 30th June,					Total for fifteen years ended 30th June, 1882.
		1878.	1879.	1880.	1881.	1882.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
.....	898,173 10	98,364 02	65,593 34	56,500 36	81,238 96	95,179 18	1,295,048 96

EXPENDITURE.

For Repairs.....	376,146 24	17,135 82	19,805 80	24,604 05	21,844 68	35,722 84	495,259 43
Management.....	332,806 46	35,917 17	36,983 18	33,612 42	35,462 15	41,892 78	516,674 16
Collection of Tolls, &c .....	8,387 67	550 00	559 00	773 52	578 50	710 00	7,558 69
Miscellaneous .....	67 20	64 74	.....	.....	.....	77 93	209 87
Total Deductions	713,407 57	53,667 73	57,347 98	58,989 99	57,885 33	78,403 55	1,019,702 15

NET REVENUE.

.....	184,765 53	44,696 29	8,245 36	.....	23,353 65	16,775 63	277,836 44
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DEFICIT.

.....	.....	.....	.....	2,489 63	.....	.....	2,489 63
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Net Revenue for fifteen years ended 30th June, 1882.....	275,346 81
Add Revenue from 1845 to 30th June, 1867, (see report of Commissioner of Public Works, 1867, Appendix No. 68, page 479) .....	411,008 90
Total Net Revenue since opening of Slides up to 30th June, 1882.....	\$686,355 71

Memorandum—	Net Revenue.
Ottawa District Slides.....	\$1,042,591 79
Slides, generally.....	1,199 49
	<u>1,043,791 28</u>
Deduct—	Deficit.
Saguenay District Slides.....	\$ 32,940 43
St. Maurice do .....	243,061 15
Newcastle do .....	81,433 99
	<u>357,435 57</u>
Total Net Revenue as above.....	<u>\$686,355 71</u>

STATEMENT showing Revenue and Expenditure on Ottawa Union Suspension Bridge for the Fifteen Years ended 30th June, 1882.

Fiscal Year.	Gross Revenue.	Expenditure.	Net Revenue.
	\$ cts.	\$ cts.	\$ cts.
Up to 30th June—			
1877.....	30,376 50	6,862 01	23,514 49
1878.....	2,390 30	214 74	2,175 56
18.9.....	1,839 45	309 96	1,529 49
1880.....	2,576 16	.....	2,576 16
1881.....	3,661 41	503 34	3,158 07
1882.....	2,951 48	4,931 67	.....
Totals .....	43,795 30	12,821 72	32,953 77
Deduct—Excess of Expenditure over Revenue for 1882...			1,980 19
Total Net Revenue to 30th June, 1882..			30,973 58



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 APPENDIX No. 42½.
 

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No. 35872.

 OFFICE BOARD OF TRADE,  
 MONTREAL, 3rd July, 1883.

DEAR SIR,—Referring to your telegrams of 20th, 22nd and 26th ult., asking for a statement of freight and passenger traffic on railway lines which compete with canals in Canada and in the United States—extending backward for fifteen years—I have now the honor to transmit to you the result of the effort made to comply with your request. The information available from a number of sources has been tabulated in such a way as to convey the desired information, I believe, without comment; but if it shall seem necessary to you to make any inquiry as to particular points, or lines of figures, it will afford pleasure to reply promptly.

Let me say that the communication is the outcome of much investigation—numerous authorities having been consulted—and I earnestly hope it will be satisfactory.

I have the honor to be, dear Sir,  
 Your obedient servant,

WM. J. PATTERSON,  
*Secretary.*

F. H. ENNIS, Esq.,  
 Secretary, Department of Public Works,  
 Ottawa.

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 MEMO. OF CONTENTS OF TABLES ATTACHED.
 

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- No. 1. Comparative Statement of receipts of grain and flour received at Montreal *via* Grand Trunk Railway, and to Lachine Canal, 1868-1882.
2. Statement of traffic on railways in the Dominion of Canada from 1875 (no returns previously.)
3. Statement of traffic on New York State canals from 1868 to 1882.
4. Statement of wheat and flour shipped from Buffalo and Oswego indicating amounts of traffic attracted to Oswego, through the Welland Canal, from 1868 to 1881.
5. Statement of traffic on the New York Canals compared with the traffic on four competing railroad lines.
6. Statement of movement of breadstuffs to the seaboard; comparison between canal and rail movement; the best comparative statement that can be made; taken in conjunction with No. 8.
7. Statement of receipts of grain and flour at New York during seven months of canal navigation, by rail and canal.
8. Statement of traffic movement on thirteen leading lines in the United States for 1873 and 1880.
9. Number of miles of railroad in operation in the United States.

## APPENDIX No. 42½.

No. 1.—RECEIPTS of Grain and Flour at Montreal per Grand Trunk Railway and Lachine Canal.

Year.	Lachine Canal.	Grand Trunk Railway.
	Bushels.	Bushels.
1868 .....	5,544,827	3,026,083
1869 .....	9,753,754	3,350,995
1870 .....	9,954,006	2,774,962
1871 .....	12,520,443	3,759,706
1872 .....	13,883,381	3,825,872
1873 .....	15,573,816	4,326,730
1874 .....	12,920,967	4,855,387
1875 .....	11,654,284	5,761,106
1876 .....	12,720,169	6,347,616
1877 .....	13,650,804	5,083,883
1878 .....	14,259,999	7,627,891
1879 .....	17,160,750	5,813,330
1880 .....	19,280,017	6,524,661
1881 .....	12,431,250	7,688,840
1882 .....	10,005,532	6,289,061

## RAILWAYS IN THE DOMINION OF CANADA.

No. 2.—STATEMENT showing the Mileage of Road, Train Mileage, number of Passengers and tons of Freight carried, and Annual Receipts and Expenditure during the past Eight Years.

Year ending 30th June—	Mileage of Road.	Train Mileage				Number of Passengers.	Tons of Freight.	Earnings.	Operating Expenses.
		Passenger.	Freight.	Mixed.	Total.				
								\$	\$
1875...	4,826½	5,266,353	10,910,181	1,563,644	17,680,168	5,190,416	5,670,826	19,470,539	15,775,532
1876...	5,157½	5,837,461	9,616,148	2,650,019	18,103,628	5,544,814	6,331,757	19,358,084	15,802,721
1877...	5,574½	.....	.....	.....	19,450,813	6,073,233	6,859,796	18,742,053	15,290,091
1878...	6,143½	6,225,327	9,981,786	3,462,334	19,669,447	6,443,924	7,883,472	20,520,078	16,100,102
1879...	6,484½	6,987,919	6,510,636	7,068,450	20,731,689	6,523,816	8,348,810	19,925,066	16,188,102
1880...	6,891½	7,312,168	10,775,380	4,157,292	22,427,449	6,462,948	9,938,858	23,501,447	16,840,705
1881...	7,260	8,298,957	15,163,634	2,099,487	27,301,306	6,943,671	12,065,323	27,987,509	20,121,418
1882...	7,530	8,802,479	16,668,635	2,375,397	27,846,411	9,352,335	13,575,787	29,027,790	22,396,709



CANALS IN THE STATE OF NEW YORK.

No. 3—STATEMENT of Tons of Property going from tide water ; the tons arriving at tide water from Western States and from New York State ; the total tons arriving at tide water ; the tons of the Internal Trade of N. Y. State, and tons of the total movement on all the Canals, from 1868 to 1882.

Year.	Going from Tide Water.	Arriving at Tide Water.				Total Arriving at Tide Water.	Internal Movement of New York State.	Total Movement.
		By way of Erie Canal.		By way of Champlain Canal.				
		From Western States.	From New York State.	From Vermont and Canada.	From New York State.			
1868	1,067,020	2,215,222	163,359	193,474	668,760	3,240,806	2,134,399	6,442,225
1869	772,201	2,028,568	229,121	203,876	634,577	3,096,142	1,990,737	5,859,050
1870	940,429	2,043,947	241,751	244,617	620,987	3,156,302	2,077,088	6,173,765
1871	801,538	2,473,832	175,045	212,054	634,870	3,495,801	2,170,549	6,467,888
1872	926,228	2,456,022	214,383	261,058	716,481	3,647,944	2,009,198	6,673,379
1873	795,117	2,539,455	225,900	27,895	763,399	3,376,649	2,193,016	6,364,782
1874	753,981	2,200,364	269,933	193,523	559,292	3,223,112	1,827,495	5,804,588
1875	701,253	1,664,056	250,886	135,115	558,720	2,608,777	1,549,828	4,859,858
1876	745,797	1,402,768	342,552	128,223	552,639	2,426,182	1,000,150	4,172,129
1877	978,991	2,010,081	287,927	156,150	532,654	2,986,812	890,160	4,855,963
1878	783,150	2,450,512	381,278	151,081	654,230	3,637,101	751,069	5,177,320
1879	992,434	2,196,177	349,825	151,913	588,261	3,286,176	1,083,762	5,362,372
1880	1,264,179	2,801,282	425,076	224,437	616,807	4,067,402	1,126,075	6,457,658
1881	1,056,196	1,804,120	389,182	312,179	660,358	3,065,839	1,057,157	5,179,192
1882	1,038,003	1,824,129	278,311	313,422	752,290	3,068,152	1,361,268	5,467,423

No. 4—STATEMENT showing Tons of Wheat and Flour shipped at Buffalo (and Tonawanda) and Oswego, and total tons arrived at Tide Water for Years 1868 to 1882.

Years.	Buffalo (and Tonawanda).	Oswego.	Total.	Total Tons Arrived at Tide Water.
1868	313,845	105,795	419,640	380,852
1869	496,524	148,721	645,245	636,870
1870	510,416	127,172	637,588	575,684
1871	576,456	133,216	709,672	678,450
1872	330,652	62,640	393,292	356,917
1873	738,644	57,283	795,927	682,827
1874	650,223	108,289	758,512	726,702
1875	701,174	34,418	735,592	686,706
1876	377,548	22,867	400,415	357,683
1877	400,126	29,810	429,936	385,072
1878	776,953	25,565	802,518	811,908
1879	893,643	26,474	920,117	914,619
1880	900,346	18,417	918,763	883,247
1881	388,096	26,110	414,206	418,621
1882 (Not ascertained)				

## RAILWAYS AND CANALS IN THE UNITED STATES.

No. 5.—STATEMENT showing the Number of Tons transported upon the New York State Canals, the N. Y. Central and Hudson River Railroad, the N. Y. Lake Erie and Western Railroad, and the Pennsylvania Railroad, for Years 1863 to 1882.

Year.	New York State Canals.	N. Y. Central and H. R. Railway.	N. Y. Lake Erie and Western Railway.	Pennsylvania Railway.	Baltimore and Ohio Railway.
1863.....	6,442,225	2,562,862	3,908,243	4,722,015	These four railroads are the roads competing with the Erie Canal for traffic between the Western States and the seaboard. The figures of the Baltimore and Ohio Railroad are not obtainable, but as nearly as can be ascertained its through tonnage is greater than the Erie Canal.
1869.....	5,859,080	3,190,810	4,312,209	5,402,991	
1870.....	6,173,769	4,122,000	4,852,505	5,804,051	
1871.....	6,467,888	4,532,056	4,844,208	7,100,294	
1872.....	6,673,370	4,393,965	5,564,274	8,459,535	
1873.....	6,364,782	5,522,724	6,777,652	9,998,794	
1874.....	5,804,588	5,759,672	6,990,250	9,118,419	
1875.....	4,859,858	5,678,808	6,765,188	9,787,176	
1876.....	4,172,129	6,510,508	6,488,184	10,600,547	
1877.....	4,955,963	6,078,273	6,752,839	10,438,394	
1878.....	5,171,320	7,889,389	6,721,724	11,627,228	
1879.....	5,362,372	9,101,012	8,811,123	14,457,502	
1880.....	6,462,290	10,576,754	9,445,392	16,341,568	
1881.....	5,179,192	11,591,192	11,086,823	18 to 19,000,000	
1882.....	5,467,423	Not ascertained	Not ascertained.	Not ascertained.	

No. 6.—STATEMENT showing Receipts of Flour and Grains at New York, Montreal, Portland, Boston, Philadelphia, Baltimore, New Orleans, distinguishing Receipts by the Erie, Champlain and St. Lawrence Canals at New York and Montreal for Years 1872 to 1882.

Year.	Total Receipts at seven Atlantic Sea-ports.	Receipts by Erie, Champlain and St. Lawrence Canals.	Receipts in excess of Canal Receipts.
	Bushels.	Bushels.	Bushels.
1872.....	186,059,546	67,746,909	118,312,537
1873.....	187,316,167	64,634,180	122,681,987
1874.....	204,806,480	64,284,861	139,521,619
1875.....	189,453,477	51,185,494	139,267,983
1876.....	218,190,865	44,486,400	173,704,465
1877.....	215,687,367	61,734,000	153,953,367
1878.....	309,167,315	76,821,600	232,345,715
1879.....	348,210,685	74,133,800	274,076,885
1880.....	362,570,607	90,369,815	272,200,792
1881.....	289,134,307	50,623,730	238,510,577
1882.....	Not ascertained.	Not ascertained.	Not ascertained.

RAILWAYS AND CANALS IN THE UNITED STATES.

No. 7.—STATEMENT showing Receipts of Flour and Grain by Canals and by Rail at New York, during seven months of Canal Navigation, May to November inclusive, for years 1877 to 1882.

Year.	By Canal.	By Rail.
	Bushels.	Bushels.
1877 .....	47,248,265	36,526,406
1878 .....	62,319,667	46,881,467
1879 .....	54,095,806	59,820,220
1880 .....	69,421,695	56,505,548
1881 .....	37,469,030	62,800,037
1882 .....	Not ascertained.	Not ascertained.

RAILWAYS IN THE UNITED STATES.

No. 8.—STATEMENT showing amount of Freight moved, Earnings from Freight on thirteen leading Railroads during the years 1873 and 1880.

Tons of Freight Moved.		Receipts from Freight.		Miles of Road.	
1873.	1880.	1873.	1880.	1873.	1880.
45,557,002	78,150,913	112,004,835	143,388,178	11,438	15,457

No. 9.—NUMBER of miles of Railroad in operation in the United States for a series of years.

1865.	1870.	1875.	1877.	1878.	1879.
35,085	52,885	74,096	79,089	81,776	86,497

NOTE.—For information respecting railways in Canada prior to Confederation, see General Report of the Commissioner of Public Works, 1867, Appendix 70, pp. 552 to 555, for expenditure, &c., and pp. 601 to 608 for traffic, &c.



No. 36027.

**APPENDIX No. 43.**

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**STATEMENT SHOWING:—**

- 1st. THE EXPENDITURE PRIOR TO CONFEDERATION BY THE PROVINCIAL GOVERNMENTS, ON THE CONSTRUCTION AND IMPROVEMENT OF PUBLIC WORKS WHICH BECAME THE PROPERTY OF THE DOMINION ON THE 1st JULY, 1867;
- 2ND THE EXPENDITURE BY THE DOMINION GOVERNMENT FROM 1st JULY, 1867 TO 30th JUNE, 1882;
- 3RD. THE EXPENDITURE FROM OTHER THAN GOVERNMENT FUNDS.

BY

O. DIONNE, *Accountant.*

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RAIL

GOVERNMENT

STATEMENT showing: 1st. The Expenditure, prior to Confederation, by the Province became the property of the Dominion on 1st July, 1867; 2nd. The Expenditure 3rd. The Expenditure from other

Number	Name of Railway.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Nova Scotia .....	6,124,241 15	.....	6,124,241 15	1,801,461 89	.....
2	European and North American, N.B.	4,642,484 39	.....	4,642,484 39	824,689 28	.....
3	Interecolonial .....				26,464,017 42	.....
	Carried forward .....	10,766,725 54	.....	10,766,725 54	29,090,168 59	.....

WAYS.

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RAILWAYS.

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vincial Governments, on the Construction and Improvement of Public Works which by the Dominion Government from 1st July, 1867 to 30th June, 1882; than Government Funds.

Confederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
1,801,461 89	7,925,703 04	1	<p>Prior to Confederation, this railway was under the care and management of a Commissioner and worked on Government account. On the 1st July, 1867, it comprised the following lines:—</p> <p>Halifax to Truro ... 61 miles ...</p> <p>Windsor Branch..... 32 do ...</p> <p>Truro to Pictou, or the "Pictou Extension"..... 52 do ...</p> <p>Total.....145 miles....</p> <p>Works were commenced on the 13th June, when first sod was turned at Richmond (about 1½ miles from Halifax). They were completed in December, 1858. The first section of the road, from Richmond to 4-Mile House, was opened for traffic in February, 1855.</p> <p>The ceremony of breaking ground on this line was performed on the 30th November, 1864, at New Glasgow. Work was completed in July, 1867. Line opened for traffic on 31st May, 1867.</p>
824,689 28	5,467,173 67	2	<p>On the 1st July, 1867, the Government of New Brunswick owned and operated this line of railway extending from St. John to Shediac, 108 miles. Works of construction were commenced, under agreement dated 29th October, 1852, by Messrs. Peto &amp; Co., on 14th September, 1853, when the first sod was turned at St. John by Lady Head. Owing to monetary embarrassments the contractors had to suspend further operations the following year. In 1856 the Government purchased the road from Messrs. Peto &amp; Co., for the sum of £90,000 sterling (\$438,000) and resumed the construction of same, which was completed in 1860. The sections of the line were opened for traffic in the following order:</p> <p>Moncton to Shediac..... 19 miles ..... On 20th August, 1857.</p> <p>St. John to Rothesay..... 9 do ..... On 1st June, 1858.</p> <p>Rothesay to Hampton..... 13 do ..... On 8th do 1859.</p> <p>Hampton to Sussex ..... 22 do ..... On 10th Nov., 1859.</p> <p>Sussex to Moncton..... 45 do ..... On 1st August, 1860.</p> <p>Total.....108 miles.</p>
26,464,017 42	26,464,017 42	3	<p>Immediately after the formation of the Dominion Government, instructions were issued (July 8, 1867) for the location of that portion of the line lying between Truro and Amherst, Nova Scotia. Further instructions were afterwards given for the surveys to be made from Rivière du Loup, in easterly and southerly directions. The route recommended by Major Robinson, in his report to the Imperial Government, dated 31st August, 1848, was adopted, and the construction and management of the railway, until completed, were placed in the hands of a Commission, by Order in Council of the 11th December, 1868, under authority of 31 Vic., cap. 13, sec. 3. This Commission was abolished and the works transferred to and vested in the Department of Public Works on 1st June, 1874, under authority of 37 Vic., cap. 15, of date 26th May, 1874. By Order in Council dated 9th November, 1872, the "Nova Scotia," "Euro-</p>
29,090,168 59	39,856,894 13		

RAIL

GOVERNMENT RAIL

STATEMENT showing : 1st. The Expenditure, prior to Confederation, by the Pro- became the property of the Dominion on 1st July, 1867; 2nd. The Expenditure 3rd. The Expenditure from other

Number.	Name of Railway.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1882.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	10,766,725 54	.....	10,766,725 54	29,090,168 59	.....
1	Prince Edward Island .....	3,114,735 11	.....	3,114,735 11	352,255 49	.....
2	Canadian Pacific.....	.....	.....	.....	26,048,125 74	.....
3	Côteau Landing Railway Bridge.....	.....	.....	.....	522 00	.....
	Total Government Railways.	13,881,460 65	.....	13,881,460 65	55,491,071 82	.....



**WAYS.**

WAYS.—Continued.

vincial Governments, on the Construction and Improvement of Public Works which by the Dominion Government from 1st July, 1867 to 30th June, 1882; than Government Funds.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
29,090,168 59	39,856,894 13		<p>pean and North American" and "Intercolonial" Railways were re-constructed under the name of "Intercolonial." On the 1st August, 1879, the Rivière du Loup Branch, extending from Hadlow (opposite Quebec) to Rivière du Loup, the then western terminus of the Intercolonial, was purchased from the Grand Trunk Railway Company for the sum of \$1,500,000, and incorporated with the Intercolonial. An additional outlay of \$866,216.20 for improvements, rolling stock, &amp;c., was made on this branch up to 30th June last, making a total expenditure of \$2,366,216.20 on same to date. Length of line:—</p> <p>Main line..... 688 miles.                      Extensions ..... 152 do</p> <p>Total ..... 840 miles.</p>
352,255 49	3,466,990 60	1	<p>Under the terms of union of the Island with the Dominion (1st July, 1875), this railway, which was commenced in September, 1871, and completed in May, 1875, became the property of the Federal Government, who assumed the expenditure incurred on same up to that date, and completed the line, which was opened for regular traffic on 12th May, 1875. Length of line:—</p> <p>Main line..... 154½ miles.                      Extensions ..... 44 do</p> <p>Total..... 198½</p>
26,048,125 74	26,048,125 74	2	<p>Name of Contractors: Collingwood Schreiber and E. R. Burpee. Operations for surveys of the proposed route commenced in June, 1871. The grading of roadway (the first work of construction on the line) between Fort William and Sunshine Creek, a distance of 32½ miles, was placed under contract in April, 1875. The works were carried on by Government on the different sections until the 16th February, 1881, when the construction of the railway was placed in the hands of the "Canadian Pacific Railway Company," the Government undertaking to construct the line between Prince Arthur's Landing, on Lake Superior, and Red River, and between Savona's Ferry, at the foot of Lake Kamloops and Port Moody, in British Columbia. The Company, on the other hand, agreed to construct the balance of the line from the Pacific Coast to the "Eastern Terminus," on the Government paying them a subsidy of \$25,000,000 in money and 25,000,000 acres of land, the Company to reimburse the Government the cost of construction of that portion of the line then being built—100 miles in length—and extending from Winnipeg, westward. Approximate length of the trunk line between Callandar (120 miles west of Pembroke) and Port Moody, B. C., 2,557 miles.</p>
522 00	522 00	3	<p>Application having been made to Government for authority to construct a bridge across the St. Lawrence from Coteau Landing to Ste. Cécile de Beauharnois, an examination was ordered, under O. C., dated 22nd June, 1879, so that an opinion could be formed as to how far the construction of piers, &amp;c., would affect the navigation of the river St. Lawrence at that point. The engineer to whom the matter was referred reported that no other but a high-level bridge should be allowed to be built. The sum stated was incurred in connection with the examination referred to.</p>
55,491,071 82	69,372,532 47		

RAIL

LINES SUBSIDIZED BY

STATEMENT showing : 1st. The Expenditure, prior to Confederation, by the Pro became the property of the Dominion on 1st July, 1867 ; 2nd. The Expenditure 3rd. The Expenditure from other

Number.	Name of Railway.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1882.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Grand Trunk.....	15,142,633 34	.....	15,142,633 34	.....	.....
2	Northern.....	2,311,666 67	.....	2,311,666 67	.....	.....
3	Great Western.....	2,810,500 00	.....	2,810,500 00	.....	.....
4	Toronto, Grey & Bruce.....	.....	.....	.....	2,656 00	.....
5	Windsor & Annapolis.....	.....	.....	.....	1,089,674 00	.....
6	Canada Central.....	.....	.....	.....	.....	.....
7	Canadian Pacific.....	.....	.....	.....	.....	.....
	Total Lines Subsidized.....	20,264,800 01	.....	20,264,800 01	1,092,330 00	.....
		34,146,260 66	.....	34,146,260 66	56,583,401 82	.....

ABSTRACT STATEMENT OF

1	Nova Scotia.....	6,124,241 15	.....	6,124,241 15	9,528,857 98	.....
2	Prince Edward Island.....	3,114,735 11	.....	3,114,735 11	312,255 49	.....
3	New Brunswick.....	4,642,484 39	.....	4,642,484 39	12,299,970 27	.....
4	Quebec.....	7,098,893 26	.....	7,098,893 26	8,351,536 34	.....
5	Ontario.....	13,165,906 75	.....	13,165,906 75	13,119,606 42	.....
6	Manitoba.....	.....	.....	.....	5,641,181 85	.....
7	North-West Territories.....	.....	.....	.....	2,715,811 86	.....
8	British Columbia.....	.....	.....	.....	4,574,181 61	.....
	Totals.....	34,146,260 66	.....	34,146,260 66	56,583,401 82	.....

WAYS.

DOMINION GOVERNMENT.

vincial Governments, on the Construction and Improvement of Public Works which by the Dominion Government from 1st July, 1867, to 30th June, 1882; than Government Funds.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$ cts.	\$ cts.	
	15,142,633 34	1	A loan.
	2 311,666 67	2	do
	2,810,500 00	3	do
2,656 00	2,656 00	4	
1,089,674 00	1,089,674 00	5	
		6	Amount subsidy paid to date, \$1,085,600, included in cost of Pacific Railway.
		7	Amount subsidy paid, \$2,210,000, included in cost of railway.
1,092,330 00	21,357,130 01		
56,583,401 82	90,729,662 48		

EXPENDITURE ON RAILWAYS.

9,528,857 98	15,653,099 13	1	
312,255 49	3,446,990 60	2	
12,299,970 27	16,942,454 66	3	
8,351,536 34	15,450,429 60	4	
13,119,606 42	26,285,513 17	5	
5,641,181 85	5,641,181 85	6	
2,715,811 86	2,715,811 86	7	
4,574,181 61	4,574,181 86	8	
56,583,401 82	90,729,662 48		

CAN

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the 1867); 2nd. The Expenditure by the Dominion Government since Confederation.

ST. PETER'S BAY AND THE BRAS.

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1882.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	St. Peter's Canal, N.S.....	156,523 32	.....	156,523 32	496,797 80	.....

ST. LAWRENCE

2	Lachine.....	2,547,532 85	40,000 00	2,587,532 85	5,579,163 90	.....
3	Beauharnois.....	1,611,424 11	.....	1,611,424 11	68,754 40	.....
4	Cornwall.....	1,933,152 69	.....	1,933,152 69	589,307 12	.....
5	Williamsburgh.....	1,320,655 54	.....	1,320,655 54	1,077 00	.....
6	St. Lawrence, generally.....	116,821 31	.....	116,821 31	237,899 33	.....
	Carried forward.....	7,529,586 50	40,000 00	7,569,586 50	6,476,261 75	.....
			1150			

**ALS.**

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

**D'OR LAKES NAVIGATION.**

Confederation.  Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.								
\$ cts.	\$ cts.										
496,797 89	653,321 12	1	<p>Commenced by the Nova Scotia Government in September, 1854, suspended in 1856, and resumed in 1868. On 1st July, 1867, (date of Confederation), the Canal became the property of the Dominion Government, who have since completed the works. Expenditure amounts to the sum stated, subdivided as follows, viz. :—</p> <table> <tr> <td>Expenditure by Local Government of Nova Scotia.....</td> <td>\$156,523 32</td> </tr> <tr> <td>Expenditure by Dominion Government for completion.....</td> <td>138,433 09</td> </tr> <tr> <td>Expenditure by Dominion Government for enlargement.....</td> <td>358,364 71</td> </tr> <tr> <td><b>Total.....</b></td> <td><b>\$653,321 12</b></td> </tr> </table> <p>Length of Canal about 2,400 feet.</p>	Expenditure by Local Government of Nova Scotia.....	\$156,523 32	Expenditure by Dominion Government for completion.....	138,433 09	Expenditure by Dominion Government for enlargement.....	358,364 71	<b>Total.....</b>	<b>\$653,321 12</b>
Expenditure by Local Government of Nova Scotia.....	\$156,523 32										
Expenditure by Dominion Government for completion.....	138,433 09										
Expenditure by Dominion Government for enlargement.....	358,364 71										
<b>Total.....</b>	<b>\$653,321 12</b>										

**NAVIGATION.**

5,579,163 90	8,166,696 75	2	<p>Commenced on 17th July, 1821, opened in August, 1824, and completed in 1825, when vessels were, for the first time, passed through. Canal was enlarged from 1843 to 1848. Further enlargement (commenced in 1873) has now been completed, with the exception of the entrance channel and harbour at Lachine. Cost of new enlargement up to 30th June, 1882, \$5,347,414.68.</p> <p>Length of Canal ... { Old line, 8½ statute miles.                                           { New line, 8½           do</p>						
68,754 40	1,680,178 51	3	<p>Commenced in autumn of 1842, completed before the close of navigation in 1845. Amount paid for damages by water owing to construction of dams at head of the canals, is :—</p> <table> <tr> <td>Before Confederation.....</td> <td>\$254,807 31</td> </tr> <tr> <td>Since Confederation, to 30th June, 1882.....</td> <td>68,754 40</td> </tr> <tr> <td><b>Total.....</b></td> <td><b>\$323,561 71</b></td> </tr> </table> <p>Cost of dams above referred to—\$22,783.45. Length of canal, 11½ statute miles.</p>	Before Confederation.....	\$254,807 31	Since Confederation, to 30th June, 1882.....	68,754 40	<b>Total.....</b>	<b>\$323,561 71</b>
Before Confederation.....	\$254,807 31								
Since Confederation, to 30th June, 1882.....	68,754 40								
<b>Total.....</b>	<b>\$323,561 71</b>								
589,367 12	2,522,519 81	4	<p>Works were commenced in 1834, suspended in 1838 and resumed in 1842. In December, 1842, the steamboat <i>Highlander</i> passed through the Canal which was not, however, formally opened until the month of June, 1843. Canal is being enlarged. Work commenced October, 1876. Total outlay on same up to 30th June, 1882, \$545,309.57.</p> <p>Length of Canal, 11½ statute miles.</p>						
1,077 00	1,321,732 54	5	<p>These canals (excepting the junction, which was commenced in 1852 and opened in 1856), were commenced in 1843-44. The Galops were opened in November, 1846, the others in 1847.</p> <p>Length of Canals { Farran's Point..... ¼ miles.                                           { Rapide Plat..... 4 do                                           { Galops..... 7½ do</p>						
237,899 33	354,720 64	6	<p>Expenditure (since Confederation) was incurred for the following works :—</p> <table> <tr> <td>Chain vessel and improvement of navigation.....</td> <td>\$ 94,673 36</td> </tr> <tr> <td>Surveys, St. Lawrence River and Canals.....</td> <td>143,325 97</td> </tr> </table>	Chain vessel and improvement of navigation.....	\$ 94,673 36	Surveys, St. Lawrence River and Canals.....	143,325 97		
Chain vessel and improvement of navigation.....	\$ 94,673 36								
Surveys, St. Lawrence River and Canals.....	143,325 97								
6,476,261 75	14,045,848 25		<p><b>Total.....</b> \$237,899 33</p>						

## CANALS

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the 1867); 2nd. The Expenditure by the Dominion Government since Confederation

## ST. LAWRENCE

Number.	Name of Canal.	Expenditure previous to Confederation:			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Brought forward .....	7,529,586 50	40,000 00	7,569,586 50	6,476,261 75	.....
	Welland .....	7,416,919 83	222,220 00	7,638,239 83	12,690,488 25	.....
2	Burlington Bay.....	432,684 40	.....	432,684 40	30,426 89	.....
3	Lake Ste. Claire Flats.....	19,984 45	50,500 00	70,484 45	.....	.....
4	Lake St. Peter.....	1,164,235 08	.....	1,164,235 08	.....	1,705,840 58
5	Lachine, Coteau and Cedars Rapids (improvements)....	48,405 83	.....	48,405 83	.....	.....
	Totals, "St. Lawrence Navigation".....	16,610,916 09	312,720 00	16,923,636 09	19,197,176 89	1,705,840 58

—Continued.

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

NAVIGATION—Continued.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
6,476,261 75	14,045,848 25	...	Commenced on 30th November, 1824; opened portion in 1829, and portion in 1832. Enlargement commenced in 1841. Canals opened, the line throughout by way of the Feeder to Port Maitland in 1815, and the trunk from the Junction to Port Colborne, with the Grand River level in 1850. Cost of first enlargement \$4,947,925.45. Further enlargement commenced in 1872. Works drawing to completion. Total outlay on these works up to 30th June, 1882, \$12,498,107.36. Length of Canal, 26½ miles.
12,690,488 25	20,328,728 08	...	
30,426 89	463,111 29	...	Commenced under Commissioners in 1825; opened for the passage of vessels in 1830, and completed, as originally undertaken, in 1832, at a cost of \$124,356.08. The works were afterwards extended, improved, and partly reconstructed by Provincial Government at an outlay of \$308,328 32, up to Confederation. The amount expended since 1st July, 1867, is for renewing the superstructure of the piers, part of which were destroyed by fire some years ago.
.....	70,484 45	...	Dredging of South or Walpole Channel to a depth of 12 feet and a breadth of 300 feet for a distance of about 1 mile. Work commenced by private parties in 1855, continued in 1857 and 1858 by the United States Government, who spent \$50,500 on same, and completed the channel to a breadth of 200 feet in August, 1858. This channel was widened subsequently by the Canadian Government at a cost of \$19,984.45.
1,705,840 58	2,870,075 66	...	The dredging through Lake St. Peter, of River St. Lawrence, between Quebec and Montreal, under the Department of Public Works, was in a straight or artificial channel across the flats. Operations were commenced in 1844 and continued till 1847, when a depth of 14 feet at low water had been obtained on a distance of about 7 miles with width varying from 100 to 150 feet. Work transferred in 1850 to the direction of the Montreal Harbour Commissioners, who abandoned the artificial channel and deepened and enlarged the natural one to a depth of 20 feet at low water, with a width of 300 feet, up to the fall of 1865. No further improvements were made till 1873, when an Act of Parliament (36 Vic., chap. 6, May 23, 1873) authorized the raising of a loan of \$1,500,000 to defray the expenses of completing the channel to a depth of 22 feet at low water, and a width of 300 feet from Montreal to the tide water above Quebec, the Commissioners to pay 5 per cent. interest and 1 per cent. as a sinking fund. The above rate of interest, however, was reduced to 4 per cent., and the provisions relating to the payment of 1 per cent. to form a sinking fund were repealed by 44 Vic., chap. 7, (March 21, 1881). A further loan of \$280,000 with the same rate of interest was authorized by 45 Vic., chap. 44, (May 17th, 1882), to complete the dredging and deepening of the channel to a depth of 25 feet. Work is now drawing to completion.
.....	48,405 83	...	Note.—Application has been made to Parliament, at its Session in 1883, for deepening channel so as to give a depth of 27½ feet when the water on the Flats of Lake St. Peter is 10 feet 6 inches. Resolutions to this effect have been passed by the House of Commons. Estimated cost \$900,000.
.....	.....	...	Prior to the construction of the Beauharnois Canal, the navigation between Lakes St. Louis and St. Francis, was effected by means of these canals. (For history and description of same, see Appendix No. 70, pages 568 and 567 of the Report of the Commissioner of Public Works, for 1867.)
20,903,017 47	37,826,653 56		

CANALS

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the 1867); 2nd. The Expenditure by the Dominion Government since Confederation

MONTREAL AND KINGSTON

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Ste. Anne's Lock.....	134,456 51	.....	134,456 51	404,787 15	.....
2	Carillon and Grenville .....	63,053 64	.....	63,053 64	2,822,800 28	.....
3	Rideau.....	153,062 60	3,911,701 47	4,064,764 07	67,402 19	.....
	Carried forward .....	350,572 75	3,911,701 47	4,262,274 22	3,294,989 62	.....



Continued.

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

NAVIGATION, VIA OTTAWA.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.																					
\$ cts.	\$ cts.																							
404,787 15	539,243 66	1.	Commenced in spring of 1840 and opened in June, 1843. The lock was 190 feet long by 45 feet wide, with 7 feet of water on the sills in the ordinary state of the river. Lock is being enlarged to 200 feet long by 45 feet wide at bottom; depth, 9 feet water on sills. The works of enlargement embrace also the formation of channels of approach 100 feet in width at bottom, increasing to 150 feet at the upper entrance, and of such depth as to give 10 feet of water on the lowest known level of the river. New works were commenced in 1873, and up to 30th June, 1882, a sum of \$402,847.69 had been expended on their construction. Length of Canal, $\frac{3}{4}$ mile																					
2,822,800 28	2,885,853 92	2.	The <i>Carillon</i> , <i>Chute à Blondeau</i> and <i>Grenville</i> , known as the "Carillon and Grenville" Canals, were constructed by the Imperial Government from 1819 to 1833. They were transferred to the Canadian Government in June, 1856, and placed under the control of the Public Works Department on 3rd March, 1857. The expenditure by the Imperial Government on these Canals has not been ascertained; the records relating to the same were kept in the Ordnance Office at Montreal, and destroyed by fire in 1852. The enlargement of the "Grenville Canals," commenced in 1871, comprises the construction of 5 locks, 200 feet long and 45 feet wide, with 9 feet of water on sills, the main channel having a depth of 10 feet and a mean width, at bottom, of 40 feet, varying at the surface from 50 to 80 feet, with crossing basins constructed at approximate distances of $\frac{1}{2}$ mile. The locks are now approaching completion; three being already in use. Cost of enlargement to 30th June, 1882, \$1,773,586.22. The new works in the "Carillon" consist of a dam across the River Ottawa, $\frac{3}{4}$ of a mile above the village of Carillon; also a Canal with 2 locks, 200 feet by 45 feet, with 9 feet of water on sills. The dam and slide were completed in November, 1881, and the Canal and locks on 27th May, 1882. Cost of these works to 30th June, 1882:— <table> <tr> <td>Dam and Slide.....</td> <td>\$382,170 71</td> </tr> <tr> <td>Canal and Locks.....</td> <td>592,971 83</td> </tr> <tr> <td><b>Total.....</b></td> <td><b>\$975,142 54</b></td> </tr> </table>	Dam and Slide.....	\$382,170 71	Canal and Locks.....	592,971 83	<b>Total.....</b>	<b>\$975,142 54</b>															
Dam and Slide.....	\$382,170 71																							
Canal and Locks.....	592,971 83																							
<b>Total.....</b>	<b>\$975,142 54</b>																							
67,402 19	4,132,166 26	3.	<table> <tr> <td>Length of Canal... {</td> <td>Carillon.....</td> <td><math>\frac{3}{4}</math> miles.</td> </tr> <tr> <td></td> <td>Chute à Blondeau.</td> <td><math>\frac{1}{2}</math> do</td> </tr> <tr> <td></td> <td>Grenville.....</td> <td><math>\frac{5}{8}</math> do</td> </tr> </table> <p>Commenced on 21st September, 1826, and completed 29th May, 1832. Constructed by the Imperial Government, and transferred to the Canadian Government in June, 1856. The expenditure since Confederation is subdivided as follows:—  <table> <tr> <td>Enlargement Canal Basin, Ottawa.....</td> <td>\$16,406 03</td> </tr> <tr> <td>Construction of bridges.....</td> <td>25,149 51</td> </tr> <tr> <td>Removing and enlarging bulkheads.....</td> <td>10,470 48</td> </tr> <tr> <td>Land damages.....</td> <td>12,553 24</td> </tr> <tr> <td>General improvements.....</td> <td>2,822 93</td> </tr> <tr> <td><b>Total.....</b></td> <td><b>\$67,402 19</b></td> </tr> </table></p>	Length of Canal... {	Carillon.....	$\frac{3}{4}$ miles.		Chute à Blondeau.	$\frac{1}{2}$ do		Grenville.....	$\frac{5}{8}$ do	Enlargement Canal Basin, Ottawa.....	\$16,406 03	Construction of bridges.....	25,149 51	Removing and enlarging bulkheads.....	10,470 48	Land damages.....	12,553 24	General improvements.....	2,822 93	<b>Total.....</b>	<b>\$67,402 19</b>
Length of Canal... {	Carillon.....	$\frac{3}{4}$ miles.																						
	Chute à Blondeau.	$\frac{1}{2}$ do																						
	Grenville.....	$\frac{5}{8}$ do																						
Enlargement Canal Basin, Ottawa.....	\$16,406 03																							
Construction of bridges.....	25,149 51																							
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Land damages.....	12,553 24																							
General improvements.....	2,822 93																							
<b>Total.....</b>	<b>\$67,402 19</b>																							
3,294,989 62	7,557,263 84																							

CANALS

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the 1867); 2nd. The Expenditure by the Dominion Government since Confederation

MONTREAL AND KINGSTON NAVI

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	350,572 75	3,911,701 47	4,262,274 22	3,294,989 62	.....
1	River Tay .....	7,764 05	10,000 00	17,764 05		.....
	Totals, Montreal and King- ton Navigation.....	358,336 80	3,921,701 47	4,280,038 27	3,294,989 62	.....

MONTREAL AND LAKE HURON NAVI

2	Chats Canal (not completed)	482,950 81	.....	482,950 81	.....	.....
3	Culbute Lock and Dams.....				313,412 81	.....
	Totals, Montreal and Lake Huron Navigation.....	482,950 81	.....	482,950 81	313,412 81	.....

—Continued

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

GATION, VIA OTTAWA—Concluded.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
3,294,989 62	7,557,263 84		
.....	17,764 05	1	This river falls into the Rideau at the foot of Lower Rideau Lake, at about eight miles below the Town of Perth. Works, consisting of 1 wood and 4 stone locks, 101 x 20 ft., with 4 ft. water on the sills, and of dams and slide for the passage of timber, were commenced in 1831 and opened for navigation in 1834 by an incorporated Company. Works have fallen into disuse and decay. During last fiscal year a survey has been carried out, having in view the construction of a short branch canal, to connect the Town of Perth with the Rideau Canal. The line adopted is to start from Beveridge's Bay, on Lake Rideau, from which point a short cut, having two locks, the only ones to be constructed, will be built, giving access from the lake to the river.
3,294,989 62	7,575,027 89		

GATION, VIA OTTAWA RIVER.

.....	482,950 81	2	This canal extends from the foot of Rapides des Chats to Chats Lake. Work commenced in 1854, was suspended on 15th November, 1856, and is yet unfinished. Canal was designed with locks of 190 x 45 ft.; the depth of water on the sills was to be 7 ft., and the total lockage 49 $\frac{1}{2}$ ft. Length of existing canal, 5 $\frac{1}{2}$ miles.
313,412 81	313,412 81	3	These works, situated at L'Islet, surmount the Culbute and L'Islet Rapids, on the north channel of the Ottawa River. Works comprise two locks, 200 x 45 ft., and three continuous dams, all built of wood, with an aggregate length of 625 ft. Commenced in 1873, these works were approaching completion on 30th June, 1882.
313,412 81	796,363 62		

## CANALS

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the 1867; 2nd. The Expenditure by the Dominion Government since Confederation

## RICHELIEU AND LAKE

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	St. Ours Lock and Dam.....	121,537 65	.....	121,537 65	.....	.....
2	Chambly Canal. ....	634,711 76	.....	634,711 76	42,606 66	.....
Totals, Richelieu and Lake Champlain Navigation....		756,249 41	.....	756,249 41	42,606 66	.....

## RIVER TRENT

1	Trent District Locks and Dams .....	309,371 31	.....	309,371 31	6,398 01	.....
Total, River Trent Navigation.....		309,371 31	.....	309,371 31	6,398 01	.....

## GRAND

1	A loan.....	3,302 23	194,559 20	197,861 43	.....	.....
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—Continued.

