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# SESSIONAL PAPERS,

# VOLUME 1.

# FOURTH SESSION OF THE SIXTH PARLIAMENT

OF THE

# DOMINION OF CANADA.

SESSION 1890.



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#### CONTENTS OF VOLUME No. 1.

- 1. Report, Returns and Statistics of the Inland Revenues of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. J. Costigan ...... Printed for both Distribution and Sessional Papers.
- 1a. Inspection of Weights, Measures and Gas, being a Supplement to the Report of the Department of
- 1b. Report on Adulteration of Food, being a Supplement to the Report of the Department of Inland

#### CONTENTS OF VOLUME No. 2.

Tables of the Trade and Navigation of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. M. Bowell-

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 3.

Public Accounts of Canada, for the fiscal year ended 30th June, 1889; presented to the House of Commons, 17th January, 1890, by Hon. G. E. Foster. Estimates for the fiscal year ending 30th June, 1891; presented 30th January, 1890. Supplementary Estimates of Canada, for the fiscal year ending 30th June, 1890; presented 27th March, 1890. Further Supplementary Estimates for the fiscal year ending 30th June, 1890; presented 25th April, 1890. Supplementary Estimates for the year ending 30th June, 1891; presented 6th May, 1890-

Printed for both Distribution and Sessional Papers.

4. List of Shareholders in the Chartered Banks of the Dominion of Canada, as on the 31st December, 1889. Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster —

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 4.

5. Report of the Auditor General on Appropriation Accounts, for the year ended 30th June, 1889. Presented to the House of Commons, 27th January, 1890, by the Hon. G. E. Foster-

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 5.

- Report of the Minister of Agriculture for the Dominion of Canada, for the calendar year, 1889. Presented to the House of Commons, 20th March, 1890, by Hon. J. Carling-
- Printed for both Distribution and Sessional Papers. 6\*. Canadian Immigration and Emigration. Annex to the Report of the Minister of Agriculture—

Printed for both Distribution and Sessional Papers.

..... Printed for both Distribution and Sessional Papers. 6a. Criminal Statistics for the year 1888.....

#### CONTENTS OF VOLUME No. 6.

- 6c. Reports of the Director and Officers of the Experimental Farms, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—

Printed for both Distribution and Sessional Papers.

6d. Report of the High Commissioner for Canada, with Reports from Agents in the United Kingdom, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 7.

7. Report of the Secretary of State of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 29th January, 1890, by Hon. J. A. Chapleau—

Printed for both Distribution and Sessional Papers.

- 7b. Report of the Board of Examiners for the Civil Service of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 30th January, 1890, by Hon. J. A. Chapleau—Printed for both Distribution and Sessional Papers.
- 8. Report of the Joint Librarians of Parliament on the state of the Library of Parliament. Presented to the House of Commons, 16th January, 1890, by Hon. Mr. Speaker—

Printed for Sessional Papers only.

#### CONTENTS OF VOLUME No. 8.

- 9. Report of the Superintendent of Insurance, for the year ended 31st December, 1889—
  - Printed for both Distribution and Sessional Papers.
- 9a. Preliminary Abstract of the business of Canadian Life Insurance Companies, for the year ended 31st December, 1889. Presented to the House of Commons, 7th February, 1890, by Hon. G. E. Foster.
  Printed for both Distribution and Sessional Papers.
- 9b. Abstract of Statements of Insurance Companies in Canada for the year ending 31st December, 1889. Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster—

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 9.

- 10. Report of the Minister of Justice as to Penitentiaries in Canada, for the year ended 30th June, 1889.
  Presented to the House of Commons, 28th March; 1890, by Sir John Thompson—
  - Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 10.

12. Annual Report of the Department of Indian Affairs, for the year ended 31st December, 1889. Presented to the House of Commons, 22nd January, 1890, by Hon. E. Dewdney—

Printed for both Distribution and Sessional Papers.

13. Report of the Commissioner of the North-West Mounted Police Force, 1889. Presented to the House of Commons, 17th March, 1890, by Sir John Macdonald—

Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 11.

- 14. Annual Report of the Department of the Interior, for the year 1889. Presented to the House of Commons, 31st March, 1890, by Hon. E. Dewdney—
  - Printed for both Distribution and Sessional Papers.
- Report of the Postmaster General, for the year ended 30th June, 1889. Presented to the House of Commons, 23rd January, 1890, by Hon. J. Haggart—

#### OMISSION.

The two following documents were not printed until the Index was issued, which accounts for their omission:

6e. Abstracts of the Returns of Mortuary Statistics for the year 1889. (Printed for both Distribution and Sessional Papers.)

[The above paper has been inserted as the first of Volume No. 7, immediately preceding the Report of the Secretary of State.]

19b. Canal Statistics for Season of Navigation, 1889. (Printed for both Distribution and Sessional Papers.)

[Inserted as last paper in Volume No. 13, immediately following Railway Statistics.]

#### CONTENTS OF VOLUME No. 12.

- 16. Twenty-second Annual Report of the Department of Marine, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 24th February, 1890, by Hon. Mr. Colby—
- 17. Annual Report of the Department of Fisheries, for the year 1889. Presented to the House of Commons, 16th April, 1890, by Hon. Mr. Colby....Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 13.

- 18. Annual Report of the Minister of Public Works, for the fiscal year 1888-89, on the works under his control. Presented to the House of Commons, 3rd February, 1890, by Sir Hector Langevin—

  Printed for both Distribution and Sessional Papers.
- 19. Annual Report of the Minister of Railways and Canals for the past fiscal year, from the 1st July, 1888, to 30th June, 1889, on the works under his control. Presented to the House of Commons, 3rd March, 1890, by Sir John A. Macdonald... Printed for both Distribution and Sessional Papers.
- 19α. Railway Statistics of Canada, and Capital, Traffic and Working Expenditure of the Railways of the Dominion, 1889. Presented to the House of Commons, 9th May, 1890, by Sir John A. Macdonald—Printed for both Distribution and Sessional Papers.

#### CONTENTS OF VOLUME No. 14.

- 20. Report of the Social Economy Section of the Universal International Exhibition of 1889 at Paris, prepared by Jules Helbronner, member of the Royal Labor Commission. Presented to the House of Commons, 8th May, 1890, by Hon. M. Bowell. Printed for both Distribution and Sessional Papers.

- Statement of Governor General's Warrants issued and expenditure made under same since last session of Parliament, in accordance with Consolidated Revenue and Audit Act, section 32, sub-section 2. Presented to the House of Commons, 20th January, 1890, by Hon. G. E. Foster—

Not printed.

#### CONTENTS OF VOLUME No. 15.

- 28b. Return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all Orders in Council, correspondence and documents respecting the superannuation of certain employés in the Post Office at Quebec, and in the Post Office Inspector's Office at Quebec; and the filling up of the vacancies caused by their superannuation. Presented to the House of Commons, 5th March, 1890.—Mr. Langelier (Quebec Centre)......Not printed.

- 30b. Return to an order of the House of Commons, dated 5th February, 1890, for copies of the original charters of the Bank of British North America and of the Bank of British Columbia, and of all amendments thereto. Presented to the House of Commons, 21st February, 1890.—Mr. Edgar—

- 33. Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all resolutions of the Legislative Assembly of the North-West Territories, respecting the application of moneys voted by this House for the use of the said territories. Presented to the House of Commons, 10th February, 1890.—Hon. Mr. Laurier......Not printed.

33h. Correspondence in relation to certain assistance afforded to the Half-breeds at Fort la Corne and other places. Presented to the House of Commons, 1st May, 1890, by Hon, E. Dewdney—

Not printed

- 33i. Statement respecting the purchase of seed grain (including a schedule of prices paid for wheat and oats). Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney....Not printed.
- 33j. Statement respecting distribution of seed-grain and instructions as to the distribution thereof. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney...................Not printed.
- 331. Statement regarding the claim of the Eau Clair and Bow River Lumber Company against the Government for lumber alleged to have been taken off their limits. Presented to the House of Commons. 1st May, 1890, by Hon, E. Dewdney
- 33n. Return to an order of the House of Commons, dated 21st April, 1890, for a return showing: 1. The number of acres of pasture land now under lease in the North-West Territories. 2. The amount paid the Government for rental of grazing leases during the past year. 3. The amount due the Government for arrears on pasture leases, and the names of the lessees in arrears for pasture lease rental. 4. The names of the lessees holding leases of territory upon which settlers are not allowed to take up land without the consent of the lease holder, with the total area of such leases, and the location of each. Presented to the House of Commons, 9th May, 1890.—Mr. Charlton—

Not printed.

- 34. See Sessional Paper No. 17a.
- 35. Certified copy of a report of the Honorable the Privy Council, approved by His Excellency in Council on the 17th August, 1889, on the subject of the Copyright Act of last session, together with correspondence and other papers referring to the same subject. Presented to the House of Commons, 10th February, 1890, by Sir John Thompson... Printed for both Distribution and Sessional Papers.

- 39. Return to an order of the House of Commons, dated 23rd January, 1890, for a statement of all the expenses generally incurred to this day for the making of the electoral lists for the Dominion of Canada. Presented to the House of Commons, 25th February, 1890.—Mr. Casgrain—

Not printed.

- 41f. Return to an order of the House of Commons, dated 10th March, 1890, for a return showing (a) the names and number of officials' cars on the Intercolonial Railway and its branches; (b) the original cost, date and place of building of each car, or name of person or company from whom purchased; (c) the cost of repairs to, or expenditure in, each of such cars since acquired; (d) the names, salaries and expenses of each employee on such official cars; (e) the annual expenses of providing the supplies to each such car. Presented to the House of Commons, 9th May, 1890.—Mr. Davies—

Not printed.

- 41g. Return to an address of the Senate to His Excellency the Governor General, dated 1st May, 1890, for a return showing: 1. The rate per ton charged for carrying coal in car loads over the Intercolonial Railway from the mines of Nova Scotia to St. John, Moncton, Newcastle and Campbellton in New Brunswick, and to Rimouski, Rivière du Loup and Quebec, and by the same, with its connections, to Montreal and Toronto. 2. The rate per ton for carrying flour, wheat and other goods of the same class in car loads from Toronto, Montreal and Quebec to Campbellton, Newcastle, Moncton and St. John in New Brunswick, and to Amherst, Truro, Pictou and Halifax in Nova Scotia. 3. The number of freight trains which passed each way between Nova Scotia and Quebec and Ontario, and between New Brunswick and the same provinces, in the year 1889. 4. How many trains carried goods from the west to be shipped at Halifax and St. John, respectively, during 1889, and up to the present date in 1890. Presented to the Senate, 16th May, 1890.—Hon. Mr. Wark.
- 42. Return to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 26th February, 1890.—Mr. McMullen—

Printed for both Distribution and Sessional Papers.

42a. Amended return (in part) to a return presented to the House of Commons on the 26th February, 1890, showing the amount of money expended by the Dominion in each province since Confederation to the 30th June, 1889, under the following heads: 1. Subsidies to railways in each province excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each province, including the Intercolonial branches and extensions, but not the main

line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 22nd April, 1890.—Mr. McMullen

Printed for both Distribution and Sessional Papers.