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

●CHAMPLAIN NAVIGATION.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.										
\$ cts.	\$ cts.												
.....	121,537 65	1	These works were commenced in 1844, and completed in September, 1849. The lock is 200 × 45 feet, with 7 feet of water on the sills. There is a navigable depth of 7 feet between St. Ours Lock and Chamby Basin, a distance of 32 miles. Length of Canal, $\frac{1}{2}$ mile.										
42,606 66	677,318 42	2	<p>This Canal was commenced on 1st October, 1831, and opened in the spring of 1843. It was constructed under Local Commissioners, who had charge of the work, until the 30th June, 1843. This Canal overcomes the rapids between Chamby and St. Johns, a distance of 12 miles. The expenditure incurred since Confederation is subdivided as follows :—</p> <table border="0"> <tr> <td>Construction of Lock Homes.....</td> <td>\$7,100 25</td> </tr> <tr> <td>Land for "do .....</td> <td>900 00</td> </tr> <tr> <td>Fencing Canal.....</td> <td>2,810 00</td> </tr> <tr> <td>Dredging and improving wharves.....</td> <td>31,796 41</td> </tr> <tr> <td><b>Total .....</b></td> <td><b>\$42,606 66</b></td> </tr> </table> <p>Length of Canal, 12 miles.</p>	Construction of Lock Homes.....	\$7,100 25	Land for "do .....	900 00	Fencing Canal.....	2,810 00	Dredging and improving wharves.....	31,796 41	<b>Total .....</b>	<b>\$42,606 66</b>
Construction of Lock Homes.....	\$7,100 25												
Land for "do .....	900 00												
Fencing Canal.....	2,810 00												
Dredging and improving wharves.....	31,796 41												
<b>Total .....</b>	<b>\$42,606 66</b>												
42,606 66	798,856 07												

NAVIGATION.

6,398 01	315,769 32	1	The works on the River Trent were designed for a navigation of 5 feet depth of water over the sills of the locks, the dimensions of which were fixed at 134 × 33; the depth of water generally maintained on the sills varies from 4 to 5 feet, and the dimensions of the locks from 133 $\frac{1}{2}$ × 32 to 134 × 33. Works were commenced in 1833, and completed in 1844. For a list of these works, see Report of the Minister of Railways and Canals for 1881-82, page xxxviii. During fiscal year 1881-82, surveys were carried on with a view of ascertaining the possibility of obtaining a through water communication between Lakes Ontario and Huron.
6,398 01	315,769 32		

RIVER.

.....	197,861 43	1	Connects Welland Canal, at Dunnville, with the town of Brantford, a distance of about 60 miles. Works built by the "Grand River Navigation Company," previous to the Union of Lower and Upper Canada.
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CANALS

STATEMENT showing: 1st. The Expenditure by Provincial Governments on the (1867); 2nd. The Expenditure by the Dominion Government since Confederation

DESJARDINS

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	A loan.....	120,263 93	30,684 00	150,947 93		

LAKE RAINY AND LAKE OF

1	Fort Frances Lock.....					
---	------------------------	--	--	--	--	--

SURVEYS OF PRO

1	Baie Verte, N.B. ....				44,387 53	
2	Cedars, Que.....					
3	Murray, Ont.....				7,535 63	
4	Sault Ste. Marie, Ont.....				949 35	
5	Tay River, Ont.....				746 65	
6	Canals, N.W.T.....				11,213 44	
	Totals.....				64,834 60	

Continued.

Construction of the Public Works of the Dominion before Confederation (1st July, to 30th June, 1882; 3rd. The Expenditure from other than Government Funds.

## CANAL.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$ cts.		
.....	150,947 93	1	Built by a private company from 1826 to 1837, when it was opened (16th August) for vessels drawing $7\frac{1}{2}$ feet of water. In 1840 the Canal could be navigated only by boats of 30 tons, and in 1845 the depth of water was no more than 5 feet in some parts of it. The Government loaned \$68,000 to the company from 1832 to 1837.

## THE WOODS NAVIGATION.

.....	.....	1	Built from 1875 to 1879, at an outlay of \$288,278.51, which is included in the cost of the Pacific Railway. This lock is situated near the outlet of Rainy Lake, at a distance of 237 miles north-westward from Prince Arthur's Landing, and 215 miles south-eastward from Fort Garry (Winnipeg), via the Dawson Route.
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## REJECTED WORKS.

44,387 53	44,387 53	1	Proposals have been made at various times to connect the Bay of Fundy with the Gulf of St. Lawrence, by opening a canal from Cumberland Basin, at the head of the former, to Baie Verte, on the Strait of Northumberland. A detailed account of the different surveys will be found in Appendix No. 30, pp. 830 to 833.
.....	.....	2	With a view to obtaining a canal of the enlarged standard fixed for the St. Lawrence Canals by the Canal Commission of 1871, to surmount the Cedars Rapids (between Lakes St. Louis and St. Francis), surveys were made during 1873-76 to ascertain the probable cost of a canal on the north shore through the County of Soulanges, and also of the enlargement of the Beauharnois Canal to the same dimensions. For details, see Appendix No. 30, pp. 835 and 836. The cost of these investigations has been included in the item, St. Lawrence Canals Generally, pages 1150-51.
7,535 63	7,535 63	3	To connect the head waters of Bay of Quinté with Lake Ontario. In August last (1882) a contract was let for the cutting through the Isthmus of Murray, of a channel, without locks, 80 feet wide at the bottom, and of a depth of 11 feet below the lowest known water level of Lake Ontario, its length being over 6 miles. Works are being vigorously prosecuted.
949 35	949 35	4	This amount was expended in 1871-72 on surveys connected with this projected work, which is intended to improve the water communication between Lakes of Huron and Superior, by cutting a passage through the Island of St. Mary, on the Canadian side of the St. Mary Rapids.
748 65	748 65	5	See page 1156 of this Appendix.
11,213 44	11,213 44	6	This sum was expended in 1870 and 1871 for the survey of a proposed line of communication between Lake Superior and Red River.
64,834 60	64,834 60		

CANALS—

ABSTRACT STATEMENT OF

Number.	Name of Canal.	Expenditure previous to Confederation.			Expenditure since Com	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Nova Scotia.....	156,523 32	.....	156,523 32	496,797 80	.....
2	New Brunswick.....	.....	.....	.....	44,387 53	.....
3	Quebec .....	6,872,308 24	40,000 00	6,912,308 24	9,353,593 94	1,705,840 58
4	Ontario .....	11,768,082 34	4,419,664 67	16,188,747 01	13,510,223 68	.....
5	North-West Territories.....	.....	.....	.....	32,675 65	.....
6	Generally .....	.....	.....	.....	9,885 67	.....
	Totals.....,.....	18,797,913 90	4,459,664 67	23,447,578 57	23,447,564 27	1,705,840 58



*Concluded.***EXPENDITURE ON CANALS.**

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number.	Remarks.		
Total for Fifteen Years ended 30th June, 1882.	\$	cts.	\$	cts.		
	496,797	80	653,321	12	1	
	44,387	53	44,387	53	2	
	11,059,434	52	17,971,742	76	3	
	13,510,223	68	29,698,970	69	4	
	32,675	65	32,675	65	5	
	9,885	67	9,885	67	6	
<b>25,153,404</b>	<b>85</b>	<b>48,410,983</b>	<b>42</b>			

PUBLIC  
NOVA

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Com	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Amherst Drill Shed. ....					
2	Belltown Drill Shed .....					
3	Halifax Dominion Building. ....				84,363 37	
4	do Drill Shed .....					
5	do Penitentiary .....					
6	do Quarantine Station (Lawlor's Island). ....				25,269 14	
7	Lunenburg Marine Hospital. ....				6,502 25	
8	Maccan and River Herbert Drill Shed. ....					
9	Pictou Custom House .....				25,060 05	
10	do Drill Shed .....					
11	do Marine Hospital. ....				1,613 00	
12	do Quarantine Station. ....				4,090 00	
13	Sydney Marine Hospital. ....				9,939 28	
14	do Quarantine Station. ....				284 27	
15	Windsor Drill Shed. ....					
16	Yarmouth Marine Hospital. ....				3,550 00	
17	do Quarantine Station. ....				3,438 64	
	Totals, Nova Scotia. ....				164,110 00	

PRINCE ED

1	Charlottetown Dominion Building. ....				69,000 00	
	Carried forward. ....				69,000 00	

**BUILDINGS.  
SCOTIA.**

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
			1	Wooden building, 80 x 45 feet, situated on Prince Arthur Street; built in 1872.
			2	A wooden shed 90 x 45 feet, situated on 1½ acre lot.
84,363 37	84,363 37		3	Purchased from Local Government of Nova Scotia, 10th Oct., 1871, for the sum of \$84,000. This building, which was commenced in 1863 and finished in April, 1868, at a cost of \$189,084.00, including \$39,584.00 for site, occupies a frontage of 125 feet on both Cheapside and George streets, and 55 feet on Hollis street and Bedford Row. It is a cut stone structure 3 storeys high, and is occupied by the Post Office, the Customs, Inland Revenue, Receiver-General's offices and Provincial Museum. An additional sum of \$54,441.20 was expended on alterations and repairs to 30th June, 1882.
			4	Situated on a lot 232 feet by 152 feet, fronting Spring Garden Road.
			5	Transferred to Dominion Government at date of Confederation. Building ceased to be used for Penitentiary purposes on the transfer of prisoners to Dorchester Penitentiary.
25,269 14	25,269 14		6	Island, covering an area of 147 acres, was purchased on 1st June, 1870, from the heirs of Jas. B. Lawlor, for \$8,000, N.S. currency (\$7,786.67 Canadian currency). Buildings built of wood on stone foundations, and comprise two hospitals, one store shed, steward's residence, outbuildings, &c. Commenced in 1871 and completed in 1874.
6,502 25	6,502 25		7	Building was commenced in 1879 and completed in 1881. Built of wood on stone foundations.
			8	Shed 80 x 40 feet.
25,060 05	25,060 05		9	Contract awarded on 28th August, 1874. Building completed in August, 1876.
			10	Wooden building, 90 x 45 feet, situated on corner of Townsend, Hayson and Cumberland streets.
1,613 00	1,613 00		11	The amount expended is for purchase of site (\$1,545.00) and professional services connected therewith.
4,090 00	4,090 00		12	Built in 1874. Wooden building.
9,939 28	9,939 28		13	Commenced in 1875 and completed in 1878. Built of wood on stone foundation; situated at Battery Point and covers an area of 2,200 feet superficial, accommodating 120 patients.
284 27	284 27		14	Preliminary expenses in connection with a building which it is proposed to erect on Flag-staff Point, Sydney Harbour.
			15	Shed 120 x 50 feet, including an armory, situated on the road leading to Fort Edward.
3,550 00	3,550 00		16	{ The amount expended is for purchase of Bunker's Island and buildings erected thereon. One of them, the steward's house, was built forty years ago, and is in a dilapidated condition.
3,438 64	3,438 64		17	
164,110 00	164,110 00			

**WARD ISLAND.**

69,000 00	69,000 00	1	Erected by the Local Government in 1872 on Queen Square, and transferred to the Dominion for the sum stated, on admission of Prince Edward Island into Confederation. A three-storey brick building on stone foundation, 91 ft. 6 in. x 65 ft., covered with a Mansard roof. It is now occupied by the Post Office, Savings Bank, Custom House and Keeper's apartments. A sum of \$19,121.02 was expended for alterations, repairs, &c., to 30th June, 1882.
69,000 00	69,000 00		

PUBLIC BUILD

PRINCE EDWARD

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				69,000 00	
2	Charlottetown Drill Shed.....					
3	do Fort Edward.....					
4	do Marine Hospital.....				1,868 06	
5	do Quarantine Station.....					
6	Georgetown Drill Shed.....					
7	Souris Marine Hospital.....				4,385 62	
8	Summerside Drill Shed.....					
9	Victoria Barracks.....					
	Totals, P. E. Island.....				75,253 68	

NEW

1	Chatham Custom House, Post Office and Inland Revenue Office .....				13,781 77	
	Carried forward.....				13,781 77	

## INGS—Continued.

## ISLAND—Continued.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number	Remarks.
	\$ tcs.	\$ cts.		
Total for Fifteen Years ended 30th June, 1882.	69,000 00	69,000 00		
			2	A wooden shed, 180 x 60 ft., with an armoury 75 x 20 ft., situated on Kent and West streets. Erected in 1866 at a cost of \$5,700. In 1881 an armoury was built, attached to drill shed, at an outlay of \$940.
			3	Is situated in Victoria Park, facing the entrance of Charlottetown Harbour. Site is two acres in extent. The fort consists of an earthwork for five guns, built by the Imperial Government about fifty years ago, and a magazine of stone and brick, built about twenty years ago, 22 x 17½ ft., and 9½ ft. in height, with flat roof.
1,868 06	1,868 06		4	Land purchase, \$1,800. Building not yet commenced.
			5	Erected in 1863, at a cost of \$1,350, upon a piece of land containing about nine acres, situate at the entrance to the harbour, a distance from the city of about two miles by water and three miles by land. Building is situated near the centre and faces the south. It is 52 ft 3 in. x 22 ft. 6 in., with a kitchen in the rear 20 x 12½ ft., the whole built of wood, on stone foundation. The main building consists of one storey, with attics.
			6	Situated upon Kent Square, and erected in 1866, at a cost of \$1,525. It is 80 x 40 ft., and is of wood.
4,385 62	4,385 62		7	A wooden building, erected in 1875-76, two storeys high. Will accommodate eight patients. Site purchased from Thos. Keay on 2nd October, 1875, for \$300, and comprises one acre, situate at north end of town.
			8	Is situated upon a piece of land purchased in 1866, for \$878, and was erected the same year at a cost of \$1,575. Building is 80 x 40 ft.
			9	These barracks were erected in 1865, upon a piece of ground four acres in extent, situated on the Brighton Road, one mile from Charlottetown, acquired at a cost of \$1,297.78. The buildings now on the ground consist of: House for Officers, 107 x 20 ft. 4 in.; armoury, 200 x 20 ft. 3 in.; coal shed, 20 ft. 6 in. x 23 ft.; poor house, 200 x 24 ft.; cook house, 22 x 22 ft.; Paymaster's offices, 38 ft. 6 in. x 17 ft.; magazine, 28 x 17 ft.; stables (2 buildings), 71 x 16 ft. and 28 ft. 4 in. x 17 ft. 6 in. The magazine is built of brick, and all the other buildings are wood, on stone foundations. An hospital, officers' quarters, servants' rooms, kitchen and root house were erected at the same time as above buildings, but were destroyed by fire in July and August, 1869, and were not rebuilt. Total cost of barracks, including purchase of land, \$29,443.54.
75,253 68	75,253 68			

## BRUNSWICK.

13,781 77	13,781 77	1	Stone building covered with slate; purchased from Hon. H. Muirhead on 16th October, 1872, for \$10,000. It was altered to meet requirements.
13,781 77	13,781 77		

PUBLIC BUILD  
NEW BRUNS

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				13,781 77	
1	Dorchester Penitentiary .....				326,085 81	
2	Fredericton Post Office, &c .....				30,521 57	
3	do Park Barracks .....					
4	do Stone Barracks .....					
5	Middle Island or Miramichi Quarantine Station .....				4,173 70	
6	Miramichi Marine Hospital .....					
7	Newcastle Custom House .....				4,830 00	
8	Sackville Marine Hospital .....					
9	St. Andrews Drill Shed .....					
10	do Marine Hospital .....				5,588 44	
11	do Quarantine Station .....				330 00	
12	do Fort Tipperary .....					
13	St. John Custom House (old) .....				75,797 88	
14	do do (new) .....				316,779 89	
	Carried forward .....				777,889 06	

INGS—Continued.

WICK—Continued.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
13,781 77	13,781 77			
326,085 81	326,085 81	1	Building placed under contract on 3rd October, 1876, and completed in June, 1879. An additional wing, 15 double cottages for guard's dwellings, a workshop, bake-house, laundry, hospital, ice-house, and four root-houses, were also placed under contract in November, 1880, and are all completed. Land, containing 619 acres, was purchased on 3rd May, 1876, from Hon. E. B. Chandler and others, for an aggregate sum of \$21,600.	
30,521 57	30,521 57	2	Erected upon Ordnance property, corner Queen and Carleton streets; commenced in 1878, and completed and occupied in 1881, by Post Office, Customs and Inland Revenue. The Weights and Measures offices and Examining Warehouse are in a detached one storey building in rear.	
		3	Transferred to Dominion by the Imperial War Department, on 9th March, 1871. Situated, corner George and Regent streets, and consist of four detached buildings:—Soldiers Barracks, 113 x 31 feet; Guard House, 26 x 20 feet; Officers Quarters, 37 x 22 feet; Magazine, 32 feet square, also four other small buildings in a rather dilapidated condition.	
		4	A group of buildings situated between Queen street and River St. John, and transferred by Imperial Government on 9th March, 1871, viz: Officers Quarters; a three storey building, 93½ x 35 feet; Soldiers Barracks, 161 x 28 feet, capable of accommodating 192 men; Guard House, one storey, 40 feet square; Armoury, a wooden two storey building, 36 x 22 feet.	
4,173 70	4,173 70	5	Situated about 2 miles below the town of Chatham, area of land 78 acres. Hospital, 21 x 24 feet; Caretaker's Dwelling, 27 x 23 feet; both buildings are of wood on stone foundations; premises acquired from Hon. Wm. Muirhead in December, 1872, for the sum of \$1,100. Buildings contracted for on 3rd May, and completed 15th December, 1873.	
4,830 00	4,830 00	6	Sandstone building 1½ storey, 40 x 100 feet, situated at Douglstown.	
		7	Stone building 30 x 30 feet, covered with slate; purchased from W. H. Tuck, 14th October, 1872, for the sum of \$4,000. An additional sum of \$830 was expended for alterations, so as to make building suitable for Customs offices.	
		8	This Depôt consists of an Hospital and 7 acres of land.	
5,588 44	5,588 44	9	1½ storey building, 40 x 30 feet, on Block 2, part of Public Square.	
		10	Wooden building on stone foundations, having accommodations for 24 patients, and room for staff in charge. Built from 1872 to 1874, to replace the former one which had been destroyed by fire.	
330 00	330 00	11	The amount stated is for the land (14 acres), purchased from Robert Ross in 1873.	
		12	Fort, with appurtenances, was transferred from Imperial to Dominion Government, 9th March, 1871. (For list of buildings, see appendix No. 2, page 157.)	
75,797 88	75,797 88	13	This building was situated on a lot of land between Prince William, Water street and Murder Hill, and purchased by the Government on 4th February, 1870, for the sum of \$75,000. Built from 1840 to 1842, and was originally a private enterprise. Destroyed by fire on 20th June, 1877.	
316,779 89	316,779 89	14	Built on original site. Commenced in August, 1877, and completed and occupied in 1880-81. The elevation of the building on Prince William street is 3 storeys, that on Water street 4 storeys. Marine and Fisheries, Public Works and Agricultural Departments have offices in the building.	
777,889 06	777,889 06			

**PUBLIC BUILDINGS  
NEW BRUNSWICK**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward.....				777,889 06	
1	St. John Marine Hospital..				2,233 93	
2	do Military Buildings				9,490 87	
3	do Quarantine Station, Partridge Island				7,308 46	
4	St. John Penitentiary .....					
5	do Post Office (old)...				178,940 86	
6	do do (new)				168,361 06	
7	do Savings Bank (old)				47,784 28	
8	do do (new)				45,022 03	
9	Sussex Post Office, Custom House, &c.				1,918 30	
	Carried forward.....				1,238,938 85	



INGS—Continued.

WICK—Continued.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
777,889 06	777,889 06		
2,233 93	2,233 93	1	Building in course of erection on the grounds connected with the present Marine Hospital, a delapidated wooden structure, which was built in 1857, and which it is intended to replace. The portions of the new building under contract are the Administrative Block, having basement, two storeys and attic, and one ward of two storeys and a basement. Foundations are stone, the walls brick, and the floor and roof wood.
9,480 87	9,480 87	2	Amount spent through the Department of Public Works in making sundry improvements to storehouse, fortifications, &c. Number of buildings: 19 at "Lower Cove," including a drill shed erected in 1879, 200 x 80 feet, a wooden structure on stone foundation; 3 at "Fort Howe," Portland; and 1 tower "Martello," Carleton Heights.
7,308 46	7,308 46	3	This amount spent for a landing pier, &c. Buildings are of wood.
.....	.....	4	This institution was first established in 1838, and some of the buildings erected by the Magistrates of the City and County of St. John, and handed over to the Provincial Government for about £4,000 (\$16,000) in 1841. The Penitentiary became the property of the Dominion at Confederation. It has been used as such up to the time when the prisoners were transferred to the Dorchester Penitentiary. Is situated about two miles from the City of St. John, on the opposite side of Courtenay Bay. The prison proper, which was built in 1839, is 120 feet long by 44 feet wide and 33 feet in height to eaves. Contains ninety cells, in three tiers of thirty each. The female prison in the rear is a two-storey brick building, 108 x 43 feet, containing forty cells. For description and list of other buildings connected with Penitentiary, see Appendix No. 2, pages 154 and 155.
178,940 86	178,940 86	5	Situated on a lot of land on Prince William, Princess and Water streets. Purchased from the Bank of New Brunswick, on 23rd September, 1871, for the sum of \$14,000. This building was commenced in 1871, and completed and occupied in 1875-76; destroyed by fire on 20th June, 1877.
168,361 06	168,361 06	6	Built on the site of old Post Office above described. Commenced in June, 1878; completed in September, 1881, and occupied some time after. Walls facing on streets are of stone, and the remaining walls of brick. The principal entrance is on Prince William street, and building is three storeys high, with basement. Above the entrance the wall is divided by pilasters and crowned by an ornamental clock-pediment, relieving the roof.
47,784 28	47,784 28	7	Situated on a lot 100 x 55 feet, corner of Princess and Canterbury streets. Transferred from Local Government at Confederation, and altered to adapt it for the use of the Government Savings Bank and Assistant Receiver-General's Office. Destroyed by fire on 20th June, 1877.
45,022 03	45,022 03	8	Built on site of former Savings Bank above described. Commenced in August, 1878; completed in May, 1879, and occupied the following year. Building is 50 x 41, three storeys high and basement. The street fronts are stone backed by brick, side walls brick only. Style of architecture, Italian, following in general features the building destroyed.
1,918 30	1,918 30	9	A site has been obtained, in the parish of Sussex, on the north-west side of the main road to Halifax. The building will be of brick on stone foundations, with floors and roof of wood, and will accommodate the Postal, Customs and Inland Revenue services. Cost of land for site, \$1,600.
1,238,938 85	1,238,938 85		

**PUBLIC BUILD  
NEW BRUNSWICK**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward.....				1,238,938 85	
1	Tracadie Lazaretto .....					
2	Woodstock Marine Hospital.....				3,416 93	
3	Woodstock Post Office, Custom House, &c.....				6,316 22	
	Totals, New Brunswick.....				1,248,672 00	

QUE

1	Chicoutimi Marine Hospital.....				1,049 91	
2	Dundee Custom House.....	1,400 00		1,400 00		
3	Grosse Isle Quarantine Station.....	129,381 48		129,381 48	56,703 24	
4	Hull Post Office and Inland Revenue Office.....				793 59	
	Carried forward.....	130,781 48		130,781 48	58,546 74	

INGS—Continued.

WICK—Concluded.

Confederation.		Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.		
\$ cts.	\$ cts.		
1,238,938 85	1,238,938 85		
3,416 93	3,416 93	1	This Lazaretto is a small framed building about 25 x 40 feet and 1½ storeys high. It was erected in 1853, at a cost of \$1,088. It accommodates about 12 lepers.
6,316 22	6,316 22	2	House, 50 x 33 feet, with kitchen in rear, two barns, &c., erected on a lot of land measuring 7½ acres. Property purchased from G. Botsford, Esq., on 26th May, 1874, for the sum of \$3,200. The balance of expenditure was incurred for professional services, &c., re purchase of premises.
		3	Instructions have been given to prepare plans for this building, which is to be of brick on stone foundations, and with wooden floors and roof. Accommodation will be had for the Customs, Post Office and Inland Revenue local services. The expenditure incurred is for the purchase of land for site, &c.
1,248,672 00	1,248,672 00		

BEC.

1,049 91	1,049 91	1	In course of construction on a plot outside and abutting on the town line at the rear of the College. The basement walls are of stone, and those of the superstructure of brick and the roof of wood. Placed under contract on 10th May, 1882. The administrative portion, which is central, will have 2 storeys above the basement, and the 2 wards flanking it, one storey each. There will be accommodation for nurses and 12 patients in the wards.
	1,400 00	2	Built in 1846-7. A frame building one storey high, 42 x 20 feet, with a wing 40 x 20 feet. Site purchased from Hon. P. McGill, on 15th March, 1847. Slight repairs effected at an outlay of \$397.89, from 1st July, 1867, to 30th June, 1882.
56,703 24	186,084 72	3	Grosse Isle is situated about the middle of the St. Lawrence, 33 miles below Quebec, and was selected as a quarantine station in the spring of 1832, shortly before the cholera broke out in Quebec on 8th June, 1832. The land occupied covers an area of 700 acres and is divided into districts to separate the sick and convalescent patients. For list and description of buildings see Appendix No. 22, page 264, Report of Commissioner of Public Works, for 1867; also, Appendix No. 2, pages 169 and 170, of this Report. This depot can afford accommodation for 600 patients. The expenditure since Confederation may be sub-divided as follows: For the re-construction of hospitals at the eastern end of the Island, destroyed by fire on the 3rd September, 1878; the construction of the doctor's residence, Catholic chapel and other buildings.....\$41,539 85 For extension of piers, &c..... 15,163 39 Total.....\$56,703 24
793 59	793 59	4	Site donated by the heirs Wright, on part of the Court House reserve, with a frontage of 125 feet on Main street, by a depth of 120 feet. Work placed under contract on 6th July, 1882. External walls of the building are to be of stone, internal walls brick, and the floors and roof of wood.
58,546 74	189,323 22		

PUBLIC BUILDINGS  
QUEBEC—

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	130,781 48	.....	130,781 48	58,546 74	.....
1	Isle aux Noix, Fort Lennox Barracks.	12,658 18	.....	12,658 18	.....	.....
2	Laprairie Barracks .....	.....	.....	.....	.....	.....
3	Levis Fortifications .....	.....	.....	.....	13,175 30	.....
4	do Immigrant Sheds....	.....	.....	.....	20,468 20	.....
5	Montreal Custom House (old), (now Inland Revenue Offices.)	18,000 00	.....	18,000 00	10,353 87	.....
6	Montreal Custom House (new).	.....	.....	.....	223,681 76	.....
7	Montreal Examining Warehouse.	.....	.....	.....	225,430 75	.....
8	do Geological Museum	23,972 23	.....	23,972 23	.....	.....
9	do Immigrant Sheds...	66,396 25	.....	66,396 25	17,811 15	.....
	Carried forward.....	251,808 14	.....	251,808 14	569,467 77	.....

## INGS—Continued.

Continued.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts. 58,546 74	\$ cts. 189,328 22		
	12,658 18	1	Transferred to the Canadian Government in 1856. It was used as a prison from 1858 to 1862, when prisoners were transferred to St. Vincent de Paul reformatory prison. The sum expended previous to Confederation (from 1858 to 1861) was for fitting up of the building and for alterations and other improvements. For description of fort and buildings enclosed in same, see Appendix No. 2, page 170. Slight repairs executed in 1881 at an outlay of \$159.75.
	13,175 30	2	Transferred to the Canadian Government by the Imperial authorities on 5th November, 1856. For details see Appendix No. 2, page 171. Repaired in 1878 at an outlay of \$250.00
13,175 30	13,175 30	3	Transferred to Dominion by the Imperial authorities in December, 1871, and consist of:—1st. Fort No. 1, stone structure with 11 casemates for 12 men each; 2nd. Forts 2 and 3, brick structures, each with same accommodation as No. 1; 3rd. Engineers' Camp, consisting of over 20 buildings, all of wood, one storey high, and described at Appendix No. 2, page 167; 4th. "Spruce Cliff House," stone villa, two storeys, basement and attic, situated on the road from the Levis Ferry to Fort No. 2. The expenditure stated was incurred for the construction of an under roof over Forts 1, 2 and 3, and other works of improvement.
20,468 20	20,468 20	4	Erected near the Grand Trunk Railway Station and the ocean steamers landing stage. Commenced in September, 1871, and completed 1st July, 1872. Additional accommodation provided in 1873 and 1874. These buildings were destroyed by fire on 3rd June, 1882. Steps are being taken to have new sheds erected.
10,353 87	28,353 87	5	Commenced in 1836 and completed in 1838. Cut-stone building, 2 stories high, 64 x 49; stands on part of the site of the old market, between St. Paul and Commissioners streets. Was vacated by the Customs in 1871 and fitted up for INLAND REVENUE OFFICES, at a cost of \$5,100, charged to Repairs. The building is being extended. The sum of \$10,353.87 has been expended in that connection up to 30th June, 1882.
223,681 76	223,681 76	6	The block of buildings on Common and Commissioners streets owned by the "Royal Insurance Company" was purchased on 12th August, 1870, for \$200,000, and alterations made to fit it for Custom House purposes. A three-storey stone building.
225,430 75	225,430 75	7	Situated on the corner of Common and McGill streets, on part of lot purchased from A. T. Galt and others. See "Purchase of land" below. Building placed under contract on 12th June, 1875, and completed on 16th June, 1877. It is four storeys in height, covered by a flat roof.
	23,972 23	8	Situated on St. Gabriel street. Site purchased from Hon. P. McGill on 25th February, 1847. Building is of cut stone, three storeys in height, 61 x 43 feet, with brick wing in rear 33 x 15 feet. This building was sold to Government of Quebec on 19th October, 1881, for \$12,400.
17,811 15	84,207 40	9	Sheds erected before Confederation situated at Point St. Charles, were sold to the Grand Trunk Railway Co., in 1862. The new building was erected in 1872, on a lot of land on the line of Mill street, facing the St. Lawrence River. It is built of brick on a stone foundation, with gravel roof. The central portion is two storeys in height, the wings one.
569,467 77	821,275 91		

PUBLIC BUILDINGS  
QUEBEC

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	251,808 14	.....	251,808 14	569,467 77	.....
1	Montreal Inland Revenue, see (old) Custom House.					
2	Montreal Post Office (old).	67,871 56	.....	67,871 56	.....	.....
3	do do (new)				(a) 501,780 31	.....
4	Montreal—Purchase of land	5,500 00	.....	5,500 00	165,724 56	.....
5	Quebec Artillery Barracks and Cartridge Factory....				16,678 57	.....
6	Quebec Citadel.....				12,576 13	.....
7	do do "Cliff".....				34,605 15	Grant City of Quebec. 2,500 00
8	do do Buildings....				6,428 60	.....
9	do Custom House (old)	26,575 83	.....	26,575 83	.....	.....
10	do do (new)	297,955 93	.....	297,955 93	5,532 48	.....
11	do Armoury & Gun Shed	4,406 11	.....	4,406 11	.....	.....
	Carried forward.....	654,117 57	.....	654,117 57	1,252,793 57	2,500 00

(a) Including \$11,186.95 erroneously charged to "Quebec Post Office" in Appendix No. 1, page 17.

## INGS—Continued.

Continued.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
569,467 77	821,275 91		
.....	67,871 56	2	The ground was purchased from the Seminary of St. Sulpice and others, in 1852, for \$24,933.38, and a cut-stone building, three storeys and basement, 100 x 56 feet, erected in 1853-55, at a cost of \$42,938.18. After the erection of the new Post Office, the old site and building were sold to M. Cuvillier on 4th November, 1873, for \$100,000, though not transferred till the 31st October, 1876, shortly after the occupation of the new building.
(a) 501,780 31	(a) 501,780 31	3	This building was placed under contract on 12th November, 1872, and completed on 30th November, 1877. It is situated on the corner of St. James and St. François Xavier streets, extending back to Fortification lane, and adjoining the Bank of Montreal. It occupies an area of 11,804 square feet, and has a basement, a first, a second, and an attic storey. The exterior walls are of Montreal stone lined with brick. Site was purchased from "La Banque du Peuple" in October, 1871, for \$150,000.
305,724 56	111,224 56	4	A lot facing on Common, Commissioners and McGill streets, containing an area of 49,277 feet, was purchased on 14th February, 1870, from Galt, Richey, Rogers & Hopkins, as a site for the proposed Custom House, for the sum of \$83,975.79. The Government having decided to purchase the "Royal Insurance Block," a portion of the other lot (11,325 feet) was sold to the Montreal Harbour Commissioners for \$33,975, and another portion (6,476 feet) to the Montreal City Corporation for \$5,396.80. The balance of the lot is occupied by the Government Examining Warehouse.
16,678 57	16,678 57	5	Property transferred by Imperial to Dominion Government on 2nd Dec., 1871. Covers an area of 13 acres, 3 roods and 2 perches, and then included 27 buildings, the greater part of which were converted into a cartridge factory from 1880 to 1882, at the outlay mentioned. For description of buildings see Appendix No. 2, pages 160, 161 and 164, (fulminate and laboratory buildings erected in 1880 and 1881-82.)
12,576 13	12,576 13	6	Transferred to Dominion on 2nd December, 1871. Consist of 28 structures, all described in Appendix No. 2, pages 159 and 160. The amount expended by the Dominion Government is for the roofing of the casemates and extraordinary repairs to walls, &c.
37,105 15	37,105 15	7	Amount expended for the purchase of buildings, on Champlain street, which were endangered by the falling of loose stones from Citadel Hill, also for the erection of a retaining wall at foot of cliff.
6,428 60	6,428 60	8	This amount was expended in 1881-82 for the construction of a "Reception Room."
.....	26,575 83	9	Erected in 1831, now occupied by the Marine and Fisheries, Immigration, Shipping Master's and Water Police Offices.
5,532 48	303,488 41	10	The lot on which building stands contains 88,000 square feet, situated at the confluence of the St. Lawrence and the River St. Charles, it is a cut stone edifice, 2 storeys high, with basement founded on the bed of the river, and protected on all sides by a substantial wharf of crib work filled with stone. Length, 159 feet; width, 49 feet. The amount expended since Confederation was for the conversion of the attics into caretakers' quarters.
.....	4,406 11	11	Constructed in 1856, and improved in 1857. It stands in the rear of the property known formerly as the "Sewell Property," near Lévis Gate, opposite the esplanade.
1,255,293 57	1,909,411 14		

PUBLIC BUILD

QUEBEC

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	654,117 57	.....	654,117 57	1,252,793 57	2,500 00
1	Quebec Drill Shed.....	8,453 21	.....	8,453 21	.....	.....
2	do Durham Terrace.....	12,444 30	.....	12,444 30	34,717 01	.....
3	do Fortifications .....	.....	.....	.....	96,838 83	H'r Majesty's Grant. 2,433 33
4	do Immigrant Sheds.....	900 00	.....	900 00	.....	.....
5	Quebec Marine Hospital.....	155,724 00	.....	155,724 00	11,047 25	.....
6	do Observatory.....	9,732 45	.....	9,732 45	.....	.....
7	do do (rebuilding).	2,400 00	.....	2,400 00	8,767 76	.....
8	do Post Office (old) ....	16,000 00	.....	16,000 00	.....	.....
	Carried forward.....	859,771 53	.....	859,771 53	1,404,164 42	4,933 33



INGS—Continued.

Continued.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
1,255,293 57	1,909,411 14			
.....	8,453 21	1	Constructed in 1863-64 on a lot of ground ceded by the Imperial to the Canadian Government, outside of Lévis Gate.	
34,717 01	47,161 31	2	This terrace rests chiefly upon the foundation of the old French Castle, which was the original "Château St. Louis," it was improved in 1854-55, together with adjoining grounds. Has been extended from 1880 to 1882 for the amount stated.	
99,272 16	99,272 16	3	This amount was expended for the erection, from 1879 to 1882, of two new gates—one, "St. Louis," on the site of the old gate of the same name, and the other connecting Nouvelle and Ursula streets, known as "Keut" Gate, also for the repairs of the fortification walls.	
.....	900 00	4	Constructed in 1863 on the wharf at rear of old Custom House, east side of Champlain street; a wooden frame structure, 100 feet long, 20 feet wide, one storey high, and covered with sheet iron. Now occupied as a smithy by the Marine Department Agency.	
11,047 25	166,771 25	5	Situated on the neck of a peninsula formed by the River St. Charles, called "La Pointe aux Lièvres." Consists principally of a central corps, 4 storeys high, 80 ft. long and 58 ft. wide, and a wing at either end 100 ft. in length, 48 ft. in breadth and 3 storeys in height; also, a cholera hospital—a wooden structure—202 ft long by 24 ft. wide and 2 storeys high, covered with a single roof. The grounds belonging to the establishment cover an area of about 120,000 ft. The central portion and west wing were commenced in 1832 and completed in 1834. The east wing was constructed in 1854-55-56. The expenditure since Confederation is for the renewing of floors, painting, improving of the drainage, &c.	
.....	9,732 45	6	Situated within the citadel of Cape Diamond. It was constructed in 1854-55. A cut stone structure, 2 storeys high, with a tower attached. It presents a front of 26 ft. The main building is 15 ft. in height, 16 ft. in breadth and 24 ft. in length. The tower is 44 ft. in height to the top of the ball which crowns its summit, and measures 11 x 11 ft. at its base. This observatory has now been transferred to the Bonner property establishments.	
8,767 76	11,167 76	7	In 1864 an equatorial telescope of 8 in. clear aperture, from the celebrated Alvan Clarke, of Boston, was purchased and erected in a small tower situated on the north bank of the St. Lawrence, a short distance from the entrance of the new jail, on what is known as the Bonner property, one mile beyond the city limits. The site, together with several acres of land and a farm-house, 1 storey high and measuring about 60 ft in length by 30 ft. in breadth, was then given by the Provincial Government for the use of the observatory. Both structures were demolished in 1873-74, and replaced, at a cost of \$8,767.76, by a wooden building on stone foundation, 34 x 30 ft., 2½ storeys in height, with separate out-buildings for the accommodation of various instruments. The stone pillars in citadel observatory were demolished and used in the reconstruction of the present observatory.	
.....	16,000 00	8	This building—a full description of which is to be found at page 262, Appendix No. 23, to the Report of the Commissioner of Public Works for 1867—was demolished in 1870 to make room for the new Post Office.	
1,409,097 75	2,268,869 28			

PUBLIC BUILD

QUEBEC

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	859,771 53	.....	859,771 53	1,404,164 42	4,933 33
1	Quebec new Post Office.....	.....	.....	.....	(a) 93,901 45	.....
2	do Water Police Station.....	1,073 50	.....	1,073 50	.....	.....
3	Seven Island Custom House.....	.....	.....	.....	.....	.....
4	Sherbrooke Immigrant Station.....	.....	.....	.....	1,334 40	.....
5	do Post Office.....	.....	.....	.....	14,394 84	.....
6	St. Helen's Island Military Buildings.....	.....	.....	.....	144 63	.....
7	St. John's Post Office.....	.....	.....	.....	15,479 84	.....
8	St. Regis Custom House....	1,457 00	.....	1,457 00	.....	.....
1	Carried forward.....	862,302 03	.....	862,302 03	1,529,419 58	4,933 33

(a) Exclusive of \$11,186.95 erroneously charged to this work  
1180

INGS—Continued.

Continued.

ederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number.	Remarks.	
Total for Fifteen Years ended 30th June, 1882.	\$	cts.	\$	cts.	
	1,409,097	75	2,268,869	28	
(a)	93,901	45	(a)	93,901	45
			1,073	50	1 Built from 1870 to 1875 on the site of the old Post Office. With a view of facilitating the entrance and exit of the public to and from the building, two additional lots of land were purchased: 1st, a lot 45 x 75 feet on Buade and Du Fort streets, from Mrs. G. O'Kill Stewart, for \$12,000; 2nd, another lot on Buade and Frontenac streets, from James Motz, for \$7,000. The building is 95 x 68 feet and 3 storeys high. It is built of grey cut lime stone; roof timber, covered with tin. It is bounded on two fronts by Buade and Du Fort streets; the third front is bounded partly by Ste. Anne street and partly by the property of H. Black. The fourth front faces Frontenac street.
					2 A brick building 23 x 35, one storey high with a tinned roof, on the north side of the old Custom House, upon a lot containing 2,110 superficial feet. Purchased on 31st March, 1852, from Dr. Hall, for \$600, and afterwards fitted up for the use of the water police force, at a cost of \$473.50. Now occupied by the Marine Department agency.
					3 Is situated at the Bay of the Seven Islands, on the North Shore of the St. Lawrence, 330 miles below Quebec, by water. A rented building. The Customs Department abandoned this post about 1867.
	1,334	40	1,334	40	4 A wooden building, one storey, 60 x 30 feet, on a pile foundation; situated in the immediate vicinity of the Grand Trunk Railway station. It was erected and occupied in 1872-3.
	14,394	84	14,394	84	5 This building was placed under contract on 17th October, 1881. Works are in progress. Building is to be a cut stone structure and is situated at the corner of Commercial and Bank streets, and covers an area of 3,550 square feet. Cost of land for site, \$8,500. A portion was purchased from S. J. and A. E. Rankin, for \$3,500, and the other portion from the Eastern Township Bank, for \$5,000.
	144	63	144	63	6 These properties were transferred by the Imperial to the Dominion Government, on the 28th November, 1870. The island contains 123 acres, 3 roods and 20 perches. Over 16 buildings are erected thereon and are fully described in Appendix No. 2, pages 176 and 177. Alterations and repairs are being made to the same.
	15,479	84	15,479	84	7 Site for building was purchased on 27th February, 1878, from the executors of N. Mott, for \$1,600. It has a frontage of 52 feet, 6 inches on Richelieu street and extends to the Chambly Canal. The building is of brick on stone foundation, two storeys high, with mansard roof and is 24 x 35 feet, 4 inches, with a front entrance. Was commenced in 1878 and finished in 1881. Occupied by the Departments of Customs, Post Office, and Railways and Canals. In the rear is a building erected for an examining warehouse.
			1,457	00	8 This building, which is of wood, was erected in 1854, on a site 80 x 152 forming part of the Indian Reserve, in the village of St. Regis, and was obtained on a lease of \$15 per annum from the Indian agent, and a payment of \$70 to Joachim Orité, the Indian occupier of the lot. A sum of \$164.90 has been expended on repairs to building since Confederation.
	1,534,352	91	2,396,654	94	

instead of Montreal Post Office, in Appendix No. 1, at page 17.

PUBLIC BUILD  
QUEBEC—

Number	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	862,302 02	.....	862,302 03	1,529,419 58	4,933 33
1	St. Vincent de Paul Penitentiary.	.....	.....	.....	183,207 13	.....
2	Three Rivers Custom House	.....	.....	.....	10,534 68	.....
3	do Old Barracks.	.....	.....	.....	8,240 70	.....
	Totals, Quebec.....	862,302 03	.....	862,302 03	1,731,402 09	4,933 33

ONTA

1	Belleville Post Office, Custom House, &c.	.....	.....	.....	17,486 95	.....
	Carried forward.....	.....	.....	.....	17,486 95	.....

INGS—Continued.