- 42d. Papers, correspondence, etc., respecting subsidies to certain railway companies, and towards the construction of certain railways, as follows: Montreal and Ottawa Railway Company (late Vaudreuil and Prescott Railway Company); Waterloo Junction Railway Company; Northern Pacific Junction Railway Company; Ottawa, Morrisburg and New York Railway Company; Erie and Huron Railway Company; Brockville, Westport and Sault Ste. Marie Railway Company; Manitoulin and North Shore Railway Company; Port Arthur, Duluth and Western Railway Company; Lake Erie and Detroit River Railway (formerly Amherstburg, Lake Shore and Blenheim Railway Company); Lindsay, Bobcaygeon and Pontypool Railway Company; Kingston, Smith's Falls and Ottawa Railway Company; Ottawa and Parry Sound Railway Company; Bay of Quinté and Lake Nipissing Railway Company; Cobourg, Northumberland and Pacific Railway Company; St. Stephen and Milltown Railway Company; Woodstock and Centreville Railway Company; St. John River Railway Company, N.B.; Central Railway Company, N.B.; Shelburne and Liverpool to Annapolis Railway Company; Inverness and Richmond Railway Company; International Railway Company; Montreal and Sorel Railway Company; Pontiac Pacific Junction Railway Company; Montreal and Lake Maskinongé Railway Company; Great Eastern Railway Company; Drummond County Railway Company; Oxford Mountain Railway Company; Maskinongé and Nipissing Railway Company; Jacques Cartier Union Railway Company; Quebec Central Railway Company; Quebec and Lake St. John Railway Company; Stewiacke Valley and Lansdowne Railway Company; Temiscouata Railway Company; Tobique Valley Railway Company. Presented to the House of Commons, 14th May, 1890, by Sir John A.
- 43. Return to an order of the House of Commons, dated 12th February, 1890, for a list of Indian reserves within the Province of Manitoba, giving location and area of each one, number of Indians belonging to it at the time of location of such reserve, and number now actually living on same. Presented to the House of Commons, 26th February, 1890.—Mr. LaRivière—

Printed for both Distribution and Sessional Papers.

- 43b. Return to an order of the House of Commons, dated 10th March, 1890, for a statement showing: 1.

  All moneys in the hands of the Superintendent General of Indian Affairs, belonging to the Indians of the Caughnawaga Reserve. 2. All the several sources from which the said moneys were derived. Presented to the House of Commons, 26th March, 1890.—Mr. Doyon.....Not printed.

- 44. Statement of the affairs of the British Canadian Loan and Investment Company, on 31st December, 1889. Presented to the House of Commons, 16th May, 1890, by Hon. Mr. Speaker...Not printed.
- Return to an address of the House of Commons to His Excellency the Governor General, dated 1st April, 1889, for a return: 1. Giving the names and places of residence of the commissioners appointed in 1883 for the purpose of examining and reporting upon the fitness and eligibility of persons appearing before them for examination and qualification as inspectors of the hulls of freight and passenger steamers plying in Canadian waters. 2. Copies of the circular sent out inviting competitors to meet at Ottawa, and the date or dates so mentioned from time to time. The names and places of residence of all persons who were so examined at each and every meeting of the said commissioners up to date. 4. Copies of the recommendation or recommendations of any of the said commissioners, or any one of them, respecting the said examination or the qualifications, or otherwise, of any or all who underwent such examination at the first or any subsequent meeting of the said commissioners, or either of them. 5. The name and place of residence of each and every inspector of freight and passenger steamer hulls appointed by the Government from 1882 to date; indicating who were appointed after undergoing and passing the necessary examination, as well as giving the name and place of residence of each and every inspector of such hulls who was appointed without having successfully passed the said examination, together with the name and place of residence of any inspector so appointed, since 1882 to date, who had been dismissed or had resigned within the time specified, and the cause assigned for such dismissal or resignation. 6. The name and place of residence of any person appointed to fill any vacancy or addition as inspector of said hulls. 7. Copies of all correspondence between the Minister of Marine and any person respecting any of the questions enumerated herein. Presented to the House of Commons,

- 46b. Return to an order of the House of Commons, dated 3rd March, 1890, for a statement showing, for each year since 1878:
  1. The number of vessels which have passed through the Chambly Canal, and their tonnage.
  2. The amount of, and the description of freight carried by these vessels.
  3. The amount of tolls collected in the said several years on the said canal. Presented to the House of Commons, 17th March, 1890.—Mr. Préfontaine.

- 48. Return to an order of the House of Commons, dated 23rd January, 1890, for a statement in detail showing the expenditure made in connection with the Marine and Emigrant Hospital at Quebec, since the 30th June, 1886, the said statement giving: 1. The sum voted each year by the Dominion Parliament. 2. The amount expended. 3. The number of sailors and emigrants taken in each year, and the total number of days that each one of these passed in the hospital. 4. The number of persons not being sailors or emigrants, taken into the said hospital, and the number of days that each one of this class passed there. 5. The total cost day by day of each patient. 6. The amount received by the Government for the patients who are neither emigrants nor sailors. 7. The amount

- received from the Sick Mariners' Fund under the Act 49 Vic., chap. 76, section 16. Presented to the House of Commons, 5th March, 1890.—Mr. Langelier (Quebec Centre)—
- Printed for both Distribution and Sessional Papers.

  48a. Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd
  January, 1890, for copies of all Orders in Council, correspondence and documents respecting the
  establishment of the Marine Hospital at Quebec and respecting the closing of the same. Presented
  to the House of Commons, 17th March, 1890.—Mr. Langelier (Quebec Centre)......Not printed.
- 49. Return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if sold, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 5th March, 1890.—Mr. Barron—Not printed.
- 49a. Supplementary return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if so, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 2nd April, 1890.—Mr. Barron. Not printed.
- 50. Return to an order of the House of Commons, dated 17th April, 1889, for a return showing the number of permanent clerks employed by the Department of the Interior, including inside and outside service. And also the number of extra clerks at present in the employ of the said department in the same service. Presented to the House of Commons, 5th March, 1890.—Mr. Weldon (St. John)—Not wrinted.

- 51c. Copy of a declaration made by Antoine Valiquette, father of the late Primat Valiquette, sergeant in the 65th Battalion. Presented to the House of Commons, 18th April, 1890, by Sir A. P. Caron.

- 53b. Return to an order of the House of Commons, dated 12th February, 1890, for copies of the late reports made by the Engineer of the Public Works Department respecting works to be carried out at Rivière du Sud, in the county of Montmagny. Presented to the House of Commons, 17th
- Return to an order of the House of Commons, dated 30th January, 1890, for a return of all correspondence, petitions, reports or other papers respecting the sale, ownership or condition of the Dundas and Waterloo Macadamized Road, since the close of the session of 1889. Presented to
- 54a. Return to an order of the House of Commons, dated 29th January, 1890, for copies of all petitions, reports of engineers, and all correspondence in reference to the dredging of the bar at the mouth of the river Thames, in the county of Kent, Ontario. Presented to the House of Commons, 10th
- Return to an order of the House of Commons, dated 22nd January, 1890, for copies of all correspondence and documents respecting the appointment of Mr. Joseph Garneau as Superintendent of Government works at Quebec; and respecting his removal and the substitution of a person named L. P. Lépine. Presented to the House of Commons, 10th March, 1890.—Mr. Langelier (Quebec
- Return to an order of the House of Commons, dated 5th February, 1890, for a return of a copy of the contract and specification for the erection of the Post Office and Custom House building at Annapolis, Nova Scotia; the several tenders and amounts thereof; also any order or orders altering the quality and nature of the stone used in the construction. Presented to the House of
- 56a. Return to an order of the House of Commons, dated 4th March, 1889, for copies of all petitions and resolutions forwarded to the Government by the citizens or Corporation of the town of Lévis, in relation to the building of a post office in the said town. Presented to the House of Commons,
- 566. Return to an order of the House of Commons, dated 12th February, 1890, for copies of all petitions, letters, etc., to the Department at Ottawa, praying for a post office at Palmer Road, Prince Edward Island; also all correspondence to and from the Post Office Department at Ottawa and the Post Office Inspector at Charlottetown, Prince Edward Island, on the same subject. Presented to the
- 56c. Return to an order of the House of Commons, dated 12th February, 1890, for copies of two enquiries made by Messrs. Bourgeois, King and Bolduc, respecting the post office at Pierreville, P.Q.—Mr.
- Return to an order of the House of Commons, dated 11th March, 1889, for copies of all correspondence, reports, etc., respecting the wharf at St. Roch des Aulnets, in the county of L'Islet, between the Department of Public Works and the late Charles Frs. Roy, surveyor, and the residents of the said municipality interested therein. Presented to the House of Commons, 10th March, 1890.— Mr. Casgrain Not printed.
- 57a. Return to an order of the House of Commons, dated 27th January, 1890, for copies of the accounts connected with the building of a wharf at Kamouraska, in the province of Quebec, made up in the course of the year 1889. Presented to the House of Commons, 10th March, 1890.—Mr. Dessaint— Not printed.
- 58. Return to an order of the House of Commons, dated 27th January, 1890, for a statement, in detail, showing the expenditure made in connection with repairs to Tignish Breakwater, Prince Edward Island, during 1889; the date of commencement of work, and when completed; the name of party in charge of work. Presented to the House of Commons, 10th March, 1890.—Mr. Perry-

- 58a. Return to an order of the House of Commons, dated 26th February, 1890, for a statement showing the number of Government wharves, piers and breakwaters repaired in Prince Edward Island during the year 1889, the amount expended on each of said wharves, piers and breakwaters. Presented to the House of Commons, 20th March, 1890.—Mr. Perry. . . . . . . . . . . . Not printed.
- Return to an order of the House of Commons, dated 24th February, 1890, for copies of the reports made by the chief engineer relating to the survey of Cove Head Harbor, in Prince Edward Island, four or five years ago. Presented to the House of Commons, 10th March, 1890 .- Mr. Davies-Not printed.
- 59a. Return to an order of the House of Commons, dated 20th January, 1890, for a copy of Government engineer's report of survey of Harbors of Pinette and Wood's Island, and also copy of report of survey of New London Harbor and Breakwater, in the province of Prince Edward Island. Pre-

- 59b. Return to an order of the House of Commons, dated 24th February, 1890, for copies of any reports made by the chief engineer relating to survey of Tracadie Harbor, Prince Edward Island, some years ago. Presented to the House of Commons, 20th March, 1890.—Mr. Davies....Not printed.
- 59d. Return to an order of the House of Commens, dated 10th March, 1890, for a return showing the number of tenders made or put in for the public work at the eastern gap of the Toronto Harbor works; the name or names of each person or company tendering for the work and the amount of each tender and the terms thereof, with a statement of the approximate quantities upon which each tender was calculated; and of all letters and correspondence, statements, documents and papers pertaining to the letting of the contract and to any and all of the tenders. Presented to the House of Commons, 1st April, 1890.—Mr. Barron.
- 59c. Return to an order of the House of Commons, dated 19th March, 1890, for a return of all correspondence, petitions, memorials, reports of the chief engineer of the Department relative to the necessity and expediency of dredging and otherwise improving the harbor at Picton, Bay of Quinté, since 1st January, 1883; and also containing all correspondence, petitions, memorials and reports concerning the desirability or expediency of construction of public buildings at the said town of Picton for the accommodation of post office, customs and inland revenue offices in that town, since 1st January, 1886. Presented to the House of Commons, 2nd April, 1890.—Mr. Platt—
- 59g. Statements and correspondence in reference to the Harbor Works at Quebec, Graving Dock at Esquimalt, etc. Presented to the House of Commons, 16th May, 189c, by Sir Hector Langevin—
  Printed for both Distribution and Sessional Papers.

63. Return to an order of the House of Commons, dated 12th February, 1890, for copies of correspondence in connection with a claim, made by the district of St. Peter's, in the county of Richmond, for medical attendance and board of Kenneth Chisholm, a sick mariner, belonging to the schooner "Jeanie." Presented to the House of Commons, 10th March, 1890.—Mr. Flynn—

Not printed.