Concluded.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$ cts.	\$ cts.	
1,534,352 91	2,396,654 94	1	The site containing about 61 arpents, together with the building formerly occupied by the Nuns of the Sacred Heart, was purchased from the Fabrique de St. Vincent Paul on 27th December, 1861, for \$18,000, and the main building 119 feet in length, and 53 feet wide was fitted up as a reformatory for Lower Canada. These buildings were all of stone, and were partly destroyed by fire on 7th August, 1864. The work of reconstruction was commenced in 1865, and at the time of Confederation one wing 100 x 45, containing 120 cells, had been completed, and a pavillion, the right wing and the central portion of the building were in course of construction. The building was transferred to Quebec Local Government by Order in Council of 27th May, 1868. The site and buildings were re-transferred to Dominion Government on 26th June, 1872, for the sum of \$110,000, and the completion of the building has since been continued mostly by the labor of the convicts. A new wing 126 x 46 feet and containing 132 cells, has been erected on the north side in 1881 and 1882. The prison yard has been extended 100 feet westward, and is enclosed by a wooden fence, 19½ feet in height. On the 27th August, 1873, a lot of land containing 5,990 sq. feet on the Rivière des Prairies was purchased from Hon. J. H. Bellerose for \$10,000, and on 21st October, 1873, a lot similarly situated and containing 76 arpents was purchased from E. H. Lemay for \$18,000. These two amounts were paid by the Department of Justice and are not included in the figures in annexed table of expenditure.
183,207 13	183,207 13	2	Placed under contract on 10th October, 1873, and completed in May, 1875. Is situated on a portion of the property known as the "Platon," which was transferred by the Imperial to Canadian Government on 19th June, 1856, per 19 Vic, cap. 45. (schedule 2nd). Building has a frontage of 45 feet 4 inches on Notre Dame street, by a depth of 32 feet 6 inches, with an extension in the rear 30 x 20 feet. The external walls are of stone for the basement, and brick above the basement. A two-storey structure, the upper storey being formed by the mansard roof. The building is now vacant, and intended to be used as a post office.
10,534 68	10,534 68	3	This building, with the military fuel yard, &c., were handed over to the Canadian Government on 19th of June, 1856. It is a stone building of two storeys and an attic, with wooden floors and roof, 90 x 44 feet, having two wings, one 24 x 15 feet, and the other 18 x 15 feet. It was altered and fitted up in 1880-81 and 1881-82, at the outlay stated, and is now occupied by the Customs and Inland Revenue Departments, and the offices of the Superintendent of the St. Maurice Works.
1,736,335 42	2,598,637 45		

RIO.

17,486 95	17,486 95	1	Site, with a frontage of 103 ft. on Bridge street and 116 ft. on Pinnacle street, was purchased from Mr. Thomas Wells, on 27th September, 1880, for \$5,500. Building was placed under contract on 5th November, 1881. Work is being carried on with due diligence. A brick building on stone foundation. The frontages on Bridge and Pinnacle streets will be 65 ft and 74 ft. respectively, with an entrance for the Post Office on the former and for the Custom House and Inland Revenue offices on the latter.
17,486 95	17,486 95		

## PUBLIC BUILD

ONTARIO—

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				17,486 95	
2	Brantford Post Office, Custom House, &c.				32,772 48	
3	Brock's Monument, Queens- town.	2,400 00		2,400 00		
4	Brockville Post Office, &c.				3,090 00	
5	Chatham Post Office, Custom House, &c.				8,137 88	
6	Cornwall Post Office, Custom House, &c.				8,233 97	
	Carried forward.....	2,400 00		2,400 00	69,721 28	

## INGS—Continued.

Continued.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
17,486	95	17,486	95	
32,772	48	32,772	48	2 The site, comprising $\frac{1}{2}$ of an acre at the corner of George and Dalhousie streets, was purchased from Isaac Hodgins on 16th September, 1878, for \$3,400. The building was placed under contract on 17th October, 1878, completed in February, 1880, and is occupied by the Post Office, Customs and Inland Revenue Departments. The building has a frontage of 62 feet on George street and 53 on Dalhousie street. It is built of brick, with stone dressings on a stone foundation, and is 2 storeys high, with mansard roof. The elevations of the building are plain in character; that facing George street contains the Post Office entrance, has the central portion projected and its roof carried higher than the general line of roof, and surmounted by a flag pole. The entrance to Customs and Inland Revenue offices is from Dalhousie street. The Examining Warehouse and office for Weights and Measures are in a detached building, 1 storey high, and 24 x 65 ft.
		2,400	00	3 This expenditure was made in 1826. See Return of 1847, at page 29.
3,090	00	3,090	00	4 Land for site was purchased from Julia F. Morris, together with a right of way 75 ft. long by 10 ft. wide, for the sum stated. Site covers an area of 68 ft. square, and is situated on Court House Avenue, between Main and King streets, and the Court House. Building was placed under contract on 10th February, 1883, and will consist of: 1st. A main building with a frontage of 66 ft. on Court House Avenue, by a depth of 61 ft., and to have a basement for heating apparatus, a ground floor for the local Postal service, a first floor for Customs and Inland Revenue and an unfinished attic; 2nd. A 1 storey building in rear, 66 x 25 ft., for Weights and Measures, Gas Inspection and Examining Warehouse. The front of the main building and 15 ft. of a return at each front angle, will be of stone. The remaining walls will be brick, on stone foundations, in both buildings. Floors and roofs of wood, the latter covered with slates.
8,137	88	8,137	88	5 This building is now in progress, situated on lot 94, corner of King and Fourth' streets, purchased from A. Northwood for the sum of \$8,000. It will consist of a main building, 48 x 50 ft., and a building in rear "L" shaped, 50 x 16 ft. + 25 x 20 + 13 x 12 ft. The main building will have a basement for heating apparatus, a ground floor devoted to the Postal service, a first floor for Customs and Inland Revenue and an unfinished attic. The rear building will be 1 storey, and occupied by Examining Warehouse, Weights and Measures and Gas Inspection offices. Both buildings will be of brick, on stone foundations, and with stone dressings on street fronts. Floors and roofs to be of wood, the latter covered with slates.
8,233	97	8,233	97	6 Building put under contract on 20th September, 1882. Is being erected on part of lot No. 16, corner of Pitt and Second streets, 100 x 80 ft., purchased on 7th December, 1881, from A. H. Davidson, for \$8,000. It will be of stone and will consist of two buildings: 1st. Main building, 2 storeys, basement and attic, 50 x 64 ft., with a projection for stairway in rear, 24 x 12 ft.; 2nd. A 1 storey building, 78 x 22 ft. They will give accommodation to Post Office, Customs and Inland Revenue offices.
68,721	28	72,121	28	

PUBLIC BUILD  
ONTARIO

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	2,400 00	.....	2,400 00	69,721 28	.....
1	Guelph Post Office, Custom House, &c. ....	.....	.....	.....	31,641 82	.....
2	Hamilton Custom House (old). ....	46,188 45	.....	46,188 45	.....	.....
3	Hamilton Custom House, Post Office, &c. ....	.....	.....	.....	37,966 89	.....
4	Hamilton Gun Shed. ....	5,510 82	.....	5,510 82	.....	.....
5	do Immigrant Shed. ....	.....	.....	.....	1,450 00	.....
6	do Post Office (old). ....	52,629 42	.....	52,629 42	17,508 67	.....
7	Kingston Custom House ...	41,805 52	.....	41,805 52	.....	.....
8	Kingston Fortifications and Military Buildings. ....	.....	.....	.....	111,480 79	.....
9	Kingston Immigrant Building. ....	.....	.....	.....	4,024 08	.....
10	Kingston Military College. ....	.....	.....	.....	102,056 30	.....
	Carried forward .....	148,531 21	.....	148,534 21	375,849 83	.....



INGS—Continued.

Continued.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
69,721 28	72,121 28		
31,641 82	31,641 82	1	Site at the corner of Wyndham and Douglas streets, facing St. George's square. Was purchased on 27th April, 1876, from J. C. McLaggan for \$4,000. Building was put under contract on 21st July, 1876, completed in May, 1878, and occupied by the Customs, Post Office and Inland Revenue Departments. The plan is of irregular form, averaging 70 x 40 feet. The building is of local limestone, with cut-stone clearings, and in 2 storeys high, with basement and mansard roof.
.....	46,188 45	2	Situating on Stuart street. Constructed from 1858 to 1860, at a cost of \$38,188.45. The lot upon which it stands was purchased from Messrs. Moore & McKinstry, on 20th June, 1855, for a sum of \$8,900.
37,966 89	37,966 89	3	Land for site, being part of town lots Nos. 9 and 10 on King and John streets, was purchased on 19th July, 1881, from Hon. D. McInnes, for \$35,908.32. Building was put under contract on 15th August, 1882. It will be an L-shaped building of cut-stone and brick, 136 feet in greatest length, and 91 feet in greatest breadth, having 2 storeys, a basement and an attic. Adjoining will be an Examining Warehouse, 123 x 30.
.....	5,510 82	4	Situating on lot 31, west side Nelson street. A brick building 140 x 36 feet, erected in 1857-58. Site purchased on 31st December, 1857, from Alfred Booker <i>et uxor.</i> , for \$1,000.
1,450 00	1,450 00	5	The amount stated is for the purchase of land for site, from A. Bamberger. This building will be of wood, two storeys, 22 x 30 feet, with a one-storey wing, 70 x 24 feet.
17,508 67	70,138 09	6	This building was erected from 1854 to 1858 on two lots of ground on St. James and Rebecca streets, purchased from E. Ritchie and Hon. Isaac Buchanan for \$8,000 and \$1,900 respectively. It measures 61 feet in length, 55 feet in depth, and is 45 feet high, built of freestone and limestone. It comprises three storeys, with truncated roof covered with slate. On the front there is a projection 41½ feet in length by 10½ in breadth. The building has been extended since Confederation, at an outlay of \$17,508.67.
.....	41,805 52	7	Cut-stone edifice in the Italian style, two storeys in height, situated at the corner of King and Clarence streets. Constructed from 1857 to 1859, at the cost stated. A sum of \$6,584.55 was expended since Confederation for repairs, &c.
111,480 79	111,480 79	8	Property and buildings transferred by Imperial to Dominion Government from July, 1870, to January, 1871. Expenditure has been incurred for the improvement or reconstruction of buildings, &c. For list of buildings, see Appendix No. 2, pages 183 to 187.
4,024 08	4,024 08	9	Situating at the city end of the Grand Trunk Railway Building. Is 60 x 37 feet, two storeys in height, built of wood and resting on stone foundation, the roof being covered with gravel. Constructed during fiscal year 1871-72.
102,056 30	102,056 30	10	The contract for the basement walls of the Military College was let in September, 1876, and that for the building proper in May, 1877. Works were completed in July, 1878. The building is of stone, four storeys in height, with wooden floors and roofs, the basement being devoted to boiler and fuel rooms, cellars, kitchen, scullery, store room, and the ground floor to dining hall, library, day room, visitors' room, officers' room, &c.; and the first, to lecture, class and store rooms. A brick dwelling, 54 x 40, for the Commandant, was also erected from October, 1875, to September, 1876, together with eight wooden buildings connected with this establishment. For list of same, see Appendix No. 2, page 184.
375,849 83	524,384 04		

PUBLIC BUILD  
ONTARIO—

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	148,534 21	.....	148,534 21	375,849 83	.....
1	Kingston Penitentiary.....	219,317 85	.....	219,317 85	38,743 25	.....
2	do Post Office.....	48,547 12	.....	48,547 12	.....	.....
3	London Custom House.....	.....	.....	.....	53,583 46	.....
4	do Immigrant Shed.....	.....	.....	.....	7,425 86	.....
5	do Military Grounds and Buildings.....	.....	.....	.....	1,928 33	.....
6	do Post Office.....	39,122 76	.....	39,122 76	6,768 17	.....
7	Ottawa Drill Shed.....	.....	.....	.....	21,981 43	Contribution City of Ottawa. 5,000 00
8	do Geological Museum.....	.....	.....	.....	50,741 80	.....
9	do Gun Shed.....	515 10	.....	515 10	.....	.....
	Carried forward.....	456,037 04	456,037 04	557,022 13	.....	5,000 00

INGS—Continued.  
Continued.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
375,849 83	524,364 04		
38,743 25	258,061 10	1	Situating on King street, at a distance of about 2 miles from Kingston market house, on W <sup>3</sup> / <sub>4</sub> of lot 21, township of Kingston, which contains 117 acres and was purchased in 1833. The expenditure incurred since Confederation was for the construction of a lunatic asylum for convicts, built from 1875 to 1880; the extension, in 1881, of the north wing of south workshop; the reconstruction the same year of part of the south-east wharf, and the construction of a breakwater 200 x 30 feet, to form a basin 100 feet square. Works in progress. For a description of building connected with the Penitentiary, see Appendix No. 2, pages 187 to 188.
.....	48,547 12	2	Situating at the corner of Wellington and Clarence streets. Commenced in October, 1856, and completed in 1859. A two storey building, with basement, 73 x 59 feet, exclusive of a projection on the rear, measuring 36 feet.
53,583 46	53,583 46	3	Site purchased from H. C. R. Becher, in July, 1870, for \$8,000. Situated in the central portion of the city at the intersection of North and Richmond streets. Edifice was commenced in December, 1870, and completed in October, 1873. It consists of a main building 3 storeys in height, covering an area of 30,509 feet, and a one storey annex for examining warehouse, covering an area of 1,204 feet. Outside walls are of Ohio stone, internal walls of brick.
7,425 86	7,425 86	4	Situating on a lot 3 <sup>1</sup> / <sub>2</sub> acres in area, lying between the line of the Grand Trunk and Great Western Railways, a mile from the city of London. Wooden building on stone foundation, two storeys in height, covering an area of 2,808 square feet.
1,928 33	1,928 33	5	Grounds were fenced in and wooden outbuildings erected in 1877-78.
6,768 17	45,890 93	6	Site (lot No. 11 on North and William streets) was purchased on 4th February, 1857, for a sum of \$3,640, from W. & J. Carling. Work commenced in the autumn of 1858 and completed in 1860. A three storey stone building, measuring 48 feet on the front, 59 feet on the rear and 66 feet in depth. The expenditure since Confederation is for the purchase of an additional piece of land and the extension of the building. Lot acquired from Becher, Barker and Steele, for \$3,000.
26,981 43	26,981 43	7	Situating on the eastern side of Cartier Square, about one hundred yards from the Rideau Canal. Building put under contract on 24th February, 1879, and completed in November of the same year. It is of brick, on a stone foundation, roofed with wood and consists of a large central hall 178 feet long by 75 feet in width and 50 feet high. Surrounding the hall on three sides and connecting with same, are rooms for field battery, cavalry, garrison artillery, foot guards and rifles orderly rooms, quarter-master's rooms and stores. On the upper floor, above these, are band rooms, reception rooms and stores.
50,741 80	50,741 80	8	Lots 1 to 4, George street, with stone buildings, known as the "Clarendon Hotel," were purchased on 22nd January, 1880, from the Canada Permanent Loan Society for \$20,000, and very extensive alterations made to meet the requirements of the Geological Survey which had been removed from Montreal. The building is of stone and 3 storeys high with a frontage of 63 feet on Sussex street and 156 feet on George street.
.....	515 10	9	On west side of Rideau Canal, near lower entrance locks and belonging formerly to the Ordnance Department. Fitted up as a gun shed in 1851, for the sum stated, is now used as a store-house by the Department of Militia and Defence.
562,022 13	1,018,059 17		

PUBLIC BUILDINGS  
ONTARIO—

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Confederation.	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867,	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	456,037 04	.....	456,037 04	557,022 13	5,000 00
1	Ottawa Parliament and Departmental Buildings.	2,723,993 93	.....	2,723,993 93	1,454,996 11	.....
	Carried forward.....	3,180,030 97	.....	3,180,030 97	2,012,018 24	5,000 00

INGS—Continued.

Continued.

Confederation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts. 562,022 13 1,454,996 11	\$ cts. 1,018,059 17 4,178,990 04		
		1	<p>Constructed from 1859 to 1865. Consists of three detached structures situated on the south side of the Ottawa River, on "Barrack Hill." The site on which these buildings stand rises about 159 feet above the summer level of the river, and commands a view of the entire city and surrounding country. Buildings are erected on the northern, eastern and western sides of the hill, leaving a rectangular plot in the centre, measuring 600 feet from north to south, and 700 feet from east to west, on Wellington street. The "Parliament House," in which Legislature assembled for the first time on 8th June, 1866, stands on the north side of the quadrangle, upon which it presents a front of 472 feet in length and 2 storeys in height above the basement, its breadth being 370 feet at the centre and 181 feet across the main eastern and western entrances. The "Eastern Block" has two principal façades at right angles to each other: one 319 feet in length, upon the Square, and the other, 245, on Wellington street. The "Western Block" is somewhat similar in shape to the Eastern, being a frontage of 220 feet on the Square and 277 feet upon Wellington street. Further accommodation being required, contracts were entered into at the following dates: for the "extension" of this block, which was completed and occupied in January, 1877, viz.: "basement walls," on 11th May, 1875; the superstructure on 29th November, 1876. The new building which is 245 feet in length by 60 feet in width, faces the Union Suspension Bridge and covers an area of 17,900 square feet, furnishing 58 additional offices in the three upper floors, besides 10 rooms in the basement. The main tower, which is 274 feet in height from ground to top of finial, is situated about the centre of the western front and contains the principal entrance and vestibule. Cost of "extension," \$462,247.11. At the time of Confederation the foundation walls of the Parliament Library building had been carried up to the plinth course, and the exterior works partly executed. By Order in Council, dated 29th February, 1868, the Government directed that the construction of the Library should not be proceeded with. The works were consequently suspended and were not resumed until the 18th November, 1870, when a contract was entered into for the completion of the walls; the material for the roofing (iron) arrived from England about the same date, and the building was completed and occupied in 1877. It is circular inside, and 90 feet diameter. The main wall is about 4 feet thick, and its exterior face forms a polygon of 16 sides, at each angle of which is a flying buttress, spanning the roof of the lean-to and joining the main wall at a height calculated to resist the thrust of the roof. The Library is floored with Canadian woods, viz.: oak, ash, cherry and walnut. Fittings and block cases of pine, the latter in 3 storeys with eight divisions, the spaces between forming small alcoves enclosed with iron railing. The upper storeys have projecting galleries floored with glass, and iron railing. These galleries are reached by stone stair cases. Library can contain 103,000 volumes. Actual number of volumes in Library, 103,000; of which 60,000 are in the centre room. Cost of completion, \$301,812.45. The other works of construction executed since Confederation are mentioned in the detailed statement of expenditure on construction of public buildings, Ottawa, at page...</p>
2,017,018 24	5,197,049 21		

**PUBLIC BUILDINGS  
ONTARIO**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Conf.	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	3,180,030 97	.....	3,180,030 97	2,012,018 24	5,000 00
1	Ottawa Post Office .....	.....	.....	.....	242,856 73	.....
2	do Supreme Court .....	.....	.....	.....	13,979 70	.....
3	Point Edward Cattle Quarantine Station .....	.....	.....	.....	1,577 10	.....
4	Port Dalhousie or St. Catharines Custom House .....	.....	.....	.....	.....	.....
5	Rideau Hall, Governor General's Residence.	80,819 66	.....	80,819 66	155,965 74	.....
	Carried forward .....	3,260,850 63	.....	3,260,850 63	2,426,397 51	5,000 00

## INGS—Continued.

Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
2,017,018	24	5,197,049	21	
242,856	73	242,856	73	1 Situated between the west ends of Sappers' and Dufferin Bridges, in close contiguity to the Eastern Block of the Departmental Buildings. It covers an area of 10,440 square feet. Style of architecture is Italian in character. The external walls are of Berea sandstone, and lined with brick. Floors, partitions and roof are of wood; roof covered with slate and galvanized iron. Basement and sub-basement are occupied as storerooms, examining warehouse and boiler and fuel rooms. The ground floor contains the Post office; the first floor, Custom House and Inland Revenue, and the District Post Office Inspector's offices; the second floor, the Ottawa River Works Offices, the Accountant of Penitentiaries Office and Laboratory for the Local Collector of Inland Revenue. Building was commenced in December, 1872, and completed and occupied in July, 1876.
13,979	70	13,979	70	2 The Government having decided to close the workshops, built on Parliament grounds, from October, 1873, to July, 1876, a contract was entered into on 30th July, 1881, for the conversion of that building into a Supreme Court and Gallery for the reception of the Diplomat pictures of the Royal Canadian Academy. The external appearance of the workshops was slightly changed, but the interior was entirely remodelled. The building is of stone, two storeys high, and has a frontage of 130 feet on Bank street by a depth of 45 feet.
1,577	10	1,577	10	3 At the upper entrance of the Ste. Claire River, 3 miles north of Sarnia. A tract of land 82 acres in extent was leased from the Grand Trunk Railway, at \$100 per annum, for a term of 10 years, from 1st April, 1882. Certain wooden buildings on the premises, which were valued at \$450, were purchased by the Government for quarantine purposes from Mr. Finlay McGibbon; these buildings to remain the property of the Government, by whom they may be removed at the expiration of the lease. Since the acquisition of this property, the following works have been executed:— 1. Superintendent's house. 2. Cattle stables. 3. Fencing. 4. Repairs to and alterations of old wooden buildings and fences.
155,965	74	236,785	40	4 Established in the Village of St. Catharines about 1845, in the building formerly occupied as the Welland Canal offices. In 1855 a new building was erected and has since been occupied as a Custom House. Cost (\$11,481.43) is charged in the Welland Canal expenditure for construction.
2,431,397	51	5,692,248	14	5 This property is situated northeast of the village of New Edinburgh, at the confluence of the Ottawa and Rideau rivers, about two miles distant from the Parliament Buildings, Ottawa. It was leased on 7th August, 1865, from the heirs of the late Thos. McKay for \$4,000 per annum, and afterwards purchased (on 28th July, 1868,) for the sum of \$82,000. It contains about 88 acres of land. The original building was 73 × 47 feet, and to this was added, prior to Confederation, a stone building 137 × 56 feet, with a wing 72½ × 74 feet; a brick cottage residence for the Governor's Secretary, 55 × 45 feet, standing at 240 yards south from the main building; a guard-house for soldiers on duty, &c. Since Confederation extensive alterations and additions have been made, and are fully enumerated in Appendix No. 2, page 180.

PUBLIC BUILD-  
ONTARIO—

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total from June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	3,260,850 63	.....	3,260,850 63	2,426,397 51	5,000 00
1	St. Catharines Marine Hospital	.....	.....	.....	2,000 00	.....
2	St. Catharines Post Office, Custom House, &c.	.....	.....	.....	17,777 69	.....
3	St. Thomas Post Office, Custom House, &c.	.....	.....	.....	7,331 37	.....
4	Stratford Post Office, Custom House, &c.	.....	.....	.....	7,213 37	.....
5	Toronto Custom House (old)	10,148 21	.....	10,148 21	.....	.....
6	do do (new)	.....	.....	.....	235,713 30	.....
7	do Examining Warehouse.	.....	.....	.....	223,715 15	.....
8	do Forts .....	.....	.....	.....	.....	.....
	Carried forward. ....	3,270,998 84	.....	3,270,998 84	2,920,148 39	5,000 00



INGS—Continued.

Continued.

Federation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
2,431,397 51	5,692,248 14		
2,000 00	2,000 00	1	Built in 1875 by the City Corporation, aided by a Government grant of \$2,000.
17,777 69	17,777 69	2	Site was purchased in November, 1880, from H. A. King and W. L. Copeland for \$6,000, and covers an area of 26 perches. It has a frontage of 154 feet on King street and 80 on Queen. The contract for the construction of the building was let on 14th November, 1881, and work is in progress. The building is designed for the use of the Post Office, Customs and Revenue Departments. It is to be of brick (with stone dressing and portico) resting on a stone foundation. Post office entrance is to be on King street, and that of the Custom House on Queen street.
7,331 37	7,331 37	3	Site purchased on 22nd November, 1881, from the "Trustees of the St. Thomas, C. W., Presbyterian Church" for \$7,000. Is situated on Talbot street, and covers an area of 132 by 122 feet. The building was placed under contract on 22nd July, 1882, and is to be of stone with wooden floors and roof, the latter covered with slates. The front portion will be cruciform in plan, 64 feet by 62 feet, with a basement for heating apparatus, a ground floor for Post Office, a first floor for Customs and Inland Revenue, and an unfinished attic. There will be a one-storey wing in rear, 36 feet x 53 feet, for Examining Warehouse, Gas Inspector's Office and Weights and Measures.
7,213 37	7,213 37	4	The site is an irregularly shaped piece of ground, at the intersection of Ontario and Erie streets, and was donated by the City Corporation. Building was put under contract on 16th January, 1882. It is to be of brick on stone foundations, and two storeys in height. The basement will contain Examining Warehouse, boiler house, fuel room and two offices. The ground floor is to be devoted entirely to the Post Office, the first floor to the Inland Revenue and Customs, and the attic rooms for the Caretaker.
.....	10,148 21	5	Constructed in 1846-47, situated on Yonge and Front streets, a short distance from the lake shore. Building was 45 x 36 feet, two storeys high, of white brick, with roof covered with tin, and was demolished to make room for the new Custom House.
235,713 30	235,713 30	6	Built partly on the site of the old Custom House and partly on additional site acquired, in October, 1872, from Hon. O. Mowat (\$27,880), and from W. Thompson and J. Burns (\$8,983). Building placed under contract on 30th April, 1873, and completed in July, 1876. The style of architecture adopted was that of the Renaissance, and the material employed, Georgetown stone for lower portions, and Ohio sandstone for superstructure. Building is two storeys high and faces on Front and Yonge streets, extending 63 feet on the former and 112 feet on the latter.
223,715 15	223,715 15	7	Built from October, 1874, to July, 1876. It is a brick building on stone foundation, four storeys high, and is situated in rear of the Custom House, with frontage of 115 feet on George street and 86 feet on the Esplanade. Cost of land for site, \$56,296.87.
.....	.....	8	The buildings (14 in number) connected with the "Old Fort," were transferred by the Imperial to the Dominion Government on 26th September, 1870, and those connected with the "New Fort" (22 in number) on 15th July of the same year. A description of these buildings may be found in Appendix No. 2, pp. 192 and 193; cost not ascertained. A sum of \$4,360.14 was expended on repairs up to 30th June, 1882.
2,925,148 39	6,196,147 23		

**PUBLIC BUILD**  
**ONTARIO**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Brought forward .....	3,270,998 84	.....	3,270,998 84	2,920,148 39	5,000 00
	Toronto Gun Sheds .....	3,592 23	.....	3,592 23	.....	.....
2	do Immigrant Sheds.....	.....	.....	.....	11,834 18	.....
3	do Magnetical and Meteorological Observatory.	13,851 72	.....	13,851 72	.....	.....
4	do Post Office (old)....	32,716 07	.....	32,716 07	.....	.....
5	do do (new).....	.....	.....	.....	148,653 25	.....
6	Windsor Post Office, Custom House, &c.	.....	.....	.....	66,868 35	.....
	Totals, Ontario.....	3,321,158 86	.....	3,321,158 86	3,147,504 17	5,000 00

## INGS—Continued.

Concluded.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
2,925,148 39	6,196,147 23	3,592 23	1	Sheds, together with a large space planked for drill purposes, are upon the premises known as the "Bathurst Street Barracks. They consist of three separate structures; were commenced in 1856 and completed in 1857, for the amount stated.
11,834 18	11,834 18		2	These buildings were erected in 1870 on a lot of ordnance property, 6½ acres in extent bounded by the tracks of the Grand Trunk, Great Western and Northern Railways. They are of wood, and comprise landing and sleeping shed 2 storeys high, dining hall, baggage-room, &c.
	13,851 72		3	Observatory founded by Imperial Government in 1848. Up to 1856 observations were taken in a wooden building. The present buildings (stone), which were commenced in 1854 and completed in 1856, are situated near the University, on the ordnance property, which was ceded by the Imperial to the Canadian Government in 1858. They are maintained by the Marine and Fisheries Department. For description of buildings, see "Report of the Commissioner of Public Works for 1867," Appendix No. 23, page 258.
	32,716 07		4	Edifice about 44 feet in front, by 77 feet in depth. Front walls of stone, flank and rear white brick; the front portion of the building is 2 storeys, the rear 1 storey in height. Lot on which it stands is situated between Adelaide, Toronto, Yonge and King streets. Cost of site, \$4,650. This building was vacated in 1874 on the completion of the new Post-office, and was fitted up for, and is now occupied by, the Assistant Receiver-General's and Inland Revenue Offices. Cost of alterations, &c., \$25,067.23, charged to "Repairs." Appendix No. 1, page 31.
148,653 25	148,653 25		5	The site for this building, comprising 4 lots on Adelaide and Stanley streets, was purchased from Hon. D. Macpherson on 1st June, 1870, for \$10,963.02; construction commenced in 1871, and the building occupied by Post-Office Department in 1873. The lot has a frontage on Adelaide street of 120 feet by a depth of 180 feet. The main building is 75 front by 66 feet deep, and 3 storeys high. The rear portion of building is 1 storey high. The main façade, with portion of returns of sides, is built of Ohio sandstone; the remainder of the external walls being of white brick, which approximates very closely in colour to the stone. The design is Italian in character, treated very freely; its height is divided by cornices, &c., into three stages, and these again are divided vertically by columns, pilasters, &c., into bays; these are occupied by windows with moulded archivolts, pilasters, jambs, cornices, &c. The stone work of ends of the main front and return is coursed and polished ashlar. The main cornice is of galvanized iron, highly enriched. The mansard roof rises above into a central and two angular or side features. The central one approaches in outline the form of a dome. The side towers are square—the whole surmounted with cresting.
66,868 35	66,868 35		6	The site for this building was purchased part on 4th September, 1878, and part 9th May, 1879, from V. Ouellette for \$3,400, and contains 16,807 superficial feet. The building was commenced in 1879 and occupied in 1880 by the Post-Office, Inland Revenue and Customs Departments. The building faces on Ouellette and Pitt streets and is two storeys high, with mansard roof. The outer walls are of stone, except the rear and end walls of the Examining Warehouse which are of brick. The walling on street elevation is in coursed ashlar, with tooled stone dressings, moulded string courses and hood-mouldings to windows and doors.
3,152,504 17	6,473,663 03			

PUBLIC BUILD  
MANI

Number.	Name of Building.	Expenditure prior to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total Up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Brandon Immigrant Sheds.				9,934 20	
2	Emerson Immigration Office.				1,186 10	
3	Stoney Mountain Penitentiary.				169,377 85	
4	Winnipeg Assistant Receiver General's Office.				5,025 00	
5	Winnipeg Custom House.				38,642 88	
6	Winnipeg Dominion Lands Office.				15,649 77	
7	Winnipeg Fort Osborne Barracks.					
8	Winnipeg Immigrant Sheds.				27,755 45	
	Carried forward.....				267,571 25	

## INGS.—Continued.

## TOBA.

Federation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
9,934 20	9,934 20	1	These buildings are situated between Third and Fourth streets on the Assiniboine River, and were placed under contract on the 10th January and completed in July, 1882. They are constructed of wood and rest on blocks. The main building is 100 feet by 29 feet and is two storeys high, each flat being divided by a transverse partition; the kitchen is 18x18 feet. There is also a detached two-storey hospital and luggage-room 50x26 feet, with necessary outbuildings.
1,186 10	1,186 10	2	A wooden building, erected from August, 1881, to April, 1882.
169,377 85	169,377 85	3	Building is situated at Stoney Mountain, a distance of fourteen miles from Winnipeg. It was placed under contract on the 19th July, 1874, completed in December, 1876, and occupied a short time after. Land attached to establishment covers an area of 300 acres; building is of local stone and brick; its arrangement is similar to that of the Central Prison, Toronto, the cells being built in the centre of the enclosure, with a space of ten feet between them and the outer walls. There are sixty-seven cells 8x4 arranged in four tiers. The basement contains dining-hall, kitchen, &c. In 1880-81 stables and outhouses, guards' quarters, laundry, &c. were added and a heating apparatus introduced. After the building was occupied a great deal of the labor was performed by the convicts.
5,025 00	5,025 00	4	This office is in the Post-Office building. The expenditure stated was incurred in May, 1882, for burglar-proof lining and doors for the vault.
38,642 88	38,642 88	5	Erected from October, 1873, to November, 1875, on block 3, Main street, having a frontage of 54 feet with a depth of 56 feet, and adjoining the Dominion Lands Office. Building is of brick on stone foundation, and is occupied by the Customs and Inland Revenue Departments.
15,649 77	15,649 77	6	Building placed under contract on 22nd October, 1873, and completed in November, 1875. It was erected on part of block 3, Main street, 74 feet distant from Custom house, and has a frontage of 41 feet. A brick structure on stone foundation.
27,755 45	27,755 45	7	Built in 1872 at a cost of about \$25,000, which was defrayed out of appropriation for the Northwest. Consists of 24 wooden buildings one storey high, described at page 204, Appendix, No. 2.
		8	The "Fort Garry" Immigrant Shed, erected in 1872-3 at a cost of \$7,050.58, is a wooden building, 21 x 180 feet, one storey high, situated on the property of the Hudson's Bay Company. It is divided into thirty compartments, and is at present occupied by the Jews. In 1880-81 an Immigrant Hospital, a wooden building, 130 x 29 feet, 2 storeys high, with a wing in the rear, 46x18 feet, was erected at Douglas Common, on the line of the Canadian Pacific Railway, at an outlay of \$10,071.61, and was sold by the Department of Agriculture to the Winnipeg General Hospital for \$5,000, as per Order in Council, dated 20th December, 1881. New buildings were placed under contract on the 18th January, and completed in April, 1882. They are situated 450 yards west of Main street, on the main line of the Pacific Railway. They are of wood, resting on blocks, and comprise a two storey main building, 29 x 100 feet; a kitchen, 18 x 18 feet; also a luggage room and hospital in two storeys, 50 x 26 feet; two temporary sheds, 18 x 100 feet each, and a cook-house, 246 x 16 feet 4 inches. Cost of these new buildings \$10,633.26.
267,571 25	267,571 25		

**PUBLIC BUILDING  
MANITOBA**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				267,571 25	
1	Winnipeg Lieutenant Governor's Residence				6,412 87	
2	do Parliament Building.				19,561 83	
3	do Post Office .....				32,701 52	
	Totals, Manitoba.....				326,247 47	

**NORTH-WEST**

1	Battleford Buildings.....				149,847 55	
2	Fort Pelly Barracks.....				63,287 85	
	Carried forward.....				213,135 40	

## INGS—Continued.

—Concluded.

federation.	Grand Total Expenditure on Constitution, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$ cts.	\$ cts.	
	\$ cts.	\$ cts.	
267,571 25	267,571 25		
6,412 87	6,412 87	1	This building was put under contract on 13th May, 1881, and is being erected on the Government Reserve. The style of architecture adopted is Italian. The building will be of brick, 60 x 60 feet, and 4 storeys high.
19,561 83	19,561 83	2	The contract for the construction of this building was signed on the 25th April, 1881. A brick structure 4 storeys high, including basement, 86 x 44 feet, and one wing, 57 x 50 feet. The legislative chamber will be 40 x 40 feet, and 33 feet high, with a gallery for the public three seats deep along the sides and one end.
32,701 52	32,701 52	3	Building situated on corner of Main and Owen streets. It was placed under contract on 22nd October, 1873, and completed in November, 1875. It is a two storey brick building, having a stone foundation and wooden roof, and consists of a main building, 50 x 40 feet, with a projection for staircase and vaulted safe, 25 x 10 feet. Occupied by the Post Office, Savings Bank and Assistant Receiver-General's office.
326,247 47	326,247 47		

## TERRITORIES.

149,847 55	149,847 55	1	Consist of, 1st. Lieutenant-Governor's Residence, a log structure on stone foundation. 2nd. Stipendiary Magistrate's Residence, a two storey wooden structure on stone foundation. 3rd. Registrar's Residence, a two story wooden building. 4th. Clerk of the Council's Residence, similar in construction to the Lieutenant-Governor's; also nine other buildings, described in Appendix No. 2, page 207. The buildings were completed and ready for occupation in 1878.
63,287 85	63,287 85	2	These buildings were erected from September, 1874, to December, 1876, for the use of the North-West Mounted Police, at the Junction of Snake Creek and Swan River, about ten miles north of Fort Pelly. They are all built of wood and consist of:— 1st. COMMISSIONER'S RESIDENCE—A frame structure, 35 x 40 feet, two storeys high with kitchen, &c. 2nd. OFFICERS' QUARTERS—A frame building 100 x 26 feet, two storeys high, with kitchen, 36 x 16, and plastered inside and outside. 3rd. COMPANIES' QUARTERS—Three buildings, 156 x 26 feet each, one being a frame building, two storeys high, the others being built of logs one storey high. 4th. QUARTERS FOR MARRIED MEN—A frame building, 250 feet long by 26 feet wide, one storey high, divided into 9 divisions suitable for 9 families. 5th. HOSPITAL—A structure 22 x 42 feet, built of plank, one storey high, plastered inside and outside. 6th. BAKE HOUSE—A log structure 22 x 40 feet, one storey high, plastered inside and outside, with bake oven built of stone. 7th. STORE ROOM—Three buildings, 20 x 40 feet each, built of logs. 8th. GUARD HOUSE—A frame building 22 x 28 feet. 9th. STABLES—Two log buildings, 190 x 26 feet each, capable of accommodating 198 horses, also lofts, grain bins, &c.; harness room at each end, 32 x 26, with floors 2-inch plank. All above buildings are covered with sawn shingles 18 inches long.
113,135 40	113,135 40		

**PUBLIC BUILDINGS  
NORTH WEST**

Number.	Name of Building.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				213,135 40	
1	Buildings at Fort McLeod, Calgary, Saskatchewan, Tailereek, Qu'Appelle and Shoal Lake.				15,000 00	
	Total N. W. Territories.				228,135 40	

**BRITISH**

1	Nanaimo Post Office, Custom House, &c.				25 33	
2	New Westminster Drill Shed.					
3	New Westminster Penitentiary.				162,635 14	
4	New Westminster Post Office, &c.				848 57	
5	Victoria Post Office, &c.				78,339 51	
7	do Custom House, &c.					
7	do Marine Hospital				18,835 43	
	Total British Columbia.				260,473 98	

**ABSTRACT STATEMENT**

1	Nova Scotia .....				164,110 00	
2	Prince Edward Island .....				75,253 68	
3	New Brunswick .....				1,248,672 00	
4	Quebec .....	862,302 03		862,302 03	1,731,402 00	4,933 33
5	Ontario .....	3,321,158 86		3,321,158 86	3,147,504 17	5,000 00
6	Manitoba .....				326,247 47	
7	North-West Territory .....				228,135 40	
8	British Columbia .....				260,473 98	
9	Public Buildings Generally.				104,633 33	
	Total, Public Buildings	4,183,460 89		4,183,460 89	7,286,432 12	9,933 33



INGS—Continued.

TERRITORIES—Continued.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
213,135	40	213,135	40	
15,000	00	15,000	00	1 Built in 1876 for the use of the Mounted Police.
228,135	40	228,135	40	

COLU MBIA.

25	33	25	33	1 Plans of the building are being prepared. Works will be placed under contract during the present season (1882).
.....	.....	.....	.....	2 A wooden building 66 x 40 feet, with a lean-to armoury 24 x 12 feet, situated on McKenzie street, Lot 10, Block 13. Constructed by Provincial Government about 1864. Cost not ascertained.
162,635	34	162,635	34	3 Situated on Government reserve, on the right bank of the River Fraser. Site comprises 77 acres. Buildings commenced in March, 1875, and completed in November, 1877. Stone building, with brick backing to outer walls. Number of cells, 67 (8 x 4 feet). During the fiscal year 1881-82 a wooden workshop, with stone foundation and brick chimneys, has been erected near the prison building. It is two storeys in height, and provides work-rooms for carpenters, blacksmiths, shoemakers and tailors.
848	57	848	57	4 Works commenced in December, 1881, and are still in progress. Building is to be brick, with a stone foundation. The ground floor will be devoted to Post Office, Savings Bank and Telegraph Offices, and the second floor to the Custom House.
78,339	51	78,339	51	5 Building devoted to Post Office, Savings Bank, Public Works and Indian Department offices. Was erected in 1873-4. It is two storeys in height, with walls of stone, and floor and roofs of wood.
.....	.....	.....	.....	6 Building, devoted to Custom House, Inland Revenue and Marine Offices, is a brick building on stone foundations, floor and roof of wood, the frontage 40 feet and the depth 62 feet. Commenced in 1873 and completed in August, 1875.
18,835	43	18,835	43	7 Stone building capable of accommodating 40 patients. Commenced in 1872-3 and completed in 1874-5.
260,473	98	260,473	98	

OF EXPENDITURE.

164,110	00	164,110	00	1
75,253	68	75,253	68	2
1,248,672	00	1,248,672	00	3
1,736,335	42	2,598,637	45	4
3,152,504	17	6,473,663	03	5
326,247	47	326,247	47	6
228,135	40	228,135	40	7
260,473	98	260,473	98	8
104,633	33	104,633	33	9
7,296,365	45	11,479,826	34	

HARBOURS AND  
NOVA

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Annapolis Harbour.....				750 00	
2	Antigonish.....				3,649 15	
3	Arichat, West.....				9,694 29	
4	Arisaig Pier.....				2,583 00	
5	Avonport.....				500 00	
6	Bayfield Harbour.....				4,888 28	
7	Bellevean Cove.....				3,000 00	
8	Benacadie Pond.....				716 20	
9	Big Pond.....				2,500 00	
10	Big Tracadie.....				14,239 63	
11	Broad Cove.....				3,000 00	
12	Burying Island, Canso Har- bour.....				9,000 00	
13	Canada Creek.....				5,000 00	
14	Canning, Pickett's Pier.....				500 00	
15	Cape St. Mary.....				2,000 00	
16	Cheticamp.....				11,731 08	
17	Cheverie.....				2,338 88	
18	Chezetcook.....				2,593 70	
19	Chipman's Brook.....				2,750 00	
20	Church Point.....				2,000 00	
21	Cow Bay.....				127,444 10	
22	Cranberry Head.....				3,500 03	
23	Delap's Cove.....				2,150 00	
24	D'Escousse Harbour.....				2,535 20	
25	Digby Pier.....				10,326 30	
26	Gabarus.....				3,175 00	
27	Green Cove.....				4,500 00	
28	Guysboro'.....				1,413 53	
29	Hampton.....				4,572 37	
30	Halifax.....				3,758 66	
31	Harbourville.....				2,000 00	
	Carried forward.....				248,809 40	

## BREAKWATERS.

## SCOTIA.

Confederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years, up to 30th June, 1882.			
\$ cts.	\$ cts.		
750 00	750 00	1	Expenditure for removal of reef in 1880-81. Wharves belong to private companies.
3,649 16	3,649 16	2	Expenditure for dredging in 1877-78.
9,694 29	9,694 29	3	Breakwater between Orsington Island and mainland, begun by Provincial Government before Confederation; completed by Dominion, 1879.
2,583 00	2,583 00	4	Cost of repairs to breakwater, mostly in 1873.
500 00	500 00	5	do pier in 1878.
4,888 28	4,888 28	6	Cost of breakwater built in 1879.
3,000 00	3,000 00	7	Breakwaters built by Provincial Government and locality, jointly—the eastern in 1825 and the western in 1853. Repaired and extended by Dominion in 1877-78.
716 20	716 20	8	Expenditure for removal of bar, now in progress.
2,500 00	2,500 00	9	Expenditure cutting and cribbing entrance in 1873-4-5.
14,239 63	14,239 63	10	Works constructed by Provincial Government in 1863 cost unknown. Reconstructed by Dominion Government in 1873-5. In 1878 dredging was done at a cost of \$675.26.
3,000 00	3,000 00	11	Breakwater built in 1875-76.
9,000 00	9,000 00	12	do 1880-82.
5,000 00	5,000 00	13	Western pier built by Provincial Government; repaired by Dominion in 1873-4, \$2,000; eastern built by Dominion in 1878-9, \$3,000.
500 00	500 00	14	Repairs to pier, 1877-8, which was originally built by Provincial Government and locality in 1845.
2,000 00	2,000 00	15	Breakwater built in 1846 and following years by locality, assisted by Nova Scotia Government, cost about \$1,200; reconstructed by Dominion in 1881-82.
11,731 08	11,731 08	16	Cost of dredging bar in 1875-77.
2,338 88	2,338 88	17	Pier built by Nova Scotia Government; extended by Dominion in 1873-74.
2,593 79	2,593 79	18	Dredging channel, 1874-75.
2,750 00	2,750 00	19	Extension of breakwater, 1876-77.
2,000 00	2,000 00	20	Breakwater built in 1846 by locality and Provincial Government jointly. Repaired by Department in 1875-76.
127,444 10	127,444 10	21	Breakwater begun in 1863 by Messrs. Archibald & Co., whose total expenditure up to September, 1874 (including a subsidy of \$14,000 from Government of Nova Scotia), was \$96,519. Transferred to Dominion on 26th September, 1874, for \$26,000. Further expenditure by Department for repairs and extension up to 1882, \$101,444.10.
3,500 03	3,500 03	22	Extension and repairs to breakwater, 1876-79.
2,150 00	2,150 00	23	Breakwater, &c., built in 1878-79.
2,535 20	2,535 20	24	Deepening channel, 1872-73.
10,326 30	10,326 30	25	Built by Provincial Government before 1867. Repaired by same with grant from Dominion in 1879—expenditure, \$2,920. Repaired again in 1871-72 and following years by Dominion.
3,175 00	3,175 00	26	Deepening channel, 1873-74 and 1880-81.
4,500 00	4,500 00	27	Extension to eastern breakwater in 1873-74, \$2,500; western, in 1878-79, \$2,000.
1,413 53	1,413 53	28	Dredging channel, 1877-78.
4,572 37	4,572 37	29	Pier built by Provincial Government, and extended by Department in 1878-79. Expense \$3,000. New pier begun in 1881 on another site; to be built partly from materials of old one. Cost to date, \$1,572.37.
3,758 66	3,758 66	30	Dredging at wharves, 1875-80. Of the amount shown \$1,076 was refunded in the following year by companies owning wharves.
2,000 00	2,000 00	31	Cost of addition to breakwater in 1875-76.
248,809 40	248,809 40		

## HARBOURS AND BREAK

NOVA SCOTIA

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				248,809 40	
32	Harbours generally .....				5,097 64	
33	Havre Bouché.....				2,498 48	
34	Herring Cove (Halifax Co.).....				8,015 05	
35	Indian Island Beach.....				2,196 45	
36	Ingonish, South .....				86,703 70	
37	Joggins.....				10,000 00	
38	Jordan Bay.....				24,746 12	
39	Ketch Harbour .....				985 50	
40	L' Ardoise.....				10,330 00	
41	Lingan .....				13,253 70	
42	Little Glace Bay.....				4,755 56	
43	Little Harbour.....				200 00	
44	Liverpool (Brooklyn).....				72,574 86	
45	Lockeport.....				6,334 85	
46	Lunenburg.....				10,849 66	
47	Mabou Harbour.....				97,855 76	
48	Mahone Bay.....				5,958 65	
49	Main-à-Dieu Breakwater.....				8,596 22	
50	Maitland Pier.....				6,341 99	
51	Margaree Pier.....				6,000 00	
52	Margaretville Pier.....				9,150 00	
53	Merigomish Pier.....				1,065 60	
54	Meteghan Cove Breakwater.....				15,202 79	
55	do River do .....				6,500 00	
56	Morden Pier.....				5,500 06	
57	Musquodoboit Pier.....				1,831 10	
58	McNair's Cove.....				33,127 45	
59	North Sydney.....				2,000 00	2,000 00
60	Oak Point (known as King's Port.).....				24,577 20	
61	Oyster Pond.....				2,250 01	
62	Parrsboro, or Partridge Island Pier.....				1,414 94	
63	Petit de Grat Inlet.....				3,000 00	
64	Pictou Island.....				745 49	
65	do Railway Wharves.....				18,116 23	
66	Plympton .....				3,543 97	
67	Porper Pond .....				5,119 09	
68	Port Caledonia.....				1,348 20	
69	do George.....				7,000 00	
70	do Greville.....				6,028 00	
71	do Hood.....				21,397 07	
72	do Medway.....				4,728 23	
73	do Mulgrave.....				782 00	
	Carried forward.....				806,531 92	2,000 00

## WATERS—Continued.

—Continued.

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
248,809 40	248,809 40			
5,097 64	5,097 64	32		Disbursements for staff, stationery, &c., not apportionable to works.
2,498 48	2,498 48	33		Dredging entrance, 1877-78.
8,015 05	8,015 05	34		Dredging in 1875.
2,196 45	2,196 45	35		Opening channel and protection work, 1880-82.
86,703 70	86,703 70	36		Cost of building breakwater and improving channel, 1872-76, \$84,397.20; repairs up to 1882, \$2,306.50.
10,000 00	10,000 00	37		Cost of extending pier and other improvements in 1873-74.
24,746 12	24,746 12	38		Cost of breakwater, 1875-78, \$24,568.79; repairs, 177.33.
985 50	985 50	39		Dredging in 1878.
10,330 00	10,330 00	40		Breakwater, built in 1876-77.
13,253 70	13,253 70	41		Beach protection work, 1876-77; cost, \$2,000. Balance for dredging, 1880-82.
4,755 56	4,755 56	42		Expenditure for dredging, 1880-82. Piers belong to private companies.
200 00	200 00	43		Deepening channel, 1881.
72,574 86	72,574 86	44		Dredging bar, 1874-77, \$4,762.38. Brooklyn Breakwater originally built by Provincial Government; rebuilt by Dominion in 1872-76; cost, \$58,320.77; repairs and stone facing, 1881-82, \$9,491.70.
6,334 85	6,334 85	45		Dredging, 1874-78.
10,849 66	10,849 66	46		do 1876-77.
97,855 76	97,855 76	47		Opening new entrance, 1871-82.
5,958 65	5,958 65	48		Dredging, 1878-79.
8,596 22	8,596 22	49		Expenditure on breakwater now under construction.
6,341 99	6,341 99	50		do landing pier, 1872-77.
6,000 00	6,000 00	51		Repairs and extension, 1875-79.
9,150 00	9,150 00	52		Built in 1837 by Provincial Government. Repaired and extended by Dominion in 1871-72 and following years.
1,065 60	1,065 60	53		Cost of construction, 1880-81.
15,202 79	15,202 79	54		Repairs to breakwater in 1875, \$10,000; extension in 1877-78, \$3,000; in 1881-82, \$2,202.79.
6,500 00	6,500 00	55		Breakwaters repaired in 1872-73, and again in 1880-81.
5,500 06	5,500 06	56		Repairs to pier, 1873-74; cost, \$3,000; extension, 1877-79, \$2,500.06.
1,831 10	1,831 10	57		Removal of boulders, 1877-78.
33,127 45	33,127 45	58		Construction of breakwater, 1872-78.
4,000 00	4,000 00	59		do portion of breakwater, 1881-82. \$2,000 expended by Government; \$2,000 by Harbour Commissioners.
24,577 20	24,577 20	60		Pier built by private company (cost unknown). Transferred to De- partment in 1873 and extended in that and following years.
2,250 01	2,250 01	61		Deepening and cribbing channel, 1875-6, \$2,000; repairing cribwork, 1878-9, \$250.01.
1,414 94	1,414 94	62		Pier built by N.S. Government in 1864-5 and repaired by Dominion in 1878-80.
3,000 00	3,000 00	63		Enlarging channel, 1880-82.
745 49	745 49	64		Repairing pier, 1879-80.
18,116 23	18,116 23	65		Dredging along side wharves in 1873.
3,543 97	3,543 97	66		Pier built by Provincial Government; extended by Department in 1873-5.
5,119 09	5,119 09	67		Opening channel, 1874-75.
1,348 20	1,348 20	68		Dredging channel, 1881-82.
7,000 00	7,000 00	69		Built by Provincial Government; repaired in 1873-75 by Department.
6,028 00	6,028 00	70		Breakwater built by Department in 1873-4.
21,397 07	21,397 07	71		Rebuilding breakwater, 1872-5, \$15,505.50; balance for repairs, 1879-82.
4,728 23	4,728 23	72		Crib-work for protection of beach, 1874-75.
782 00	782 00	73		Dredging, 1873.
808,531 02	808,531 02			

HARBOURS AND BREAK

NOVA SCOTIA

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				806,531 02	2,000 00
74	Port Williams (now Port Lorne.) .....				4,245 78	
75	Porter's Lake.....				200 00	
76	Pudding Pan.....				5,714 75	
77	Ragged Pond.....				4,491 43	
78	Salmon River Breakwater.....				2,656 03	
79	Saulnierville.....				2,000 00	
80	Scott's Bay.....				3,000 00	
81	Somerville.....				4,990 25	
82	Sydney.....				17,781 54	
83	Tancook Island.....				2,000 00	2,000 00
84	Three Fathom Harbour.....				2,999 94	
85	Trout Cove.....				5,499 76	
86	Tusket Island.....				1,000 64	
87	Victoria Harbour.....				1,000 00	
88	Vogler's Cove.....				5,075 53	
89	White Point Harbour.....				4,000 00	
90	Yarmouth Harbour.....				29,305 04	
	Total, Nova Scotia.....				902,491 69	4,000 00

N.B.—Expenditure on Harbours, Nova Scotia, previous to Confederation not ascertained at time

PRINCE ED

1	Bedeque (Summerside).....	16,903 71		16,903 71		12,084 44
2	Brudenell (Georgetown)....	8,795 98		8,795 98		10,904 00
3	Belle Creek.....					845 45
4	Cable Head.....	350 40		350 40		
5	Campbell's Cove.....	4,530 11		4,530 11	7,421 42	100 00
6	Cardigan.....	3,912 53		3,912 53		4,974 70
7	Cascumpec.....	3,105 71		3,105 71		992 34
8	Charlottetown.....	54,912 45		54,912 45	13,360 85	25,762 32
9	Colville Bay, Souris.....	11,746 78		11,746 78	100,436 81	77 50
10	Cove Head.....	502 88		502 88		
11	Croft.....	11,217 15		11,217 15	19,151 46	14,340 56
12	Grand River, Piers.....	6,190 75		6,190 75		6,286 67
13	Hillsboro' and Elliott River, Piers.....	17,890 61		17,890 61		
14	Harbours, Generally.....				2,916 21	
15	Little Sands.....					1,663 80
16	Malpeque, or Richmond Bay.....	15,605 47		15,605 47	15,278 53	7,508 68
	Carried forward.....	155,664 53		155,664 53	158,585 28	85,540 46

**WATERS**—Continued.  
—Continued.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
cts.	\$ cts.		
808,531 02	808,531 02		
4,245 76	4,245 76	74	Pier originally built in 1835, at joint expense of inhabitants and Provincial Government; repaired and extended by Department in 1872-74.
200 00	200 00	75	Enlarging outlet, 1881.
5,714 75	5,714 75	76	Breakwater built in 1878-9.
4,491 43	4,491 43	77	Dredging and cribbing channel, 1878-82.
2,656 03	2,656 03	78	Repairing breakwater, 1873-4.
2,000 00	2,000 00	79	do do 1875-6.
3,000 00	3,000 00	80	Cost of breakwater, 1878-9.
4,990 25	4,990 25	81	do do
17,781 54	17,781 54	82	Cost of dredging, 1878-81.
4,000 00	4,000 00	83	Cost of breakwater and landing pier at West Cove, built in 1872-3 \$4,000. One half voted by Provincial Government.
2,999 94	2,999 94	84	Protection to beach, 1879.
5,499 76	5,499 76	85	Breakwater built in 1868 by inhabitants and Provincial Government jointly; extended by Department in 1875-6 and repaired in 1880-2.
1,000 64	1,000 64	86	Removal of boulders from channel, 1876-79.
1,000 00	1,000 00	87	Built in 1864-7 by inhabitants, assisted by N. S. Government; repairs and addition made by Dominion, 1877-8.
5,075 53	5,075 53	88	Dredging channel, 1881-82.
4,000 00	4,000 00	89	Extension and repairs of breakwater and removal of boulders, 1877-9.
23,305 04	23,305 04	90	Breakwater begun in 1867 by Government of N.S.; completed by Dominion in 1872-4 for \$12,103.25. Repairs have cost \$3,514.54, and dredging, in 1876-79, \$12,687.25.
906,491 69	906,491 69		

of preparing this Statement. See Appendix No. 434.

**WARD ISLAND.**

12,084 44	28,988 15	1	
10,904 00	19,699 98	2	
845 45	845 45	3	Expenditure for Breakwater, 1879-81, by Local Government.
.....	350 40	4	
7,521 42	12,051 53	5	Expenditure on Breakwater, Dominion Government, \$7,421.42; Local Government, \$4,630.11.
4,974 70	8,887 23	6	
992 34	4,098 05	7	
39,123 17	94,035 62	8	Expenditure by Local Government, for Piers, \$80,674.77; Dominion Government, Dredging, \$13,360.85.
100,514 31	112,261 09	9	Expenditure by Local Government, Piers, \$2,562.36; Breakwater, \$9,261.92; Dominion Government, Breakwater, \$100,436.81.
.....	502 88	10	
33,492 02	44,709 17	11	Expenditure by Local Government, for Piers, \$25,557.71; Dominion Government, Dredging, \$19,151.46.
6,286 67	12,477 42	12	
.....	17,890 61	13	
2,916 21	2,916 21	14	Disbursements by Dominion Government for Staff, Stationery, &c., not apportionable to works.
1,663 80	1,663 80	15	Expenditure by Local Government, for Breakwater, 1878-80.
22,787 21	38,392 68	16	do do Piers, \$23,174.15; Dominion Government, Breakwater, \$15,218.53.
244,105 74	399,770 27		

HARBOURS AND BREAK  
PRINCE EDWARD

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	155,664 53	.....	155,664 53	158,565 28	85,540 46
17	Miminigash.....	.....	.....	.....	6,466 57	.....
18	Montague.....	8,795 99	.....	8,795 99	.....	3,162 54
19	Murray Harbour.....	3,714 41	.....	3,714 41	.....	3,848 10
20	New London.....	4,075 60	.....	4,075 60	8,841 42	2,239 00
21	Nine Mile Creek.....	.....	.....	.....	6,286 48	.....
22	Orwell.....	8,400 76	.....	8,400 76	.....	11,596 85
23	Pinette.....	6,413 28	.....	6,413 28	756 24	1,991 50
24	Port Hill.....	.....	.....	.....	.....	1,211 10
25	Pownall.....	2,806 96	.....	2,806 96	11,765 85	4,277 02
26	Rustico.....	2,616 70	.....	2,616 70	4,549 60	760 05
27	St. Peter's Bay.....	7,290 24	.....	7,290 24	6,387 84	3,217 58
28	Tignish.....	8,149 06	.....	8,149 06	19,764 53	135 26
29	West Point.....	6,601 76	.....	6,601 76	.....	4,226 40
30	Wood Islands.....	9,851 73	.....	9,851 73	5,872 93	4,244 23
	Totals, P. E. Island.....	(a) 224,381 02	.....	(a) 224,381 02	229,246 72	(a)126,450 08

(a) The figures in these columns indicate expenditure mostly for landing piers, made by the

NEW

1	Bathurst.....	.....	.....	.....	20,629 52	.....
2	Black River Pier.....	.....	.....	.....	3,907 40	.....
3	Buctouche.....	.....	.....	.....	4,934 24	.....
4	Campobello(Wilson's Beach)	.....	.....	.....	2,807 11	600 00
5	Clifton.....	.....	.....	.....	9,681 75	.....
6	Cocagne.....	.....	.....	.....	1,728 66	.....
7	Dipper Harbour.....	.....	.....	.....	22,244 52	.....
8	Grande Anse, Baie des Chaleurs.	.....	.....	.....	7,156 28	.....
9	Harbours Generally.....	.....	.....	.....	1,870 71	.....
10	Herring Cove.....	.....	.....	.....	13,113 45	.....
11	Hillsboro'.....	.....	.....	.....	3,000 00	.....
12	Horse Shoe Shoal.....	.....	.....	.....	42,294 23	.....
13	Miramichi Tug Service.....	.....	.....	.....	4,000 00	.....
14	Pointe du Chêne (Shediac).	.....	.....	.....	33,369 61	.....
15	Quaco, Bay of Fundy.....	.....	.....	.....	20,846 52	.....
16	Richibucto.....	.....	.....	.....	52,746 81	.....
17	Richibucto Tug Service.....	.....	.....	.....	13,000 00	.....
18	Rocher Bay.....	.....	.....	.....	3,130 00	.....
	Carried forward.....	.....	.....	.....	280,460 81	600 00



## WATERS—Continued.

## ISLAND—Concluded.

Confederation.		Grand Total Expenditure on Construction up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$ cts.			
	\$ cts.	\$ cts.		
	244,105 74	399,770 27		
	6,466 57	6,466 57	17	Expenditure by Dominion Government, Piers.
	3,162 54	11,958 53	18	
	3,848 10	7,562 51	19	
	11,080 42	15,156 02	20	Expenditure by Local Government, for Piers, \$6,314.60; Dominion Government, Breakwater, \$8,841.42.
	6,286 46	6,286 46	21	Expenditure by Dominion Government for Dredging.
	11,596 85	19,997 61	22	
	2,747 74	9,161 02	23	Expenditure by Local Government, for Piers, \$8,404.78; Dominion Government, Dredging, \$756.24.
	1,211 10	1,211 10	24	
	16,042 57	18,849 83	25	Expenditure by Local Government, for Piers, \$7,083.96; Dominion Government, Dredging, \$11,765.85.
	5,309 65	7,926 35	26	Expenditure by Local Government, for Piers, \$3,376.75; Dominion Government for Breakwater now building, \$4,549.60.
	9,605 42	16,896 66	27	Expenditure by Local Government, for Breakwater and Piers, \$10,507.82; Dominion Government, new Breakwater, \$6,387.84.
	19,889 79	28,038 85	28	Breakwaters, &c., begun by Provincial Government in 1868, and proceeded with by Dominion after Confederation. Not yet finished.
	4,226 40	10,828 16	29	
	10,117 15	19,968 88	30	Expenditure by Local Government, for Breakwater, \$14,095.95; Dominion Government, new Breakwater, \$5,324.93; Dredging, \$548.
	355,696 80	580,977 82		

Provincial Government, from 1831 to 1873, and from 1873 to 1882, respectively.

## BRUNSWICK.

20,629 52	20,629 52	1	Dredging, 1875-81.
3,907 40	3,907 40	2	Construction of Pier, 1879.
4,934 24	4,934 24	3	Dredging and removing old wreck, 1881-82.
3,407 11	3,407 11	4	Dominion expenditure, together with \$600 contributed by the Local Government, were applied to the construction of a Breakwater, from 1874 to 1878.
9,681 75	9,681 75	5	Extending and repairing Breakwater, 1878-82.
1,728 66	1,728 66	6	Building Quay, 1881-82, \$941.76; dredging, 1881-82, \$786.90.
22,244 52	22,244 52	7	Cost of Breakwater, 1874-76.
7,156 28	7,156 28	8	do and repairs, 1875-81.
1,870 71	1,870 71	9	Disbursements for Staff, Stationery, &c., not apportionable to works.
13,113 45	13,113 45	10	Cost of Breakwater, 1873-75.
3,000 00	3,000 00	11	do 1874-75.
42,294 23	42,294 23	12	Dredging Channel, 1876-82.
4,000 00	4,000 00	13	Maintenance of tug service, 1872-74.
33,369 61	33,369 61	14	Constructing and repairing Breakwater, 1875-81, \$32,572.67; dredging, 1875, \$796.94.
20,846 52	20,846 52	15	Old Piers built by Provincial Government, destroyed in 1865; cost of East Pier, built in 1872-73, \$18,877.84; cost, to date, of West Pier (now building), \$1,968.68.
52,746 81	52,746 81	16	Building and extending Breakwater, 1873-81, \$38,447.22; dredging, 1873-78, \$14,299.59.
13,000 00	13,000 00	17	Maintenance of tug service, 1871-75.
3,130 00	3,130 00	18	Cost of part of proposed Breakwater, 1879-80.
261,060 81	261,060 81		

HARBOURS AND

NEW BRUNSWICK

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Oct	
		From Government Funds.	From other than Government Funds.	Total to 30th June, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				260,460 81	800 00
19	Sackville.....				2,050 00	
20	Shippegan.....				22,084 97	
21	St. Andrews.....				72 52	
22	St. John Harbour.....				301,770 50	
23	Tynemouth.....				2,500 00	
					588,938 80	800 00

Expenditure for New Brunswick, previous to Confederation, not ascertained.

QUE

	Amherst Harbour, Magdalen Islands.	400 00		400 00	14,283 21	
1	Anse du Portage Slip and Wharf.				584 43	
2	Anse St. Jean Pier .....				4,752 63	
3	Bagotville (St. Alphonse) Pier.				9,186 63	
4	Baie St. Paul Pier.....				30,982 73	
5	Beauharnois Harbour .....				6,772 96	
	Carried forward.....	400 00		400 00	66,562 59	

## BREAKWATERS—Continued.

WICK—Concluded.

Confederation.		Grand Total to 30th June, 1882.	Number.	Remarks.
Total, 1st July, 1867, to 30th June, 1882.				
\$	cts.	\$	cts.	
261,060	81	261,060	81	
2,050	00	2,050	00	19 Cost of building dykes and removing boulders, 1875-81.
22,084	97	22,084	97	20 Building and repairing Breakwater and Dam, 1875-82.
72	52	72	52	21 Preliminary expenses for construction of Lighthouse, now under contract.
301,770	50	301,770	50	22 Construction and repairs, Negro Point Breakwater, 1874-82, \$256,150.99; dredging at Ferry Slips and Navy Island Bar, 1872-82, \$8,489.50; dredging at Intercolonial Railway Terminus, 1876-80, \$37,130.01.
2,500	00	2,500	00	23 Construction of Pier, 1874-75.
589,538	80	589,538	80	

BEC.

14,283	21	14,683	21	1 Amberst Island is the most southerly of the Magdalen Group, and lies in the Gulf of St. Lawrence, about 140 miles south-east of Percé, Que. The harbour is near the eastern extremity of the island. The only expenditure previous to Confederation was for the maintenance of buoys, 1859-61. On 1st Jan., 1865, it was placed under the control of the Trinity House of Quebec. In 1870-74 the entrance was improved by blasting the bar, so as to give a channel 150 feet wide and 9 to 10 feet deep at low water. Cost as shown.
584	43	584	43	2 At the west side of the mouth of the Saguenay, opposite Tadoussac. In 1881 a landing slip for the use of the boat carrying the mails to Tadoussac in winter was begun, as well as a jetty to protect the same from the ice. The work is not yet complete.
4,752	63	4,752	63	3 On the south-western shore of the Saguenay, 25 miles from its mouth. A landing pier begun in 1876 by the Provincial Government, continued by Dominion in 1879, and still in progress, has cost the Dominion \$4,752.63.
9,186	63	9,186	63	4 At the head of Hal Hal Bay, on the south side of the Saguenay. Before Confederation, a pier was built here at a cost of about \$3,200. An extension built by the Dominion in 1876 cost \$3,034.24. Further extension and repairs begun in 1881 and now in progress have cost up to the present date \$6,102.28.
30,982	73	30,982	73	5 Baie St. Paul is on the north shore of the St. Lawrence, about 60 miles below Quebec. In 1874-76 a pier for the accommodation of lightships, &c., was built on the west side of the bay, but not connected with the shore. This cost \$25,621.03. During the past year a landing-pier has been commenced at Point Rouge, and up to the end of the year has cost \$5,361.
6,772	96	6,772	96	6 On the south shore of Lake St. Louis, River St. Lawrence, 20 miles above Montreal. The expenditure shown was incurred in dredging before the wharves and deepening the channel leading to the main channel of the river, 1880-82.
66,562	59	66,962	59	

## HARBOURS AND

QUEBEC—

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	400 00	.....	400 00	66,562 59	.....
7	Belœil Piers and Booms.....	.....	.....	.....	394 76	.....
8	Berthier ( <i>en bas</i> ) Pier.....	37,724 14	.....	37,724 14	9,024 15	.....
9	Cap à l'Aigle Pier.....	.....	.....	.....	2,946 25	.....
10	Carleton Pier.....	.....	.....	.....	4,665 31	.....
11	Cedars Pier .....	.....	.....	.....	3,761 01	.....
12	Chenal du Moine Pier .....	.....	.....	.....	1,967 97	.....
13	Chicoutimi Pier.....	.....	.....	.....	17,017 61	.....
14	Côteau Landing Pier .....	.....	.....	.....	11,461 88	.....
15	Emboulements Pier.....	65,531 52	.....	65,531 52	15,450 31	.....
16	Etang du Nord .....	.....	.....	.....	12,912 63	.....
17	Gaspé Bay and Harbour....	787 11	.....	787 11	.....	.....
	Carried forward.....	104,442 77	.....	104,442 77	146,154 47	.....

BREAKWATERS—Continued.

Continued.

Confederation.	Grand Total Expenditure on Construction, up to 20th June, 1882.		Number.	Remarks.
	\$	cts.		
Total for Fifteen Years ended 30th June, 1882.	\$	cts.		
	66,562	59		
	394	76		
	9,024	15	7	Belœil is situated on the River Richelieu, about 33 miles from its mouth. In 1874 it was found necessary to construct a number of guide piers and a boom to enable steamers, &c., to follow the proper channel in passing under the bridge by which the Grand Trunk Railway crosses the river at this point. These were constructed under contract by Messrs. Bonneville and O'Brien, between August, 1872, and May, 1875, at a cost of \$11,279.39 (included in expenditure on River Richelieu). The expenditure shown here was for sundry repairs, &c., 1879-82.
	2,946	25	8	On south shore of St. Lawrence, 24 miles below Quebec. Built in 1853, and up to Confederation cost, including repairs, \$37,724.14. Extensive repairs were done in 1877-78, which, with some slight expenditures since, make the total expenditure since Confederation \$9,024.15.
	4,665	31	9	On the north shore of the St. Lawrence, 3 miles east of Murray Bay, and 6½ below Quebec. The expenditure shown is for a landing pier, built during the last fiscal year.
	3,761	01	10	On the north shore of Baie des Chaleurs, 36 miles below Campbelltown. A landing pier, commenced in 1881 and not yet completed, has cost, up to the close of the last fiscal year, \$4,668.21, in addition to which the Municipality has granted some assistance in the form of labor and supplies.
	1,957	97	11	On the north shore of the St. Lawrence, 30 miles above Montreal. The landing pier, built by the local authorities, was reconstructed by the Department in 1881-82.
	17,017	61	12	One of the channels of the St. Lawrence, about 3 miles below Sorel. The expenditure shown is for two piers, built in 1881-82, to prevent the ice from being carried by the spring floods over the low lands along the shore.
	11,461	88	13	Chicoutimi, the head of navigation on the Saguenay, is situated on the south side of that river, 71½ miles from its mouth. A landing pier was built here in 1874-76, and extended and repaired in 1881-82. Total cost as shown.
	15,450	31	14	On the north shore of the St. Lawrence, at the head of the Côteau Rapids, 36 miles above Montreal. A mooring pier for steamers was built here in 1871, and in 1872-74 this was enlarged and connected with the shore, so as to form a landing pier.
	12,912	63	15	On the north shore of the St. Lawrence, 66 miles below Quebec, and 3 miles above Eboulements Village. The pier was built in 1853, costing \$65,531.52. In 1875 a wing was built, extending eastward from the main structure, at a cost of \$10,007.27. Repairs done at various times since Confederation, have amounted to \$5,443.04.
			16	On the western side of Grindstone Island, one of the Magdalen group, in the Gulf of St. Lawrence. The expenditure shown is for a breakwater begun in 1881, with a view to the formation of a Harbour of refuge. The work is not yet finished.
			17	The buoys in the bay and harbour were maintained by the Department of Public Works from 1858 to 1865, when they were placed under the control of the Quebec Trinity-House. Harbour, 429 miles below Quebec.
	146,154	47	787	11
	250,597	24		

**HARBOURS AND BREAK  
QUEBEC—**

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	104,442 77	.....	104,442 77	146,154 47	.....
18	Grosse Isle Harbour.....	17,280 28	.....	17,280 28	10,060 33	.....
19	Harbours generally.....	.....	.....	.....	2,922 00	.....
20	House Harbour.....	.....	.....	.....	2,291 69	.....
21	Isle aux Coudres Pier.....	.....	.....	.....	3,718 00	.....
22	Isle aux Grues Pier.....	.....	.....	.....	2,636 18	.....
23	Laprairie Harbour.....	.....	.....	.....	417 43	.....
24	Les Écureuils Pier.....	.....	.....	.....	1,571 13	.....
25	L'Islet Pier.....	113,343 27	.....	113,343 27	25,925 69	.....
26	Malbaie Pier.....	53,487 20	.....	53,487 20	17,937 04	.....
27	Matane Pier.....	.....	.....	.....	11,271 43	.....
28	Montreal Harbour.....	521,100 00	43,538 67	564,638 67	747 25	1,560,918 65
	Carried forward.....	869,653 52	43,538 67	913,192 19	225,652 55	1,560,918 65

WATERWAYS - Continued.

Continued.

Confederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
146,154 47	250,597 24		
10,069 33	27,340 61	18	Grosse Isle lies in the St. Lawrence, 33 miles below Quebec, and is the site of an important quarantine station. The harbour works consist of two piers, one for the healthy, built at the south-west extremity of the island in 1848, and one for the sick, at the eastern extremity, built in 1866. The total cost to Confederation, \$17,280.28. The eastern pier was extended in 1872 and again in 1881-82. The western was repaired in 1873-37. Total cost since Confederation, \$25,223.72 (of which \$15,163.39 is included under the head of Grosse Isle Quarantine Station.)
2,922 00	2,922 00	19	Expenditure for staff, stationery, &c., and not apportionable to works.
2,291 60	2,291 60	20	Between Grindstone and Allright Islands, in the Magdalen group; Gulf of St. Lawrence. In 1873, the mouth of this harbour was deepened by dredging some 6,800 tons of gravel from the bar, at a cost of \$2,291.60.
3,718 00	3,718 00	21	Isle aux Coudres lies in the St. Lawrence near its north shore, about 65 miles below Quebec. In 1880-82, a landing pier was built here at a cost of \$3,718.00.
2,636 18	2,636 18	22	This island is situated in the St. Lawrence, opposite St. Ignace, about 30 miles below Quebec. In 1862, a lighthouse and pier were built here, the expenditure on which has been included among lighthouses. The pier was sometimes used as a landing pier at high water. In 1881 the Department constructed an extension 171 feet in length, so that a landing may now be effected at any state of the tide. The cost of the latter work has been \$2,636.18.
417 43	417 43	23	On the south side of the St. Lawrence, 7 miles above Montreal. The expenditure is for dredging done in 1882 alongside the wharf. The work is not yet finished.
1,571 13	1,571 13	24	On the north shore of the St. Lawrence, 25 miles above Quebec. In 1881-82 a small landing pier was built here, serviceable at high tide only.
25,925 69	139,268 96	25	On the south shore of the St. Lawrence, 46½ miles below Quebec. The pier was built in 1855, at a cost of \$113,343.27. In 1870 a gate house was built and various repairs executed. The whole upper part of the pier was renewed in 1876-79. Total cost since Confederation, \$25,925.69.
17,937 04	71,424 24	26	On the north shore of the St. Lawrence, 83½ miles below Quebec. The pier was built in 1854, costing \$53,487 20. In 1870, a gate house was built and various repairs executed. In 1875 an extension was built so as to reach a depth of 19 feet at low water. Repairs have been executed at various times since that. Total cost since Confederation, \$17,937.04.
11,271 43	11,271 43	27	On the south shore of the St. Lawrence, 240 miles below Quebec. Pier built by local authorities in 1879, with a grant of \$10,000 from Government. In 1881-82 the Department surrounded it with a row of pile work at a cost of \$1,271.43.
1,561,665 90	2,126,304 57	28	This harbour is under the management of special Commissioners. The amount shown as Government expenditure before Confederation, represents sums granted at various times to the Harbour Commissioners to aid them in the work of improving the harbour. The amount, \$747.25, expended by Government since Confederation, was disbursed during 1880-2, in connection with the consideration of the plan recently proposed for the improvement of the harbour, and known as the "Shearer scheme." The sums noted as expenditure from other than Government funds were expended by the Commissioners from their own funds.
1,668,541 20	2,636,763 39		

## HARBOURS AND BREAK

QUEBEC—

Number.	Name of Harbour.	Expenditure prior to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	809,653 52	43,538 67	853,192 19	225,653 55	1,560,818 65
29	Mooring Piers, St. Lawrence Rapids.	8,859 00	.....	8,859 00	860 95	.....
30	New Carlisle Pier. ....	.....	.....	.....	4,220 20	.....
31	Nicolet River. (Harbour of Refuge.)	.....	.....	.....	594 52	.....
32	Percé Breakwater. ....	.....	.....	.....	499 43	.....
33	Piers below Quebec, generally.	.....	.....	.....	12,858 25	.....
34	Pointe St. Laurent Pier.....	.....	.....	.....	1,266 13	.....
35	Port aux Quilles Pier. ....	103 45	.....	103 45	.....	.....
36	Quebec Harbour. (Survey of River St. Charles.)	.....	.....	.....	6,504 52	.....
37	Rimouski Pier. ....	106,944 80	.....	106,944 80	2,616 00	.....
38	Rivière Blanche Pier.....	.....	.....	.....	5,101 73	.....
39	Rivière du Loup (en bas) Pier.	170,129 35	.....	170,129 35	16,104 19	.....
	Carried forward.....	1,095,690 12	43,538 67	1,139,228 79	276,278 47	1,560,918 65
			1218			



## WATERS—Continued.

Continued.

Confederation.		Grand Total Expenditure on Construction up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882				
\$ cts.	\$ cts.			
1,786,571 20	2,639,763 39			
860 95	9,719 95	29	In 1856 three piers were built at the heads of rapids in the St. Lawrence, for the convenience of steamers overtaken at these dangerous points by nightfall or fog. One was situated at the head of the Lachine Rapids, one at the head of the Cascadés, and a third at the head of La Chute aux Bouleaux, about three miles above Cedars village. The amount expended on these before Confederation was \$3,859.00. In 1870, the two first-named were repaired at a cost of \$860.95; the third has since been converted into a landing pier. (See St. Dominique Pier.)	
4,220 20	4,220 20	30	On the north shore of the Baie des Chaleurs, 65 miles from Campbellton, N.B. The expenditure shown is for a pier begun in 1881 and not yet finished. Site, a gift from Lieut.-Governor Robitaille.	
594 52	594 52	31	This river empties into the St. Lawrence from the south, at the foot of Lake St. Peter, 81 miles below Montreal. In the fall of 1881, with a view to the formation of a harbour of refuge, a contract was let for dredging the basin and entrance, and protecting the latter with rows of pile work.	
499 43	499 43	32	Percé harbour is situated at the south-eastern angle of the County of Bonaventure, 36 miles south of Gaspé. In 1882 the amount shown was expended in making a survey with a view to the construction of a breakwater for the protection of the numerous fishing craft which seek refuge from storms in this harbour.	
12,858 25	12,858 25	33	Disbursements during fifteen years for staff, stationery, advertising, &c., &c., on the various piers on the St. Lawrence below Quebec, not apportionable to any one work.	
1,266 13	1,266 13	34	On the south shore of the Island of Orleans, 15 miles below Quebec. Having been built as a lighthouse pier, the cost of construction will be found under the head of lighthouses. It is also, however, used as a landing pier and as such, was repaired by the Department of Public Works in 1879-81, at the cost shown.	
.....	103 45	35	On the north shore of the St. Lawrence, 114 miles below Quebec.	
6,504 52	6,504 52	36	Expenditure in 1875 for survey and borings at mouth of River St. Charles, to enable the Government to decide on best site for proposed graving dock, afterward located at Lévis.	
2,616 00	109,560 80	37	On south shore of the St. Lawrence, 180 miles below Quebec, and one mile below the village of Rimouski. The pier was built in 1855 at a cost of \$106,944.80. During the years 1870 to 1874, the sum of \$2,616.00 was expended in making necessary repairs.	
5,101 73	5,101 73	38	On the south of the St. Lawrence, about 26 miles east of River Métis. In 1875-6 a mooring pier was built here, about 550 feet from shore. This was extended in 1879-80 and part of a causeway built to connect it with the shore. The latter will be finished, during the coming year.	
16,104 19	186,233 54	39	On the south shore of the St. Lawrence, 108 miles (by water) below Quebec. This pier was built in 1855 at a cost of \$170,129.35. During the first ten years of Confederation \$1,861.86 were expended on minor repairs. In 1879 the structure having sunk so that the waves washed over it, was raised about three feet, a waiting-room was built and dredging done at the west side of the pier to a depth of 16 feet. The last mentioned works, 1879-82 cost \$14,242.33.	
1,537,197 12	2,976,425 91			

HARBOURS AND BREAK  
QUEBEC

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	1,095,690 12	43,538 67	1,139,228 79	276,278 47	1,560,918 65
40	Rivière Ouelle Pier .....	225,229 87	.....	225,229 87	12,848 53	.....
41	Ste. Anne's Wharf, River Saguenay.....	.....	.....	.....	128 20	.....
42	St. Anicet Pier.....	1,920 00	.....	1,920 00	.....	.....
43	St. Dominique Pier .....	.....	.....	.....	1,952 74	.....
44	Ste. Famille Pier.....	.....	.....	.....	9,323 86	.....
45	St. Jean (Isle d'Orléans) Pier.....	.....	.....	.....	470 93	.....
46	St. Jean, Port Joli, Pier.....	.....	.....	.....	3,617 82	.....
47	St. Thomas (Montmagny) Pier.....	.....	.....	.....	5,256 96	.....
48	St. Timothée Pier.....	.....	.....	.....	11 10	.....
49	St. Zotique Pier.....	.....	.....	.....	1,070 78	.....
50	Tadoussac Fish Dams.....	.....	.....	.....	4,046 46	.....
	Carried forward.....	1,322,839 99	43,538 67	1,366,378 66	316,005 82	1,560,918 65

## WATERS—Continued.

—Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
1,837,197 12	2,976,425 91			
12,848 53	238,078 40	40	At Pointe aux Orignaux, on the south shore of the St. Lawrence, 75 miles below Quebec, and 4½ miles from the Village of Rivière Ouelle. This pier was built in 1856, costing \$225,229.87. Since Confederation, in addition to minor repairs from time to time, the pier was planked throughout its whole length in 1879; and in 1881, owing to its having settled, the work of increasing its height was begun, and is still in progress. Total expenditure since Confederation, \$12,848.53.	
128 20	128 20	41	The Village of Ste. Anne is on the north side of the Saguenay, opposite Chicoutimi. The small pier built by the locality having been found inadequate to accommodate the traffic, the Government caused observations of the current, movement of ice, &c., to be made in 1880-81, with a view to the location of a larger pier; cost of this examination, \$128.20.	
.....	1,920 00	42	This pier was completed in 1862; it lies on the south shore of Lake St. Francis, 56 miles above Montreal, and measures 300 feet in length by 18 to 34 feet in width.	
1,952 74	1,952 74	43	On the north shore of the St. Lawrence, at the head of la Chute aux Bouleaux, about 32 miles above Montreal. A mooring pier was built here before Confederation (see Mooring Piers, St. Lawrence Rapids). In 1880 the superstructure of this was renewed and a causeway built connecting it with the shore, so as to form a landing pier. The cost of these alterations was \$1,952.74.	
9,323 86	9,323 86	44	On the north side of the Island of Orleans, 17 miles below Quebec. In 1876 a small landing pier was built by the inhabitants. This has been considerably extended and enlarged by the Department during the years 1879-82. Cost to Government as shown.	
470 93	470 93	45	On the south side of the Island of Orleans, 20 miles below Quebec. A pier built some years ago by the local authorities was repaired by this Department in 1880-81 at the cost shown.	
3,617 82	3,617 82	46	On the south shore of the St. Lawrence, 5½ miles below Quebec. The pier was originally built by the local authorities at a cost of \$4,000, including \$2,000 granted by the Government in 1878. This, being insecurely built, was reconstructed by the Department in 1879-81 at a cost of \$1,617.82. Total Government outlay, \$3,617.82.	
5,256 96	5,256 96	47	On the south shore of the St. Lawrence, 35 miles below Quebec. A landing pier was constructed by the Department in 1879-81 at a cost of \$5,256.96.	
11 10	11 10	48	On the south shore of the St. Lawrence, at the head of the Cedars Rapids, 29 miles above Montreal. The expenditure shown was for preliminary work in connection with a landing pier about to be constructed here.	
1,070 75	1,070 75	49	On the north shore of the St. Lawrence, at the foot of Lake St. Francis, 3 miles above Odeau Landing. A pier which may be used for either mooring or landing purposes was begun at this point in 1881-82; cost to end of fiscal year, 1,070.75.	
4,046 46	4,046 46	50	On the eastern side of the Saguenay, near its mouth, 130 miles below Quebec. In 1873 an old saw-mill and the adjoining grounds, the property of the Hon. D. Price, were presented to the Government by that gentleman for the purpose of establishing a fish hatchery. In 1874 and following years the necessary alterations were performed by the Department of Marine and Fisheries, under whose control the establishment was placed. In 1880 the erection of certain further improvements was committed to this Department, and \$4,046.46 was expended (1880-82) in raising the three dams already in existence and building another near the public road.	
1,875,924 47	3,242,308 13			

**HARBOURS AND BREAK  
QUEBEC—**

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	1,322,839 99	43,538 67	1,366,378 66	1,315,005 82	1,560,918 65
51	Trois Pistoles Pier.....				3,500 00	
	Totals, Quebec.....	1,322,839 99	43,538 67	1,366,378 66	318,506 82	1,560,918 65

**ONT**

1	Bayfield, Lake Huron.....				51,517 55	10,000 00
2	Belleville, Bay of Quinté....				22,688 24	
3	Bruce Mines.....				1,581 33	
4	Chantry Island, Lake Huron	31,910 95		31,910 95	235,469 81	
5	Cobourg.....	62,010 70		62,010 70	66,654 40	25,507 49
6	Collingwood, Georgian Bay				56,368 06	28,268 26
7	Colpoys' Range, Big Bay, called also Kepple Pier (Georgian Bay).				900 00	
8	Consecon, Lake Ontario....				3,236 13	
9	Goderich, Lake Huron.....				461,531 16	10,000 00
10	Hawkesbury, Ottawa River				1,164 90	
11	Harbours generally, Ontario				10,561 33	
12	Inverhuron, Lake Huron....	15,125 00		15,125 00	6,093 60	
13	Kincardine do.....	19,044 00		19,044 00	78,049 68	
	Carried forward.....	128,090 65		128,090 65	995,816 19	73,775 75

## WATERS—Continued.

Concluded.

Confederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
1,875,924 47	3,242,303 13		
3,500 00	3,500 00	51	On the south shore of the St. Lawrence, 148 miles below Quebec. During 1881-82 a number of boulders were removed from the harbour, and a landing pier was commenced. This work is still in progress.
1,879,424 47	3,245,803 13		

## ARIO.

61,517 55	61,517 55	1	Works originally constructed by Municipality of Township of Stanley—expenditure unascertained. Pier extended, and harbour dredged, 1875-79, by Department, assisted by a grant of \$10,000 from township.
22,688 24	22,688 24	2	Dredging, 1874-82.
1,581 33	1,581 33	3	do 1881-82.
235,469 81	267,380 76	4	Breakwater built by Government in 1856. This repaired and extended, and another built, 1871-77. Also a landing-pier and beacon.
92,161 89	154,172 59	5	Works built by Harbour Company, commencing 1829. Subsidized by Provincial Government at various times to amount of \$62,010.70. Assumed by Government in 1842 and transferred to Town Council of Cobourg in 1850 for \$16,000. Cost of extending piers and dredging since Confederation by Department, assisted by a grant of \$25,507.49 from corporation, has been \$92,161.89.
84,636 32	84,636 32	6	The first Government expenditure here was for a new Breakwater with Lighthouse at end, built in 1871-74, to replace the old one destroyed by the ice in the spring of 1872. Cost of Breakwater, \$55,868.43, Lighthouse, \$1,600, total, \$57,468.43, to which the Northern Railway Company contributed \$28,268.26. During 1879-82 the Department expended \$27,167.89 in dredging.
900 00	900 00	7	Toward the construction of a pier built here in 1877 by the Municipality of North Keppel, the Government contributed \$400, and for extension of same in 1881, \$500. Municipal expenditure not ascertained.
3,236 13	3,236 13	8	Dredging entrance 1881.
471,531 16	471,531 16	9	At mouth of Maitland River, 68 miles above Sarnia. In 1872 the foundation of a Harbour of Refuge at this point was commenced by the construction of new piers &c., dredging to a depth of 14 feet at low water, and changing the channel of the river so as to prevent its waters from entering the harbour at all. The total cost of these works was \$467,396.10, including \$10,000 contributed by the Township of Goderich in 1875. In 1881 and 1882 \$4,135.08 was expended in dredging, beach protection work and repairing south pier.
1,164 90	1,164 90	10	Dredging from wharves to main channel of river, 1880 and 1881.
10,561 33	10,561 33	11	Expenditure for staff, stationery, &c., not apportionable to works.
6,093 60	21,218 60	12	On the east coast 114 miles north of Sarnia. Pier 150 feet long, built by Government in 1856-57. Repaired and extended to a length of 450 feet in 1873 and 1874.
78,049 68	97,093 68	13	At the mouth of the River Penetangore, on the east coast, 106 miles above Sarnia. Two piers, 100 feet apart, and having a united length of 830 feet, were commenced by the Government in 1856. In 1868 \$4,500 were granted to the Corporation of Kincardine for certain repairs and improvements executed by them during the two previous years. Since 1871 a considerable sum of money has been spent each year in dredging harbour, extending and protecting piers. (For dimensions, &c., see Appendix No. 3, page 289.)
1,008,591 94	1,197,682 59		

HARBOURS AND BREAK  
ONTARIO

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	128,090 65	.....	128,090 65	995,816 19	73,775 75
14	Kingston, Lake Ontario.....				14,814 40	.....
15	Little Current, Lake Huron.....				12,415 25	.....
16	Orignal, Ottawa River.....	2,000 00	.....	2,000 00	.....	.....
17	Meaford, Georgian Bay.....	6,000 00	.....	6,000 00	15,714 13	10,000 00
18	Morpeth, Lake Erie.....				514 40	.....
19	Napanee Harbour.....	1,078 00	.....	1,078 00	.....	.....
20	Newcastle, Lake Ontario.....				5,000 00	.....
21	Oakville.....	14,361 08	.....	14,361 08	588 20	.....
22	Oshawa, Lake Ontario.....				5,000 00	.....
23	Owen Sound, Georgian Bay.....	13,000 00	.....	13,000 00	55,781 17	.....
	Carried forward.....	164,529 73	.....	164,529 73	1,105,643 74	83,775 75

WATERS—Continued.

Continued.

Federation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
1,069,591 94	1,197,882 59		
14,814 40	14,814 40	14	Removing "Carruther's Shoal" to a depth of 13 feet. Work was done by divers, 1873-76.
12,415 25	12,415 25	15	The passage between Cloche and Great Manitoulin Islands, about 140 miles from Collingwood. A rocky ledge at this point, rendering the channel too narrow and intricate for deeply laden vessels, is the only serious obstruction in the sheltered passage of upwards of 100 miles in length, between the Manitoulin group of islands and the mainland. Its removal would enable vessels plying between Georgian Bay ports and Sault Ste. Marie to take advantage of this shelter, and avoid one of the most dangerous parts of Lake Huron. Work was begun in 1880, and up to 30th June, 1882, 3,752 cubic yards of rock had been removed by blasting.
.....	2,000 00	16	On south shore of Ottawa River, 6½ miles above Grenville; pier was built prior to Union of 1841 by Municipality. In 1857 and 1858 an addition of 600 feet was made to its length, making in all 1,354 feet. Towards this work the Municipality received a grant of \$2,600 from the Government.
25,714 13	31,714 13	17	About 20 miles west of Collingwood. Pier built in 1856-57 by Municipality, aided by a Government grant of \$6,000. In 1873-74 this Department extended the pier and built a breakwater to the eastward thereof, at a cost of \$22,899.19, towards which \$10,000 was contributed by the township of St. Vincent. Dredging done from time to time between 1878 and 1882, cost in all \$2,814.94.
514 40	514 40	18	10 miles northeast of Rondeau. The expenditure shown was incurred in 1879-1880 in making an examination and survey with a view to the formation of a Harbour of Refuge at this point. Up to the present date, however, nothing further has been done.
.....	1,078 00	19	On the north side of the Bay of Quinté, about five miles up the River Napanee. The works executed here by the Department consist of a channel half a mile in length dredged to a depth of 9 feet. This was done in 1861. Any expenditure since Confederation has been charged to Napanee River.
5,000 00	5,000 00	20	47 miles east of Toronto. In 1877 the Local Harbour Trust, after having spent a large sum of money on crib-work at the western pier, dredged the harbour to a depth of 10 feet. For the latter service the Parliamentary grant of \$5,000 was paid over to the Trust.
588 20	14,949 28	21	19 miles west of Toronto. Works constructed in 1829 and following years, by Mr. W. Chisholm with assistance from Government to the amount of 14,361.08, of which \$10,000 was a loan to Mr. Chisholm and bore interest at 6 p.c.; payments on which not being made; as agreed, the Government took possession of the works. On the 14th November, 1874, the Harbour was sold by auction to the Corporation of the Town of Oakville for the sum of \$6,600. The expenditure of \$588.20 is for advertising, auctioneer's commission, &c.
5,000 00	5,000 00	22	33 miles east of Toronto. The expenditure shown is for extending and protecting the pier and dredging the channel, 1875.
55,781 17	68,781 17	23	At the mouth of the Sydenham river, Georgian Bay. This harbour was formed in 1856 and following years by deepening the channel and forming a basin opposite to the town. The work was done by the Corporation, aided by a grant of \$13,000 from the Government. Since Confederation, dredging has been done at various times by this Department, and in 1881 two rows of pile protection work were put in, extending down the river bank 500 feet, and about 600 feet beyond into the bay.
1,189,419 40	1,353,949 22		

HARBOURS AND BREAK  
ONTARIO—

Number.	Name of Harbour.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	164,529 73	.....	164,529 73	1,195,643 74	83,775 75
24	Penetang, formerly Penetanguishene, Georgian Bay.....	.....	.....	.....	2,624 07	.....
25	Pickering, formerly Frenchman's Bay, Lake Ontario.....	.....	.....	.....	4,999 00	.....
26	Picton, Bay of Quinté.....	8,424 00	.....	8,424 00	13,487 85	.....
27	Port Albert, Lake Huron.....	.....	.....	.....	9,521 31	.....
28	Port Bruce, Lake Erie .....	6,267 47	.....	6,267 47	.....	.....
29	Port Burwell do .....	12,546 00	.....	12,546 00	10,055 37	.....
30	Port Colborne do .....	.....	.....	.....	.....	.....
31	Port Dalhouse, Lake Ontario.....	.....	.....	.....	.....	.....
32	Port Darlington, Lake Ontario.....	.....	.....	.....	5,000 00	.....
33	Port Dover, Lake Erie.....	44,391 61	8,500 00	52,891 61	2,661 46	.....
34	Port Elgin, Lake Huron.....	4,000 00	.....	4,000 00	3,180 97	.....
35	Port Hope, Lake Ontario.....	58,680 26	.....	58,680 26	30,401 69	.....
36	Port Maitland, Lake Erie .....	.....	.....	.....	.....	.....
	Carried forward.....	298,839 07	8,500 00	307,339 07	1,187,575 46	83,775 75



## WATERS—Continued.

Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
1,189,419 49	1,353,949 22			
2,624 07	2,624 07	24		On an arm of Matchedash Bay, on the east coast of Georgian Bay. In 1880 the harbour was dredged near the wharves to a depth of 16 feet.
4,999 00	4,999 00	25		21 miles east of Toronto. In 1878-79, 60 feet were added to the length of the eastern pier and dredging was done to a depth of 12 feet.
13,487 85	21,911 85	26		On the south side of the bay, 36 miles above Kingston. From 1857 to 1862, dredging was done by this Department, giving a uniform depth of 9 feet in the channel leading to the wharves. Since Confederation a considerable amount of dredging has been done from 1874 to 1882.
9,521 31	9,521 31	27		9 miles north of Goderich. In 1874-5, a breakwater was built here and the northern pier extended. In 1881-82 a considerable sum was spent on dredging and pile protection work.
.....	6,267 47	28		This harbour, 14 miles west of Port Burwell, is the property of the Port Bruce Harbour Co., which, in 1857-58, received Government aid to the amount shown.
10,055 37	22,601 37	29		90 miles west of Port Colborne and 22 west of Long Point. These works also are the property of a local harbour company, which, after expending upwards of \$100,000, received assistance from Government to the extent of \$12,000. In 1842, \$546 were spent in making a survey. Since Confederation this Department has repaired the western pier, removed a shoal at the mouth of the harbour and dredged the harbour itself to a uniform depth of 10 feet.
.....	.....	30		The southern or Lake Erie entrance of the Welland Canal. Expenditure included with that of canal.
.....	.....	31		The northern or Lake Ontario entrance of the Welland Canal. Expenditure included with that of canal.
5,000 00	5,000 00	32		About 40 miles east of Toronto. This harbour was dredged to a depth of 10 feet in 1875-76.
2,661 46	55,553 07	33		40 miles above Port Colborne. Constructed in 1837 by a joint stock company at a cost of \$8,500. In 1843 the Company transferred the works to the Government, who in 1850 sold them to the Port Dover Harbour Company for \$30,400, but again resumed possession in 1863. Total Government expenditure for extending and repairing up to Confederation, \$44,391.61. From 1868 to 1871, \$2,658.50 was spent on repairs. On 1st May, 1877, the Harbour was sold by auction to the Port Dover and Lake Huron Railway Co. for \$6,200.
3,180 97	7,180 97	34		128 miles north of Sarnia. Constructed in 1857-58 by a local company with \$4,000 assistance from Government. A breakwater was begun in 1881 and the work is now in progress. A contribution of \$5,000 from the corporation of Port Elgin is in the hands of the Hon. Receiver-General and will be applied to supplement the Government grant for the completion of the work.
30,401 69	89,081 95	35		Constructed by company in 1832, vested in Commissioners 1853. Government aid granted at various times before Confederation to amount shown. In 1875-77 piers were extended and considerable amount of dredging was done. Additional dredging and a further extension of the eastern pier are now in progress.
.....	.....	36		At the mouth of the Grand River. This is the entrance to the Broad Creek Branch of the Welland Canal. Expenditure included with that of canal.
1,271,351 21	1,578,690 28			

HARBOURS AND  
ONTARIO—

Number.	Name of Harbour.	Expenditure prior to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total Up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	298,839 07	8,500 00	307,339 07	1,187,575 46	83,775 75
37	Port Rowan Lake Erie.....				150 00	
38	Port Royal do .....				281 83	
39	Port Stanley do .....	260,531 88		260,531 88	8,758 00	
40	Portsmouth, Lake Ontario.....				3,390 40	
41	Presqu' Isle do .....	626 00		626 00	26,981 34	
42	Rondeau, Lake Erie.....	74,737 70		74,737 70	197,590 76	300 00
43	Saugeen, or Southampton, Lake Huron.	10,236 39		10,236 39	8,559 60	
44	Shannonville, Bay of Quinté .....				2,992 94	
45	Thornbury, Georgian Bay .....				3,469 98	
46	Thunder Bay, Lake Superior .....				5,999 25	
47	Tobermory, Lake Huron.....				349 20	
48	Toronto, Lake Ontario.....	22,965 12		22,965 12	70,589 95	
	Carried forward.....	667,936 16	8,500 00	676,436 16	1,516,688 71	84,075 75

## BREAKWATERS.

Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
1,271,351 21	1,578,690 28			
150 00	150 00	37	Expenditure for survey, 1880.	
281 83	281 83	38	do do	
8,758 00	269,239 88	39	110 miles above Port Colborne. Constructed by Government Commissioners, commencing 1828. Transferred in 1859 to London and Port Stanley Railway Co. This Department built extensions to both the piers in 1876-77, and in 1882 the western one, having sunk, was raised to its former height.	
3,390 40	3,390 40	40	2 miles west of Kingston. In 1882 this harbor was dredged to a depth of 13 feet.	
26,981 34	27,607 34	41	About 78 miles west of Kingston. In 1857 a number of buoys were placed to mark the entrance of the harbor, (cost \$626), and in 1869-75, dredging was done to increase the depth of the channel to 12 feet, at a cost of \$26,981.34.	
197,890 76	272,628 46	42	At Pointe aux Pins, 140 miles west of Port Colborne. Breakwater commenced in 1844. On 1st July, 1851, the Harbour was sold to the Rondeau Harbour Co. for \$8,004; but on the 4th August, 1856, the Government again resumed possession. In 1872 the formation of a harbour of refuge was commenced by the construction of a new breakwater and piers, widening the entrance and deepening the basin to 18 feet at low water. This was completed in 1875. In 1880-82, 2,000 feet of pile-work were put in to protect the beach at the west side of the entrance, costing \$11,399.96; and a channel was opened into Mill Creek at a cost of \$3,145, to which the County Council of Kent contributed \$300.	
8,559 60	18,795 99	43	At the mouth of the River Saugeen, 133 miles north of Sarnia. Breakwater constructed by Government in 1858. The local authorities repaired this in 1868, receiving from the Government a grant of \$3,500. Repairs were also executed in 1878 and 1882 by this Department, and a small breakwater 155 feet long, opposite the lighthouse, is now in course of construction.	
2,992 94	2,992 94	44	At mouth of Salmon River, north side of bay, forty miles above Kingston. The expenditure was for dredging a bar opposite to the town in 1875 and again in 1882.	
3,469 98	3,469 98	45	At mouth of Beaver River, thirteen miles west of Collingwood. The wharf originally built by the residents of the locality having fallen into dilapidated condition, the Department, in 1882, commenced to reconstruct the same and dredge the basin. A grant of \$7,000 from the township of Collingwood is now in the hands of the Hon. Receiver-General, and will be used to supplement the Parliamentary appropriation.	
5,999 25	5,999 25	46	Expenditure in 1877 for survey, with a view to construction of harbour works at Prince Arthur's Landing. Further expenditure charged to Pacific Railway.	
349 20	349 20	47	A large and safe harbour of refuge on the north coast of the county of Bruce, between Lake Huron and Georgian Bay. In 1882 the Department placed some large iron mooring-rings and fenders in the rocky sides of the harbour.	
70,589 95	98,555 07	48	The expenditure previous to Confederation was for the construction of repairs to the "Queen's Wharf" up to 1850, when it was transferred to the Toronto Harbour Commissioners. Expenditure since Confederation has been for surveys and examination in 1875 and 1882, and for dredging western entrance, 1877 to 1881.	
1,600,764 46	2,277,200 62			

HARBOURS AND BREAK  
ONTARIO—

Number.	Name of Harbour.	Expenditure prior to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	667,936 16	8,500 00	676,436 16	1,516,688 71	84,075 75
49	Trenton, Bay of Quinté.....				6,418 54	
50	Whitby, Lake Ontario. ....	178,703 37		178,703 37		
	Totals, Ontario.....	846,639 53	8,500 00	855,139 53	1,523,107 25	84,075 75

MANI

1	Harbours generally, Manitoba.				223 39	
	Totals, Manitoba.....				223 39	

BRITISH

1	Harbours generally, B. C....				714 91	
2	Victoria.....				83,779 86	
	Totals, British Columbia.				84,494 77	

ABSTRACT STATEMENT

1	Nova Scotia.....				902,491 69	4,000 00
2	Prince Edward Island .....	224,381 02		224,381 02	229,946 72	126,450 08
3	New Brunswick.....				588,938 80	600 00
4	Quebec.....	1,322,839 99	43,538 67	1,366,378 66	318,505 82	1,560,918 65
5	Ontario.....	846,639 53	8,500 00	855,139 53	1,523,107 25	84,075 75
6	Manitoba.....				223 39	
7	British Columbia.....				84,494 77	
8	Harbours Generally.....				6,083 35	
	Grand Totals.....	2,393,860 54	52,038 67	2,445,899 21	3,653,091 79	1,776,044 48

**WATERS—Continued.**

*Concluded.*

Federation.  Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
1,600,764 46	2,277,200 62		
6,418 54	6,418 54	49	At the mouth of Trent river, head of bay, and twelve miles above Belleville. Expenditure, 1878-80, for deepening channel at entrance by dredging.
.....	178,703 37	50	135 miles above Kingston; works began in 1843; transferred in 1864 to Port Whitby Harbour Co. for \$35,150.
1,607,183 00	2,462,322 53		

**TOBA.**

223 39	223 39	1	Disbursements for staff, stationery, &c., not apportionable to separate works.
223 39	223 39		

**COLUMBIA.**

714 91	714 91	1	Disbursements for staff, stationery, &c., not apportionable to separate works.
83,779 86	83,779 86	2	The expenditure on this harbour is as follows, viz.: Dredging ..... \$74,155 01 Removal of <i>Beaver Rock</i> , as per Appendix No. 1, page 11. \$57,384 85 Amount charged to "dredg- ing" in 1876. (See Public Accounts, Folio 276)..... 2,240 00 <span style="float: right;">9,624 85</span> Total..... \$83,779 86
84,494 77	84,494 77		

**OF EXPENDITURE.**

906,491 69	906,491 69	1	
355,696 80	580,077 82	2	
589,538 80	589,538 80	3	
1,879,424 47	3,245,803 13	4	
1,607,183 00	2,462,322 53	5	
223 39	223 39	6	
84,494 77	84,494 77	7	
6,083 35	6,083 35	8	
5,429,136 27	7,875,035 48		

IMPROVEMENTS

NOVA

Number.	Name of River.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Annapolis River.....				1,333 77	
2	Avon River (Windsor).....				1,627 60	
3	East River, New Glasgow..				5,705 09	
4	do Pictou.....				19,559 93	
5	Larry River.....				6,546 70	
6	Middle River, Pictou.....				996 39	
7	Partridge Island River.....				7,804 68	
8	River John.....				18,114 02	
9	St. Mary's River, Sherbrooke				354 10	
10	Sissiboo River.....				2,500 09	
11	Tatamagouche River.....				5,418 82	
12	Wallace do.....				9,908 28	
	Totals, Nova Scotia...				79,869 38	

Expenditures for Nova Scotia previous to Confederation not ascertained.

PRINCE ED

1	Grand River.....				8,963 97	
2	Hillsboro' River.....				3,223 47	
3	Montague do.....				17,119 43	
4	South do.....				1,070 59	
5	Vernon do.....				6,326 72	
	Totals, P. E. Island...				36,704 18	

No expenditures for Improvements of Rivers in P. E. Island previous to Confederation.

NEW

1	Grand Lake.....				16,632 32	
2	Madawaska River.....				1,037 06	
3	Miramichi do.....				2,955 48	
4	Peticodiac do.....				12,436 00	
5	Richibucto do.....				998 09	
6	St. John do.....				77,369 28	
7	Tobique do.....				2,000 00	
8	Washedemoak River.....				6,340 83	
	Totals, New Brunswick				119,769 06	

Expenditures for New Brunswick previous to Confederation not ascertained.

OF RIVERS.

SCOTIA.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
1,333 77	1,333 77	1	Cost of removing boulders between Annapolis and Bridgetown.
1,627 60	1,627 60	2	Hand dredging 1879-81.
5,705 09	5,705 09	3	Dredging channel 1880-82.
19,559 93	19,559 93	4	do 1873.
6,546 70	6,546 70	5	do 1878.
996 39	996 39	6	do 1873.
7,804 68	7,804 68	7	Hand dredging, 1879-82.
18,114 02	18,114 02	8	Dredging channel, 1878-82.
354 10	354 10	9	do 1881-82.
2,500 00	2,500 00	10	Removing shoals in 1874-75.
5,418 82	5,418 82	11	Dredging, 1881-82.
9,908 28	9,908 28	12	do 1878-80.
79,869 38	79,869 38		

WARD ISLAND.

8,973 97	8,963 97	1	Dredging, 1878-79.
3,223 47	3,223 47	2	do 1873-82.
17,119 43	17,119 43	3	do 1877-78.
1,070 59	1,070 59	4	do 1873-82.
6,326 72	6,326 72	5	do 1873-82.
36,704 18	36,704 18		

BRUNSWICK.

16,632 32	16,632 32	1	Dredging Beard's Bar, \$6,375.44. Dredging Jemseg River, \$10,256.88.
1,037 06	1,037 06	2	Repairing tow-paths and bridges. 1881-82.
2,955 48	2,955 48	3	Improving channel, south-west branch, 1875-76.
12,436 00	12,436 00	4	Closing up one channel, Stony Creek, 1872-75.
998 09	998 09	5	Beach protection work, 1879-80.
77,369 28	77,369 28	6	Improving navigation above Fredericton by Provincial Government, 1826-67, about..... \$75,000 00
			Improving navigation above Fredericton by Dominion Government, 1867-82..... 33,439 45
			Dredging at Fredericton, 1874-76..... 7,699 15
			do Oromocto, 1873-82..... 22,671 12
			Construction Oromocto Shear Dam, 1877-81..... 13,559 58
2,000 00	2,000 00	7	Removal of boulders, &c., 1880-81.
6,340 83	6,340 83	8	Dredging channel, Perry's Flats, 1878-79.
119,769 06	119,769 06		

IMPROVEMENTS OF  
QUE

Number.	Name of River.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Berthier ( <i>en haut</i> ).....				4,340 32	
2	Cape de Chatte.....				792 20	
3	Chateauguay.....				(a) 1,680 80	
4	Escoumains.....				1,189 80	
5	Gatineau.....				39,264 17	
6	L'Assomption.....				5,714 55	
7	Ottawa.....				3,162 57	
8	Richelieu.....				46,657 22	
9	Richelieu Rapids.....	13,713 00		13,713 00		
10	Rivière à la Graisse, Rigaud.....				6,401 76	
11	Rivière des Prairies.....					
12	Rivière du Lièvre.....				4,316 89	
13	Rivière du Loup, ( <i>en bas</i> ).....				693 44	
14	do ( <i>en haut</i> ).....				2,000 00	
15	Rivière du Nord, tributary of the Ottawa.	681 61		681 61	1,627 51	
	Carried forward.....	14,394 61		14,394 61	117,841 23	

(a) Exclusive of \$1,602.99 wrongly charged to this river instead of River St. Francis in Appendix No. 1, page 45.



## RIVERS—Continued.

BEC.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
cts.	\$ cts.		
4,340 32	4,340 32	1	On the north shore of the St. Lawrence, 45 miles N.E. of Montreal, and almost opposite Sorel, at the mouth of the Richelieu. Amount expended in deepening the river to 9 feet below the usual low water mark over the Vanasse, Church and Levesque Shoals, to admit of vessels coming to the wharves at Berthier.
792 20	792 20	2	This amount was spent for deepening and removing obstructions at mouth of river in 1872.
(a) 1,680 80	(a) 1,680 80	3	Dredging entrance of river (east of Sister's Island) in 1876.
1,189 80	1,189 80	4	This amount was expended, in 1881, in removing about 200 boulders, weighing from 3 to 15 tons, from the channel at the entrance to the harbour. Schooners can now enter and leave at half-tide with ease and safety.
39,264 17	39,264 17	5	Dredging sand bar from steamboat channel at boom in 1874 and 1875.
5,714 55	5,714 55	6	Expended in 1880-81-82 deepening and widening channel at mouth of river, near steamboat wharf, and making a cut to mill channel so as to obtain a depth of 10 feet at low water.
3,162 57	3,162 57	7	Proportion of expenditure, dredging channel, removing boulders, &c., at Green Shoal, Kettle Island, Chenaux Rapids, &c., &c.
46,657 22	46,657 22	8	Improving navigation in 1874 (about 6 miles between St. John and Rouse's Point) by removing rocks, &c., giving a depth of from 7 to 9 feet at low water on shoals at Isle aux Noix. 1875, extending mooring piers about 200 feet at lower entrance of Chambly Canal, and piers and booms at Belœil Bridge, to facilitate navigation. Dredging, in 1876, to a depth of 7 feet at low water under Grand Trunk Railway Bridge, Belœil, and approaches thereto, and making channel 100 feet wide and 7 deep between St. Ours and Belœil. In 1877, making a channel 100 feet wide between St. Antoine Village and St. Ours, also removing boulders. In 1878, connecting, by a channel 75 feet wide, wharves at St. Denis with main channel. 1880-81, Dredging and deepening channel between St. Denis and St. Antoine, and deepening entrance to Chambly Canal to 8 feet. In 1882, channel below St. Ours was deepened to 10 feet.
	13,713 00	9	Experimental piers constructed from 1856 to 1858 for the purpose of aiding the formation of an ice bridge above these rapids, and preventing the grounding and accumulation of ice on the shoals below, and the consequent inundation of low lands on both shores of the River St. Lawrence. This work, not having produced the desired effect, has been abandoned.
6,401 76	6,401 76	10	Making a channel 6 ft. deep to Village of Rigaud.
		11	See Slides and Booms.
4,316 89	4,316 89	12	Deepening channel of river at Little Rapids, about ten miles above Buckingham by blasting a reef, also removing boulders at Long Rapids to facilitate the navigation of river by vessels engaged in the transportation of phosphates.
693 44	693 44	13	Dredging a berth for vessels on west side of pier, in July, 1880.
2,000 00	2,000 00	14	Dredging channel at entrance of River.
1,627 51	2,309 12	15	The expenditure prior to Confederation is for the removal of a small shoal of boulders lying about one mile below the Village of St. Andrews, for a breadth of 50 ft. and a depth of 5 ft., so as to allow vessels of 4½ ft. draught of water to ascend from the Ottawa River to the village, a distance of 3½ miles.
117,841 23	132,235 84		

IMPROVEMENTS OF  
QUEBEC

Number.	Name of River.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	14,394 61		14,394 61	117,841 23	
16	Saguenay River .....				13,559 94	
17	do enlargement of La Grande Décharge, Lake St. John. ....				6,303 16	
18	Salmon, north shore, Ottawa River. ....				746 16	
19	St. Francis.....				(a) 15,821 50	
20	St. Lawrence.....				36,656 17	
21	St. Lawrence—Removal of chains and anchors. ....				93,816 98	
22	St. Placide.....				1,719 51	
23	Yamaska.....				7,008 02	
	Totals Quebec .....	14,394 61		14,394 61	293,472 67	

ONTA

1	Detroit .....				7,260 32	
2	Gananoque.....				245 17	
3	Napanee.....				14,026 80	5,000 00
	Carried forward.....				21,531 29	5,000 00

(a) Including \$1,602.99 wrongly charged to Chateauguy River in Appendix No. 1, page 45.

RIVERS—Continued.

—Continued.

federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.			
\$ cts.	\$ cts.		
117,841 23	132,235 84		
13,559 94	13,559 94	16	Deepening and improving the channel below Chicoutimi, so as to enable vessels to enter or leave that port at half tide.
6,303 16	6,303 16	17	Widening the outlet of Lake St. John so as to drain the waters of the lake more rapidly during spring freshets and prevent the flooding of the adjacent lands.
746 16	746 16	18	Dredging channel to a depth of 6 ft., September and October, 1880.
(a) 15,821 50	(a) 15,821 50	19	Dredging a channel, 50 ft. wide and 6 ft. deep at low water, from Pierreville Mills to entrance of river at Lake St. Peter, a distance of about 3½ miles.
36,656 17	36,656 17	20	This expenditure is for dredging and otherwise improving the river at the following places:— Cap à la Roche—Removal of rock, fiscal years 1873-74 ..... \$17,000 00 Contrecoeur—Dredging in 1874-75 ..... 13,752 37 Boucherville to Longue Point—Dredging in 1881-82 ..... 2,212 50 Improvement of channel between Lake St. Francis and Montreal (dredging) in 1881-82..... 2,691 30 Total ..... 36,656 17
93,816 98	93,816 98	21	Removing anchors, chains, &c., from Harbour of Quebec, including cost of lifting barge (\$25,000). Since the fall of 1875 the barge was successful in raising 224 anchors, 7,013 fathoms chain and 610 boulders, the wrecks of the steamer "Bidder" and ship "L'Original."
1,719 51	1,719 51	22	A channel, 1,000 feet long by 50 feet wide, with a basin opposite wharf 70 feet wide was dredged during season of 1879—depth at low water, 6 feet.
7,008 02	7,008 02	23	Constructing a lift-lock and dam at Isle à Cardin, about 4½ miles from mouth of river. The constructing of these works and dredging below the lock will render the river navigable for vessels of moderate draft as far as Rapid de la Grosse Roche, a distance of 21 miles.
293,472 67	307,867 28		

RIO.

7,260 32	7,260 32	1	Deepening river near Amherstburg and Bois Blanc Island to a uniform depth of 14 ft. 5 in. at lowest water. Survey was made in 1874 and work done in 1875 to the amount stated.
245 17	245 17	2	Deepening a portion of mouth of river to permit entrance of a larger class of vessels to load grain.
19,026 80	19,026 80	3	This expenditure was incurred to obtain a channel 50 ft. wide and 9 feet deep, at low water, to the Diamond Mill, north of the town. Dredging was begun on the 22nd September, 1873, and continuing during the years 1874-75,-76 and 1878. Of the amount expended, the Town of Napanee contributed \$3,000, and the Counties of Lennox and Addington, \$2,000.
26,532 29	26,532 29		

IMPROVEMENTS OF  
ONTARIO

Number.	Name of River.	Expenditure previous to Confederation.			Expenditure since Con.	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....				21,532 79	5,000 00
4	Narrows (between Lake Simcoe and Lake Couchiching).	10,138 30		10,138 30		
5	Neebish Rapids (St. Mary's River).				36,171 85	
6	Otonabee .....				1,105 86	
7	Ottawa .....				10,898 34	
8	Salmon .....				1,913 53	
9	Sydenham .....				8,265 16	
10	Thames .....	3,821 42		3,821 42	16,428 31	2,400 00
11	Trent .....				1,897 43	
	Totals Ontario .....	13,959 72		13,959 72	98,212 77	7,400 00

MANI

1	Assiniboine .....				4,178 63	
2	Fairford or Partridge Crop River.				3,951 43	
3	Rainy Lake and River. ....				3,000 00	
4	Red River .....				6,234 90.	
	Total, Manitoba. ....				17,364 96	

NORTH-WEST

1	Saskatchewan .....				714 48	
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## RIVERS—Continued.

Continued.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number.	Remarks.
	\$	cts.		
Total for Fifteen Years ended 30th June, 1882.				
	\$	cts.		
	26,532	29		
	10,138	30	4	Channel dredged to a depth of 6 ft. in 1857-58.
	36,171	85	5	Dredging channel to a depth of 14 ft. 5 in., at lowest water, and 200 ft. wide. Work was commenced in July, 1876 and finished in 1882.
	1,105	86	6	Repairing dam, Whitlaw's Rapids.
	10,898	34	7	Dredging channel, removing boulders, &c., at Green Shoal, Kettle Island, Chenux Rapids, &c., (proportion of expenditure) and also removing reef below Union Suspension Bridge, at a cost of \$4,933.19, in 1881-82.
	1,913	53	8	Dredging a channel through bar at mouth of river, 1,700 ft. long by 40 ft. wide to a depth of 8 ft.
	8,265	16	9	Dredging a channel, 50 ft. wide and 10 ft. deep, between Simpson's Bend and Dresden.
	18,828	31	10	Expenditure previous to 1867 was for removing logs, &c., including remains of an old bridge from bed of river. Expenditure since was incurred for deepening river and making a channel 76 ft. wide and 11 ft. deep through shoal at mouth of river. Of this amount the Counties of Kent and Lambton contributed \$2,400 towards expenditure incurred in 1871.
	1,897	43	11	Dredging sawdust, mill refuse, &c., from bed of river.
	105,612	77		
	119,572	49		

## TOBA.

4,178	63	4,178	63	1	Removing boulders and snags and binding side dams, for the purpose of deepening, straightening and widening the channel so as to make the river navigable for steamers from Winnipeg to Portage la Prairie.
3,951	43	3,951	43	2	Examination of river, which is the outlet of Lake Manitoba, with the view of ascertaining the best means of increasing the outflow into Lake St. Martin and Little Saskatchewan, checking the steady rise of waters in the lake, and redeeming the land which has been gradually flooded during the last few years.
3,000	00	3,000	00	3	This amount was expended for work in connection with Fort Frances Lock.
6,234	90	6,234	90	4	Of this amount \$5,234.90 was spent in the years 1872-73 and 1874 in removing boulders, &c., at St Andrew's Rapids, and in 1879 a further sum of \$1,000 was expended in improving navigation at the same place.
17,364	96	17,364	96		

## TERRITORIES.

714	48	714	48	1	Preliminary expenses in connection with works for improvement of navigation.
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IMPROVEMENTS OF  
BRITISH

Number.	Name of River.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Courtenay .....				474 65	
2	Cowichan .....				1,469 82	
3	Fraser.....				29,566 22	
4	Naas.....				990 84	
	Total, British Columbia .....				32,501 53	

ABSTRACT Statement of

1	Nova Scotia.....				79,869 38	
2	Prince Edward Island .....				36,704 18	
3	New Brunswick .....				119,769 06	
4	Quebec.....	14,394 61		14,394 61	293,472 67	
5	Ontario .....	13,959 72		13,959 72	98,212 77	7,400 00
6	Manitoba .....				17,364 96	
7	North-West Territories .....				714 48	
8	British Columbia.....				32,501 53	
	Totals.....	28,354 33		28,354 33	678,609 03	7,400 00

RIVERS—*Concluded.*  
COLUMBIA.

Federation.  Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts. 474 65	\$ cts. 474 65	1	This expenditure was incurred in November, 1881, in an unsuccessful attempt to remove snags from the river.
1,469 82	1,469 82	2	Removing drift piles of fallen timber from channel of river to permit the free passage of logs.
29,566 22	29,566 22	3	Dredging channel at entrance of river, also blasting and removing rocks from Cottonwood Canyon, above Quesnel mouth.
990 84	990 84	4	Removing snags and buoying the channel.
32,501 53	32,501 53		

Expenditure on Rivers.

79,869 38	79,869 38	1	
36,704 18	36,704 18	2	
119,769 06	119,769 06	3	
293,472 67	293,472 67	4	
105,612 77	105,612 77	5	
17,364 96	17,364 96	6	
714 48	714 48	7	
32,501 53	32,501 53	8	
686,009 03	714,361 36		

DREDGES AND  
NOVA SCOTIA AND

Number.	Name of Dredge.	Expenditure previous to Confederation.			Expenditure since Con-	
		From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Canada .....				42,778 44	
2	Cape Breton .....				19,744 38	
3	New Dominion .....				30,826 51	
4	St. Lawrence .....				116,389 48	
5	George McKenzie .....				15,000 00	
6	Tugs (Plans, &c.) .....				350 50	
	Totals, Nova Scotia and New Brunswick .....				225,089 31	

PRINCE ED

1	Prince Edward .....				23,582 07	23,582 07
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QUE

1	Dredging Vessels .....	6,872 43		6,872 43		
2	Nipissing .....				13,501 57	
3	Queen of Canada .....	15,000 00		15,000 00		
4	Tug Dennis .....				2,000 00	
	Totals, Quebec .....	21,872 43		21,872 43	15,501 57	

ONTA

1	Dredging Vessels .....	21,600 00		21,600 00		
2	Challenge .....				31,211 32	
3	Tug Trudeau .....				6,847 05	
	Totals, Ontario .....	21,600 00		21,600 00	38,058 37	



DREDGING PLANT.

NEW BRUNSWICK.

Federation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.	\$	cts.		
42,778 44	42,778 44	1	Iron hull ; elevator dredge ; self propelling ; built in Glasgow.	
19,744 38	19,744 38	2	Wooden hull ; spoon dredge.	
30,826 51	30,826 51	3	do do	
116,389 48	116,389 48	4	Iron hull ; elevator dredge ; self propelling ; built in Glasgow.	
15,000 00	15,000 00	5	Wooden hull ; spoon dredge.	
350 50	350 50	6		
225,089 31	225,089 31			

WARD ISLAND.

23,582 07	1	Transferred by the Local Government to the Dominion, for the sum of \$22,000, according to terms of Union. The balance \$1,582.07, was expended in fitting out dredge. Wooden hull ; spoon dredge.
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BEC.

6,872 43	1	
13,501 57	2	Wooden hull ; spoon dredge.
15,000 00	3	do do
2,000 00	4	
15,501 57		37,374 00

RIO.

21,600 00	1	
31,211 32	2	Wooden hull ; spoon dredge.
6,847 05	3	
38,058 37		59,658 37

DREDGES AND DREDG  
BRITISH

Number.	Name of Dredge.	Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	"Dredger".....	92,000 00	.....	92,000 00	1,447 96	.....
2	Str. "Sir James Douglas".					
3	Tug Georgia.....	.....	.....	.....	6,250 00	.....
	Totals, British Columbia	92,000 00	.....	92,000 00	7,697 96	.....

ABSTRACT

1	Nova Scotia.....	.....	.....	.....	120,044 65	.....
2	Prince Edward Island.....	.....	.....	.....	23,582 67	.....
3	New Brunswick.....	.....	.....	.....	105,044 66	.....
4	Quebec.....	21,872 43	.....	21,872 43	15,561 57	.....
5	Ontario.....	21,600 00	.....	21,600 00	38,058 37	.....
6	British Columbia.....	92,000 00	.....	92,000 00	7,697 96	.....
	Totals.....	135,472 43	.....	135,472 43	309,929 28	.....

ING PLANT—*Concluded.*

COLUMBIA.

Federation.  Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
1,447 96	93,447 96	1 2	<p>The machinery for "Dredger," extra punts, iron work for mud punts, engines for steam tug, &amp;c., were purchased in England and shipped via Cape Horn to Victoria, where it arrived in July, 1864. The cost of the above may be stated as follows:—</p> <p>Machinery purchased in England..... \$24,592 65                      Amount of contract for dredge and four punts ..... 34,564 00                      do building steamer's hull. ... 16,800 00                      Services of two engineers erecting machinery and engines on their respective hulls ..... 4,000 00                      Contingencies..... 12,043 85</p> <p style="text-align: right;">Total..... \$92,000 00</p> <p>The "Dredger" is 118 feet on keel, 122 feet over all; beam, 22 ft. 10 in.; depth of hold, 8 ft. 6 in., has side lever condensing marine engine of 25-horse power (English), two flue boilers and can dredge to a depth of 16 ft. On the 14th June, 1865, in consequence of a resolution passed by the House of Assembly, the Superintendent and the crew were paid off and the dredge moored in James' Bay, where it lay until 1872, when it was overhauled prior to its being employed again.</p> <p>The steamer "Sir James Douglas" is built with oak frame, fastened and strengthened with iron knees, and is 110 ft. long, breadth 20 ft., copper fastened, two condensing engines of 40-horse power (English). Had new boilers in 1870. Speed from 8 to 9 knots an hour. She performs the postal service between Victoria, Nanaimo and Comox, and serves the intermediate ports. For further details—see Report by Hon. Sir Hector L. Langevin on British Columbia, dated March, 1872, pages 34 and 190.</p>
6,250 00	6,250 00	3	This tug was purchased in 1874 from Messrs. Cornish & Putnam for sum stated.
7,697 96	99,697 96		

STATEMENT.

120,044 65	120,044 65	1
23,582 07	23,582 07	2
105,044 66	105,044 66	3
15,501 57	37,374 00	4
38,058 37	59,658 37	5
7,697 96	99,697 96	6
309,929 28	445,401 71	

SLIDES AND

Number.	Expenditure previous to Confederation.			Expenditure since Con	
	From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1 Saguenay District, Quebec.	44,872 79	.....	44,872 79	2,418 50	.....
2 St. Maurice District, Quebec.	269,043 03	.....	269,043 03	168,915 25	.....
3 River Ottawa, Ontario and Quebec.	290,904 11	.....	290,904 11	48,300 86	.....
4 Gatineau River, Quebec.....	31,967 83	.....	31,967 83	23,526 44	.....
5 Madawaska River, Ontario.	76,727 37	.....	76,727 37	5,667 81	.....
Carried forward.....	713,515 13	.....	713,515 13	254,828 86	.....

BOOMS.