64. Return to an order of the House of Commons, dated 24th January, 1890, for a return showing: 1.

The total number of Chinese immigrants who have arrived in the Dominion of Canada from the 31st March, 1887, to the 31st December, 1889, specifying the ports at which such immigrants have arrived. 2. The amount of fees or duties collected from Chinese immigrants during the same period. 3. The number of certificates of residence that have been issued to Chinese as provided for under section 13 of the Act to restrict and regulate Chinese immigration into Canada, since the passage of the Act. 4. The number of Chinese who have been detected in attempting to land in Canada upon fraudulent certificates and who were prevented by the courts from doing so. 5. Copies of all correspondence having reference to the removal from office of Mr. Vroman alias Mr. Gardner, and also all correspondence having reference to the appointment of a Chinaman to the

65. Return to an address of the Senate to His Excellency the Governor General, dated 21st January, 1890, for copies of all reports and other communications in reference to the deposit of sawdust, slabs, or other offensive material, in the Ottawa and other rivers of the Dominion. Presented to the Senate, 10th March, 1890.—Hon. Mr. Clemow—

Presented for both Distribution and Sessional Papers.

- 66. Return to an address of the Senate to His Excellency the Governor General, dated 22nd January, 1890, for a detailed statement showing the settlement effected with the lessees of hydraulic lots at the Chaudiere, city of Ottawa; as likewise copies of new leases entered into with the several lessees of the said hydraulic lots. Presented to the Senate, 10th March, 1890.—Hon. Mr. Clemow.
  Not wrinted.

- 68. Report in relation to the appointment of non-commissioned officers in the Royal Military College.

  Presented to the House of Commons, 13th March, 1890, by Sir A. P. Caron..........Not printed.

- 72. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the annual losses of ships since 1868 in the Gulf of St. Lawrence and on the Atlantic coast and Bay of Fundy, owing to tides, currents and fogs, with the name and tonnage of each vessel, and such particulars in each case as to the causes and extent of damage, as may be in the possession of the Government. Presented to the House of Commons, 17th March, 1890.—Mr. Curran—

Printed for Sessional Papers only.

78. Return to an order of the House of Commons, dated 24th February, 1890, for a return showing the number of Reports of the Geological Survey published respectively for each year of the last ten years, the number sold each year, the number distributed gratuitously, and the number still on hand. Presented to the House of Commons, 17th March, 1890.—Mr. Ferguson (Welland)—

Printed for Sessional Papers only.

- 80. Return to an order of the House of Commons, dated 24th February, 1890, for the report and plans of the Chief Engineer of the Department of Public Works employed to make a survey and examination, with a view to the construction of an inter-provincial bridge across the Ottawa River, between the village of La Passe, in the province of Ontario, and the village of Fort Coulonge, in the province of Quebec. Presented to the House of Commons, 1st April, 1890.—Mr. Bryson—

Not printed.

- 82. Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company, and the officers of the Saskatchewan Land and Homestead Company, and the Department of the Interior, or any member of the Government; and all correspondence between Rev. Alexander Sutherland and John T. Moore and the Department of the Interior, or any member of the Government, in relation to the location of lands and claims for placing immigrants on lands, and compensation for assisting immigration to the said lands, together with all Orders in Council relating to such claims. Presented to the House of Commons, 14th April, 1890.—Mr. Somerville—

82a. Supplementary return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company and the officers of the Saskatchewan Land and Homestead Company and the Department of the Interior, or any member of the Government; and all correspondence between the Rev. Alexander Sutherland and John T. Moore and the Department of the

- 83. Return to an order of the House of Commons, dated 10th March, 1890, for copies of all petitions and correspondence respecting the placing of a floating light opposite Yamachiche, in Lake St. Peter, River St. Lawrence. Presented to the House of Commons, 16th April, 1890—Mr. Rinfret.
- 83a. Return to an order of the House of Commons, dated 19th March, 1890, for copies of all petitions, correspondence and documents whatsoever respecting the placing of a floating light on the St. Lawrence opposite the church of Ste. Croix, in the county of Lotbinière, in place of the buoy now located there. Presented to the House of Commons, 25th April, 1890.—Mr. Rinfret . . . . . Not printed.
- 84. Report of Collingwood Schreiber, Esq., Chief Engineer and General Manager of Government Railways, on the completion of the location survey of the proposed line of railway between Harvey Station on the New Brunswick Railway, and a point on the Intercolonial Railway near Moneton viâ Fredericton, known as the "Harvey-Moneton Section of the Short Line Railway." Presented to the House of Commons, 24th April, 1890, by Sir John Macdonald ..... Not printed.
- 86. Return to an order of the House of Commons, dated 24th January, 1890, for a return of all papers and correspondence between the Ontario Manufacturers' Association and the Dominion Government, during the years 1883, 1884 and 1885, on the subject of proposed legislation relating to factories. Presented to the House of Commons, 1st May, 1890.—Mr. Edgar.......Not printed.

- 87c. Return (in part) to an order of the House of Commons, dated 5th March, 1890, for a return of all claims made by the Government since Confederation against individuals, companies or corporations for damages done to Government property by steamers, vessels or other craft; giving the names of vessels, etc., their owners, dates and items of each claim, distinguishing those paid and unpaid. Presented to the House of Commons, 16th May, 1890.—Mr. Cook........Not printed.
- 88. Return to an order of the House of Commons, dated 14th April, 1890, for copies of all agreements made between the Government, or the Minister of Railways, and the Western Union Telegraph Company, respecting the construction and operation of a telegraph line along the Cape Breton Railway. Presented to the House of Commons, 2nd May, 1890.—Mr. Macdonald (Victoria)—

  Not printed.
- 89. Return to an order of the House of Commons, dated 14th April, 1890, for copies of the petitions, letters, and the plans and engineers' reports respecting the projected dam at Hungry Bay, in the county of Beauharnois. Presented to the House of Commons, 2nd May, 1890.—Mr. Bergeron—

- 91a. Return to an order of the House of Commons, dated 10th March, 1890: 1. For a return, in detail, of all expenses attending the passage and enforcement of the Liquor License Act of 1883 up to date.
  2. The amount of all law costs re its constitutionality. 3. The names of all the legal firm or firms employed by the Government, and the amount paid said firm or firms. Presented to the House of Commons, 16th May, 1890.—Mr. Trow.

- 94. Correspondence respecting the surrender of the Anderson contract for the Atlantic Steamship Service.

  Presented to the House of Commons, 13th May, 1890, by Hon. G. E. Foster—
- 96. Return (in part) to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault branch; 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed; 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 7th May, 1890.—Mr. McMullen—

Printed for both Distribution and Sessional Papers.

- 98. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the names of the six Pagans returned for the parish of Ste. Elizabeth, in the county of Joliette and province of Quebec, in the census returns of 1881, as appears from the original schedule of the enumerator for that parish. Presented to the House of Commons, 16th May, 1890.—Mr. Charlton.
  Not printed.

# REPORT,

# RETURNS AND STATISTICS

OF THE

# INLAND REVENUES

OF THE

# DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30th JUNE,

1889.

4	Presented to	both	Houses	of	Parliament	by	Command of	His	Excellency.	
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JOHN COSTIGAN, Minister of Inland Revenue.



#### OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

1889.

To His Excellency the Right Honorable Lord Stanley of Preston, Governor General of Canada, &c., &c.

#### MAY IT PLEASE YOUR EXCELLENCY:

I have the honor to transmit to Your Excellency the Returns and Statistics of Inland Revenues of the Dominion of Canada, for the Fiscal Year ended 30th June, 1889, as prepared and laid before me by the Commissioner of Inland Revenue.

All of which is respectfully submitted.

JOHN COSTIGAN,

Minister of Inland Revenue.

11th December, 1889.



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# STATISTICS—(APPENDIX A.)

# EXCISE.

<del></del>	Spirits.	Malt.	Malt Liquor.	Manufactured Tobacco.	Canada Twist Tobacco.	Raw Leaf To- bacco.	Cigars.	Petroleum.	Bonded Manu-
RETURN OF MANUFACTURES—Showing the number of Licenses issued and Fees collected, the materials used, the quantities produced, the amount of duties collected ex-manufactory, and the amount of duties accruing upon exciseable articles warehoused.  COMPARATIVE STATEMENT of the above, for the years ended 30th June, 1888 and 1889, respectively.  RETURN OF DISTILLERIES—Showing their transactions in the Dominion of Canada, during the year ended 30th June, 1889.  RETURN OF WAREHOUSE TRANSACTIONS—Showing the quantity of exciseable goods remaining in bonded warehouses of each Collection Division, respectively, from previous years; quantities placed in warehouse during fiscal year ended 30th June, 1889; quantities placed in warehouse from other Collection Divisions; also, quantities exwarehoused for consumption, with duty accrued thereon; quantities exwarehoused to be re-warehoused for exportation; also, quantities used in bonded factories, and quantities remaining in warehouse, 30th June, 1889  COMPARATIVE STATEMENT of the above, for the years ended 30th June, 1888 and 1889, respectively.  RETURN OF FEES for Inspection of Petroleum, for the year ended 30th June, 1888 and 1889, respectively.  RETURN OF FEES for Inspection of Petroleum, for the year ended 30th June, 1888.  COMPARATIVE STATEMENT of Petroleum Inspection Fees, for the years ended 30th June, 1889.	52 54	56 57 58 60	62 63	64 66 	71 72	73	74 76 	82 83	88 90

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27 28 29	Timber culled at Port of Quebec; description of Timber, Measurements, Rates, of Office and Cullers' Fees charged, and Revenue accrued.  As above, for Ports of Montreal, Lachine and Sorel	92 94 • 96

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	Inside Service.	Excise.	Cullers.	Weights and Measures.	Gas.	Adulteration of Food.
SALARIES.  Paid to each Officer employed in collecting Revenue.	Page.	Page.	Page.	Page.	Page.	Page.
SUPERANNUATION.  How much deducted from each Officer's salary.	128	98	116	133	138	125
CONTINGENCIES.  Authorized by the Department for office rent, fuel, &c.						
Distribution of Seizures			,		Page. 121	

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# REPORT

OF THE

# COMMISSIONER OF INLAND REVENUE.

To the Honorable

The Minister of Inland Revenue.

SIR,—Herewith I have the honor to submit statements of the Inland Revenues collected by this Department during the fiscal year ended 30th June, 1889, with the usual information as to the cost of collection and statistics respecting the sources whence those revenues were derived.

The following summary comparison shows the accrued revenue for the years ended 30th June, 1885, 1886, 1887, 1888, and 1889 respectively:—

	1885.	1886.	1887.	1888.	1889.
	*		\$	*	<b>\$</b>
Excise	6,438,688	5,883,580	6,466,151	6,010,561	6,892,612
Public Works other than Canals	9,296	11,287	11,950	13,708	10,457
Culling Timber	28,557	30,073	19,707	15,096	21,416
Weights and Measures, Gas and Law Stamps	40,504	42,001	43,621	46,033	50,034
Other Revenues.			231	56	21
			<del></del>		
	6,517,045	5,966,941	6,541,660	6,085,454	6,974,540
Canal Revenue	400,590	429,390	436,625	418,945	
Total	6,917,635	6,396,331	6,978,285	6,504,399	6,974,540

By the Act 52 Vic., Chap. 19, the duty of collecting canal tolls and slide and boomage dues was transferred to the Department of Railways and Canals and Public Works respectively.

These revenues will therefore in future be omitted from the comparative tables.

1—B

It will be observed, however, that notwithstanding this fact the gross revenue collected by this Department is in excess of that of last year by nearly half a million dollars.

Excluding these items, the revenue as compared with that of 1888 shows an increase of \$889,086.