Confederation. Total for Fifteen Years. ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
2,418 50	47,291 29	1	Works were commenced in 1856 and completed in 1860. They were constructed for the purpose of passing timber from Lake St. John down to the river Saguenay, which flows for a distance of 133 miles, from Lake St. John, in the north, into the St. Lawrence, at Tadoussac, 122 miles below Quebec. The works consist of 7 flat dams, 1 pier dam, 2 glance piers, 1 bulk head (which was constructed in 1881-82, at a cost of \$2,418.50), 1 slide for single sticks, 1 boom and 1 store house, erected in 1865 and 1866.
168,915 25	437,958 28	2	The river St. Maurice, which is about 360 miles long, discharges into the St. Lawrence, at Three Rivers, 74 miles above Quebec. Works on the St. Maurice were commenced in 1852 and completed from 1854 to 1866. On the Vermillon river, a tributary of the St. Maurice river, about 90 miles in length, they were built from 1858 to 1866 by private parties and purchased for \$2,695.52, extended and improved by the Government. The expenditure since Confederation, was incurred for the following works, viz : Construction of new piers and reconstruction of old piers and booms .....\$ 98,837 91 Dam at Grandes Piles ..... 63,074 84 Improving Manigance Rapids ..... 1,702 26 Purchase of Isle aux Cochons..... 3,340 10 Contingencies ..... 1,960 14 Total.....\$ 168,915 25
48,300 86	339,204 97	3	For description of works, see Appendix No. 21, pages 658 to 660 ; also, Appendix No. 24, pages 685 and 686. The Ottawa river is about 700 miles long and drains an area of 57,800 square miles. Works were commenced in 1829 and completed from 1854 to 1866. The expenditure since Confederation, was incurred for the following works, viz : Deschênes Rapids slide, abandoned on 14th June, 1876.....\$ 4,000 00 Des Joachims slide (reconstruction) ..... 3,243 60 Rocher Capitaine slide..... 24,546 58 Extending and strengthening Chenaux boom ..... 14,936 00 Portage du Fort slide, partly reconstructed..... 1,019 68 Land damages ..... 435 00 Generally..... 120 00 Total.....\$ 48,300 86
29,526 44	61,494 27	4	For description of works, see Appendix No. 22, pages 662 to 663. The bridge over timber slide, city of Ottawa, was abandoned by Government on 5th May, 1876. This river is about 400 miles long, and falls into the Ottawa River from the north side at a distance of about 2 miles from the City of Ottawa, obtaining upwards of 9,000 square miles of territory. The Government works here are all situated within 1½ miles, or thereabout from the mouth of the Gatineau, and were originally constructed in 1848. The booms were enlarged and strengthened in 1874, at an outlay of \$29,526.44.
5,667 81	82,395 18	5	This is the second tributary in ascending the Ottawa where the Government has constructed works for the descent of timber. It flows into the Ottawa from the south, about 40 miles above the City of Ottawa, draining an area of upwards of 400 square miles. In 1872 and 1893 piers, &c., were renewed at a cost of \$5,667.81. For description of works, see Appendix No. 22, p. 669.
254,828 86	968,843 99		

SLIDES AND

Number.		Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	713,515 13	.....	713,515 13	254,828 86	.....
6	Coulonge River, Quebec ....	29,032 78	.....	29,032 78	318 00	.....
7	Black River, Quebec .....	10,000 00	.....	10,000 00	2,500 00	.....
8	Petewawa River, Ontario....	67,634 01	.....	67,634 01	7,713 00	.....
9	Rivière du Moine, Quebec...	8,802 00	.....	8,802 00	19,478 54	.....
10	Rivière des Prairies (removal of obstructions, &c.) Quebec.	.....	.....	.....	3,037 35	.....
11	Rivière des Prairies (Sault au Récollet Pier) Quebec.	.....	.....	.....	10,466 48	.....
12	South Nation, Ontario.....	.....	.....	.....	488 45	.....
13	General expenditure on Ottawa River and its tributaries.	204,179 03	.....	204,179 03	.....	.....
	Carried forward.....	1,033,162 95	.....	1,033,162 95	298,830 68	.....

BOOMS—Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
254,828 86	968,343 99			
318 00	29,350 78	6	This river empties itself into the Ottawa from the north side, about 80 miles above the City of Ottawa, after a course of 160 miles, draining an area of about 1,800 square miles. Works which were constructed from 1864 to 1866 consist of a single stick slide 6 feet wide x 2,966 in length, flat dam at head of chute 173 feet long, with an average height of 6 feet; guide boom and piers at head of slide, and retaining boom and piers near mouth of river; also a station-house purchased from John P. O'Connor in 1870, at an outlay of \$300.	
2,500 00	12,500 00	7	This river is 128 miles long, and empties into the Ottawa from the north, about 9 miles above the mouth of the Coulonge, draining a territory of about 1,120 square miles. The slides were constructed by the late Mr. Poupore about 45 years ago, and were renewed by him at various times. They were purchased by Government in 1867 for \$12,500, of which \$10,000 were paid prior to Confederation. For description of works, see Appendix No. 22, p. 672.	
7,713 00	75,347 01	8	This river flows from the south into the Ottawa River 110 miles above the City of Ottawa. Length, 138 miles; territory drained, 2,200 square miles. Works were commenced in 1857, and completed from 1858 to 1864. In 1874 two large reservoir dams were built at Thomson's Rapids and Cedar Lake, for the purpose of retaining the waters of the chain of large lakes in the neighbourhood, at a cost of \$7,713.00.	
19,478 54	28,280 54	9	This river is the sixth tributary, ascending the Ottawa, with Government works. It flows from the north into the Ottawa, 150 miles above the city of that name, draining an area of about 1,600 square miles. Length of river about 120 miles. The first slide and booms were constructed in 1851-52 by "The River du Moine Boom and Slide Company." In 1862-63 the Government enlarged and improved the slides, built dams at the chutes and across the channel of the river where required, and placed a retaining boom and piers at the north of the stream. In 1871-72 a new slide was built at High Falls, 15 miles from mouth, at a cost of \$19,478.54. This slide is the longest the Government has yet built in the Ottawa Valley, being 5 feet wide x 3,384 in length.	
3,037 35	3,037 35	10	This expenditure was incurred from 1871 to 1874, for the removal of boulders from, and improvement of, the channel of the river.	
10,466 48	10,466 48	11	Built from 1872 to 1875. A stiff 6-ply boom, in sections 36 x 24 and 1000 feet long, supported by four piers, 35 x 25 x 21 feet high.	
488 45	488 45	12	This river falls into the Ottawa, from the south, about 36 miles below the City of Ottawa. The works are near the village of Plantagenet, within five miles of the mouth, and were built in 1880-81. Length of River about 80 miles.	
.....	204,179 03	13		
298,830 68	1,331,993 63			

## SLIDES AND

Number.	Expenditure prior to Confederation.			Expenditure since Con	
	From Government Funds.	From other than Government Funds.	Total Up to June 30, 1867.	From Government Funds.	From other than Government Funds.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward .....	1,033,162 95	.....	1,033,162 95	298,830 68	.....
14 Newcastle District, Ontario.	313,489 72	.....	313,489 72	6,279 58	.....
<b>Totals, Slides and Booms.</b>	<b>1,346,652 67</b>	.....	<b>1,346,652 67</b>	<b>305,110 26</b>	.....

## ABSTRACT Statement of Expenditure

1 Quebec.....	748,783 18	.....	748,783 18	260,810 99	.....
2 Ontario.....	597,869 49	.....	597,869 49	44,299 27	.....
<b>Total .....</b>	<b>1,346,652 67</b>	.....	<b>1,346,652 67</b>	<b>305,110 26</b>	.....



ROOMS—Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$ cts.	\$ cts.			
298,830 68	1,331,993 63			
6,279 58	319,769 30	14	The waters on which these works are erected take their source in the County of Haliburton, in the Township of Havelock, not more than half mile from the head waters of the Madawaska, and flow in a southerly direction, consisting in their course of numerous large lakes, for a distance of about ninety miles, they then flow in a south easterly course and empty into the Bay of Quinté, at Trenton. Works were constructed from 1837 to 1865; a full description of the same may be found in Appendix No. 23, page 678 to 682; also in Appendix No. 24, pages 712 to 719. The expenditure since Confederation was incurred for the following works or services, viz:— First slides, Lindsay, &c., 1868..... \$254 85 Improvement, Opeongo Creek, 1868 ..... 126 00 Booms and piers, Fenelon River, 1874..... 3,090 00 Land purchase, Heeley's Falls, 1874..... 1,000 00 Booms and piers, Whitlas Rapids, 1875..... 179 94 Labor, &c., River Trent, 1875..... 392 41 Winter Weir, Whitlas Rapids, 1878..... 591 28 New piers, Hall's Bridge, 1882 ..... 645 10 Total..... \$6,279 58	
305,110 26	1,651,762 93			
up to 30th June, 1882.				
260,810 99	1,009,594 17	1		
44,299 27	642,168 76	2		
305,110 26	1,651,762 93			

ROADS AND  
NEW

Number.	Expenditure previous to Confederation.			Expenditure since Con	
	From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1 Apohaqui Bridge.....				2,368 34	

QUE

1 Gatineau Bridge (Farmer's Rapids).	7,679 14		7,679 14	272 10	
2 Isle aux Noix.....				838 67	
3 Métapédiac Road.....	187,870 85		187,870 85	20,453 50	
4 Port Louis and Huntingdon Road.				12,093 25	
5 Temiscouata Road.....	204,376 61		204,376 61	26,039 83	
6 Ottawa Suspension Bridge (one-half of expenditure)	33,224 39		33,224 39	6,388 94	
7 Petite Nation Bridge.....	1,761 33		1,761 33	685 86	
8 Portage du Fort Bridge.....				11,966 20	5,500 00
Carried forward.....	434,912 32		434,912 32	78,738 35	5,500 00

**BRIDGES.**  
**BRUNSWICK.**

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
2,368	34	2,368	34	1 Over Kenebecasis River, King's Co., connecting Mill Stream Road, on north side of river, with European and North American Railway at Apohaqui Station, on south side. In 1868, the bridge, having been partly destroyed by a freshet, was reconstructed at the cost shown. All other expenditures on this bridge included in cost of railway.

**BEC.**

272	10	7,951	24	1 Over Gatineau River, at Farmer's Rapids, about 3 miles from mouth. Completed in 1866. The expenditure of \$272.10 since Confederation was for amount of arbitrator's award on contractor's claim for extras, together with costs thereon. The cost of repairing this bridge is included under Gatineau River Slides and Booms.
838	67	838	67	2 Isle aux Noix lies in the Richelieu River, near the southern boundary of the Province of Quebec. On this is situated Fort Lennox, an old military post, afterwards used as a reformatory. A bridge over a ravine on the road leading from St. Valentin to the Island Ferry was repaired in 1881 at a cost of \$838.67.
20,453	50	208,324	35	3 From Ste. Flavie, on south shore of St. Lawrence, to cross Point Ferry, north shore of Bay des Chaleurs, 110½ miles. Begun in 1857; completed in 1868. Maintained and repaired by Dominion until completion of Intercolonial Railway, when road was transferred to local municipalities.
12,093	25	12,093	25	4 This road—8 miles in length—leads from Port Louis, on Lake St. Francis, to Huntingdon; was originally constructed by the Huntingdon and Lake St. Francis Road Company, organized in 1849, but was allowed to fall into decay; assumed by Dominion under Order in Council, dated 9th April, 1869, as a military road. A portion of this road, five miles in length, was rebuilt in June and July, 1868, and the balance repaired and put in good order.
26,039	83	230,416	44	5 Extends from Rivière du Loup, on the St. Lawrence, to the boundary line between Quebec and New Brunswick, 67 miles. Was completed in 1867, at a cost of \$204,376.61. Since Confederation the Department has rebuilt the bridges at Rivière du Loup (1868) and Rivière Verte (1873-74), as well as several minor bridges and culverts, and has executed all necessary repairs.
6,388	94	39,613	33	6 This bridge was built in 1843-44, and with the three other bridges by which the main road from Ottawa to Hull crosses the channels of the Ottawa River, viz.: One stone bridge to the north of the suspension bridge and two wooden ones to the south—cost, up to Confederation, \$66,448.78. Since then ordinary repairs have been executed, and in 1882 the flooring of the bridge was renewed.
685	86	2,447	19	7 This bridge, by which the main road along the north shore of the Ottawa crosses the Petite Nation River, in the County of Ottawa, was opened for traffic in 1866. The total cost of construction up to February, 1868, when the contract was closed, was \$2,061.99. In 1870 the bridge was repaired at a cost of \$385.20.
17,466	20	17,466	20	8 This bridge, crossing the Ottawa River at the Village of Portage du Fort, was built in 1872-73 at a cost of \$17,066.20, towards which the Province of Ontario contributed \$4,000, and the municipality of Portage du Fort \$1,500. By Order in Council of 4th June, 1875, the bridge was transferred to the said municipality. In 1882 the Government granted \$400 to assist that body in repairing the bridge.
84,238	35	519,150	67	

ROADS AND  
QUEBEC

Number.		Expenditure previous to Confederation.			Expenditure since Con.	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward .....	434,912 32	.....	434,912 32	78,738 35	.....
9	General on Bridges .....	5,917 81	.....	5,917 81	.....	.....
	Totals, Quebec .....	440,830 13	.....	440,830 13	78,738 35	5,500 00

ONTA

1	Des Joachims Bridge.....	.....	.....	.....	908 31	.....
2	Dunnville Bridges (for reconstruction).	7,500 00	.....	7,500 00	2,573 65	.....
3	{ Fort William Road..... Red River Route and Transportation Service, proportion of expenditure	.....	.....	.....	209,195 38	.....
		.....	.....	.....	452,415 21	.....
4	Ottawa Suspension Bridge (half of expenditure.)	33,224 39	.....	33,224 39	6,432 78	.....
5	Ottawa Chaudière Bridges.	.....	.....	.....	20,000 00	.....
	Totals, Ontario.....	40,724 39	.....	40,724 39	691,525 33	.....

BRIDGES—Continued.

—Continued.

Confederation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
84,238	35	519,150	67	
.....		5,917	81	9
84,238	35	525,068	48	

R10.

908	31	908	31	1	A contract has been let for the construction of a wooden bridge across the Ottawa River at Des Joachims Rapids, about 140 miles above Ottawa and 45 miles above Pembroke. The expenditure shown was made in the years 1880-82, for surveys and other preliminary work. The Provincial Governments of Ontario and Quebec have each contributed a sum of \$4,000, which is now in the hands of the Hon. Receiver-General, to be used on this work, the balance of the cost to be borne by the Dominion.
2,573	65	10,073	65	2	These bridges, on the Dunnville and Port Dover road,—one 564 ft. in length, crossing Grand River; the other 209 ft. in length, crossing Sulphur Creek,—were built in 1856, the cost of construction being included in that of the Welland Canal. In 1867-68, having fallen into decay, they were rebuilt at a cost of \$10,073.65, as shown.
209,195	38	209,195	38	3	The name Red River Route or Dawson Route, is used to describe the whole line of communication between Lake Superior and the Red River country, now Manitoba, begun in 1867, almost immediately after Confederation, and finished in 1876. Up to 31st December, 1871, the accounts of the eastern portion were kept under the title of Fort William Road. Since that date the whole have been kept as one under the title of Red River Route. The expenditures noted here cover the cost of the road itself, and also of wagons and other "plant" used in the transport service. A complete description and history of this work will be found in Appendix No. 19, page 646.
452,415	21	452,415	21		
6,432	78	39,657	17	4	See note to same work under Province of Quebec.
20,000	00	20,000	00	5	These two bridges, one over the timber slide and one over a minor channel of the Ottawa River, and constituting the southern approach to the Suspension Bridge were built in 1843-44, the expenditure being included with that of the latter work. They were transferred to the Corporation of the City Ottawa, on 5th May, 1876. Being originally of wood and falling to decay they were replaced with iron truss bridges in 1876. To aid the city in this work the Government granted \$20,000.
691,525	33	732,249	72		

ROADS AND  
MANI

Number.		Expenditure previous to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Boats for transportation service.				72,193 01	
2	Fort Garry Road.....				226,513 67	
3	Fort Garry Bridge (over Red River).				2,967 10	
4	Red River Routes and transportation service (proportion of expenditure).				64,630 75	
	Totals, Manitoba .....				366,304 53	

ABSTRACT Statement

1	New Brunswick.....				2,368 34	
2	Quebec .....	440,830 13		440,830 13	84,238 35	
3	Ontario.....	40,724 39		40,724 39	691,525 33	
4	Manitoba.....				366,304 53	
	Totals... ..	481,554 52		481,554 52	1,144,436 55	

## BRIDGES—Continued.

TOBA.

Federation. Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
72,193 01	72,193 01	1	Cost of steamer and row boats for transportation of passengers over water stretches of the Red River Route 1870-71. (See note on Red River Route under Province of Ontario).
226,513 67	226,513 67	2	This is the western portion of the Red River Route from N.W. angle of Lake of the Woods to Fort Garry. The amount shown here covers the expenditure up to 30th June, 1874, after which the outlay on this portion was included under Red River Route. (See notes on Red River Route under Province of Ontario).
2,967 10	2,967 10	3	Expenditure in 1873-74 for survey and other preliminary expenses in connection with a bridge which it was proposed to build at this point as a completion of the Red River or Dawson Route.
64,630 75	64,630 75	4	See notes on Red River Route under Province of Ontario.
366,304 53	366,304 53		

## of Expenditure.

2,368 34	2,368 34	1
84,238 35	84,238 35	2
691,525 33	691,525 33	3
366,304 53	366,304 53	4
1,144,436 55	1,625,991 07	

TELEGRAPH

(See List at Appendix No.

Number.		Expenditure previous to Confederation.			Expenditure since Con.	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	{ Nova Scotia .....				67,945 88	
	{ New Brunswick .....				13,940 00	
	{ Quebec .....				180,958 74	
2	{ Manitoba .....				72 00	
	{ North-West Territories .....					
3	British Columbia .....				89,879 49	
	Carried forward .....				352,796 11	



**LINES,**  
1, pages 128 to 131.)

Federation.		Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.
Total for Fifteen Years ended 30th June, 1882.				
\$	cts.	\$	cts.	
67,945	88	67,945	88	1 These telegraph lines were constructed from 1880 to 1882, and are 852½ miles in length, viz :
13,940	00	13,940	00	
180,958	74	180,958	74	
				<b>NOVA SCOTIA.</b>
				Land. Cables. Total.
				Meat Cove to North Sydney..... 126 0½ 126½
				Low Point to Lingan ..... 5 ..... 5
				<u>Totals, Nova Scotia..... 131 0½ 131½</u>
				<b>NEW BRUNSWICK.</b>
				Campobello Section—
				Eastport, Maine, to Liberty Cove..... 9½ 9½
				Grand Manan Section—
				Liberty Cove to Southern Head..... 29 ..... 29
				<u>Totals, New Brunswick..... 29 9½ 38½</u>
				<b>QUEBEC.</b>
				Magdalen Islands—
				Amherst to Meat Cove..... 83½ 73½ 156½
				Anticosti—
				Gaspé Basin to English Bay..... 242 44½ 286½
				North Shore St. Lawrence—
				Baie St. Paul to Chicoutimi..... 92 ..... 92
				Murray Bay to Betsiamis..... 146½ 1½ 147½
				<u>Totals, Quebec..... 563½ 118½ 682½</u>
				<u>Grand Totals..... 723½ 128½ 852½</u>
				For subsidized and projected lines in the above Provinces, see Appendix No. 30, at pages 879, 880 and 881.
72	00	72	00	2 An additional sum of \$670,620.84 for this service has been expended to 30th June, 1882, and is included in the cost of the Canadian Pacific Railway.
89,879	49	89,879	49	
				3 The construction of telegraph lines in British Columbia was commenced in 1864 by the California State Telegraph Co., under authority of an Act of incorporation, dated the 12th March of the same Year. On the 22nd February, 1865, another Act of incorporation was granted to P. M. Collins and associates, who constructed a line from Washington Territory to the boundary line of British Columbia, near Matsqui; thence to New Westminster; and from Matsqui, via the Fraser River Route, to Quesnel; and thence northerly some distance beyond Fort Stager, upon the Skeena River, when work was suspended, and that portion of the line north of Quesnel finally abandoned in consequence of the successful submergence of the Atlantic cables of 1865 and 1866.
352,796	11	352,796	11	

TELEGRAPH

Number.	Expenditure previous to Confederation.			Expenditure since Con	
	From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward .....	.....	.....	.....	352,796 11	.....
4 Generally.....	.....	.....	.....	7,254 27	.....
Totals.....	.....	.....	.....	360,050 38	.....

LINES—Continued.

federation.  Total for Fifteen Years ended 30th June, 1882.	Grand Total Expenditure on Construction, up to 30th June, 1882.	Number.	Remarks.																																																				
\$ cts. 352,796 11	\$ cts. 352,796 11																																																						
			<p>On 30th January, 1866, an Act of incorporation was granted to the "Western Union Telegraph Co.," who purchased the lines and privileges of the Western Union Extension Co.</p> <p>Finally, on the 27th September, 1880, the Dominion Government acquired, for the sum of \$24,000, the Western Union Telegraph Co's. lines and cables, and thus became possessed of 450 miles of land lines and 16 miles of cable, viz. :—</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><i>Land Lines.</i></th> <th style="text-align: right;"><i>Miles.</i></th> </tr> </thead> <tbody> <tr> <td>Victoria to Saanich.....</td> <td style="text-align: right;">10 Abandoned.</td> </tr> <tr> <td>New Westminster to Matsqui .....</td> <td style="text-align: right;">32</td> </tr> <tr> <td>Matsqui to U. S. Boundary.....</td> <td style="text-align: right;">9</td> </tr> <tr> <td>do Quesnel.....</td> <td style="text-align: right;">399</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">450</td> </tr> </tbody> </table> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><i>Cables.</i></th> <th style="text-align: right;"><i>Miles.</i></th> </tr> </thead> <tbody> <tr> <td>Saanich to James' Island.....</td> <td style="text-align: right;">0½</td> </tr> <tr> <td>James' Island to Sydney Island.....</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Sydney do Henry do .....</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Henry do St. Juan do .....</td> <td style="text-align: right;">0½</td> </tr> <tr> <td>St. Juan do Lopez do .....</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Lopez do Fedalgo do .....</td> <td style="text-align: right;">6½</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">16</td> </tr> </tbody> </table> <p>Since the purchase of above lines the Government have constructed 212½ miles of land lines and 24 miles of cables, at an outlay of \$65,879.49, viz. :—</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><i>Land Lines.</i></th> <th style="text-align: right;"><i>Miles.</i></th> </tr> </thead> <tbody> <tr> <td>Victoria to New Westminster .....</td> <td style="text-align: right;">139</td> </tr> <tr> <td>Quesnel to Barkerville .....</td> <td style="text-align: right;">61</td> </tr> <tr> <td>Matsqui to Boundary Line.....</td> <td style="text-align: right;">12½</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">212½</td> </tr> </tbody> </table> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><i>Cables.</i></th> <th style="text-align: right;"><i>Miles.</i></th> </tr> </thead> <tbody> <tr> <td>Saanich Arm.....</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Vancouver to Gabriola.....</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Valdes Island to Point Gray .....</td> <td style="text-align: right;">20</td> </tr> <tr> <td>2 cables across Fraser River (opposite New Westminster) ½ mile each.....</td> <td style="text-align: right;">1</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">24</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">236½</td> </tr> </tbody> </table> <p>ADD— Land lines purchased in 1880 from Western Union Telegraph Co., and still in operation..... 440</p> <p style="text-align: right;">Total, British Columbia..... 676½</p>	<i>Land Lines.</i>	<i>Miles.</i>	Victoria to Saanich.....	10 Abandoned.	New Westminster to Matsqui .....	32	Matsqui to U. S. Boundary.....	9	do Quesnel.....	399		450	<i>Cables.</i>	<i>Miles.</i>	Saanich to James' Island.....	0½	James' Island to Sydney Island.....	2	Sydney do Henry do .....	4	Henry do St. Juan do .....	0½	St. Juan do Lopez do .....	3	Lopez do Fedalgo do .....	6½		16	<i>Land Lines.</i>	<i>Miles.</i>	Victoria to New Westminster .....	139	Quesnel to Barkerville .....	61	Matsqui to Boundary Line.....	12½		212½	<i>Cables.</i>	<i>Miles.</i>	Saanich Arm.....	2	Vancouver to Gabriola.....	1	Valdes Island to Point Gray .....	20	2 cables across Fraser River (opposite New Westminster) ½ mile each.....	1		24		236½
<i>Land Lines.</i>	<i>Miles.</i>																																																						
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7,254 27	7,254 27	4																																																					
360,050 38	360,050 38																																																						

## LIGHT

Number.		Expenditure prior to Confederation.			Expenditure since Con	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1		1,481,498 19	204,492 64	1,685,990 84	75,588 51	1,110,624 14
	Totals, Lighthouses.	1,481,498 19	204,492 65	1,685,990 84	75,588 51	1,110,624 14

## HOUSES.

Confederation. Total for Fifteen Years ended 30th June, 1882	Grand Total Expenditure on Construction up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
1,186,212 65	2,872,203 49	1	<p>Prior to Confederation the management of the lighthouses in the Province of Ontario, and in the Province of Quebec <i>above</i> Montreal, was vested in the Department of Public Works, whilst the lighthouses <i>below</i> Montreal were managed by the Trinity Houses of Montreal and Quebec. In New Brunswick they were managed by a Board of Commissioners of Public Institutions, and in Nova Scotia by the Board of Works. After Confederation, the Department of Marine and Fisheries was charged, on its establishment, with the management of the lights, and by Order in Council (No. 9,151), dated the 11th January, 1870, the construction of lighthouses at a cost not exceeding \$10,000 was transferred to that Department.</p> <p>For detailed statement of expenditure, <i>prior</i> to Confederation, on lighthouses in Ontario and Quebec—See “Report of the Commissioner of Public Works” for 1867, Appendices No. 10, pages 72 to 83, and No. 70, pages 498 to 501, and 550 and 551.</p> <p>For expenditure <i>since</i> Confederation :  Through Public Works Department,—See Appendix No. 1, of this Report, pages 133 to 136.  Through the Department of Marine and Fisheries,—See Public Accounts at pages noted in following statement :</p>
1,186,212 65	2,872,203 49		

LIGHT-HOUSES  
YEARLY Expenditure on Lighthouses by

Fiscal Year.	Public Ac- counts.	Amount.	Fiscal Year.	Public Ac- counts.	Amount.
	I	\$ cts.		II.	\$ cts.
			Brought forward	.....	583,454 94
1870.....	{ 192 to 209 }	21,311 31	1875 .....	172	95,352 32
			1876.....	176	118,187 90
1871.....	{ 167 to 189 }	119,931 24	1877.....	166	79,605 22
	II.				
1872.....	200	108,232 15			
1873.....	132	165,176 10			
1874.....	149	168,804 14			
Carried forward.	.....	583,454 94	Carried forward.	.....	876,600 38

Total expenditure by Department of Marine and Fisheries...

ABSTRACT STATEMENT

Number.	Expenditure prior to Confederation.			Expenditure since Con	
	From Government Funds.	From other than Government Funds.	Total up to June 30, 1867.	From Government Funds.	From other than Government Funds.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1 Nova Scotia.....				397,359 30	
2 Prince Edward Island.....				51,619 45	
3 New Brunswick .....				157,126 75	
4 Quebec.....	1,144,690 70		1,144,690 70	357,414 36	
5 Ontario .....	541,300 14		541,300 14	172,300 27	
6 Manitoba.....				1,590 86	
7 British Columbia .....				44,167 04	
8 Generally.....				4,634 62	
Totals.....	1,685,990 84		1,685,990 84	1,186,212 65	

—Concluded.

the Department of Marine and Fisheries.

Fiscal Year.	Public Ac- counts.	Amount.	Fiscal Year.	Public Ac- counts.	Amount.
	II.	\$ cts.		II.	\$ cts.
Brought forward		876,600 38	Brought forward		1,022,561 91
1878.....	168	48,016 97	1881.....	198	48,667 96
1879.....	192	58,694 32	1882.....	196	39,394 27
1880.....	186	39,250 24			
Carried forward		1,022,561 91			
					1,110,624 14

OF EXPENDITURE.

Federation.	Grand Total Expenditure on Construction up to 30th June, 1882.	Number.	Remarks.
\$ cts.	\$ cts.		
397,359 30	397,359 30	1	
51,619 45	51,619 45	2	
157,126 75	157,126 75	3	
357,414 36	1,502,105 06	4	
172,300 27	713,600 41	5	
1,590 66	1,590 86	6	
44,167 04	44,167 04	7	
4,634 62	4,634 62	8	
1,186,212 65	2,872,203 49		

DOMINION

Number.	Name of Vessel.	Expenditure previous to Confederation.			Expenditure since Con.	
		From Government Funds.	From other than Government Funds.	Total, up to June 30, 1867.	From Government Funds.	From other than Government Funds.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	"Admiral" .....			37,000 00		
2	"Advance" .....			37,000 00		
3	"Lady Head" .....	225,544 00	158,456 00	70,000 00		
4	"Napoleon III" .....			120,000 00		
5	"Queen Victoria" .....			120,000 00		
6	Steamer "Michigan" .....	16,787 50		16 787 50		
7	do "Rescue" .....	21,000 00		21,000 00		
8	do "Doris" .....	22,386 67		22,386 67		
9	Schooner "La Canadienne" .....	20,066 23		20,066 23		
10	Steamer "Glendon" .....				20,000 00	
11	do "Newfield" .....				64,997 23	
12	do "Northern Light" .....				62 320 10	
13	do "Foxhound," now "La Canadienne" .....				38,933 33	
14	Str. "Sir James Douglas" — See "Dredges," folio .....					
Totals, Dominion Steamers		305,784 40	158,456 00	464,240 40	*186,250 66	

\* This expenditure was made through the Department of Marine and Fisheries, under whose the purchase or construction of the undermentioned Steamers during

	1876.	
	II.	\$ cts.
Steamer "Glendon" .....	175	20,000 00
do "Newfield" .....	175	64,997 23
do "Northern Light" .....	175	16,241 26
do "Foxhound," now "La Canadienne" .....		
Totals .....		101,238 49



STEAMERS.

Confederation.	Grand Total Expenditure on Construction, up to 30th June, 1882.		Number.	Remarks.
	\$	cts.		
Total for Fifteen Years ended 30th June, 1882.				
	\$	cts.		
.....	37,000	00	1	Wooden paddle steamer, purchased from the late Frs. Baby in August, 1860, and sold to S. & C. Peters on 16th February, 1861, for \$1,400.
.....	37,000	00	2	Wooden paddle steamer, purchased from the late Frs. Baby in August, 1860.
.....	70,000	00	3	Iron screw steamer, purchased from the late Frs. Baby in August, 1860. WRECKED on Fishery service near Fox River in 1879
.....	120,000	00	4	Iron screw steamer, purchased from the late Frs. Baby in August, 1860. Supplies lights, Quebec.
.....	120,000	00	5	Iron screw steamer; purchased in August, 1860, and FOUNDERED at sea on the 4th October, 1866.
.....	16,787	50	6	Purchased in 1866-67.
.....	21,000	00	7	Purchased in 1866-67. Sold by the Department of Militia for \$9,500 to the St. Lawrence Tow-Boat Company, in June, 1873.
.....	22,386	67	8	Wooden paddle steamer. She was placed in 1853 on the service for the protection of Fisheries in the Gulf of St. Lawrence. She was WRECKED in 1856.
.....	20,066	23	9	Built on 5th June, 1855, for the protection of the Canadian Fisheries in the Gulf of St. Lawrence Length 92 $\frac{1}{2}$ feet, breadth 23 $\frac{1}{2}$ feet, depth 10 $\frac{1}{2}$ feet. FOUNDERED near Halifax two years ago.
20,000 00	20,000	00	10	Purchased in 1876 for the sum stated. Condemned and sold this year for \$4,100.
64,997 23	64,997	23	11	Purchased in 1876 for the sum stated. Employed in Fishery Service.
62,320 10	62,320	10	12	Built in 1876 and 1877 for winter navigation between Prince Edward Island and Mainland. Is undergoing repairs at Pictou.
38,933 33	38,933	33	13	Purchased in 1880-81 for the amount stated. Is engaged on the protection of the Canadian Fisheries in the Gulf of St. Lawrence.
.....			14	
186,250 66	650,491	06		

management the Dominion Steamers were placed at date of Confederation. It was incurred for the following years, as shown in the Public Accounts, viz. :-

1877.		1881.		Total.	
II.	\$ cts.	II.	\$ cts.		\$ cts.
.....	.....	.....	.....	.....	20,000 00
184	46,078 84	.....	.....	.....	64,997 23
.....	.....	.....	.....	.....	62,320 10
.....	.....	197	38,933 33	.....	38,933 33
46,078 84		38,933 33		186,250 66	

ANALYSIS OF EXPENDITURE by the Government of Lower and Upper Canada on Public Works prior to Confederation, as shown in the Report of the Commissioner of Public Works for 1867. Appendix No. 70, pages, 482 to 561.

Number.	Name of Work.	Government Expenditure.				Other than Government Expenditure.			Total Expenditure as shown in Appendix above referred to, page 561.
		On Works either transferred to Local Governments or abandoned to Municipal Authorities, &c.		Total Government Expenditure.	On Dominion Works.	(In works transferred to Local Governments, &c.	On works built and paid for by Private Companies.		
		Quebec.	Ontario.						
		\$	cts.	\$	cts.	\$	cts.	\$	cts.
1	Railways .....	20,264,800	01	20,264,800	01	116,498,416	99	136,763,217	00
2	Canals .....	18,641,390	58	18,641,390	58	4,459,664	67	23,101,055	24
	Totals, Railways and Canals .....	38,906,190	59	38,906,190	59	4,459,664	67	159,864,272	25
3	Public Buildings.....	4,183,460	89	9,176,560	70	60,000	00	9,236,560	70
4	Harbours .....	2,169,479	52	2,169,479	52	52,038	67	2,221,518	19
5	Improvement of Rivers .....	28,354	33	28,354	33			28,354	33
6	Dredges .....	43,472	43	43,472	43			43,472	43
7	Slides and Booms .....	1,346,652	67	1,346,652	67			1,346,652	67
8	Roads and Bridges.....	481,554	52	6,518,114	59			7,484,290	02
9	Lighthouses .....	1,685,990	84	1,635,980	84			1,685,990	84
								Turnpike roads 936,175	43



ANALYSIS OF EXPENDITURE the by Dominion Government on Public Works of Canada, from 1st July, 1867, to 30th June, 1882,  
as shown in Appendix No. 1, page 141.

Number.	Name of Work.	On Dominion Works.				On Works transferred to Local Governments or abandoned to Municipalities, &c.			Total Expenditure, as per App No. 1, Page 141.
		Construction or Improvement.		Repairs, Maintenance, Working Expenses, &c.	Total Expenditure on Dominion Works.	Nova Scotia.	Quebec.	Ontario.	
		Government Funds.	Other than Government Funds.						
1	Railways	\$ 55,491,071 82	\$	\$ 55,491,071 82	\$ 20,709,640 19	\$	\$ 76,200,712 01	\$ 76,200,712 01	
2	Canals	\$ 23,447,564 27	\$	\$ 23,447,564 27	\$ 5,239,257 67	\$	\$ 28,686,821 94	\$ 28,686,821 94	
	Total, Railways and Canals.	\$ 78,938,636 09	\$	\$ 78,938,636 09	\$ 25,948,897 86	\$	\$ 104,887,533 95	\$ 104,887,533 95	
3	Public Buildings	\$ 7,286,432 12	\$ 9,933 33	\$ 7,296,365 45	\$ 3,046,090 05	\$	\$ 10,342,455 50	\$ 10,342,455 50	
4	Harbours and Breakwaters	\$ 3,653,091 79	\$ 84,075 75	\$ 3,737,167 54	\$	\$	\$ 3,737,167 54	\$ 3,737,167 54	
5	Improvement of Rivers	\$ 678,609 03	\$ 7,400 00	\$ 686,009 03	\$ 2,433 76	\$	\$ 688,442 79	\$ 688,442 79	
6	Dredges	\$ 309,929 28	\$	\$ 309,929 28	\$ 49,289 21	\$	\$ 359,218 49	\$ 359,218 49	
7	Dredging (not apportioned to any work)	\$	\$	\$	\$ 86,531 95	\$	\$ 86,531 95	\$ 86,531 95	
8	Slides and Booms	\$ 305,110 26	\$	\$ 305,110 26	\$ 1,019,702 15	\$	\$ 1,324,812 41	\$ 1,324,812 41	
9	Road and Bridges	\$ 1,138,936 55	\$ 5,500 00	\$ 1,144,436 55	\$ 601,479 75	\$	\$ 1,745,916 30	\$ 1,745,916 30	
10	Telegraph Lines	\$ 360,050 38	\$	\$ 360,050 38	\$ 386,322 18	\$	\$ 746,372 56	\$ 746,372 56	
11	Lighthouses	\$ 75,588 51	\$	\$ 75,588 51	\$	\$	\$ 75,588 51	\$ 75,588 51	
12	Miscellaneous (Nos. 18 to 24)	\$	\$	\$	\$ 610,575 56	\$	\$ 610,575 56	\$ 610,575 56	
	Totals, Public Works	\$ 13,807,747 92	\$ 106,909 08	\$ 13,914,657 00	\$ 5,803,424 61	\$	\$ 19,717,081 61	\$ 19,769,209 37	
	Grand Totals	\$ 92,746,384 01	\$ 106,909 08	\$ 92,853,293 09	\$ 31,751,322 47	\$	\$ 124,604,615 56	\$ 124,656,743 32	





(d) This expenditure was made through the Department of Marine and Fisheries, under whose management the Dominion steamers were placed at date of Confederation. It was incurred for the purchase or construction of the undermentioned steamers, as shown in the Public Accounts, for the following years, viz :

	1876.		1877.		1881.		Total.
	II	\$ cts.	II	\$ cts.	II	\$ cts.	
Steamer Glendon, purchase of.....	175	20,000 00					20,000 00
do Newfield do .....	175	64,997 23					64,997 23
do Northern Light, construction.....	175	16,241 26	164	46,078 84			62,320 10
do Foxhound, purchase of.....					197	38,933 33	38,933 33
		101,238 49		46,078 84		38,933 33	186,250 66

Memo. i.—Expenditure—Prior to Confederation—  
 Government Funds..... \$63,505,505 18  
 From other Funds..... 4,670,159 34  
 \$68,175,664 52

Since Confederation—  
 Government Funds..... \$95,135,588 81  
 From other Funds..... 3,504,718 39  
 98,640,307 20

Total Expenditure as above ..... \$166,815,771 72

GENERAL ABSTRACT showing amounts expended in each Province on Construction  
inception, to

Number.	Works.	Nova Scotia.	Prince Edward Island.	New Brunswick.
			Entered Confederation, 1st July, 1871.	
		\$ cts.	\$ cts.	\$ cts.
1	Railways.....	15,653,099 13	3,466,990 60	16,942,454 66
2	Canals.....	£53,321 12	.....	44,387 53
	<b>Totals, Railways and Canals .....</b>	<b>16,306,420 25</b>	<b>3,466,990 60</b>	<b>16,986,842 19</b>
3	Public Buildings.....	164,110 00	75,253 68	1,248,672 00
4	Harbours and breakwaters.....	906,491 69	580,077 82	589,538 80
5	Improvement of rivers.....	79,869 38	36,704 18	119,769 06
6	Dredges.....	120,044 76	23,582 07	105,044 66
7	Slides and booms.....	.....	.....	.....
8	Roads and bridges.....	.....	.....	2,368 34
9	Telegraph lines.....	67,945 88	.....	13,940 00
10	Lighthouses.....	397,359 30	52,619 45	157,126 75
11	Dominion steamers.....	162,622 76	162,622 76	162,622 77
	<b>Totals, Public Works.....</b>	<b>1,898,443 66</b>	<b>929,859 96</b>	<b>2,399,082 38</b>
	<b>Grand Totals .....</b>	<b>18,204,863 91</b>	<b>4,396,850 56</b>	<b>19,385,924 57</b>

\* Including \$1,755,840 58 amount expended by the Montreal Harbour Commissioners, and paid out  
July, 1873, to 31st

† Including \$1,560,918.65 amount expended by the Montreal Harbour Commissioners, and paid out

\$3,266,759 23



and Improvement of the Public Works of the Dominion of Canada since their 30th June, 1882.

Quebec.	Ontario.	Entered Confederation.			Miscellaneous not apportioned to any of the Provinces.	Total.	Number.
		15th July, 1870.		20th July, 1871, British Columbia.			
		Manitoba.	North - West Territories.				
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.		
15,450,429 60	26,285,513 17	5,641,181 85	2,715,811 86	4,574,181 61	.....	90,729,662 48	1
*17,971,742 76	29,698,970 69	.....	326,675 65	.....	9,885 67	48,410,983 42	2
33,422,172 36	55,984,483 86	5,641,181 85	2,748,487 51	4,574,181 61	9,885 67	139,140,645 90	
2,598,637 45	6,473,663 03	326,247 47	228,135 40	260,473 98	104,633 33	11,479,826 34	3
†3,245,803 13	2,462,322 53	223 39	.....	84,494 87	6,083 35	7,875,035 48	4
307,867 28	119,572 49	17,364 96	714 48	32,501 53	.....	714,363 36	5
37,374 00	59,658 37	.....	.....	99,697 96	.....	445,401 71	6
1,009,594 17	642,168 76	.....	.....	.....	.....	1,651,762 93	7
525,068 48	732,249 72	366,304 53	.....	.....	.....	1,625,991 07	8
180,958 74	.....	72 00	.....	89,879 49	7,254 27	360,050 38	9
1,502,105 06	713,600 41	1,590 86	.....	44,167 04	4,634 62	2,872,203 49	10
162,622 77	.....	.....	.....	.....	.....	650,491 06	11
9,570,031 08	11,203,235 31	711,803 21	228,849 88	611,214 77	122,605 57	27,675,125 82	
42,992,203 44	67,187,719 17	6,352,985 06	2,977,337 39	5,185,996 38	132,491 24	166,815,771 72	

of their own funds on account of dredging, St. Lawrence River, between Quebec and Montreal, from 1st December, 1881.

of their own funds, on account of harbour works, from 1st July, 1867, to 30th June, 1882.



APPENDIX No. 43½.

—  
HARBOURS AND BREAKWATERS.

—  
NOVA SCOTIA.

—  
1852—1867.

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APPENDIX No. 43½.

STATEMENT showing Expenditure by Provincial Government of Nova Scotia on Harbour Works, &c., prior to Confederation, 1st July, 1867.

TABLE I.—1852 TO 1861.