The following statement exhibits the details of Excise Revenue accrued during the undermentioned fiscal years:—

	1.	2.	3.	4.	5.
	1885.	1886.	1887.	1888.	1889.
	\$	\$	*	\$	\$
SpiritsMalt Liquor	4,281,027 6,344	3,214,075 6,189	3,737,339 7,045	3,099,016 6,997	*3,874,022 12,710
Malt	477,184	382,572	433,129	493,030	518,239
Cigars	318,357	560,351	524,281	554,067	563,172
Tobacco	1,270,933	1,629,604	1,668,002 31,989	$1,740,542 \\ 36,569$	1,840,522
Petroleum	27,520 44,090	$29,181 \\ 46,523$	50,005	53,312	35,745 $28,082$
Seizures	1,256	2,697	2,029	13,066	4,880
Other Receipts	11,977	12.388	12,331	13,962	15,240
Totals	6,438,688	5,883,580	6,466,150	6,010,561	6,892,612

<sup>\*</sup>This amount exceeds that shown by Statistical Statements Nos. 1 and 4, the reason being that an over-collection of \$414.15 was made in Prescott Division, which was afterwards refunded.

The chief increase in Excise Revenue accrued is from spirits, such increase having amounted to \$882,051.

Probably this is in great measure due to duty-paid alcohol having taken the place of methylated spirits in the preparation of many of the tinctures and liniments made up by druggists, methylated spirits being only permitted to be used in the mechanical arts under special bonds.

The quantity of spirits produced during the year was 5,847,508 proof gallons, against 5,514,589 gallons during the preceding year. The raw material used in their production being as follows:—

	Lbs.
Malt	4,859,031
Indian Corn	77,666,625
Rye	15,006,917
Wheat	99,087
Oats	1,285,281
Barley	56,000

98,972,941

The transactions of the several distilleries will be found stated in detail in Appendix A (Statement No. 3.)

There were on 1st July, 1888, in process of manufacture	Proof Gallons. 111,064
Manufactured during the fiscal year	5,847,508
Returned to distilleries for re-distillation	115,237
Received into distilleries from other sources:	
Duty paid	
	4,851
	6,078,660
These were disposed of as follows:—	
Placed in warehouse in bond under Crown lock	5,915,673
Fusil oil extracted by re-distillation	22,401
Destroyed by fire	968
Deficiency arising from rectification	22,590
Remaining in process of manufacture 30th June, 1889,	,
per actual stock-taking	117,028
	6,078,660

The following statement shows the transactions in Spirits during the year ended 30th June, 1889, and the four preceding years:—

	1.	2.	3.	4.	5.	6.	7.	8.	9.
Fiscal Year.	In Warehouse at beginning of Year.	Warehoused during the Year. Ex-Dis- tillery.	Otherwise Ware-housed.	Taken for Consumption.	Exported.	Used in Bonded Factories.	Otherwise Accounted for.	For Re-Distillation.	In Warehouse at end of period.
	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.	Pf. Galls.
1884-85. 1885-86. 1886-87. 1887,88.	2,201,034 1,242,197 2,832,473 4,563,977	4,290,456	15,442	3,888,012 2,412,818 2,864,935 2,326,327	10,322 9,310 4,597 7,889	264,804 287,209 301,503 335,785	2,570 2,119 3,090 49,672		1,242,197 2,832,473 4,563,977 7,423,208
Totals	10,839,681	18,022,897	85,576	11,492,092	32,118	1,189,301	57,451	115,337	16,061,855
Annual average of four years ended 30th June, 1888 1888-89	1		21,394 16,769		. 8,029 8,731	297,325 218,142	11,863 103,924	28,834 116,224	4,015,464

In addition to the quantities of domestic spirits shown in column 6, the following quantities of imported spirits were used in bonded factories during the same period, viz:—1884-85, 11,372 pf. galls.; 1885-86, 9,670 pf. galls.; 1886-87, 15,425 pf. galls.; and 1887-88, 32,884 pf. galls.

\* Of this amount 32,884 gallons were warehoused on importation and 8,957 gallons were seized spirits, subsequently warehoused. The remaining 2,768 gallons is explained at the foot of Statement No. 4 Appendix A.

The following statement exhibits the entire quantities upon which duties were collected during the several years recited therein. The total column will be found to accord with the figures shown in Financial Statement No. 13:—

TV 1 TV	Canadia	n Spirits.	Imported spirits used in Bonded Factories. Paid	Total quantity	Memorandum of Revenue accrued, in- cluding License Fees.	
Fiscal Year.	Paid duty. Ex-Distillery.	Paid duty. Ex-Warehouse	difference between Cus- toms and Excise Duty.	duty was Collected.		
	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	Pf. Gallons.	\$	
1884-85	386,710	3,888,012	11,394	4,286,116	4,281,027	
1885-86	65,280	2,412,818	9,670	2,487,768	3,214,075	
1886-87	1,904	2,864,935	15,426	2,882,265	3,737,338	
1887–88	46,505	2,326,327	32,884	2,405,716	3,099,016	
Total	500,399	11,492,092	69,374	12,061,865	14,331,456	
Annual average of four years ended 30th June, 1888.	125,100	2,873,023	17,343	3,015,466	3,582,864	
1888-89.	12,485	2,945,124	15,322	2,972,931	3,873,607	

The quantity manufactured was 5,847,508 proof gallons as against 5,514,589.

The quantity entered for consumption was 2,960,447 proof gallons, as compared with an average consumption during the preceding four years of 2,873,023.

The duty and license fees accrued amounted to \$3,873,607, as against an annual average since 1884-85 of \$3,582,864, and for last year \$3,099,016.

The increase is probably due to the withdrawal from the market of methylated spirits for other purposes than the mechanical arts.

The quantity used in bonded factories has been curtailed more than one-third since the Department undertook the production and sale of methylated spirits.

The products manufactured therefrom were 619,620 gallons of vinegar, having an acetic strength of 6 per cent., and 9,561 lbs. of crude fulminate, all the latter being exported on completion of manufacture.

Appendices 3 and 3 show the consumption, per head of the population, of spirits, tobacco and other goods subject to Excise and similar goods subject to Customs. It must be borne in mind, however, that a large proportion of the goods entered for consumption at the chief importing centres is consumed beyond the limits of the Province in which those duties are paid.

#### MALT AND MALT LIQUORS:

The following statement shows the transactions in Malt during the year 1888-89, and the four years preceding:—

	1.	2.	3.	4.	5.	6.	7.
Fiscal Year.	In Warehouse at Commencement of Period.	Manufactured during the Year.	Taken for Consumption,	Exported.	Otherwise Accounted for.	In Warehouse at end of Period.	Memorandum of Revenue accru- ed, including License Fees.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$
1884-85	25,420,719	49,517,962	47,005,917	11,868,299	1,150,592	14,913,873	483,528
1885-86	14,913,873	48,212,695	37,604,708	9,793,202	921,201	14,807,457	388,761
1886-87	14,807,457	54,662,804	42,630,440	6,064,360	505,077	20,270,384	440,175
1887-88	20,270,384	54,282,943	48,640,467	5,470,338	671,923	19,770,599	500,027
Total	75,412,433	206,676,404	175,881,532	33,196,199	3,248,793	69,762,313	1,812,491
Annual average of 4 years ended 30th June, 1888.	18,852,358	51,669,101	43,970,383	8,299,049	814,676	17,440,578	453,123
1888-89	19,770,599	60,500,427	51,111,429	3,339,627	1,055,348	24,764,622	530,949

The production of malt is in excess of the average of the preceding four years by nearly 20 per cent.; and the consumption has increased from an average of 43,970,383 pounds to 51,111,429.

The exports continue to fall off at a rapid ratio.

The revenue accrued from malt was \$530,949, against an average for four years preceding of \$453,123.

Tobacco:

The following table exhibits the transactions during the Fiscal Year in Tobacco, Snuff and Cigarettes:-	exhibits th	e transacti	ons during	the Fiscal	Year in Te	obacco, Snı	off and Cig	arettes:-		
	<del>, i</del>	63	3.	4.	5.	.9	7.		86	ő
Fiscal Year.	In Warehouse	Manufac- tured during	Taken for Con-	Exported.	Otherwise Accounted	In Warehouse	Raw Leaf taken for Consumption	Leaf msumption.	Total Tobacco taken for	- Duty Collected thereon, In-
	lst July.	the Year.	sumption.		ior.	onen e mee	Canadian.	Foreign.	sumption.	License Fees.
Andreas and the second	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1884-85.	2,237,834	10,509,217	11,061,514	600,115	59,192	1,026,230		72	11,061,589	1,270,933
1885-86	1,026,230	9,594,121	8,507,074	454,631	46,237	1,612,409	:	142	8,507,216	1,629,604
xiv	1,612,409	9,114,944	8,816,573	93,930	25,262	1,791,588	:	08	8,816,593	1,668,002
1887–88.	1,791,588	10,608,026	9,248,034	87,720	39,455	3,024,405			9,248,034	1,740,542
Total	6,668,061	39,826,308	37,633,195	1,236,396	170,146	7,454,632		237	37,633,432	6,309,081
Average for four years ended 30th June, 1888	1,667,015	9,981,577	9,408,299	309,099	42,536	1,863,658		29	9,408,358	1,577,270
1888-89.	3,024,405	9,003,065	9,749,213	110,574	53,422	2,114,261		8	9,749,233	1,840,522
And the second s										

27. The following is a statement of Canadian tobacco taken for use during the last five years:—

Fiscal Year.	Leaf and Twist paid duty.	Taken for use in Manufac- tories.	Total.
	Lbs.	Lbs.	Lbs.
1884-85.	340,874	154,847	495,721
1885-86.	93,940	305,751	399,691
1886-87	91,593	426,223	517,816
1887-88.	77,104	599,231	676,335
1888-89.	74,071	711,334	785,405

The quantity of tobacco taken for consumption exceeds that of any year since the year 1884-85, when the duty was only 12 cents per pound, against a present rate of 20 cents.

The duty realised therefrom being as follows:-

Tobacco, snuff and cigarettes	,840,522
Cigars	563,172

**\$**2,403,694

against an annual average for four years preceding of \$2,066,534.

The following statement shows the quantity of Canadian roll tobacco which paid duty, and the divisions within which such duty was collected. The quantities shown are included in the foregoing statement (column 3.):—

, D	Lice	nses.	Tobacco paid duty during	Duty Collected.
Divisions.	No.	Amount.	year ended 30th June, 1889.	including Fees.
		\$	Lbs.	\$ cts.
Cornwall		<b> </b>	50	2 50
Ottawa			298	14 90 65 43
Beauharnois Iberville	5	10 00	1,108½ 180	11 00
OUIETTA	26	52 00	48,203	2,462 15
Montreal	44	88 00	18,142	995 10
& ne Dec	1	2 00	160	10:00
Terrebonne.	18	36 00	5,930	332 50
Total	95	190 00	74,07112	3,893 58
Total of previous years	81	162 00	77,104	4,017 20

Memorandum of Revenue accrued including License Fees. The following statement shows the transactions in Cigars during the fiscal year ended 30th June, 1889, and the four 563,172 318,357 560,351 554,067 524,281 1,957 056 œ In Ware-house 30th June. 10,793,175 8,746,625 8,505,805 10,306,500 10,809,270 38,368,200 9,592,050 Ŀ Otherswise Accounted for. 163,000 45,250 218,250 54,5626. 17,675 236,375 124,750 33,475 59,500 454,100 113,525Exported. δ. Taken for Con-sumption. 78,869,878 92,046,289 90,783,558 347,674,548 92,599,820 35,974,823 86,918,637 Manufac-tured during to bring pro-the Year. to Standard. 346,889 222, 223 47,685 616,797 154,149 11,388 ಣ 82,352,178 92,590,012 90,427,275 85,587,505 93,098,838 87,866,449 351,465,796 જાં 10,809,270 7,070,575 10,306,500 8,746,625 8,505,805 34,629,505 8,657,376 Annual average of four years ended 30th June, 1888. Fiscal Year. years preceding:-1886–87..... 1885-86.