No.	Places.	1852.	1853.	1854.	1855.	1856.	1857.	1859.	1860.	1861.	Totals, 1852-61, carried forward.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Allen's River.....					80 00					80 00
2	Arsaig Pier.....		800 00	800 00	800 00	500 00	800 00	60 00	60 00	400 00	4,520 00
3	Barnaby Mill Cove.....		200 00	40 00							200 00
4	Bass Creek.....					305 40	94 60		49 90		449 90
5	Baxter Harbour.....		100 00			660 00	160 00		40 00		300 00
6	Bear River.....										1,960 00
7	Belliveau Cove.....	200 00	300 00	490 00	400 00					30 00	60 00
8	Birchtown.....			60 00							1,393 81
9	Bridgeport.....					413 79	357 21				1,040 00
10	Canada Creek.....		225 81		400 00	400 00		80 00	80 00		300 00
11	Cape Cove.....	120 00	160 00		200 00	200 00				100 00	160 00
12	Cheverie.....							160 00			600 00
13	Chipman Brook Pier.....					300 00					735 66
14	Chute's Cove.....					520 00	135 66	80 00			100 00
15	Church Point.....										540 00
16	Clyde River.....			100 00							160 00
17	Comcauville.....						440 00			100 00	80 00
18	Cranberry Head Cove.....							80 00		80 00	80 00
19	Darling's Lake.....										2,909 34
20	Digby.....		100 00		220 00	89 34				2,500 00	4,000 00
21	East River.....					3,482 67	517 33				100 00
22	Fisher's Grant Wharf.....					120 00					100 00
23	Fort Lawrence.....										1,375 50
24	French Cross.....	88 00	87 50	400 00	800 00						1,120 00
25	Gate's Cove.....		500 00	620 00	620 00						1,140 58
26	Givyan Wharf.....				200 00	769 24	171 34				160 00
27	Griffin Cove.....							60 00	80 00		2,000 00
28	Griffin Cove.....							80 00	80 00		827 74
29	Groscoque.....	200 00	200 00	200 00	400 00	600 00	400 00				100 00
30	Hall Harbour.....		67 00		539 51		221 20				
31	Horton.....						100 00				





35	Clyde River.....	100 00				140 00			550 00
36	Cocaine.....					100 00			100 00
37	Comeauville.....	540 00				200 00			1,240 00
38	Cow Bay.....	160 00					300 00		10,000 00
39	Cranberry Head Cove.....	80 00					8,000 00		310 00
40	Darling's Lake.....	2,909 34						150 00	80 00
41	Digby.....	4,000 00						250 00	8,268 74
42	East River.....	120 00				100 00			4,100 00
43	Fisher's Grant Wharf.....	100 00							120 00
44	Fort Lawrence.....	168 86							100 00
45	French Cross.....	1,375 50							2,175 50
46	Gate's Cove.....	1,120 00							1,120 00
47	Givan Wharf.....	1,140 58							1,140 58
48	Griffin Cove.....	140 00							140 00
49	Green Cove.....	160 00				200 00			701 00
50	Groscoque.....	2,000 00				200 00			2,400 00
51	Hall Harbour.....	827 74				250 00			827 74
52	Herring Cove.....								250 00
53	Horton.....	100 00							100 00
54	Indian Gardens.....					600 00			600 00
55	Intercolonial Coal Co.....						500 00		500 00
56	Jordan River.....	200 00							400 00
57	Little A'ricat Harbour.....								5,000 00
58	Little River Wharf.....	636 00							636 00
59	Liverpool Harbour.....	1,280 00				4,400 00			7,980 00
60	Lobster Rocks.....					855 66			1,482 35
61	Low Water.....					3,000 00			3,000 00
62	Lunenburg.....								250 00
63	Maccabur Passage.....								1,600 00
64	McAnley's.....	500 00							2,000 00
65	Margareville.....	999 88							2,100 00
66	Margaree River.....	40 00							999 88
67	Merigumish.....	800 00							1,400 00
68	Meteghan River.....					400 00			1,400 00
69	Minudie.....								190 00
70	Molasses Harbour.....								800 00
71	Molasses and Cole Harbours.....								433 84
72	Montegan.....	1,300 00				66 16			66 16
73	Murray Mill Brook River.....	200 00							1,633 27
74	Neil's Harbour.....								200 00
75	Nesse Ledge.....								1,123 68
76	Oak Point Pier.....								500 00
77	Ogilvie Brook.....	1,300 00							1,000 00
78	Pictou Harbour.....	871 14				267 00			1,300 00
79	Plaster.....	400 00							1,588 14
80	Pleasant Cove.....	800 00							400 00
81	Port George.....								800 00
82	Port George.....								268 00
	Carried forward.....	37,172 65	3,212 41	3,460 54	24,364 06	12,770 86	21,982 74	9,649 78	112,613 03

STATEMENT showing Expenditure by Provincial Government of Nova Scotia on Harbour Works, &c., &c.—Continued.

TABLE II, 1862 to 1867.

Number.	Place.	Brought forward from 1852 to 1861.	1862.	1863.	1864.	1865.	1866.	1867.	Grand Totals.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	Brought forward.....	37,172 65	3,212 41	3,460 54	24,364 06	12,770 85	21,982 74	9,649 78	112,613 03
83	Port Hood Harbour.....	4,474 25					19,843 40	500 00	21,617 65
84	Porter Point.....	645 00							645 00
85	Port Williams.....	283 35					298 63		551 98
86	Pubnico Harbour.....	80 00				236 00			80 00
87	River Dennis.....						100 00		236 00
88	River Philip.....								100 00
89	Roseway River.....	222 00				100 00			322 00
90	Round Bay.....						40 00		40 00
91	Safe Harbour Pier.....	74 25				300 00	1,500 00	300 00	1,900 00
92	Saultmeville.....						400 00		400 00
93	Shelburne Harbour.....	200 00							200 00
94	Short Beach.....	730 50					300 00		1,030 50
95	Sisiboo River.....						540 00		540 00
96	Somerville.....								120 00
97	Sonier Creek.....	120 00					300 00		300 00
98	St. Ann's.....								40 00
99	St. Croix River.....						40 00		40 00
100	St. Mary's River.....						340 00	200 00	540 00
101	Tracadie Harbour.....	1,199 34					7,500 00	4,572 87	13,272 21
102	Trout Cove.....	959 30							959 30
103	Tusket River.....	300 00		389 93		200 00			949 93
104	Young's Landing.....						1,000 00		1,000 00
105	Yarmouth.....	654 20							654 20
106	Whale Cove.....	280 00							280 00
107	Whitehead Harbour.....	80 00							80 00
108	Windsor River.....	200 00							200 00
109	Wise Ledge.....						1,000 00		1,000 00
	Grand Totals.....	47,644 84	3,212 41	3,850 47	24,424 06	13,606 85	64,684 77	15,222 65	162,646 05



ABSTRACT STATEMENT of Expenditure on Roads and Bridges by Provincial Government of Nova Scotia prior to Confederation, 1st July, 1867.

Year.	Roads and Bridges.	Road.		Grand Totals.
		Advances.	Compensation.	
	\$	\$	\$	\$
1852.....	485,582 45	4,910 92	5,314 65	495,808 02
1853.....	558,912 32	5,303 57	3,237 54	567,453 43
1854.....	776,800 50	10,432 84	3,482 85	790,716 19
1855.....	6,231 94	7,215 80	3,540 87	16,988 61
1856.....	167,648 88	4,716 83	3,597 00	175,962 71
1857.....	160,048 90	8,783 96	1,549 65	170,382 51
1858.....	101,319 60	4,196 55	2,840 87	108,357 02
1859.....	100,775 06	9,143 14	1,859 55	111,777 75
1860.....	88,629 95	14,801 40	423 76	103,855 11
1861.....	100,341 34	17,705 36	323 46	118,370 16
1862.....	94,327 75	12,094 63	274 29	106,696 67
1863.....	124,450 77	12,314 18	346 85	137,111 80
1864.....	187,084 73	10,840 90	14 00	197,939 63
1865.....	254,300 58	47,039 81	621 50	301,961 89
1866.....	176,550 47	13,029 96	326 95	189,907 38
1867.....	46,478 85	22,911 28	300 30	69,690 43
	3,429,484 09	205,441 13	28,054 09	3,662,979 31



APPENDIX No. 44.

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ALTITUDES OF DIFFERENT POINTS IN QUEBEC

ABOVE THE

ST. LAWRENCE AT LOW TIDE.

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 APPENDIX No. 44.
 

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(No. 36028.)

**ALTITUDES OF DIFFERENT POINTS IN QUEBEC, ABOVE THE ST.  
LAWRENCE, AT LOW TIDE.**

Names of Places.	Height in feet.
Little Glacis, from Champlain Steps.....	87·70
Prescott Gate, (extra muros).....	116·86
Archbishop's Palace, from ground.....	143·00
Roman Catholic Cathedral, from side-walk opposite the main entrance.....	152·84
English Cathedral, from ground.....	175·00
Durham, Dufferin or Frontenac Terrace.....	182·34
Commissariat.....	195·70
Wolfe and Montcalm Monument... ..	205·00
Palace Gate.....	68·35
St. John's Gate.....	147·00
St. Louis Gate.....	232·75
The Citadel.....	333·33

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APPENDIX No. 45.

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**TABLES OF ENGLISH AND FRENCH  
MEASURES, ETC.,**

**USED IN CANADA, Etc.**

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## APPENDIX No. 45.

(36029).

## MEASURES IN USE IN LOWER CANADA.

The measures used in the Seigniorial parts of Canada are those of France, while, in the Townships, the Standard Measures of England are adopted. The relation these measures, respectively, bear to each other, is generally but little understood, and indiscriminate reference to them in legal instruments, and even in Acts of the Legislature, has often caused much inconvenience, and many cases of litigation in the country; to remedy (as much as possible) those evils, the following tables have been constructed.

In assuming the relation the *Pied de Paris* or Paris Foot bears to the English Foot, that given in the "Philosophical Transactions," vol. 58, page 326, has been taken as the best authority. By this it appears that 1,000 French feet are equal to 1,065.75 English feet. In the Province of Ontario for some years, the difference was accounted still greater than the above analogy gives it, 1,068 English feet being considered as equal to 1,000 feet of Paris. This last proportion, however, was found to be decidedly incorrect, and the care with which that was ascertained, as given in the "Philosophical Transactions," can leave no doubt of its superior exactness.\*

The denominations of French measures of distance, introduced in the tables are Leagues, Arpents, Perches, Feet and Inches; in Superficial or Square Measures the only French Measures are Arpents and Perches, as applied to Land Measure with decimal parts of the lesser denomination used in the Equivalents in all cases where they may occur, in the measures of either species.

The *Toise*, although much used by practical Geometricians in France, is seldom referred to in Canada, except in Solid or Cubic Measure, and is therefore not included amongst those used in the Tables. It consists of six French Feet, or *one-third* of a Perch, and its value may thence be easily obtained from the Tables, by taking its equivalent in any other given denomination.

The following Table may be useful to those not familiar with French measures:—

Inches.	Feet.	Perches.	Arpents.	League.
12 =	1			
216 =	18 =	1		
2,160 =	180 =	10 =	1	
181,440 =	3,240 =	840 =	84 =	1

\* The well known property of different metals to expand or contract in increased or diminished temperature as compared with those at which the measures of the standard feet of London and Paris are respectively taken has caused some to apply a further correction to the above relation between their values, by which 1,065.79 nearly of English feet, would be equal to 1,000 feet of Paris. The extreme smallness of this correction, amounting to less than a unit in 26,000, seemed to render it unnecessary to depart from the general authorities in the compilation of the Tables.

TABLE I.—For converting French Feet and Inches into English Feet and Inches, and into English Statute Chains and Links.

LINEAL MEASURE.

French.		English.				French.	English.				
Feet.	Inches.	Feet.	Inches.	Chains.	Links.		Feet.	Inches.	Chains.	Links.	
.....	1	.....	1·066	0	·135	14	14	11·046	0	22·607	
.....	2	.....	2·132	0	·269	15	15	11·835	0	24·222	
.....	3	.....	3·197	0	·404	16	17	0·624	0	25·836	
.....	4	.....	4·263	0	·538	17	18	1·413	0	27·451	
.....	5	.....	5·329	0	·673	18	19	2·202	0	29·066	
.....	6	.....	6·395	0	·807	19	20	2·991	0	30·681	
.....	7	.....	7·460	0	·942	20	21	3·780	0	32·295	
.....	8	.....	8·526	0	1·077	30	31	11·670	0	48·443	
.....	9	.....	9·592	0	1·211	40	42	7·560	0	64·591	
.....	10	.....	10·658	0	1·346	50	53	3·450	0	80·739	
.....	11	.....	11·723	0	1·480	60	63	11·340	0	96·886	
1	.....	1	0·789	0	1·615	70	74	7·230	1	13·034	
2	.....	2	1·578	0	3·230	80	85	3·120	1	29·182	
3	.....	3	2·367	0	4·844	90	95	11·010	1	45·330	
4	.....	4	3·156	0	6·459	100	106	6·900	1	61·477	
5	.....	5	3·945	0	8·074	200	213	1·800	3	22·955	
6	.....	6	4·734	0	9·689	300	319	8·700	4	84·432	
7	.....	7	5·523	0	11·303	400	423	3·600	6	45·909	
8	.....	8	6·312	0	12·918	500	532	10·500	8	7·886	
9	.....	9	7·101	0	14·533	600	639	5·400	9	68·864	
10	.....	10	7·890	0	16·148	700	746	0·300	11	30·341	
11	.....	11	8·679	0	17·762	800	852	7·200	12	91·818	
12	.....	12	9·468	0	19·377	900	959	2·100	14	53·295	
13	.....	13	10·257	0	20·992	1,000	1,065	9·000	16	14·773	

EXAMPLE I.

In 360 feet, 10 inches, French measure, how many English feet ?

300 feet	=	319	8·70
60 "	=	63	11·34
10 inches	=	.....	10·66
Answer .....		384	6·70

EXAMPLE II.

In 13 feet, 11 inches, French measure, how many chains and links ?

13 feet	=	0	20·992
11 inches	=	...	1·480
Answer .....		0	22·472

TABLE II.—For converting English Feet and Inches into French Feet and Inches.

LINEAL MEASURE.							Remarks.
English.		French.		English.	French.		
Feet.	Inches.	Feet.	Inches.	Feet.	Feet.	Inches.	
.....	1	.....	0·94	10	9	4·60	
.....	2	.....	1·88	20	18	9·19	
.....	3	.....	2·81	30	28	1·79	
.....	4	.....	3·75	40	37	6·39	
.....	5	.....	4·69	50	46	10·98	
.....	6	.....	5·63	60	56	3·68	
.....	7	.....	6·57	70	65	8·18	
.....	8	.....	7·51	80	75	0·77	
.....	9	.....	8·44	90	84	5·37	
.....	10	.....	9·38	100	93	9·97	
.....	11	.....	10·32	200	187	7·94	
1	.....	.....	11·26	300	281	5·90	
2	.....	1	10·52	400	375	3·87	
3	.....	2	9·78	500	469	1·84	
4	.....	3	9·04	600	562	11·81	
5	.....	4	8·30	700	656	9·77	
6	.....	5	7·56	800	750	7·74	
7	.....	6	6·82	900	844	5·71	
8	.....	7	6·08	1,000	938	3·68	
9	.....	8	5·34				

EXAMPLE.

In 384 feet, 6 7-10 inches of English measure, how many feet, &c., French ?

	Feet.	Inches.
300 feet =	281	5·90
80 do =	75	0·77
4 do =	3	9·04
6 inches =	...	5·63
7-10 do =	...	66

Answer..... 360 10·00

See the converse of the above example at the end of Table I.



TABLE III.—For converting French Leagues, Arpents and Perches into English Miles, Chains and Links.

LINEAL MEASURE.

French.		English.			French.		English.		
Arpents.	Perches.	Miles.	Chains.	Links.	Leagues.	Arpents.	Miles.	Chains.	Links.
.....	1	.....	.....	29·07	.....	60	2	14	39·54
.....	2	.....	.....	58·13	.....	70	2	43	46·14
.....	3	.....	.....	87·20	.....	80	2	72	52·73
.....	4	.....	1	16·26	1	.....	3	4	15·36
.....	5	.....	1	45·33	2	.....	6	8	30·73
.....	6	.....	1	74·40	3	.....	9	12	46·09
.....	7	.....	2	03·46	4	.....	12	16	61·45
.....	8	.....	2	32·53	5	.....	15	20	76·81
.....	9	.....	2	61·59	6	.....	18	24	92·18
1	.....	.....	2	90·66	7	.....	21	29	07·54
2	.....	.....	5	81·32	8	.....	24	33	22·90
3	.....	.....	8	71·98	9	.....	27	37	38·26
4	.....	.....	11	62·64	10	.....	30	41	53·63
5	.....	.....	14	53·30	20	.....	61	3	07·25
6	.....	.....	17	43·95	30	.....	91	44	60·88
7	.....	.....	20	34·61	40	.....	122	6	14·51
8	.....	.....	23	25·27	50	.....	152	47	68·14
9	.....	.....	26	15·93	60	.....	183	9	21·76
10	.....	.....	29	6·59	70	.....	213	50	75·39
20	.....	.....	58	13·18	80	.....	244	12	29·02
30	.....	1	7	19·77	90	.....	274	53	82·64
40	.....	1	36	26·36	100	.....	305	15	36·27
50	.....	1	65	32·95					

EXAMPLE.

In 50 leagues, 70 arpents and 6 perches, French measure, how many English miles, &c. ?

	Miles.	Chains.	Links.
50 Leagues =	152	47	68·14
70 Arpents =	2	43	46·14
6 Perches =	.....	1	74·40
Answer.....	155	12	88·68

TABLE IV.—For converting English Miles, Chains and Links, into French Leagues, Arpents, Perches and Feet.

LINEAL MEASURE.

English.			French.				English.			French.			
Miles.	Chains.	Links.	Leagues.	Arpents.	Perches.	Feet.	Miles.	Chains.	Links.	Leagues.	Arpents.	Perches.	Feet.
.....	.....	1	.....	.....	.....	0.62	.....	50	.....	.....	17	2	0.41
.....	.....	2	.....	.....	.....	1.24	.....	60	.....	.....	20	6	7.69
.....	.....	2	.....	.....	.....	1.86	.....	70	.....	.....	24	0	14.98
.....	.....	4	.....	.....	.....	2.48	.....	1	.....	.....	27	5	4.26
.....	.....	5	.....	.....	.....	3.10	.....	2	.....	.....	55	0	8.52
.....	.....	6	.....	.....	.....	3.72	.....	3	.....	.....	82	5	12.77
.....	.....	7	.....	.....	.....	4.34	.....	4	.....	1	26	0	17.03
.....	.....	8	.....	.....	.....	4.96	.....	5	.....	1	53	6	3.29
.....	.....	9	.....	.....	.....	5.57	.....	6	.....	1	81	1	7.55
.....	.....	10	.....	.....	.....	6.19	.....	7	.....	2	24	6	11.80
.....	.....	20	.....	.....	.....	12.39	.....	8	.....	2	52	1	16.06
.....	.....	30	.....	.....	1	0.58	.....	9	.....	2	79	7	2.32
.....	.....	40	.....	.....	1	6.77	.....	10	.....	3	23	2	6.58
.....	.....	50	.....	.....	1	12.96	.....	20	.....	6	46	4	13.15
.....	.....	60	.....	.....	2	1.16	.....	30	.....	9	69	7	1.73
.....	.....	70	.....	.....	2	7.35	.....	40	.....	13	8	9	8.30
.....	.....	80	.....	.....	2	13.54	.....	50	.....	16	32	1	14.88
.....	.....	90	.....	.....	3	1.74	.....	60	.....	19	55	4	3.45
.....	.....	1	.....	.....	3	7.93	.....	70	.....	22	78	6	10.63
.....	.....	2	.....	.....	6	15.86	.....	80	.....	26	17	8	16.01
.....	.....	3	.....	1	0	5.78	.....	90	.....	29	41	1	5.18
.....	.....	4	.....	1	3	13.71	.....	100	.....	32	64	3	11.76
.....	.....	5	.....	1	7	3.64	.....	200	.....	65	44	7	5.51
.....	.....	6	.....	2	0	11.57	.....	300	.....	98	25	0	17.27
.....	.....	7	.....	2	4	1.50	.....	400	.....	131	5	4	11.03
.....	.....	8	.....	2	7	9.43	.....	500	.....	163	69	8	4.78
.....	.....	9	.....	3	0	17.35	.....	600	.....	196	50	1	16.54
.....	.....	10	.....	3	4	7.28	.....	700	.....	229	30	5	10.30
.....	.....	20	.....	6	8	14.56	.....	800	.....	262	10	9	4.05
.....	.....	30	.....	10	3	3.85	.....	900	.....	294	75	2	15.81
.....	.....	40	.....	13	7	11.13	.....	1,000	.....	327	55	6	9.57

EXAMPLE.

In 155 miles, 12 chains, 88-68-100ths links, English measure, how many French leagues, &c. ?

	L.	A.	P.	Feet.
100 miles =	32	64	3	11.76
50 " =	16	32	1	14.88
5 " =	1	53	6	3.29
10 chains =		3	4	7.28
2 " =			6	15.86
80 links =			2	13.54
8 " =				4.96
0.68 " =				0.43
Answer =	50	70	6	0.00

TABLE V.—For converting French Arpents and Perches into English Acres, Roods and Perches.

SUPERFICIAL OR SQUARE MEASURE.

French.		English.			French.		English.		
Arpents.	Perches.	Acres.	Roods.	Perches.	Arpents.	Acres.	Roods.	Perches.	
.....	1	.....	.....	1·35	6	5	0	11·03	
.....	2	.....	.....	2·70	7	5	3	26·21	
.....	3	.....	.....	4·06	8	6	3	1·38	
.....	4	.....	.....	5·41	9	7	2	16·55	
.....	5	.....	.....	6·76	10	8	1	31·72	
.....	6	.....	.....	8·11	20	16	3	23·44	
.....	7	.....	.....	9·46	30	25	1	15·17	
.....	8	.....	.....	10·82	40	33	3	6·89	
.....	9	.....	.....	12·17	50	42	0	38·62	
.....	10	.....	.....	13·52	60	50	2	30·34	
.....	20	.....	.....	27·03	70	59	0	22·06	
.....	30	.....	1	0·55	80	67	2	13·79	
.....	40	.....	1	14·07	90	76	0	5·51	
.....	50	.....	1	27·59	100	84	1	37·23	
.....	60	.....	2	1·10	200	168	3	34·46	
.....	70	.....	2	14·62	300	253	1	31·70	
.....	80	.....	2	28·14	400	337	3	28·93	
.....	90	.....	3	1·65	500	422	1	26·16	
.....	1	.....	3	15·17	600	506	3	23·39	
.....	2	.....	2	30·34	700	591	1	20·61	
.....	3	.....	2	5·52	800	675	3	17·86	
.....	4	.....	3	20·69	900	760	1	15·09	
.....	5	.....	4	35·86	1,000	844	3	12·32	

EXAMPLE.

In 320 arpents and 10 perches, French measure, how many acres, &c. ?

	Acres.	Roods.	Perches.
300 arpents	= 253	1	31·70
20 do	= 16	3	23·44
10 perches	= .....	.....	13·52
Answer.....	270	1	28·66

TABLE VI.—For converting English Acres, Roods and Perches, into French Arpents and Perches.  
SUPERFICIAL OR SQUARE MEASURE.

English.			French.		English.			French.	
Acres.	Roods.	Perches.	Arpents.	Perches.	Acres.	Arpents.	Perches.		
.....	.....	1	.....	0·74	8	9	46·94		
.....	.....	2	.....	1·48	9	10	65·31		
.....	.....	3	.....	2·22	10	11	83·67		
.....	.....	4	.....	2·96	20	23	67·35		
.....	.....	5	.....	3·70	30	35	51·02		
.....	.....	6	.....	4·44	40	47	34·70		
.....	.....	7	.....	5·18	50	59	18·37		
.....	.....	8	.....	5·92	60	71	2·05		
.....	.....	9	.....	6·66	70	82	85·72		
.....	.....	10	.....	7·40	80	94	69·39		
.....	.....	20	.....	14·80	90	106	53·07		
.....	.....	30	.....	22·19	100	118	36·74		
.....	1	.....	.....	29·59	200	236	73·48		
.....	2	.....	.....	59·18	300	355	10·23		
.....	3	.....	.....	88·78	400	473	46·97		
1	.....	.....	1	18·37	500	591	83·71		
2	.....	.....	2	36·73	600	710	20·45		
3	.....	.....	3	55·10	700	828	57·19		
4	.....	.....	4	73·47	800	946	93·94		
5	.....	.....	5	91·84	900	1,065	30·68		
6	.....	.....	7	10·20	1,000	1,183	67·42		
7	.....	.....	8	28·57					

EXAMPLE.

In 270 acres, 1 rood and 28-66-00 perches, English measure, how many arpents, &c. ?

	Arpents.	Perches.
200 acres.....	=236	73·48
70 do.....	= 82	85·72
1 rood.....	=	29·59
20 perches.....	=	14·80
8 do.....	=	5·92
66-100 do.....	=	49
Answer.....	320	10·00

See the converse of this example at the end of Table V.

### IMPERIAL STANDARD MEASURES.

In the Imperial system, adopted in the United Kingdom, January 1st, 1826, the legal measures of extension and weight are continued as before; but a variety of corn, wine, and beer measures, previously in use, are superseded by a new measure of capacity called the "Imperial standard gallon," containing 277·274 cubic inches, or 10 lbs. avoirdupois, of distilled water, at 62° Fahrenheit, the barometer being at 30 inches. The following tables exhibit the Imperial standards, and their usual multiples and divisions.

#### I.—MEASURES OF LENGTH.

12 Inches	=	1 Foot.
3 Feet	=	1 Yard.
5½ Yards	=	1 Pole or Perch.
40 Poles	=	1 Furlong.
8 Furlongs or 1,760 Yards	=	1 Mile.

The hand equals 4 inches; the English ell equals 45 inches; the pace equals 5 feet; and the fathom equals 6 feet. The geographical degree equals 60 nautical miles, or 69,160 statute miles at the equator. In land measure, the chain of 100 links equals 66 feet.

#### II.—MEASURES OF SURFACE.

144 Square inches	=	1 Square foot.
9 Square feet	=	1 Square yard.
30½ Square yards, or 272½ sq. feet	=	1 Square pole.
40 Square poles	=	1 Rood.
4 Roods, or 4,840 square yards	=	1 Acre.
And 640 acres make 1 square mile.		

#### III.—MEASURES OF CAPACITY.

##### I.—General Measures of Solidity.

1,728 Cubic inches	=	1 Cubic foot.
27 Cubic feet	=	1 Cubic yard.
The ton measurement	=	8 barrel bulk, or 40 cubic feet.

##### II.—Measures for Liquids, Corn and Dry Goods.

8·665 cubic Inches	=	1 Gill, British Imperial.
4 Gills	=	1 Pint.
2 Pints	=	1 Quart.
4 Quarts	=	1 Gallon.
2 Gallons	=	1 Peck.
4 Pecks	=	1 Bushel.
8 Bushels	=	1 Quarter.

The peck, bushel and quarter are used for dry goods only; there are besides, the coom = 4 bushels; the wey, or load = 5 quarters; and the last = 2 loads, or 10 quarters.

In Beer Measure, the barrel contains 4 firkins or 36 gallons; and the hogshead 1½ barrels, or 54 gallons.

#### METRIC SYSTEM OF WEIGHTS AND MEASURES.

##### The Units of Measure and Value with their English Equivalents.

1. The Mètre	is the unit of length,	=	1 yd. 0 ft. 3·3708 inches,	English.
2. " Are	"	surface,	=	119·6033 sq. yds., "
3. " Stère	"	solidity,	=	1 cub. yd. 8·31658 cub. ft., "
4. " Litre	"	capacity,	=	1·76077 pts. "
5. " Gramme	"	weight,	=	·56438 drms. avoirdupois, "
6. " Franc	"	money,	=	9½ pence, "

*Multiples of Measure, &c., of the Mètric System.*

Deca signifies 10 times, as decamètre, or 10 mètres.  
 Hecto " 100 " as hectolitre, or 100 litres.  
 Kilo " 1,000 " as kilogramme, or 1,000 grammes.  
 Myria " 10,000 " as myriagramme, or 10,000 "

Sub-multiples:

Déci signifies  $\frac{1}{10}$  part, as décimètre or  $\frac{1}{10}$  of a mètre.  
 Centi "  $\frac{1}{100}$  part, as centilitre, or  $\frac{1}{100}$  of a litre.  
 Milli "  $\frac{1}{1000}$  part, as milligramme, or  $\frac{1}{1000}$  of a gramme.

1. The mètre or unit of length = 1 = 39·3708 inches, English.

Multiples:

Décamètre = 10 metres, or 10·9363 yards.  
 Hectomètre = 100 " or 109·363 "  
 Kilomètre = 1,000 " or 1093·63 "  
 Myriamètre = 10,000 " or 10936·33 "

Sub-multiple:

Décimètre =  $\frac{1}{10}$  " or 3·937 inches.  
 Centimètre =  $\frac{1}{100}$  " or ·3937 "  
 Millimètre =  $\frac{1}{1000}$  " or ·03937 "

The are or unit of surface = 1 sq. décamètre, or 119·6033 sq. yards.

Multiples:

Décare = 10 ares, or ·2473 acres.  
 Hectare = 100 " or 2·4736 "

Sub-multiples.

Centiare =  $\frac{1}{100}$  " or 1·19603 sq. yards.

The stère or unit of solidity = 1 cub. mètre, or 35·316 cub. ft.

Multiple:

Décastère = 10 stères, or 353·166 cub. ft.

Sub-multiple:

Decistère =  $\frac{1}{10}$  " or 3·5316 "

The litre or unit of capacity = 1 cub. décimètre, or 1·76077 Brit. pts.

Multiples:

Décalitre = 10 litres = 2·20096 Brit. gals.  
 Hectolitre = 100 " = 22·00966 "  
 \* Kilolitre = 1,000 " = 220·0966 "

Sub-multiples:

Décilitre =  $\frac{1}{10}$  " = ·17607 Brit. pts.  
 Centilitre =  $\frac{1}{100}$  " = ·017607 "  
 Millilitre =  $\frac{1}{1000}$  " = ·0017607 "

\* The kilolitre is the cubic mètre

THE Gramme or Unit of Weight = 15·432348 Grains Troy.

	Lbs.	Ozs.	Dwts.	Grains.
Multiples—				
Decagramme = 10 grammes or .....			6	10·32348
Hectogramme = 100 do .....		3	4	7·23487
Kilogramme = 1000 do .....	2	8	3	0·3487
Myriagramme = 10000 do .....	26	9	10	3·487
Sub-multiples—				
Decigramme = $\frac{1}{10}$ do .....				1·54323
Centigramme = $\frac{1}{100}$ do .....				·15432
Milligramme = $\frac{1}{1000}$ do .....				·01543

THE Gramme or Unit of Weight = 1 = .56438 Drachms, Avoirdupois.

—		Cwts.	Qrs.	Lbs.	Ozs.	Dr.
<b>Multiples—</b>						
Decagramme	= 10 grammes or.....					5.6438
Hectogramme	= 100 do .....				3	8.4383
Kilogramme	= 1000 do .....			2	3	4.3830
Myriagramme	= 10000 do .....			22	0	11.8304
Quintal	= 100000 do .....	1	3	24	7	6.304
Millier	= 1000000 do .....	19	2	20	9	15.04
<b>Sub-multiples—</b>						
Decigramme	= $\frac{1}{10}$ do .....					.056438
Centigramme	= $\frac{1}{100}$ do .....					.005643
Milligramme	= $\frac{1}{1000}$ do .....					.000564

THE Franc or Unit of Money = 1 =  $9\frac{2}{3}$  Pence.

—		Multiples.	—		Sub-multiples.
Silver .....	{	2 francs =	£0	1s.	7 $\frac{1}{2}$ d.
		5 do =	0	4	0
		5 do =	0	4	0
		10 do =	0	8	0
Gold .....	{	20 do =	0	16	0
		50 do =	2	0	0
		100 do =	4	0	0
		Silver .....	{	20 centimes =	2 pence.
		50 do =	4 $\frac{2}{3}$ do		
		1 do =	nearly $\frac{1}{2}$ farthing.		
		2 do =	1 do		
Bronze ....	{	5 do =	$\frac{1}{2}$ penny.		
		10 do =	1 do		

The above tables are taken from "Diagrams and Synoptical Tables of the Metric System of Weights and Measures, with their English Equivalents." Compiled and arranged for the use of schools, by W. Rickard, L.L.D., Liverpool.

TABLE showing the size of box required to contain a given quantity from one quarter down to one quart.

Dimensions of Box in Inches, English Measure.			Contents, Cubic Inches.	Equivalents in Imperial Measure.
Length.	Width.	Depth.		
48	24	15.404	17,745.536	1 quarter = 8 bushels.
24	24	15.404	8,872.768	1 coomb = 4 do
16	16	8.665	2,218.192	1 bushel.
12	11	8.402	1,109.096	$\frac{1}{2}$ do
12	8	5.777	554.548	1 peck.
8	8	4.332	277.274	1 gallon.
8	4	4.332	138.637	$\frac{1}{2}$ do
4	4	4.332	69.318	1 quart.





APPENDIX No. 45½.

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AREA AND POPULATION OF THE GLOBE.

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No. 36,782.

APPENDIX No. 45 $\frac{1}{2}$ .

AREA and Population of the Globe. Compiled, as far as possible, from the last Official Census of each country; and where no Census has been made the figures are taken from the most reliable estimates.

Continent.	Country.	Years of Census.	Area, English Square Miles.	Population.
Europe . . . . .	Austro-Hungary . . . . .	1880	240,940	37,741,434
	Belgium . . . . .	"	11,373	5,519,844
	British Isles and Gibraltar, Malta, &c . . . . .	1881	121,237	35,422,407
	Bulgaria . . . . .		27,538	2,000,000
	Denmark and Iceland . . . . .	1880	55,260	2,096,410
	France . . . . .	1881	204,096	37,672,048
	German Empire . . . . .	1880	208,744	45,194,177
	Greece . . . . .	1879	19,353	1,979,775
	Holland . . . . .	1880	13,679	4,270,098
	Italy . . . . .	1881	114,408	28,459,451
	Montenegro . . . . .		1,710	245,380
	Portugal . . . . .	1879	35,812	4,745,124
	Roumania . . . . .		49,262	5,376,000
	Russia, in Europe . . . . .	1882	2,074,686	84,851,886
	Servia . . . . .	1879	18,767	1,670,000
	Spain . . . . .	"	193,775	16,623,389
	Sweden and Norway . . . . .	1881	293,849	6,391,398
	Switzerland . . . . .	1880	15,991	2,846,102
	Turkey, in Europe . . . . .		80,000	5,275,000
		Total . . . . .		3,782,595
Asia . . . . .	Afghanistan . . . . .		278,600	2,500,000
	Arabia (Ind.) . . . . .		1,500,000	3,265,000
	Beluchistan . . . . .		140,000	1,000,000
	British India . . . . .	1881	1,473,687	253,382,186
	Chinese Empire . . . . .		4,539,750	434,580,000
	East India Islands . . . . .		786,500	34,500,000
	Farther India . . . . .		873,151	36,504,250
	Independent Turkistan . . . . .		191,345	3,000,000
	Japan . . . . .		147,629	35,925,313
	Persia . . . . .		636,000	5,000,000
	Portuguese Settlements . . . . .		7,134	877,500
	Russia, in Asia . . . . .	1882	6,250,707	15,186,456
	Turkey do . . . . .		729,981	17,538,465
		Total . . . . .		17,557,284
Africa . . . . .	Abyssinia . . . . .		158,000	3,000,000
	Algeria . . . . .		123,000	2,870,000
	British South Africa . . . . .		546,230	1,890,500
	Central Africa, including Somah & Gallas . . . . .		4,000,000	50,000,000
	Egypt . . . . .		870,000	17,400,000
	Gold Coast, Sierra, Leone, &c . . . . .	1881	17,609	669,966
Liberia . . . . .		50,000	1,500,000	
	Carried forward . . . . .			

AREA and Population of the Globe, &c.—Continued.

Continent.	Country.	Years of Census.	Area, English Square Miles.	Population.
	Brought forward .....			
<i>Africa—Concluded...</i>	Lower Guinea .....		280,000	2,000,000
	Madagascar.....		228,570	3,000,000
	Morocco.....		260,000	6,000,000
	Orange Free State.....		42,470	50,000
	Portuguese Settlements .....		697,365	2,410,000
	Sahara.....		2,500,000	5,000,000
	Senegambia.....		147,000	4,000,000
	Soudan .....		1,250,000	30,000,000
	Transvaal.....		114,360	700,000
	Tripoli.....		344,400	1,200,000
	Tunis.....		45,716	1,500,000
	Zanzibar.....		100,000	5,000,000
	Total.....		11,774,720	138,190,466
<i>America.....</i>	Dominion of Canada.....	1881	3,470,392	4,324,810
	Greenland.....		750,000	10,000
	Mexico.....		741,820	9,650,000
	Newfoundland.....	1874	40,200	161,389
	United States.....	1880	3,603,884	50,152,866
	Central America.....		8,696,296	64,303,065
	West Indies.....		164,900	2,600,000
	Argentine Republic.....	1880	1,357,896	2,540,000
	Bolivia.....		500,870	2,325,000
	Brazil.....		3,288,000	10,200,000
	Chili.....	1882	182,790	2,234,000
	Colombia.....		320,760	3,100,000
	Ecuador.....		248,380	1,066,000
	Guiana.....	1881	178,370	341,800
	Patagonia.....		375,000	200,000
	Paraguay.....		56,700	293,844
	Peru.....		508,380	3,374,000
	Uruguay.....	1880	69,800	450,000
	Venezuela.....	1881	403,276	2,075,245
	Total.....		16,396,408	99,602,954
<i>Australasia.....</i>	Australia.....	1881	2,946,555	2,235,734
	New Zealand.....	"	108,260	489,993
	Tasmania.....	"	26,215	115,705
	Total.....		3,079,030	2,841,432
<i>Polynesia.....</i>			350,000	30,000,000

RECAPITULATION.

Europe	about.....	3,800,000	330,000,000
Asia	do .....	17,600,000	850,000,000
Africa	do .....	11,800,000	140,000,000
America	do .....	16,500,000	100,000,000
Australasia	do .....	3,100,000	3,000,000
Polynesia	do .....	350,000	30,000,000
Grand total.....		53,150,000	1,453,000,000

## POPULATION BY RACES.

TAKEN FROM KEITH JOHNSTON'S GEOGRAPHY, LONDON, 1880.

Indo-Germanic, or Aryan.....	550,000,000
Mongolian, or Turanian.....	635,000,000
Semitic and Hamitic.....	65,000,000
Negro and Bantu .....	150,000,000
Hottentot and Bushmen.....	150,000
Malay and Polynesian .....	35,000,000
American Indian.....	15,000,000
<b>Total .....</b>	<b>1,450,150,000</b>

## POPULATION BY RELIGIONS.

TAKEN FROM KEITH JOHNSTON'S GEOGRAPHY, LONDON, 1880.

Christians.....	375,000,000
Jews.....	7,000,000
Mohammedans.....	170,000,000
Buddists.....	503,000,000
Hindus .....	177,000,000
Heathen and Fetish Worshippers.....	170,000,000
Various and Unknown.....	48,000,000
<b>Total .....</b>	<b>1,450,000,000</b>

See Tables Nos. 19, 20, 21, of Part III., Appendix No. 30, at pages 885-886.

J. A. PHILLIPS.

OTTAWA, 17th January, 1883.

APPENDIX No. 46.

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**SYNOPSIS**

OF THE

**GENERAL REPORT ON PUBLIC WORKS**

OF THE

**UNITED PROVINCES OF LOWER AND UPPER CANADA, NOW THE  
PROVINCES OF QUEBEC AND ONTARIO, FROM THEIR COM-  
MENCEMENT TO THE TIME OF CONFEDERATION,  
1st JULY, 1867,**

BY

**F. H. ENNIS,**

*Secretary of the Department of Public Works.*

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## APPENDIX No 46.

(No. 36030).

## MEMORANDUM RESPECTING THE GENERAL REPORT OF THE COMMISSIONERS OF PUBLIC WORKS, PUBLISHED IN 1867.

The Report for 1867 was prepared during the administration of the Hon. J., C. Chapais as Commissioner of Public Works of the United Provinces of Lower and Upper Canada.

It contains the history and description of the public works executed and projected before the Union, 10th February, 1841, and since then up to the time of Confederation, 1st July, 1867.

The various subjects embraced in the Report are :—

1. The canals constructed and the dredging done for the purpose of avoiding the shoals and rapids on the River St. Lawrence from Quebec to Lake Superior; on the Rivers Ottawa and Rideau route from Montreal to Kingston; on the River Richelieu and Lake Champlain route, from Sorel on the St. Lawrence to Albany on the River Hudson and thence to New York; on the Upper Ottawa, and on the inland route of navigation in the River Trent district.

The advantages afforded by these works and the improvements necessary to place them in a condition to meet the growing requirements of trade and navigation, and to give such impulse to the commerce of the country as would tend to promote its full development.

The canals projected for the extension and improvement of the inland navigation:—From the port of Montreal to Lake Champlain, or the Caughnawaga Canal; from the same port, by way of the River Ottawa, Lake Nipissing and French River, to Lake Huron, or the Ottawa Ship Canal; the cut across the peninsula between the Bay of Quinté and Lake Ontario, or the Murray Canal; and the River Tay Canal.

The lengths of the canals constructed up to the date of the Report were as follows:—

In Lower Canada.....	54.35 miles
In Upper Canada.....	211.89 "
Total.....	<u>266.24</u>

The cost up to that date was:—

For Lower Canada.....	\$ 6,912,308 24
For Upper Canada.....	16,188,747 01
Total.....	<u>\$23,101,055 25</u>

2. An enumeration, in detail, of all the works executed on the inland waters of the country—together with statements of their cost, viz.:—

In Lower Canada.....	\$14,394 61
In Upper Canada.....	13,959 72
Total.....	<u>\$28,354 33</u>

3. Statements of expenditure entailed by the construction of harbors and piers at numerous points:—

Lower Canada.....	\$1,366,378 66
Upper Canada.....	855,139 53
Total.....	<u>\$2,221,518 19</u>

4. A history of the construction of the lighthouses, buoys and beacons—with statements of their cost:—

Lower Canada.....	\$1,144,690 70
Upper Canada.....	541,300 14
Total.....	<u>\$1,685,990 84</u>

5. A history of the construction of the slides, dams and booms built in the Saguenay, St. Maurice, Ottawa and Trent River districts, to facilitate the conveyance of timber to the sea—showing the cost of those works viz.:—

Lower Canada.....	\$748,783 18
Upper Canada.....	597,869 49
Total.....	<u>\$1,346,652 67</u>

6. A complete list and an historical summary of all roads and bridges built and maintained by the Government or by Commissioners—together with a statement of the lengths of the roads; the dates when they were completed; their cost, etc., etc., the expenditure having been:—

	Lower Canada.	Upper Canada.	Total.
On Roads .....	\$3,760,381 25 ...	\$3,113,623 69 ...	\$6,874,004 94
On Bridges.....	353,357 81 ...	256,927 27 ...	610,285 08
Total.....	<u>\$4,113,739 06</u>	<u>\$3,370,550 96</u>	<u>\$7,484,290 02</u>

7. Histories of all the public buildings, with statements of their cost:—

In Lower Canada.....	\$4,094,687 85
In Upper Canada.....	5,141,872 85
Total.....	<u>\$9,236,560 70</u>

8. A statement respecting the Provincial vessels used for towing, for the conveyance of mails, and generally for the promotion of commercial enterprise and intercourse. The total cost of these services for Lower and Upper Canada amounted to \$507,712.83.

The Report is accompanied by nine maps, showing the geographical position of British America; the situations of the several canals and works constructed for the improvement of the St. Lawrence and its tributaries, and of the lines of land communication with the Maritime Provinces.

The appendices attached to the Report, (72 in number, and covering 615 pages), were furnished, mainly, by the engineers and superintendents to whose charges the several works were entrusted—and give detailed and sufficiently complete descriptions of those works.

They comprise also a series of tables of great interest, showing:—

1. The monthly variations in the levels of the St. Lawrence, and of the great Lakes since their opening, nearly twenty years prior to the date of the Report.
2. The dates of opening and closing of navigation through the canals since they were opened, and at the ports of Quebec, Montreal, Kingston and Toronto from 1814 to 1867.

3. The movement of trade through the canals since they were opened, and at the principal ports since 1764.

4. The movement of vessels, passengers and merchandise through each canal.

5. The quantities of flour manufactured on the Lachine, Williamsburg and Welland Canals.

6. A comparison of the entrance and clearance duties on vessels frequenting the ports of Quebec and New York, respectively.