The revenue derived from goods manufactured in bond during the past five years has been as follows:—

1884–85	
1885–86	46,523
1886–87	50,005
1887–88	
1888-89	28,082

## INSPECTION OF PETROLEUM:

The number of packages of Canadian petroleum inspected during the year is 255,442, and the fees collected thereon \$22,948.93.

The number of imported, inspected by officers of the Department, is 52,409, and the fees collected thereon \$12,795.90.

#### PUBLIC WORKS:

The revenue from this source was as follows:-

	1887-88.	1888-89.	Increase.	Decrease.
	\$	\$	Per cent.	Per cent.
Hydraulic and other Rents	3,151	6,052	92.06	
Minor Public Works	<b>5</b> ,563	4,405		20.81

By the Act 52 Victoria, Chapter 19, the collection of canal revenues was entrusted to the Department of Railways and Canals, and that of slides and booms to the Department of Public Works.

The statistics in reference to these public works are therefore discontinued, and will be found in the reports of those Departments.

#### CULLING TIMBER:

The amount accrued upon culling of timber was, during 1888-89, \$21,416.07; the cost of the service having been \$48,390.

# WEIGHTS AND MEASURES AND GAS:

The usual special reports in relation to these services have been prepared, containing full statistical information.

The revenue accrued from these services and from law stamps of the Supreme and Exchequer Courts was \$50,033.89, being \$4,001 in excess of the previous year.

# PREVENTION OF ADULTERATION OF FOOD AND AGRICULTURAL FERTILIZERS:

The usual supplementary report in relation to this service will be submitted, containing details of the work done and the reports of the analysts.

#### INSPECTION OF STAPLES:

The usual statistics in relation to this service will be found in Appendices of, and D.

#### METHYLATED SPIRITS:

The quantity of methylated spirits manufactured during the year was 100,283 gallons, of which 97,472 gallons were sold, thereby leaving 2,811 gallons in warehouse.

I have the honor to be, Sir,

Your obedient servant,

E. MIALL,

Commissioner.

xviii

APPENDIX 3.

Table showing the Annual Consumption per head of the undermentioned Articles paying Excise or Customs Duties in the respective Provinces and in the Dominion, since Confederation.

xix

		C	)ntario	•			(	QUEBEC.				New	BRUN	wick.			No	VA Sco	TIA.		Pr	ince Ei	DWARD	ISLAND	•	Non	Mani th-We	TOBA A	ND RITORIES	3.		Beitisi	H COLUM	(BIA.			D	o <b>m</b> inion	<b>«.</b>	
Years.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Торыссо.	Petroleum.	Spirits.	Been	Wine.	Tobacco.	Petroleum.	Spirits.	Beer	Wine	Tobacco.	Petroleum.
	Galls.	Galls.	Galls.	Lbs.	Galls.	Galls.	Galls.	Galls.	Lbs.	Galls.	Galls.	Galls.	Galls.	Lbs.	Galls.	Galls.	Galls.	Galls.	Lbs.	Galls.	Galls. C	alls. G	alls.	Lbs.	Galls.	dalls.	falls.	Galls.	Lbs.	Galls.	Galls.	Galls.	Galls.	Lbs.	Galls.	Galls.	Galls.	Galls.	Lbs.	Gall
						.																							و فرود و و							1.621	1.973	-098	1.815	
	1 534	2.156		1.596	.094	1.278	2.319	308	1.804	073	1 050	.519	.209	2.661	.480	.909	450	·193	143	·480															• • • •	1.604	2 · 269	174	1.738	,
	1.093	2.172	·034	1.569	.836	.801	2:120	263	1.966	.054	867	.995	071	1.734	•443	742	.825	075	1.895	347	·   .										• • • • • • • • • • • • • • • • • • • •	76-62 2008	<b> </b>		<b> </b>	1 124	2.290	·115	1.755	1
	1 298	2.072	.055	1.831	1.537	1.247	1.988	351	2 692	·279	1.074	634	100	2.425	.712	· 692	859	.081	2.128	471			····.								• • • • • • • •		<b> </b>			1.434	2.163	195	2.190	1.
	1.420	3.758	057	1.626	2 388	1.377	2.065	354	2.588	·189	1 214	613	128	2.536	1.050	759	1.081	·118	1.830	581													<b> </b>			1.578	2.490	259	2.052	1.8
• • • • • • • • • • • • • • • • • • • •	1.539	3.002	.082	2.179	1.690	1.540	2.172	443	2.879	.501	1 254	.751	·128	2.557	.747	827	.986	133	2.473	.564																1.723	2.774	257	2.481	1.8
	1.444	3.522	094	1 681	2.032	1.541	2.468	387	2.524	·193	1.358	837	·151	2 181	.860	.839	·954	·100	1.612	·629								,						• • • • • • • • •		1.682	3 188	238	1.999	1:
	1.923	3.379	.103	2.079	2.292	1.614	2.273	478	3.414	.361	1 362	.708	·201	2.472	.968	•928	·916	·133	2 · 125	653																1.994	3.012	·288	2.566	1
	1 256	3.696	055	1.723	2.244	1 215	2.322	259	2.307	·318	1:057	·639	066	1.794	.950	.689	·811	062	1 639	.755					•••••						•••••					1.394	3.091	149	1.915	1
••••••	1.369	3.383	.065	2.032	2.325	}	2 212	387	2.744	·476	950	·636	087	2.405	968	653	996	077	2.226	815	849	932	098	1.706	662	726	1.077	205	2.582	185	1.288	3.478	.430	2.936	.598	1.204	2.454	177	2·316	1
•••••••	1.019	3 109	.028	1 971	1.842	ŀ	2 108	i	2.086	288	.742	633	064	2:609	1.092	659	.794	064	1.876	.660	.748	875	045	1.588	.717	294	627	012	2.275	128	1.089	3.196	.330	2.723	.754	975	2:322	.098	2.051	1
•••••	1 002	3.013	.021	1.879		1 126	1.872	223	1.997		886	·782	.056	2.461		492	·828	.050	1.754		416	651	025	1 594		533	1.468	053	3 676		1.397	3.422	454	3 118		.960	2.169	.096	1.976	٠
	1	3.281	.030	1.907		1	1.660	230	1.939		756	646	059	2 251		. 516	767	.058	1 679		609	.516	036	1.618	•••••	814	1.851	.072	4.051		1.819	3.349	-519	3.389		1.131	2.209	104	1.954	
	l	3.478	020	1.958			1.598	1	1.738		.590	486	025	2 447	·····	430	•519	.031	1 812		425	561	014	1.327	•••••	813	2.479	.053	4:270	••••	1.010	3 187	.410	2.132		715	2.248	.077	1.936	
	1	3.548	025	2.008	• • • • • • •	1.150	1.723		2.118		753	456	044	2.548		1 1	.603	049	1.841		530	381	019	1 287	•••••	385	1.156	.010	1 311		1.038	2-699	.417	2.886	<b>]</b>	922	2 · 293	.099	2.035	•
	1.011	4.250	029	2.068		1.248	2.004		2.279		.883	649	·049	2 517		539	.690	062	1.870		425	269	013	1.066	•••••	767	2.150	.072	2:460		1 330	3· <b>2</b> 11	667	3 491		1.009	2.747	120	2.150	
••••••	1.075	4.508	037	2.183		1 380	1.967	1.	2:474		932	790	058	2 627	• • • • • • •	579	629	063	1 842	••••			4	1 107	•••		2.818	094	2:638		1.526	4.080	.803	4.464		1.090	2.882	135	2.680	
· · · · · · · · · · · · · · · · · · ·	987	4.519	.030	2.260	• • • • • • •	1.271	2.067	1	3 224		815	.805	056	1.792		573	.782	061	1.811	•••••				1 228			2.208	043	2:341	····	1 459	4.863	.860	3.896		.998	2.924	117	2.476	• • •
•••••	1.334	3,990	.028	2.175		1:211	1 952		3:767		:753	859	.044	2 130	• • • • • • • • •	536	772	054	1.985	•••••	1			1:348	• • • •		1 605	043	2 051		1.750	5.192	.980	2.945		1.126	2.639	109	2.623	ļ
•	654	4.555	.020	1.502	• • • • • • • •	920	2.207		3 · 327		:560	973	044	1 646	••••	463	807	.060	1.416	••••	- 1			1.587	•••••		1.722	.040	2.017		1.633	5:471	.899	2.561		.711	2.839	.110	2.052	
• • • • • • • • • • • • • • • • • • • •	580	4·555 4·856	020	1.905		1.027	2.578	1	2.774		.578	912	.032	1 638		441	634	032	1.355					1.421	•••••		1.826	033	1.420	• • • • • •	1 563	5 858	.878	5 545		746	3.084	095	2.062	
••••••	:732		022	1.868		927	2:609		2.822		515	927	.036	1.716		363	*897	.038	1.643	•••••		1		1 462	• • • •		1.679	034	1 412		1.600	6.744	.395	2.471		. 645	3 247	094	2.093	
•••••••••••••••••••••••••••••••••••••••	.102	7 002	020	1 212,		1 000	2.544	236	2.945		605	948	·040	1.967		456	1.127	<b>2047</b>	1.624	• • • • • •	197	523	003	1 467		609	3.080	062	2.527		1.956	8 122	526	2.263		.776	3.263	.097	2.153	
Average	1.136	3·606	.044	1.905		1 195	2.128	287	2.564		-889	736	.080	2 · 232		-619	• 000	.075	1.750		.450	. 461	.005	1 418		. 501	1.000	.050	0. 500		1.40=									-
	1	0 000	011	1 300		1 100	2 120	201	4 504		009	730	UBU	2 252		ora	.806	. 010	1.753	• • • • •	456	461	025	1.415 .		591	1.839	.059	2 502		1 461	4 491	612	3 201	1	1.176	2.633	143	2.116	1.

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.

E. MIALL,
Commissioner.

APPENDIX 3.

Table showing the Revenue per head derived annually since Confederation from the undermentioned Articles paying Excise or Customs Duties in the respective Provinces and in the Dominion.

		0	NTARIO.				Q	UEBEC.				New	Bruns	wick.			Nov	a Scot	IA.		Pi	BINCE I	EDWARI	Islan	D.	N	MAN ORTH-W	IITOBA A	AND RRITORIE	s.		Britisi	( Corn	MBIA.			Do	MINION.		
YEARS.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.	Spirits.	Beer,	Wine.	Tobacco.	Petroleum.	Spirits.	Beer.	Wine.	To acco.	Petroleum.	Spirits.	Beer.	Wine.	Tobacco.	Petroleum.
	8	8	\$	8	*	8	*	\$	8	\$	\$	\$	\$	\$	8	\$	8	\$	\$	\$	\$	8	\$	3	\$	\$	\$	*	*	8	\$	\$	\$	\$	\$	\$	\$	\$	*	*
8		114		163	.006	1.001	111	.094	218	.008	·870	.030	.068	157	.039	·894	.033	.045	·112	·048													<sub>!</sub>			1.028	.097	·043	176	.01
	841	110	014	·169	.061	.666	082	.074	·217	.007	.786	049	.027	·216	.068	.706	. 057	.030	·200	·045													<u>]</u>			·761	092	· 037	·193	.0.
•••••••	997	·101	.019	209	·105	1.016	.078	.099	.326	.020	957	.038	035	· <b>2</b> 87	.057	652	.055	.034	·244	·043										<b> </b>			J			·962	.085	·049	•259	.0
	1.080	122	021	265	·130	1 127	.082	106	431	.015	1.079	.039	.048	·405	·071	.766	.066	.050	·290	·045															.	1.059	.095	.056	.336	.0,
	1 182	·135	.030	368	·110	1 259	101	·134	.510	.035	1.128	.047	050	·416	.058	.765	.057	.054	·386	·046													<u> </u>		.	1.160	108	.070	422	.02
	1.112	155	033	286	·135	1 · 258	107	·122	471	.019	1.233	.055	.057	·347	.084	.780	.060	.042	251	·075																1.135	120	.066	.350	.06
••••••	1 507	154	·042	·351	154	1 349	097	162	615	.032	1.255	.053	.075	·404	·101	·887	.059	.056	·337	·079				· · · · · · · · ·												1.363	·119	.086	442	.1
••••••	1.150	·140	033	379	150	1.200	110	·134	•529	.029	1.158	.047	.044	.389	·104	.788	.057	.044	.333	.083							. <b></b>						[·····]	l	.	1 · 127	·114	.069	428	
	1 1	132	.031	·443	·153	1 269	.081	153	623	.039	1.055	.046	043	•406	·111	.746	.049	.038	`455	.095	.976	.046	.052	·344	·115	·776	.037	.108	·684	.033	1.545	.254	184	1.003	138	1.182	.098	.075	.213	.:
	927	142	021	425	·126	1 · 101	.092	110	•463	.023	·812	.039	.043	·540	104	.750	.072	·044	·384	.066	.851	052	.033	.319	.100	·294	.036	·014	.557	.021	1 289	·230	1	887	109	•949	109	.057	446	
•••••••••••••••••••••••••••••••••••••••	912	202	012	410	· • • • • • • •	1 100	.119	112	•450		.955	·074	.033	•537		.552	.079	.036	365		469	047	002	.319		•534	.096	.039	·914		1.647	·231	1	1.057		. 927	147	.052	439	}
***************************************	1 283	186	.019	424		1.068	.079	·118	472		.830	.051	.039	·493		.587	063	.039	351		687	.029	027	•325		.905	.106	051	1.043		2.163	.338		1.147		1.095	125	057	}	
****************	1. 1	121	.016	422		950	052				.690	.028	022	.509		532	.036	.032	.370		.525	.021	.015	· <b>26</b> 8			.087	.046	.989		1.331	198	1 1	928		.772	.081	.055	1	
*** **********	1 1	120	021	437		1 246	059		463		.880	028	.039	.539	•••	646	}	047	.380		673	.017	.018	260		]	.041	.008	275		1.342	151		833		.990	.081	·073	į -	
	) 1	145	026	460		1 355	.069	197	•534		1 034	039	.044	543	• • • • • • • • • • • • • • • • • • • •	665		055	385		547	012	012	215		.810	.086	139	·564 ·508		1.691	182		1.017		1.084	· 103	092	473	
		151	031	444		1 513	065	206	.542		1.087	·051 ·049	045	· 504 · 257	• • • • • • • • • • • • • • • • • • • •	.717	.044	056	342		537	.010	025	201		·958 ·715	·143	·112 ·039	347		1 918	299		861		1 074	103	.082	365	
	1 : 1	150	025	324		1 317	.067	177	·490		· 949 · 890	.046	031	312		·716		002	· 236 · 265		·445	·013	.008	·149 ·163		.631	.087	.036	.306		2.182	283	1	836		1.198	111	.074	393	
		166	023	322	· · · · · · ·	1 312	.082		.569		.861	.039	.033	.385	• • • • • • • • • • • • • • • • • • • •	.763	1	048	.318		.983	013	.013	.318		672	.097	.032	253		2.615	263		1.118		1.007	.091	.074	.502	
•••••••	910	139	019	346		1 462	052		· 856		.882	.044	033	375		.700	1	048	.316		362	.021	013	·134		622	.091	.022	401	Ì	2 472	330		938		1.045	.100	.066	514	1
	1	147	017	·450 ·406		1.351	.071				.808	.048	027	383		·612		.035	·340	1	416	021	.008	294		.390	.077	.024	328		2.675	332		. 843		•944	.110	.066		
	1	.173	020	•469		1.567	070		748		.939	.050	029	435		.744		1 1	.360		345	.023	.003	270		842	136	.043	.564	1	3.151	.378		.837		1.107	·114	.068	529	1
				100									<u>·</u>			-	-			ļ										-			<u> </u>		-				-	-
Average	1.051	144	023	362		1 221	.081	139	· 513		.960	·045	.040	401		.710	.049	.043	.319		-597	.024	.017	·262	\ 	·672	.089	.050	.552		1.989	249	.398	.961		1.052	105	665	·413	,

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.
1—c1

E. MIALL, Commissioner. APPENDIX C.

		1 /	
ct under the showing the	Residence.	ector Kincardine.  Owen Sound.  Chatham. ector Windsor.  Hamilton. do	Port Hope. Kingston. Dalhousie. St. Catharines.
owered to a 1889; also	ОЁсе.	Inspector Dep. Inspector Inspector Dep. Inspector Dep. Inspector do	do do Inspector
e who are emp the 30th June, istrict	Name,	r hides. Wm. G. Culbard Inspector Paris. John Campbell Dep. Inspector Kincardine. Geo. S. Miller Dep. Inspector Chatham. Jos. W. Barringer Dep. Inspector Windsor. r prain. Edward Adamson Inspector Hamilton. do do do	Wm. Bletcher Peter McKim. Wm. Gardner. Michael Cairns
anadian Commerc ets, made up to t nprised in each D	Articles.	27, 1873. Leather and raw hides. Wm. G. Culbard Inspector Paris.  do	10, 1885. Wheat and other grain.     Wm. Bletcher     do     Kingston.       29, 1873. Leather and raw hides.     Peter McKim.     do     Kingston.       27, 1873. Beef and pork.     Wm. Gardner.     Inspector.     Dalhousie.       do     Leather and raw hides.     Michael Cairns.     Inspector.     St. Catharines.
Articles of Commending A	Date of Order in Council.	Sept.	10, 1885 29, 1873 27, 1873 do do
List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce who are empowered to act under the Inspection Act of 1874, 37 Vic., cap. 45, and amending Acts, made up to the 30th June, 1889; also showing the District for which they are appointed, and the Territory comprised in each District	Territory comprising District.	Counties of Brant and Haldimand  do Bruce and Grey.  do do Carleton and Russell  do Essex, Kent and Lambton.  do Essex, Kent and Lambton.  do Frontenac, Leeds and Addington.  do Grenville, Dundas and Stormonties of Glengarry and Prescott.  Counties of Glengarry and Prescott.  All that territory lying south of the main line of the Grand Trank Railway (not incorporated in the Division of Toronto) and east of the Port Dover and Lake Huron Railway  City of Hamilton.  Comprising all that portion of Ontario Jung west of the Kingston and Pen- broke Railway, and east of the east- broke Railway, and east of the east-	ern boundaries of the Counties of Ontario, Muskoka and Parry Sound. Nov. City of Kingston. Aug. Counties of Lanark and Renfrew. Sept. do Lennox and Prince Edward. do Lincoln and Welland
List of Inspectors and Depu Inspection Act of 1874, District for which they	District.	Brant and Haldimand  Gounties  Bruce and Grey.  Gounties  Gounties  Gounties  Gounties  Grewille, Dundas and Stor- mont.  Glengary and Prescott.  Gounties Hamilton  Grey of Frexion onto onto onto onto onto onto onto o	do Lanark and Renfrew Lennox and Prince Edward. Lincoln and Welland

Lisr of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c.—Continued.

ī						
	Residence.	London.	spector Belleville. do Port Hope.	Kingston. Ottawa.	Stratford.	
	Office.	Inspector	Inspector do	Inspector Kingston. do Ottawa.	ор	
	Name.	Simpson Thompson.	John Hodge	W. J. McNeil Francis McCullough.	John Meyers	
	Articles.	Wheat and other grain.  Leather and raw hides. Simpson Thompson., Inspector.	Leather and raw hides John Hodge Inspector Belleville.	10, 1885 Wheat and other grain. W. J. McNeil 29, 1873 Leather and raw hides. Francis McCullough.	op	Nov. 10, 1885 . Wheat and other grain.
	Date of Order in Council.	Nov 10, 1885 Aug. 29, 1873 Sept. 27, 1873	: : : op op		Sept. 27, 1873 do	Nov. 10, 1885 .
	Territory Comprising District.	All that territory lying south of the lipe of the Grand Trunk Railway and west of the line of the Port Dover and Laske Huron Railway	do Northumberland and Hastings.  do Ontario and Durham  do Oxford and Norfolk  Comprising all that portion of Ontario	lying east of the Kingston and Feinbroke Railway	Counties of Perth and Huron	Comprising all that territory lying north of the Grand Trunk Railway between Guelph and Sarnia, and west of the western boundary of the Toron Division, also all stations upon the line of the Grand Trunk and Georgian Bay Extension between Stratford and Wiarton Beginning at the western boundary of the Kingston Division, thence westerly along the north shore of Lake ontain to Burlington, thence westerly along the rotte of the Hamilton and North-Western Railway to Georgetown, thence westerly along the rotte of the Hamilton
	District.	Ontario—Continued.  London		ор	Perth and Huron	Stratford

		1 /
Toronto.  do do do	Port Arthur. Collingwood.	Hochelaga. Lévis. Montreal. do d
Inspector do do do do do do do	do do	Inspector  do do  Dep. Inspector  Dep. Inspector  Dep. Inspector  do  Inspector  Dep. Inspector  Ado  do  do  do  do  hep. Inspector  Dep. Inspector  Dep. Inspector  Inspector  Dep. Inspector  Dep. Inspector  Dep. Inspector
n. Joseph Harriss. John C. Howe	Frank E. Gibbs. Pat Doherty.	w hides. Flavien Genest. Inspector.  E. Lemieux. do Louis A. Boyer. do J. C. Gingras. Dep. Inspector. W. E. Scott. Dep. Inspector. W. E. Scott. Dep. Inspector. Edward J. Major. do Dep. Inspector. Inspector. do Dep. Inspector. Blancian Masson Dep. Inspector. W hides. Thos. Hawkins do Dep. Inspector. W hides. B. Simard. Inspector. Benjamin Rousseau. Dep. Inspector. Phileas Rousseau. Dep. Inspector. David Nolan. Inspector. Inspector. David Nolan. do Dep. Inspector. David Nolan. Dep. Inspector. David Coté Dep. Inspector.
10, 1885 Wheat and other grain. Joseph Harris  26, 1875 Flour and meal  Leather and raw hides. John C. Howe do James Pepler	11, 1885 Wheat and other grain. Frank E. Gibbs 27, 1873 Fish and fish oils Pat Doherty	19, 1877         12, 1886       Leather and raw hides. Flavien Genest.         15, 1886       do         16, 1873       Four and meal.         17, 1886       Leather and other grain. Hospice Labelle.         18, 1878       W. E. Scott.         19, 1878       Fish and fish oils.         10, 1878       Fish and fish oils.         10, 1878       Fish and fish oils.         29, 1878       Fish and fish oils.         29, 1878       Fish and fish oils.         29, 1878       Fish and fish oils.         40       Louis Coté.
99	<del>၀</del>	
Nov.	Sept.	Sept. Oct. April March Aug. Common Co
Guelph, along the line of the Grand Trunk Railway, and thence northwesterly by the westernmost route of the Wellington, Grey and Bruce Railway to Kincardine, excepting thereout all stations upon the line of the Grand Trunk and Georgian Bay Extension, which shall be deemed to be within the Inspection Division of Stratford  City of Toronto and Counties of York and Peel.	1 own of for Articular and the certificity within a radius of 15 miles	Counties of Drummond and Arthabaska, do Gaspe, Bonaventure and the Magdalen Islands. County of Hochelaga. Counties of Lévis, Lotbinière, Bellechasse and Dorchester. City of Montreal. do d
op op op	Fort Arthur Simcoe and Algoma Wellington and Waterloo. Wentworth and Halton	Orunmond and Arthabaska. Gaspé and Bonaventure Hochelaga.  Montreal do

Harbour an Bou-Residence. P. L. Commeau..... Dep. Inspector Petit Rocher. 1874. | Fish and fish oils ..... | George Scott. ..... | Inspector. ... | Main-à-dieu. Inspector . . . . | Fredericton. Franville. Instector....|Carleton. Dep. Inspector Quebec. List of Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, &c.—Continued. F. W. Thomson .... Inspector..... Dep. Inspector Office. දිදි Chas. Clarke.....Geo. Murdock Israel Letteny ... ... Leather and raw hides. Aldéric Fortin..... Peter Haché..... S. L. Brittain..... Israel Atherton .... F. Grenier.
W. Sutherland.
J. Mathieu.
J. Roe. 
 west of the river
 March 18, 1876.
 Fish and fish oils.

 of Gloucester
 Oct.
 12, 1875.
 do

 Northumberland
 April 29, 1880.
 do

 Restigouche
 May 23, 1882.
 Fish and fish oils.
 Fish and fish oils..... Leather and raw hides. Butter.... Articles. පිපිපි do do Temiscouata and Kamouraska Counties of Temiscouata and Kamouraska April 1, 1875. St. John. That portion of the City and County of St. John, lying to theeast of the river. March 18, 1876. only April 25, 1879.