7. The number and tonnage of vessels which arrived at Quebec each year from 1764, and the number and tonnage of vessels built there since 1787 :—

Number of vessels built, 3,416—Tonnage, 1,113,947.

8. The distances between the different sea-ports of North America and Liverpool, Havre, Havana and Rio Janeiro.

9. Statements relative to lighthouses, roads, bridges and slides, and the works on the River Trent.

10. Statements of the receipts and expenditures on canals, slides and other public works from 1857 to 1867.

11. A summary of Acts relating to roads and toll-gates in Lower Canada, public works, etc., etc.

Appendices Nos. 23 and 70 contain a complete detailed history of each public work in each of the two Provinces of Lower and Upper Canada from the cession of the country to England, in 1763, until the Union, on the 10th February, 1841, and from the latter date to the 1st July, 1867, when Confederation took place—including, in addition to the works constructed by Government, such public buildings, railways, asylums, hospitals, charitable institutions, &c., as were built by associations or private companies.

Appendix No. 70, comprising 133 pages, shows in detail the sums expended by the Department of Public Works in each Province since 1763—the expenditures being as follow :—

In Lower Canada, \$61,925,091.13, of which \$43,276,252.42 were for 575½ miles of railway.

In Upper Canada, \$120,450,260.70, of which \$93,436,964.58 were for 1,393½ miles of railway.

The expenditures on railways include the outlays made by the Companies.

The expenditure by Government *alone* since the Union up to the 30th June, 1867, was:—

	Lower Canada.	Upper Canada.	Total.
Cost of all works excepting railways...	\$17,489,896 61	\$22,455,903 45	\$39,945,800 06
Cost of railways.....	7,093,893 26	13,165,906 75	20,264,800 01
	<u>\$24,588,789 87</u>	<u>\$35,621,810 20</u>	<u>\$60,210,600 07</u>



The total cost of hospitals, lunatic asylums and charitable institutions was as follows :—

	Lower Canada.	Upper Canada.	Total.
Total cost.....	\$1,153,634 92	\$655,346 30	\$1,808,981 22
Annual Government grants, for 1866...	154,600 99	197,557 05	352,158 04
Number of days passed by patients &c., in the institutions of each Province in 1866 .....	1,432,974	722,080	2,155,054

See pages 536 to 593, Appendix No. 70 of General Report 1867.

The Report of 1867 and its appendices are indispensable to all who desire to follow the histories of the public undertakings of the country, and are of the highest importance to those engaged in the compilation of statistics, &c.

It was the first Report of a thoroughly complete character issued by the Department; it was initiated by the Hon. Mr. Chapais and prepared by the late Deputy Minister of Public Works, Mr. T. Trudeau, and Mr. Baillairgé, the present Deputy Minister, with the assistance of Mr. T. Guerin, C.E., and other officers of experience in the Department.

A Report of a similar nature, in a more condensed form, was prepared by Messrs. James Stewart and G. F. Baillairgé, C.E's., by order of the late Sir E. P. Taché, Commissioner of Public Works, for his Report which was published in 1848.

The following summary of expenditures shows the cost of construction of the different works in Lower Canada, now the Province of Quebec, and in Upper Canada, now the Province of Ontario, from the time the works were first commenced to the time of Confederation, 1st July, 1867.

1868-1882.

**SUMMARY of Expenditures by the Provincial Government on the construction of the Public Works of Lower and Upper Canada, prior to Confederation, 1st July, 1867.**

Works.	Lower Canada now Prov. of Quebec	Upper Canada. now Prov. of Ontario.	Totals.
	\$ cts.	\$ cts.	\$ cts.
Canals (exclusive of River Improvements).....	6,912,308 24	16,188,747 01	23,101,055 25
Works on navigable rivers, or improvement of rivers.....	14,394 61	13,959 72	28,354 33
<b>Total, Canals and Rivers.....</b>	<b>6,926,702 85</b>	<b>16,202,706 73</b>	<b>23,129,409 58</b>
Harbors and piers.....	1,366,378 66	855,139 53	2,221,518 19
Lighthouses, beacons and buoys.....	1,144,690 70	541,300 14	1,685,990 84
Slides, dams, piers and booms.....	748,783 18	597,869 49	1,346,652 67
Roads, including Turnpike and Colonization Roads. Bridges, exclusive of those on Turnpike and Col- onization Roads, the cost of which includes that of bridges.....	3,760,381 25	3,113,623 69	6,874,004 94
Public Buildings, exclusive of those constructed by charitable institutions or private donations. ...	353,357 81	256,927 27	610,285 08
Provincial Vessels, one-half of total cost charged to each Province.....	4,094,687 85	5,141,872 85	9,236,560 70
	253,856 41	253,856 42	507,712 83
<b>Total cost of Works, exclusive of Railways...</b>	<b>18,648,838 71</b>	<b>26,963,296 12</b>	<b>45,612,134 83</b>
Railways, exclusive of subsidiary lines in United States..... (See Note A, below.)	43,276,252 42	93,486,964 58	136,763,217 00
<b>Total cost of Works, including Railways.....</b>	<b>61,925,091 13</b>	<b>120,450,260 70</b>	<b>182,375,351 83</b>
Deduct:—Expenditure from other than Govern- ment Funds, so far as ascertained .....	37,336,301 26	84,828,450 50	122,164,751 76
<b>Total Government Expenditure.....</b>	<b>24,588,789 87</b>	<b>35,621,810 20</b>	<b>60,210,600 07</b>
Note A.—Government Expenditure on Railways, included above .....	7,098,893 26	13,165,906 75	20,264,800 01

For details of above Summary, see appendix No. 70 of General Report of 1867, pages 481 to 613—general abstracts of which will be found at pages 556 to 561 of same appendix.

F. H. ENNIS, *Secretary,*  
*Department of Public Works.*

Ottawa, 27th January, 1883.

APPENDIX No. 47.

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LIST OF OFFICERS OF THE DEPARTMENT.

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No. 36,031.

## APPENDIX

List of the Members, Commissioners and Assistant Commissioners of the Board  
Chief Architects of the Department

Chairman, Commissioners and Ministers.			Assistant Commissioners and Deputy Ministers.	
Names.	From	To	Names.	Date of Appointment.
<i>Under Statute 4-5 Vic., Cap 38, Corporation of Board of Works.</i>				
Hon. H. H. Killaly, Chairman.....	.....	.....	.....	.....
D. Daly... ..	Dec. 29, 1841..	Oct. 3, 1844..	} Members....	
S. B. Harrison... ..				
J. Davidson, Esq				
<i>New Board of Works</i>				
Hon. H. H. Killaly, Chairman.....	Oct. 5, 1844.	June 8, 1846..	} Members... }	
D. Daly. ....				
W. H. Draper... ..				
W. Morris... ..				
D. B. Papineau. }				
<i>Under Statute 9 Vic, Cap. 37, etc.</i>				
Hon. W. B. Robinson, Chief Commissioner...	July 4, 1846.	Mar. 10, 1848.	Hon. Chas. Eus. Casgrain, Asst. Commissioner.	Aug. 1, 1846.
E. P. Taché do ...	Mar. 11, 1848.	Nov. 26, 1849.	Hon. M. Cameron, Asst. Commissioner	Mar. 11, 1848.
J. Chabot do ...	Dec. 15, 1849.	Mar. 31, 1850..	Jno. Wetenhall, Asst. Commissioner.	Feb. 2, 1850.
W. H. Merritt do ...	April 20, 1850.	Feb. 11, 1851.	Hon. Jos. Bourret, Asst. Commissioner	April 20, 1850.
J. Bourret do ...	Feb. 15, 1851.	Oct. 27, 1851..	Hon. H. H. Killaly, Asst. Commissioner	Feb. 15, 1851.
John Young do ...	Oct. 28, 1851.	Sept. 22, 1852.	.....	.....
J. Chabot do ...	Sept. 23, 1852.	Jan. 26, 1855.	.....	.....
F. Lemieux do ...	Jan. 27, 1855.	Nov. 25, 1857.	.....	.....
C. Alleyne do ...	Nov. 28, 1857..	Aug. 1, 1858.	.....	.....
L. H. Holton do ...	Aug. 2, 1858..	do 6, 1858.	.....	.....
L. V. Sicotte do ...	do 6, 1858.	Jan. 10, 1859.	Saml. Keefer, Deputy Commissioner.	May 6, 1859.
John Rose do ...	Jan. 15, 1859.	June 12, 1861..	.....	.....
Jos. Cauchon, Commissioner..	June 15, 1861..	May 23, 1862.	.....	.....
U. J. Tessier do ...	May 24, 1862.	do 27, 1863.	.....	.....
L. T. Drummond do ...	do 28, 1863.	July 23, 1863.	.....	.....
M. Laframboise do ...	July 23, 1863.	Mar. 29, 1864.	Toussaint Trudeau, Deputy Minister.	Mar. 15, 1864.
J. C. Chapais do ...	Mar. 30, 1864.	June 30, 1867.	.....	.....
<i>Under Statute 31 Vic., Cap. 12.</i>				
Hon. Wm. McDougall, Minister.....	July 1, 1867.	Oct. —, 1869.	Toussaint Trudeau, Deputy Comm'r.	May, —, 1868.
do H. L. Langevin, C.B., Minister	Dec. 8, 1869..	Nov. 5, 1873.	.....	.....
do Alexander Mackenzie do .	Nov. 7, 1873..	Oct. 16, 1878.	.....	.....
Sir Chas. Tupper, C.B., K.C.M.G., Minister.....	Oct. 17, 1878.	May 20, 1879.	.....	.....
Sir Hector L. Langevin, C.B., K.C.M.G., Minister.....	May 20, 1879.	.....	G. F. Baillairgé .....	Oct. 4, 1879.

No. 47.

of Works, and of the Ministers, Deputy Ministers, Secretaries, Chief Engineers and of Public Works, from 1841 to 1882.

Secretaries.		Chief Engineers.		Chief Architects.	
Names.	Date of Appointment.	Names.	Date of Appointment.	Names.	Date of Appointment.
Thomas A. Begly.	Aug. 17, 1841.	Samuel Keefer.....	Aug. 17, 1841.	F. P. Rubidge. Architect and Asst. Engineer.	Dec. 15, 1841.
Thomas A. Begly, under Act estab- lishing Dept. of Public Works.	Sept. 25, 1847..				
.....	.....	John Page. ....	Oct. 31, 1853.		
Toussaint Trudeau	Dec. 13, 1859.				
Frederick Braun...	Mar. 8, 1864.				
.....	.....	G. F. Baillargé, Asst.-Chief En- gineer.	July 5, 1871.	Thos. S. Scott .....	Feb. 7, 1872.
{ S. Chapleau... ..	Oct. 4, 1879.	H. F. Perley.....	Nov. 25, 1880.	Thos. Fuller.....	Oct. 31, 1881.
{ F. H. Ennis .....	Nov. 4, 1880.				



ALPHABETICAL INDEX TO APPENDIX, 1868-1882.

Names of Places and Works at each Place, &c.	Province wherein situated.	PAGE OF APPENDIX.				
		Report, &c.	Expenditure.		Revenue.	
			Prior to Confederation.	1868 to 1877.	1878 to 1882.	1868 to 1877.
<b>A</b>						
Abraham River .....	N.S.					
Expenditure by Local Government from 1852 to 1867 .....		1280				
Acton West .....	Ont.	198				
Drill shed .....		1028				
Acts relating to Public Works of Canada .....		to				
		1031				
Albany, U.S.						
Mean rise and fall of tide .....		902				
Algoma .....	Ont.					
Court house and Gaol .....			18	88		
Allen's River .....	N.S.					
Expenditure by Local Government, from 1852 to 1867 .....		1280				
Altitudes of different places in Quebec, above low-water level of the St. Lawrence	Que.	1286				
Altitudes of rivers and lakes above the sea, between Lake St. John and the Great Lake Mistassini, &c. ....	Que.	358				
Amet Island .....	N.S.					
Lighthouse .....		642	62	132		
Amherst .....	N.S.					
Drill shed .....		150	1164	1164		
Amherst Harbour, Magdalen Islands .....	Que.					
Removal of rock, &c. ....		244	1212	38, 1212	108	
Revenue .....					1078	1114
Annan .....	Ont.					
Drill shed .....		201				
Annapolis .....	N.S.					
Harbour .....		214		104, 1204		
do Expenditure by Local Government, from 1852 to 1867 .....		1280				
Opening and closing of navigation .....		927				
Annapolis River .....	N.S.					
Removal of boulders .....		214		114, 1232		
Anse du Portage .....	Que.					
Slip and wharf .....		247, 381		108, 1212		
Anse St. Jean .....	Que.					
Pier, &c. ....		247, 378	1212	108, 1212		
Winter road to Malbaie .....		379				
Antigonish .....	N.S.					
Harbour .....		228	1204	104, 1204		
do Expenditure by Local Government, from 1852 to 1867 .....		1280				
Apohaqui Bridge .....	N.B.	654	56, 1252		126	
					136	
Arbitrations .....			60, 70, 72		140	
Claims submitted to Dominion Arbitrators, with the result of the arbitration in each case .....		952			142	
		to				
		980				
		398				
Arctic Regions and Hudson's Bay Route .....		to				
		405				

ALPHABETICAL INDEX—Continued.

Names of Places and Works at each Place, &c.	Province wherein situated.	PAGE OF APPENDIX.				
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Wright, G. B.—							
Report on survey of Fraser River.....	B.C.			{ 569 to			
				{ 572,			
				{ 574			
Report on work performed at Cotton- wood Canon, Upper Fraser River; and also on work remaining to be done.....				{ 576 to			
				{ 580			

ALPHABETICAL INDEX—Continued.

Names of Places and Works at each Place, &c.	Province wherein situated.	PAGE OF APPENDIX.				
		Report, &c.	Expenditure.		Revenue.	
			Prior to Confederation.	1868 to 1877.	1878 to 1882.	1868 to 1877.
<b>Y</b>						
Yamaska River.....	Que.					
Lift lock and dam.....		253		116, 1236		
Yarmouth.....	N.S.					
Expenditure by Local Government, from 1852 to 1867.....			1282			
Harbour.....		216	34, 1208	106, 1208		
do Survey and Estimates.....		299				
Marine Hospital.....		149	14, 1164	84		
Opening and closing of Navigation.....		927				
Quarantine Station.....		149	{ 14, 22 1164	84, 94 1164		
Vessels constructed—their number and tonnage.....		942				
York.....	Ont.					
Drill shed.....		198				
York Factory.....	Ont.					
Opening and closing of Navigation.....		396				
York Roads.....	Ont.	645	58	128	1080	1116
Young's Landing.....	N.S.					
Expenditure by Local Government, from 1852 to 1867.....			1282			



## INDEX TO PLANS, MAPS, &c.

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### VIEWS AND PLANS.

			Between Pages.
1.	Perspective view of Rideau Hall, residence of the Governor General,		
		Ottawa.....	208-209
2.	do do	Parliament Building, Ottawa.....	208-209
3.	do do	do Library, do .....	208-209
4.	do do	East Departmental Building, Ottawa.....	208-209
5.	do do	West do do .....	208-209
6.	do do	Post Office, Custom House and Inland Revenue Office, Ottawa.. .....	208-209
7.	Plan of Quebec Harbour Improvements at mouth of River St. Charles.		334-335
8.	Plan of the Graving Dock at Lévis.....		334-335
9.	do	Toronto Harbour.....	534-535
10.	do	Graving Dock at Esquimalt, B.C.....	566-567
11.	Perspective view of Union Suspension Bridge, Ottawa.....		654-655

### M A P S

*(Accompanying Report are not bound with it. They will be furnished in a separate cover.)*

1. Map of the World's Submarine Cables and principal Telegraph Lines.
2. Map showing Dominion Government Telegraph Lines along the River and Gulf of St. Lawrence below Quebec, and along the sea coast of the Maritime Provinces.
3. Map showing Dominion Government Telegraph Lines in part of the Province of Quebec and of the Province of Ontario.
4. Map showing the Dominion Government Telegraph Lines in the Province of Manitoba and the North-West Territories.
5. Map showing the Dominion Government Telegraph Lines and Cables in the Province of British Columbia.



ADDENDA.

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(Ref. No. 37,349.)  
(Ref. No. 31,841.)

## ADDENDA.

### PETITION FOR WIDENING GRANDE DÉCHARGE, LAKE ST. JOHN.

Since Appendix No. 8 was printed, a petition, No. 32,307, dated 15th February, 1883, has been received by Sir Hector L. Langevin, Minister of Public Works, from the Municipalities of Hébertville, St. Joseph d'Alma, St. Gédéon, St. Jérôme, St. Louis, Roberval, St. Pierre and St. Félicien, urging the Government to proceed vigorously with the works of enlargement, already commenced, on the Grande Décharge, and to complete them as speedily as possible, in order to diminish as far as practicable the periodical inundation of the lands around Lake St. John.

They draw attention to the object of their petition, which is not for the deepening but merely for the widening of the Grande Décharge.

Some persons are under the impression that the outlet of the lake is to be deepened, and that the lake will be lowered and rendered unnavigable, which is not the case.

G. F. B.

### PROVINCE OF MANITOBA.

By the Act 44 Vic., chap. 14, assented to 21st March, 1881, the boundaries of the Province of Manitoba were extended easterly to the eastern limit of the District of Keewatin; westerly to a line drawn between the twenty-ninth and thirtieth ranges of townships lying west of the first principal meridian in the system of Dominion land surveys, and northerly to the twelfth base line in said system of Dominion land surveys.

### PROVISIONAL DISTRICTS—NORTH-WEST TERRITORIES.

In view of the rapid development of the North-West Territories, beyond the boundaries of Manitoba, consequent upon the near completion of the Canadian Pacific Railway, it was deemed desirable that a portion of these vast territories should be divided into Provisional Districts for the convenience of settlers and for postal purposes. As the country is being rapidly settled, the necessity for public works is being felt, and several have been executed, or are in course of construction; a copy of the Order in Council creating these Provisional Districts is, therefore, appended in order that the locations of new works may be more readily determined.

G. F. B.

— — —

*CERTIFIED Copy of a Report of a Committee of the Honourable the Privy Council, approved by His Excellency the Governor General in Council, 8th May, 1882.*

On a Memorandum from the Minister of the Interior, hereunto annexed, submitting that for the convenience of settlers and for postal purposes, a portion of the North-West Territories should be divided into provisional districts and their boundaries defined:

The Committee concur in the recommendations contained in the said Memorandum, and submit the same for Your Excellency's approval.

JOHN J. MCGEE.

— — —

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DEPARTMENT OF THE INTERIOR,  
OTTAWA, 12th May, 1882.

The undersigned has the honour to report:—

That in his opinion, it is expedient for the convenience of settlers in the North-West Territories, and for postal purposes, that a portion of such Territories should be divided into provisional districts, and he recommends that four such districts be at once described and their boundaries settled.

He recommends that the four such districts be named *Assiniboia*, *Saskatchewan*, *Alberta*, and *Athabasca*.

He further recommends that the boundaries of such districts shall be as follows:

1st. *Assiniboia*.

The District of Assiniboia, about 95,000 square miles in extent, to be bounded on the south by the international boundary line, the 49th parallel; on the east by the western boundary of Manitoba; on the north by the 9th correction line of the Dominion Lands system of survey into townships, which is near to the 52nd parallel of latitude; on the west by the line dividing the 10th and 11th ranges of townships, numbered from the fourth initial meridian of the Dominion Lands system aforesaid.

2nd. *Saskatchewan*.

The District of Saskatchewan, about 114,000 square miles in extent, to be bounded on the south by the district of Assiniboia and by Manitoba; on the east by Lake Winnipeg and the Nelson River, flowing therefrom into Hudson's Bay; on the north by the 18th correction line of the Dominion Lands Survey system; and on the west by the line of that system dividing the 10th and 11th ranges of townships numbered from the fourth initial meridian.

3rd. *Alberta*.

The District of Alberta, about 100,000 square miles in extent, to be bounded on the south by the international boundary; on the east by the District of Assiniboia; on the west by the Province of British Columbia; and on the north by the 18th correction line before mentioned, which is near the 55th parallel of latitude.

4th. *Athabasca*.

The District of Athabasca, about 122,000 square miles in extent, to be bounded on the south by the District of Alberta; on the east by the line between the 10th and 11th ranges of the Dominion Lands townships, before mentioned, until, in proceeding northward, that line intersects the Athabasca River; then by that river and the Athabasca Lake and Slave River to the intersection of the last with the northern boundary of the district, which is to be the 32nd correction line of the Dominion Lands township system, and is very nearly on the 60th parallel of north latitude; westward by the Province of British Columbia.

A map of the proposed districts is hereunto annexed.

All of which is recommended.

JOHN A. MACDONALD,  
*Minister of the Interior.*

## ESQUIMALT GRAVING DOCK.

VICTORIA ISLAND, BRITISH COLUMBIA.

## PRINCIPAL DIMENSIONS OF DOCK.

	FR.	IN.
Clear length on centre line of Graving Dock, from meeting face of inner invert at sea entrance to inside face of caisson at head.....	400	0
Top inside width of dock at coping level.....	90	0
Width of stone floor on bottom of dock.....	41	0
Top width of outer invert of sea entrance at coping level.....	69	0
do inner do do do do .....	65	0
Depth from coping level to inverts.....	33	6
Depth from high water level spring tides to inverts.....	26	6
Depth from coping level to finished floor of dock against inverts.....	36	6
do do do do at head of dock.....	35	6
do do to floor of caisson berth of sea entrance.....	36	10½
do do to surface of outer apron between entrance and dam.....	35	6
Depth of water on sill at L. W. ordinary spring tides.....	16	0
do do H. W. do .....	26	0

See plan of dock between pages 566 and 567.

## PLAN OF IMPROVEMENTS AT MOUTH OF RIVER ST. CHARLES, QUEBEC.

The soundings marked on the plan inserted between pages 334 and 335 were taken at high water—the entire area of the wet dock being dry, or very nearly so, at low water. The soundings referred to datum coinciding approximately with high water of ordinary spring tides, which is  $6\frac{1}{2}$  feet below extreme high water observed in 1866, and 19.9 feet above extreme low water observed on the 25th of February, 1876, at Pointe-à-Carey.

G. F. B.

## OTTAWA PARLIAMENT AND DEPARTMENTAL BUILDINGS.

DETAILED Statement of Expenditure for Construction, since the commencement of above Buildings (1859), to 30th June, 1882.

	Prior to Confederation.	Since Confederation.	Total.	Grand Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<b>PARLIAMENT BUILDING</b> .....	1,419,355 68	91,188 89	1,510,544 57	
Library.....		301,812 45	301,812 45	
Main Tower (completion).....		24,500 25	(a) 24,500 25	
Fire and water service, $\frac{1}{2}$ cost .....		36,206 55	36,206 55	
Totals.....	1,419,355 68	453,708 14		1,873,063 82
<b>EASTERN BLOCK</b> .....	641,036 37	17,470 07	658,506 44	
Attics.....		10,516 60	10,516 60	
Fire and water service, $\frac{1}{2}$ of cost.....		18,104 85	18,104 85	
Alterations and additions.....		10,598 14	10,598 14	
Vault (completion of) .....		8,822 98	8,822 98	
Totals.....	641,036 37	65,512 64		706,549 01
<b>WESTERN BLOCK</b> .....	641,036 38	17,470 07	658,506 45	
Extension.....		462,247 11	462,247 11	
Fire and water service, $\frac{1}{2}$ of cost.....		17,721 23	17,721 23	
Alterations and additions.....		10,981 77	10,981 77	
Totals.....	641,036 38	508,420 18		1,149,456 56
<b>GROUNDS, viz :—</b>				
Clearing do, making roads, &c.....	22,565 50		22,565 50	
Fence walls .....		89,855 71	89,855 71	
Excavating grounds .....		70,800 99	70,800 99	
Terrace walls.....		38,192 67	38,192 67	
Laying out grounds, lamp posts, &c.....		150,326 60	150,326 60	
Footpaths .....		10,313 54	10,313 54	
Conservatory, laboratory, &c.....		2,360 00	2,360 00	
Marshall Wood's claim.....		13,615 50	13,615 50	
Totals.....	22,565 50	375,465 01		398,030 51
<b>WORKSHOPS (now Supreme Court)</b> .....		50,232 69	50,232 69	(b) 50,232 69
Sheds, drying house, &c.....		1,657 45	1,657 45	1,657 45
<b>Grand Totals</b> .....	2,723,993 93	1,454,996 11		4,178,990 04

(a). Including \$752.63, being cost of the tower bell.

(b). Apart from this amount, a sum of \$13,979.70 (see App. 43, page 1192), was expended for the conversion of the workshops into Supreme Court, making a total outlay of \$64,212.39 on that building

N.B.—The above expenditure is charged as follows, viz :—

Against "Capital".....	\$ 4,087,811 69
do "Consolidated Fund".....	91,178 35
	<u>\$ 4,178,990 04</u>

O. DIONNE,  
Accountant.

No. 37,588.

## OFFICIAL CORRESPONDENCE.

List of Letters Received and Sent from 30th June, 1867, to 1st July, 1882.

Years.	Received.	Sent.
1867—From 1st July to 31st December.....	2,075	1,511
1868 do 1st January to 31st December.....	3,498	2,317
1869 do do do .....	3,448	2,171
1870 do do do .....	4,961	3,185
1871 do do do .....	6,268	3,983
1872 do do do .....	8,333	4,428
1873 do do do .....	10,072	5,707
1874 do do do .....	9,800	5,043
1875 do do do .....	9,006	5,006
1876 do do do .....	7,971	4,773
1877 do do do .....	7,517	4,425
1878 do do do .....	6,886	4,021
1879 do do to 6th October.....	7,186	4,547
1879* do 7th October to 31st December.....	2,033	810
1880 do 1st January do .....	8,451	4,410
1881 do do do .....	9,599	5,529
1882 do do to 30th June .....	4,977	2,492

\* By an Order in Council, approved on 19th May, 1879, published at page 1496 of the *Canada Gazette*, the 20th May of that year was fixed as the day for separating the Department of Railways and Canals from the Department of Public Works, in accordance with Act 42 Vic., chap. 7. The staff of officers and clerks of the Department of Public Works continued to manage in common the business of the two Departments until the 1st October, when an Order in Council was approved dividing the staff between the two Departments. The first letter of the new Department of Public Works was written on 7th October.

The above list does not include the correspondence of the chief officers of the Department with their assistants and the public.



ERRATA.

Page	Line from top of Page	Line from bottom of Page	Instead of	Read
<i>Minister's Report.</i>				
XXIX	19	.....	31 Vic., chap. 60.....	36 Vic., chap. 60.
XI.	8	.....	33 Vic., chap. 12.....	33 Vic., chap. 23.
XI.	10	.....	47 Vic., chap. 7.....	42 Vic., chap. 7.
<i>Appendix.</i>				
16	Item 16	8	Quebec Post Office—1877, \$11,186.95.	Montreal Post Office—1877, \$11,186.95.
38	" 5	25	Chicoutimi River, Saguenay pier.....	Chicoutimi pier, Saguenay River—first column.
44	" 2	20	Chateauguay River—\$1,602.99 in column of 1877.	Transfer \$1,602.99 to column of 1877, opposite St. Francis River.
46	.....	Bottom of page.	(a) including "\$2,000".....	(a) including \$2,400.
68	Item 7	5	Salmon River.....	Thames River.
72	" 3	.....	Number 8.....	Number 3.
73	Line 3	.....	Manitoba and North-West Territories entered Confederation "1st July, 1870."	"15th July, 1870"—at head of seventh and eighth columns.
86	" 5	.....	Year ended 30th June, "1848".....	"1878"—at head of fourth column.
87	Item 14	5	\$490,593.36—last column.....	\$501,780.31.
87	Carried forward.	.....	\$1,184,310.42—last column.....	\$1,195,497.37.
88	Item 27	.....	\$105,088.40—third column.....	\$93,901.45.
88	" 2	.....	"Hastings East"—second column.....	"Hastings West"
89	Brought forward.	.....	\$1,184,310.42—last column.....	\$1,195,497.37.
89	Item 27	.....	\$105,088.40—last column.....	\$93,901.45.
108	" 7	12	"Montmagny"—second column.....	"Verchères."
108	" 12	7	"Yamaska"—second column.....	"Rich-lieu."
112	" 35	11	Presqu'Isle, Georgian Bay, Grey.....	Presqu'Isle, Lake Ontario, Northumberland East—first and second columns.
112	" 43	3	"Hasings"—second column.....	"Northumberland East."
116	" 3	35	\$3,283.79—third column.....	\$1,680.80.
116	" 18	21	\$14,218.51—third column.....	\$15,821.50.
117	" 3	36	Chateauguay—\$3,283.79.....	\$1,680.80—last column.
117	" 18	21	St. Francis River—\$14,218.51.....	\$15,821.50—last column.
138	" 11	5	"River Salmon"—first column.....	"River Thames."
145	" 4	6	Esquimaux Graving Dock, 1881.....	\$9,891.00—omitted in column 1881.
145	" 4	6	\$37,769.22—last column.....	"\$47,660.22"
145	Totals.	5	\$3,292,769.22—last column.....	\$3,302,660.22.
149	.....	19	place is.....	plan is.
152	.....	3	BURKE'S ISLAND.....	BUNKER'S ISLAND.
152	.....	11	and pavilion.....	and pavilions.
153	.....	3	the entrance.....	three entrances.
156	.....	3	Keystone.....	Keystones.
156	.....	25	wood and have.....	wood and have.
161	.....	5	a dining room.....	a dining room.
161	.....	22	were converted.....	were converted.
162	.....	15	BARRACK BUILDING.....	BARRACK BUILDING.
163	.....	4	one storey.....	one storey.
165	.....	26	the haunches.....	the haunches.
167	.....	4, 16 & 19	Commissioners.....	Commissioner.
167	.....	25	Temiscouata Barrack or Fort Ingal....	This is a special heading.
170	.....	5	stone foundation.....	stone foundations.
171	.....	4	Commissioners.....	Commissioner.
178	.....	3	do.....	do
181	.....	4	running the.....	run the.
181	.....	6	Marine and Defence.....	Militia and Defence.

ERRATA.—Continued.

Page.	Line from top of Page.	Line from bottom of Page.	Instead of	Read
<i>Appendix—Continued.</i>				
182		11	PORT WELLINGTON .....	FORT WELLINGTON.
183		4	16 and 31.....	16 to 31.
184	25		in 1875.....	in 1878.
191		8	sn a lot.....	on a lot.
193		9	outbuilding.....	outbuildings.
193		3	building.....	buildings.
193		1	Engineer's.....	Engineers.
193		1	magasin.....	magazine.
194	24		depth of.....	depth of 67.
194	25		heatic.....	heating.
195	7		guagers.....	gaugers.
198		16	were.....	was.
199		5	Custom.....	Customs.
208		20	10 foot.....	10 feet.
212		17	\$3,000.....	\$5,000.
215	18		Belleveau Cove.....	Belleveau Cove.
217		4	\$12,218.44.....	\$12,295.09.
218	4		have been spent in.....	\$600 have been granted for.
227		4	depth of inside.....	depth inside.
233	18		Frederickton.....	Fredericton.
242	10		Wert Point.....	West Point.
245		11	blank.....	2½ feet.
248	16		Some years ago.....	In April and May, 1870.
249	9		\$6,303.16.....	\$6,603.16.
249	23		Piers.....	Pier.
250		4	\$3,627.82.....	\$3,617.82.
252	10		low spring tides.....	low water spring tides.
255	11		\$417.23.....	\$417.43.
256	6		Cedars Rapids.....	Chute-aux-Bouleaux.
256	11		12 feet.....	24 feet.
256	25		Chute à Bouleaux.....	Cedars Rapids.
260	1		Shannonville.....	Shannonville.
263		25	after page 77 add.....	and at App. 14, pages 516 to 534.
267		13	water water the.....	water at the.
268	4		1856-77.....	1856-57.
268	6		maintained the.....	maintained by the.
268		16	500 cubic feet.....	500 cubic yards.
272	22		After "Thunder Bay" add.....	on Lake Superior.
272		5	\$4,178.13.....	\$4,178.63.
275		13	mouth of the employed at the.....	employed at the mouth of the.
276	13 & 15		St. Frances Lake.....	Fort Frances Lock.
276	15		Appendix No. 20.....	Appendices Nos. 19 and 20, pages 852 and 826.
279		4	Tormentine.....	Torment.
280		23	Magdalen Islands.....	Bay of Chaleurs.
281	25		In blank under names of Counties.....	Bacot Hayes Shoal "Soulanges County."
285		6	in 1860.....	in 1870.
285		1	Under heading of depth of water "71 feet".....	7 feet.
298		2	trebled.....	trebled.
308		2	Irving.....	Fruing.
310		4	Dumaresq.....	Dumaresq.
314	Item 19		High Water Full and Change.....	High Water Full and Change..... 10½
			Rise of Spring Tides.....	Rise of Spring Tides..... 9
			Rise of Neap Tides.....	Rise of Neap Tides..... 5
320	1		Reference 12295.....	Reference 22295.
325		15	floating ice.....	floating ice.
331	18		wet dock.....	tidal dock.



ERRATA.—Continued.

Page.	Line from top of Page.	Line from bottom of Page.	Instead of	Read.
<i>Appendix.—Continued.</i>				
352	21	.....	scarp.....	carp.
353	10	.....	Chomouchouan .....	Chomouchouan.
354	18	.....	above .....	above.
354	26	.....	Historie .....	Histoire.
354	26	.....	signified.....	signifies.
355	22	.....	Mistassina .....	Mistassini.
361	20	.....	F. O S.....	F. G. S.
361	23	.....	December.....	September.
362	13	.....	Chief River on.....	Chief River or
363	14	.....	Crosses .....	Crosses.
365	5	.....	48° 42' .....	48° 44' 75'.
365	17	.....	Omitted after "White birch" .....	red and white spruce, fir and scattered.
383	22-23	.....	are then covered by water and which shelter them at ebb-tide.	which shelter them at ebb-tide, are then covered by water.
396	6	.....	Rea .....	Rae.
407	2	.....	Cartier.....	Carlier.
411	10	.....	Coats .....	Coasts.
416	4	.....	E. O. Tache .....	E. E. Taché.
418	10	.....	circular .....	circular.
419	3	.....	Stewart .....	Stuart.
421	10	.....	Ouitchonanish.....	Ouitchouanish.
431	2	.....	going going .....	going.
433	4	.....	Kinogami .....	Kinogami.
434	18	.....	Herbertville .....	Hébertville.
434	14	.....	St. François Xavier.....	St. François-Xavier.
434	15	.....	Along .....	Along.
445	1	.....	18° 0' W.....	18° 0' W. in 1881.
446	15	.....	estauries .....	estuaries.
448	1	.....	Report of .....	Report on.
474	3	.....	In blank after pp.....at end of line...	471-472.
484	2	.....	page 842.....	page 482.
488	2	.....	Delaware.....	Delaware.
498	11	.....	fates.....	rates.
498	11	.....	trade the St. Lawrence.....	trade of the St. Lawrence.
532	12	.....	1876—App. p. 100.....	1875—App. p. 109.
562	4	.....	Department at.....	Departmental.
563	25	.....	estimate of the work upon .....	estimate of the work upon it.
573	13	.....	1874.....	1874.
585	24	.....	it is highly desirable .....	it was highly desirable.
596	19	.....	it is asserted that by water.....	it is asserted that the discharge of saw-dust from mills driven by water
598	31	.....	At Lindsay .....	At Lindsay.
600	9	.....	pages 17 and 18.....	pages 594 and 598.
601	14	.....	pages 72, 73, 74.....	pages 590-591.
603	4	.....	saw-dust in hard bottom .....	saw-dust on hard bottom.
610	6	.....	D'Hubuisson .....	D'Anbuisson.
624	10	.....	with a specific gravity of say 1.5 feet.	with a specific gravity of 2.25 is moved by a current of say 1.5 feet.
630	8	.....	July.....	February.
635	15	.....	June, 1871.....	January, 1871.
636	9	.....	July, 1871.....	February, 1871.
636	13	.....	about thirteen miles.....	about three miles.
637	1	.....	refusion on.....	refuse in.
638	15	.....	obstructions.....	observations.
638	12	.....	in some places of.....	in some places to a depth of.
643	18	.....	Maisonette light house, Province of Quebec.....	Maisonnette lighthouse, Province of New Brunswick.
643	13	.....	Appendix 3, page.....	Appendix 3, page 252.

ERRATA.—Continued.

Page.	Line from top of Page.	Line from bottom of Page.	Instead of	Read
<i>Appendix—Continued.</i>				
647		3	On the 11th.....Ste. Marie Canal was stopped.....and the troops disembarked .....	as on her previous trip the steamer.... Ste. Marie Canal, had been stopped ..... the troops were this time disembarked.
648	35		this 208 miles .....	these 208 miles.
648	36		and at each .....	and each.
648	39		reached on the 29th .....	reached on the 9th.
662	17		Port Viau .....	Pont Viau.
732		at bot'm	1867 .....	1882.
911		18	Sault Ste. Marie, Ont. ....	Sault Ste. Marie, U.S.
939		9	In blanks opposite 1875, Victoria, B.C.	Insert 453 vessels, 193,481 tons and 7,090 men.
1025		4	Commissioners .....	Commissioner.
1028	10		Under subject BRIDGES, 1882, 45 Vic., cap. 27 .....	cap. 37.
1028	13		Under subject BUOYS, &C., provisions.	provision.
1028	21		Under subject COW BAY BREAKWATER, Cow Bay, and .....	Cow Bay, N. S., and.
1028		4	Under subject PICTOU, N.S., 1872, 36 Vic., cap. 63 .....	1872, 36 Vic., cap. 63.
1029	15		Under subject Three Rivers, 1882, 45 Vic., cap. 42, p. 229 .....	45 Vic., cap. 52, page 224.
1029	18		Under subject LIGHTHOUSES, further provisions .....	further provision.
1029		3	Under subject RIVERS AND STREAMS, add .....	An Act for the better protection of navigable streams and rivers, 1873, 36 Vic., cap. 65, page 281 of Statute.
1030		11	Under subject SUPERANNUATION, 1875, 38 Vic., cap. 8, p. 64 .....	1875, 38 Vic., cap. 9, p. 64.
1041		21	qui sera public .....	qui sera publié.
1145	11		13th June .....	13th June, 1854.
1146	9		1882—fourth column .....	1867.
1148	9		1882 do .....	1867.
1148		8	\$312,255.49—fifth and sixth columns ..	\$352,255.49.
1148		8	\$3,446,990.60—last column .....	\$3,466,990.60.
1148		2	\$4,574,181.86 do .....	\$4,574,181.61.
1150	9		1882—fourth column .....	1867.
1151	6		\$496,797.89 .....	\$496,797.80
1151		2	\$143,225.97—in remarks .....	\$143,225.97.
1159	12		Lock Homes do .....	Lock Houses.
1160		3	\$748.65—fifth column .....	\$748.65.
1161		3	\$748.65—first and second columns ..	\$748.65.
1161		6	Lakes of Huron and .....	Lakes Huron and.
1162		1	\$23,447,578.57—fourth column .....	\$23,257,578.57.
1169		15	14 acres .....	12 acres.
1172	Item.	2	Woodstock Marine Hospital .....	Westcock Marine Hospital.
1177		1	Lévis Gate .....	St. Louis Gate.
1179		1	Lévis Gate .....	St. Louis Gate.
1182	Item 1	Col. 1	\$862,302.02 .....	\$862,302.03.
1187	" 7		and in two storeys high .....	and is two storeys high.
1187		15	Grand Trunk Railway Building. Is ..	Grand Trunk Railway. Building is-
1188	Col. 2	1	\$456,037.04 .....	.....
1188	" 3	1	\$557,022.13 .....	\$456,037.04.
1189		23	Becher, Barker and Steele .....	Becher, Barker and Street.
1191		1	Consists .....	Consist.
1191		20	being a frontage .....	having a frontage.
1202	Item 5	Col 5, 6, 7	\$78,339.51—Victoria P. Office .....	\$78,329.51.
1202	" 7	"	\$18,835.43—Victoria M. Office .....	\$18,635.43.

ERRATA—*Concluded.*

Page	Line from top of Page.	Line from bottom of Page.	Instead of	Read
<i>Appendix—Concluded.</i>				
1202	Item 4	ol. 5	\$1,731,402.00.....	\$1,731,402 09.
1210	" 28	"	\$19,764.53.....	\$19,764 53.
1211	" 25	" 6	\$16,042.57.....	\$16,042 87.
1214	" 15	"	Emboulements.....	Emboulements.
1230	"	8	4th col. \$229,946.72.....	\$229 246.72.
1231	6	"	App. No. 1, page 11—\$57,384.85.....	App. No. 1, page 115 \$7,384.85.
1233	Item 1	"	Grand River—6th column—\$8 973.97.....	\$8,963.97.
1238	"	"	Brought forward—5th col. \$21,532.79.....	\$21,532 29.
1241	"	1	last col. \$714,361.36.....	\$714,363.36.
1243	"	9	last col. *13,691.87.....	\$13 501.87.
1247	"	11	obtaining upwards.....	draining upwards.
1251	"	14	First slides.....	Fish slides.
1268	Item 2	"	last col. \$23,101,055.24.....	\$23,101,055.25.
1268	G. Totals.	1	\$182,375,351.33.....	\$182,375,351.83.
1271	"	1	\$98,640,307.09.....	\$98,640,307 20.
1271	"	2	\$3,397,809 20.....	\$3,397,809 31.
1274	Item 6	"	1st col. \$120,044.76.....	\$120,044.65.
1274	" 10	"	2nd col. \$52,619.45.....	\$51,619 45.
1275	" 4	"	9th col. \$84,494.87.....	\$84,494 77.
352	21	"	brochet.....	pike
794	Item 5	41	water. Three Rivers.....	water at Three Rivers.
806	"	17	\$580.75—last column.....	\$576.75
806	"	16	\$580.75 do.....	\$576.75.
806	"	16	1st col.—mean elevation above Tide Water at Albany.....	at New York.
807	2nd Col.	14	Depth of w'r on lower sill, Lock No. 1.....	(To be struck out). 1879, and to 6th October, 1881.
808	10	1st Col.	1879, and to October, 1881.....	1879, and to 6th October, 1881.
841	5	"	Port du Fort.....	Portage du Fort.
863	"	13	Shaldrac.....	Sheldrake.
867	"	8	West end of Port Daniel.....	West Point of Port Daniel.
898	"	3	Item Glenora—"100".....	160.
1113	Item 8	2nd Col.	4th col. *854.75.....	\$864.75.
1120	" 3	"	6th col. \$57,688.67.....	\$57,688.67.
1121	"	6	last col. \$3,922.65.....	\$3,922 96.
1121	"	19	2nd col. \$1,436.13.....	\$1,436 33.
1121	"	17	3rd col. \$3,030.42.....	\$3,030.43.
1121	"	17	5th col. \$108,639.13.....	\$108,639.63.
1123	"	14	5th col. *653.....	*663.
1131	11	"	6th col. \$23,353.65.....	\$23,353.63.
1134	"	10	"	"

Omitted at page 1235—Item 15—Rivière du Nord:—The expenditure since Confederation is for the removal of a number of boulders (in 1880 and 1881) from the bed of the channel, about  $\frac{1}{2}$  a mile below the village, leaving a depth of  $\frac{1}{2}$  feet at low water over a width of 70 feet.