Township of Barrington April 20, 1876.

County of Cape Breton July 8, 1874. Date of Order in Council. Annapolis ......June Argyle ..... Township of Argyle for fish and fish oils That portion of the County of St. John. including Town of Carleton, lying to the west of the river Counties of Quebec, City of Quebec .... Restigouche Territory comprising District. City of Quebec, ...... County of York. දිදි Gloucester..... Northumberland..... Barrington .... Quebec -Continued Annapolis ..... District. 888888 York

Dep. Inspector Gaberouse.   do	: : : : : : : : : : : : : : : : : : :		Inspector (Guysborough. Dep. Inspector Millord. do Isaac's Harbor. do Isaac's Harbor. do Guysborough. do Guysborough. do Guysborough. do Guysborough. do Guysborough. do Harry's River. lie do Guysborough.
Henry Bagnell. Patrick Bates. Paul Buckley Benjamin Boon John W. Burke James Campbell Patrick Campbell Benjamin Cann Henry Cann John Cryer	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Wm. G. Scott David Andres Moses Bearso. And. Blakeney. Thomas Condon. John Cross. R. F. Cunningham Wm. DesBares. Patrick Dunfey. J. H. Fetmate. Joseph Rougere. G. M. Francheville
			16, 1873 do
	<u>a</u>		April
	d <del>Q</del>	lchester	April Oct.
ත්ති ක්රම්	4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	County of	County of Guysborough April  do d
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Hubbard's Cove.	Blind Bay.	Shad Bay. Egg Island.	Dover.	Jeddore.	Boutillier's Cove.	Herring Cove.	Hubbard's Cove.	Halifax.	West Dover.	3-Fathom Harbor	de do	Halifax.	Seaforth L. Ward	Dover.	S. E. Fassage.	Feggy's Cove.	Sambro.	Herring Cove.	Tinner Prognect.	op	Bay of Islands.	Dimean's Cove	St. Mary's Bay,	Black Point. French Village.	St. Mary's Bay,	Indian Harbor.	Herring Cove.	Characterel	Halifax	Chezzetcook.	Spry Bay.	Dover.	Ketch Harbor.	Pennant.	St. Marv's Bav.	Inkerman H.
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Jas. E. Conrad	Jas. H. Coolen	William E. Coolen	Robert Connors	Anthony Cooper	James Cornelius	Isaac Croucher	Archipald Darram	Thos. Doyle.	James Fader	Jeremiah Fillis	Peter Fleining	James Fortune.	Wm. Fraser	James Fraser	Charles Fulker	Sydney Garrison	Andrew Grav	Ed. Hayes	John Hayes	John A. Hearn	James Henley	George Hertling.	Ephraim Hubley	Tesso Hubley	James Hubley	Judson T. Hubley	Wm. B. Johnston	Feter Jollimore.	Mourise Veyenech	Geo Lanierre	Geo. Leslie.	Thomas Lynch	Simon Mackay	George Marryatt	Jacob E. Marryatt.	F I Guilt to Literoutin
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op		do do	op	:	op			<b>8-8</b>				op				op	: : : : : : : : : : : : : : : : : : : :		op					000		op			op /				on	000		:

Isle Madame	That portion of the County of Richmond Vine to the south of the Lennox	pa pa								
	Channel	May	10, 18	1880.	qo		E. E. Binet.	do	Arichat.	
op	do do	•		:	qo		Charles Doyle	:	Rocky Bay.	
qo	do do	_	qo	:	qo		David M. Gruchy	•	West Arichat.	
op		<u> </u>	op.	-	op.	:	W. J. Levesconte		D'Escousse.	
op			of.	- 1	о <del>р</del>		Malcolm Medonald		Arichat.	_
Pietou	County of Pictou	Çet.	16,	1873	1873 Leather	:	John Sutherland	or	Fictou.	
		: 1		Ψ( ::;	Hides	<del>-</del> -	Charles Wilson	go	qo	•
Queen's	County of Queen's	reb.	, 28,	1881	1881 Fish and fish oils	:				
	anart as t	· a								
	Madame	Oct.	16.	1873	qo		Maurice J. Kavanagh	do	St. Peter's.	
op	do do	· ·		:	op	:	Simon Clannon	Dep. Inspector	Dep. Inspector Point Michaud.	
op	do do		qo	:	qo	:	E. Malcolm	op ,	Cariboo Cove.	
op	do do		op op	:	op.		Fred. Mauborquet	:	Upper L'Ardoise	ĺ
op	op op	<u> </u>	op.	:	op.	<u> </u>	Colin Medonald.	:	Fourchu.	_
op	op op	<u> </u>	op.	:	op.	:	John McDonald	٠	St. Peter's.	~~
op	op op	<u> </u>	မွ.	:	op,	:	Alex. McKay	:	rand Kiver.	~.
op	do do	·	၀ှ.	:	ළ,		Alex, McKillop,	:	L'Archevedue.	
op	do do	<u> </u>	do ,	:	မှ.		Chas. F. Samson	op	Lower L'Ardoise	
go 20	0	· -	98		go (	•	John Walker	 00	Kiver Innabit ts.	-
Shelburne	County of Victoria	A pri	, , ,	1878	8-6		I A Matheson	Tueroctor	S Bay Ingonish	-
do		;	, ,	2	9-5		Reprose Factor	ector.	Englishtown.	
op	op		ą	: :	op		Murdoch McDonald.	op	Neil's Harbor.	T
op	op		ф	-	දි	:	John McNeil		Ingonish.	, ,
op	do ob	<u> </u>	qo		qo	:	Hugh McQueen	:	North Shore.	
op	op -		op jo	-!	op ,		Isaac Roper	op	Ingonish.	,
Windsor Yarmouth	Township of Windsor, in County of Hants April County of Yarmouth	s April	orî.	1884 F	1884 Leather and raw hides.  Fish and fish oils		J. B. Worthylake	Inspector	Windsor.	(
										•
Prince Edward Island.										-•,
nn	Province of Prince Edward Island		22,	1886	op.	:	Nathan Davies	Inspector	Charlottetown.	
Prince	County of Prince.	op ·	51.6 61.6	1886 1824 1	do 7bost and othor		:	Trenoctor	Winning	
	do	9mt	go;	- :	do David Horn.	Stail.		do	do	
	op	-	မှ		ф.		James Massie	op	op,	
op	ор	-	ව	<del>-1</del> :	Leather and raw hides. W. J. Bird	hides.	W. J. Bird	ор	op	
	AND THE PROPERTY OF THE PROPER	-		-						

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E. MIALL,
• Commissioner

Inland Revenue Department, Ottawa, 3rd September, 1889.

#### APPENDIX

STATEMENT showing the Quantity of certain Staple Articles of Canadian ended 30th June, 1889, and the Fees accrued thereon, as returned to GRAIN.

,		1977 T Maller a. (Miller)				Whe	eat.				
Districts.		Man	nitoba Ha	ard.			anada Iard.	w	hite Fyf	e.	
	Extra	No. 1.	No. 2.	No. 3.	Re- jected	No. 1.	No. 3.	No. 1.	No. 2.	Re- jected.	No. 1.
Montreal Kingston	Ctls.	Ctls. 125,670	1 1	Ctls. 12,800	Ctls.		Ctls.	Ctls.	Ctls.	Ctls.	Ctls.
Toronto Port Arthur Winnipeg	2,660		275,120	221,160			184,300		1,900	11,780	95,380 4,560
Total	6,460	870,130	669,268	246,360	360	380	184,300	6,460	1,900	11,780	283,960

GRAIN-

		Wheat.	Ì			C	Other G	rain.			
Districts.	Red W	inter.	No		In	dian Corn.				Oats.	
	No. 1.		Grade	No. 2 White.	No. 1.	No. 2.	No. 3.	Re- jected	No. 2.	No. 3.	Re- jected.
	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.
Montreal Kingston		9,360				, ,	3,640	2,240	19,168	3,072	7,872
Toronto	2,400		28,720		300						4,800 4,420
Total	2,400	17,610	47,720	219,310	300	1,665,824	3,640	2,240	88,648	3,072	17,092

FLOUR AND

				Flour.			
Divisions.	Patent Winter.	Patent Spring.	Straight Roller.	Ext	ra.	Super	fine.
	Brls.	Bags.	Brls.	Brls.	Bags.	Brls.	Bags.
MontrealQuebec	251	15	28,181 2,261		312	7,045 979	2,033
Total	251	15	30,442	21,768	312	8,024	2,033

## D.

Commerce, inspected under provisions of 37 Vic., cap. 45, during the Year the Department of Inland Revenue, by the respective Inspectors.

## Wheat.

Northern	ı.		Spri	ng.			Frost	ed.		White Winter.	Miz Win	
No. 2.	No. 3.	No. 1.	No. 2.	No. 3.	Re- jected.	No. 1.	No. 2.	No. 3.	Re- jected	No. 2.	No. 3.	Re- jected
Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.	Ctls.
2,940	360	334,740	180,670	23,700	4,260	30,120	6,120	4,200		200		
110,960		23,250							5,400	29,400		
11,400	3,800	5,420	4,560 760						24,700			7,980
125,300	26,200	363,410	195,290	30,920	156,040	395,420	292,900	179,360	30,100	29,700	9,000	9,180

#### Continuéd.

_				Other	Grain.						
		Bar	ley.				Pe	as.		Fees.	
No. 1.	No. 2.	No. 3 Extra.	No. 3.	No. 4.	Re- jected.	No. 1.	No. 2.	No. 3.	Re- jected.		
Ctls. 8,064	Ctls.	Ctls. 3,168	Ctls. 21,600	Ctls.	Ctls.	Ctls. 4,320	Ctls.	Ctls. 34,380	Ctls. 22,540	\$ 2,649	cts.
129,120 391,434 1,360 4,420	124 060	17,240 273,622 2,040	967 168,296		3,600 5,520					3,691 2,251	30 69 70
534,398	546,630	296,750	225,303	1,360	<u>-</u>	l	731,280	34,380	22,540	11,425	50

## MEAL.

			Flour.		٠,			Oatmeàl.		
Strong	Bakers.	On Sa	mple.	Sour.	Reje	cted.	First.	Second.	Re- jected.	Fees.
Brls.	Bags.	Brls.	Bags.	Brls.	Brls.	Bags.	Bags.	Bags.	Bags.	
		21,456	3,337 38,646	530 25	294	3,871	100	434	76	1,668 01 738 64
504	145	21,456	41,983	555	294	3,871	100	434	76	2,406 65

# STATEMENT showing Quantity of certain Staple

#### BEEF AND PORK.

Division.		]	Beef.				Pork.			Fees.
Division.	Me	ess.	Prime Mess.	Re- jected.	Mess.	Prime Mess.	Extra Prime.	Thin Mess.	Re- jected.	1 0037
Quebec	½ Brls.	Brls.	Brls.	Brls.	Brls. 1,182	Brls.	Brls.	Brls.	Brls.	\$ cts. 384 25

#### PICKLED

	Saln	on.	Sea T	rout.	Lake	Frout.	Mack	erel.
Division.		Brls.	, i	Brls.	ri.	Brls.	zi.	Brls.
	Brls.	B	Brls.	3 B	Brls.	- F B	Brls.	
Quebec	662	16	91	17				
St. John	2,051	20			4	Z	0,308	103
Isle Madame. Victoria St. Mary's (Guysboro').	59	3					206 379 7	3 9
Simcoe and Algoma	2,772			17	4	349 351	7,290	175
10001	2,112	0.0	1 31	*1	1 -	001	,,200	1,0

#### FISH

	Whale Oil.			Seal (	Oil.				Po	rpoise (	Dil.	
Division.	No. 2 Straw.	No. 2 Pale.	No. 3	Straw.	No Bro	o. 4 wn.	No. 5 Dark Brown.	No. 1	Pale.	No. 28	traw.	No. 3 Brown.
	Tierces.	Tierces.	Tierces.	Brls.	Tierces.	Brls.	Tierces.	Tierces.	Brls.	Tierces.	Brls.	Tieroes.
Quebec St. John Halifax. Isle Madame			1,380 121					193	3	61	2	7
Total	1	592	1,501	67	222	8	36	193	3	61	2	7

# Articles of Canadian Commerce Inspected, &c.—Continued.

## ASHES.

		Pot.		Pea	ırl.	
Division.	First Sort.	Second Sort.	Third Sort	First Sort.	Second Sort.	Fees.
Montreal	Brls. 2,824	Brls. 332	Brls.	Brls. 533	Brls. 95	\$ cts.

FISH.

Herr	ing.	Newfo las Herr	nd		ereaux id vives.	Sh	ad.	Cod	fish.	White- fish.		her sh.	
Brls.	½ Brls.	Brls.	½ Brls.	Brls.	½ Brls.	Brls.	½ Brls.	Brls.	½ Brls.	½ Brls.	Brls.	½ Brls.	Fees.
1,589 163 3,109 4,921 1,494 566 120 467	2,195 7,819 167 1 362 18 3	46	44	4,095 1,778 1,255 99 67 11	23	9		996 409					\$ cts 2,264 37 279 60 483 24 1,367 80 165 67 80 46 40 37 33 51 109 07
12,429	10,585	46	44	7,305	26	9	10	7,979	9	968	2	4	4,824 09

OILS.

	Cod O	il.		Herrir	ng Oil.	Hake	o Oil.	Dogfish Oil.	Other F	ish Oil.		_
A	١,	E	3.	A		A	L	A.	A	<b>.</b> .	Fees	s.
Tierces.	Brls.	Tierces.	Brls.	Tierces.	Brls.	Tierces.	Brls.	Brls.	Tierces.	Brls.		
2,087 1,763 32	142 289 205		1 12 3	12 21	3 7 3	46	210 1	2	25	7	802 78 575	00
3,882	636	24	16	33	13	46	211	2	25	7	1,460	95

# STATEMENT showing Quantity of certain Staple Articles, &c.—Concluded.

#### LEATHER AND RAW HIDES.

Division.	]	Leather	·.		Hid	les.	•	Cal	f Skins	3.	Fees.	
Division.	1.	2.	3.	1.	2.	3.	Sq. Foot.	1.	2.	3.	rees.	
											\$ c	ts.
Montreal	28.312	66,954	17.683	33,601	6,685	2,409			1.082	i	4,396 1	ın
do				13,661	6,355						1,089 3	
Quebec	7,150	17,050	6,850	11,300			143,250				2,972 0	
Belleville				4,789	992	61					292 2	
Hamilton				20,143	5,295	382		4,525	1.854		1,508 1	
Kingston				11,597	1,252	608						
London				5,652						i	442 9	
Ottawa				10,173							782 8	
Perth				2,411	262						140 1	
Toronto		l	l		26,931	2,518		5,362	2,678		5,179 3	
Lincoln and Welland	١		l	5,571	380						304 6	
Fredericton			<i>.</i> .	3,453	221	5					178 2	
St. John				9,269	293	30					481 0	
Charlottetown				614	52	7					33 5	
Winnipeg				8,492	6,783	736				105		
Totals	35,462	84,004	24,533	196,739	70,061	10,746	143,250	12,175	6,525	107	19,346 6	36

E. MIALL, Commissioner.

Inland Revenue Department, Ottawa, 3rd September, 1889.

#### APPENDIX &.

Statement showing the number of Illicit Stills seized during the Fiscal Year ended 30th June, 1889, with names of owners, schedule value, &c.

Date.	Name.	No.	Sche ule Valu	3	Division.			Rer	narks.	
do 6, 1889	(John McPherson.)	15 16 17 18	24 186 45 127	00 00 00	do	Fine do	of \$100		ed and 1 n	th in jail. nonth in jail do
April 6, 1889. Mar. 26, 1889. Oct. 19, 1888. do 19, 1888. July 26, 1888.	D. McDonald	19 20 21 81 86 598 71 72 22	26 30 20 40 206 15 15 200	25 00 00 61 00 00	do do Joliette do Montreal Ottawa do Owen Sound	do Fine Fine do Rele	\$120 ased. lo	impos impos	ed. ed and 1 r sed.	do do nonth in jail
Nov. 26, 1888. do 28, 1888. Dec. 11, 1888. July 12, 1888. Oct. 1, 1888.	D. McFhall	33  49 51 50 52 226 38	57 40 33 30 68 15	00 50 00 40 00 00 00	do do Pictou	Pena dor Fine	lty of able dut	\$100 ty.	imposed	and to pay
Aug. 9, 1888 Oct. 9, 1888 Oct. 26, 1888	S. Middleholtz D. Clendenning Unknown. Albert Roe D. Calder.	94 95 193 194 195	19 33 7 15 20	00 00 00	Stratford do Toronto do do	do	\$100 \$400 \$100	do do do	and 5 mc	onths in jail. do

E. MIALL, Commissioner.

Inland Revenue Department, Ottawa, 3rd September, 1883.

FINANCIAL RETURNS, 1888-89.

-	<del></del>		
	Total.	\$\psi\$ cts.  6,917,830 71  91,476 64  28,995 25  62,981 44  53,800 67  45 04  21 00  7,155,150 75  23,145 73  7,132,005 02	mer.
CR.	Revenue Accrued, 1888-89.	\$ cts. 6,892,612,41 6,652,33 4,465,00 21,416,07 50,033,89 21,00 6,974,540,70 23,145,73 6,951,394,97	E. MIALL, Commissioner.
	Revenue of previous previous not collected lst July, 1888.	\$ cts. 25,218 30 85,424 31 24,590 25 41,565 37 3,766 78 45 04	E. M.
No. 1.—GENERAL REVENUE ACCOUNT.	Service.	Excise and Seizures, per Statement No. 3.  Hydraulic and other Rents, per Statement No. 5.  Hydraulic Works, per Statement No. 6.  Hydraulic Works, per Statement No. 7.  Hydraulic Works, per Statement No. 7.  Hydraulic Works, per Statement No. 7.  Hydraulic Timber, per Statement No. 19.  Hydraulic Statement No. 19.  Hydraulic Statement No. 10.  Hydraulic Statement No. 11.  LESS—Refunds, as per Statement No. 16.  Totals.	
Vo. 1.—GE	Total.	\$ cts. 6,917,830 71 28,995 25 62,981 44 53,800 67 45 04 21 00 7,155,150 75 23,145 73	TUE DEPARTMENT, OTTAWA, 3rd September, 1889.
Ħ	Balances due 30th June, 1889.	cts. 31,349 02 90,713 64 25,827 25 42,119 25 5,512 66 45 04	RIMENT,
	Author- ized Abate- ments.	\$ cts. 250 00 250 00 250 00	E DEPA
DR.	Amounts deposited to the Credit of the Receiver- General.	\$ cts. 6,886,481 69 773 00 2,918 00 20,813 89 48,288 01 21 00 21,959,333 59 23,145 73 6,956,187 86	INLAND REVENUE DEPARTMENT, OTTAWA, 3rd Sep
	Memo. of Refunds deducted below.	\$ cts. 23,145 73	INLA

Dr.

## No. 2.—GENERAL EXPENDITURE

te to Col- &c., 1st 8.	Ex	PENDITURE A	UTHORIZED B	Y DEPARTMEN	īT.	ue by Col- &c., 30th 39.	
Amounts due to Collectors, &c., 1st July, 1888.	Salaries.	Con- tingencies.	Seizures.	Cullers' Fees.	Cullers' Annuities.	Amounts due by Collectors, &c., 30th June, 1889.	Total.
\$ ets.	<b>\$</b> ets.	\$ ets.	\$ ets.	\$ ets.	\$ cts.	\$ ets.	\$ ets.
49 08	266,374 43	97,898 80	933 32			673 98	365,929 61
	15,500 00	6,234 33		21,389 08	5 <b>,2</b> 66 68	75 00	48,465 09
			2,241 45				2,241 45
	6,312 17	19,967-86					26,280 03
	47,309 07	7,263 03				16 66	54,588 76
19 10	51,105 82	16,204 32				201 51	67,530 75
	10,751 20	7,787 76				262 88	18,801 84
68 18	397,352 69	155,356 10	3,174 77	21,389 08	5,266 68	1,230 03	583,837 53

Inland Revenue Department, Ottawa, 3rd September, 1889.

ACCOUNT, 1888-89.

Cr.

Service.	Amounts due by Collectors, &c., 1st July, 1888.	Amounts disbursed by the Receiver- General on requi- sition of the De- partment.	Amounts deducted from Salaries for Superannuation.	Amounts due to Collectors, &c., 30th June, 1889.	Total.
	\$ ets.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Excise and Seizures, per Statement No. 4	913 98	359,751 69	5,214 86	49 08	365,929 61
Culling Timber, per Statement No. 8	75 00	48,097 89	292 20		48,465 09
Seizures Distributed, per Appendix B		2,241 45			2,241 45
Sundry Minor Expenditures, per Statement No. 12		26,153 75	126 08		26,280 03
Departmental Expenditures, per Statement No. 17	16 66	53,794 11	777 99		54,588 76
Weights and Measures, per Statements 21 (A) and 21 (B)	193 26	66,354 01	983 48		67,530 75
Gas Inspection, per Statement No. 22.	12 88	18,576 98	206 98	5 00	18,801 84
Totals	1,211 98	574,969 88	7,601 59	54 08	583,837 53

E. MIALL, Commissioner.

DR.

No. 3.—Collection Divisions, (For Details,

\$ cts. 91,443 20 12,058 53 7,372 37 168,395 82 119,094 56 64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19	50 00 50 00 475 00 50 00 100 00	62 75 84,675 00 9,689 99 720 00	65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	\$ cts. 3,288 30 17,945 40 15,971 55 31,548 30 9,289 26 70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59	23 30 48 00 587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	Manufactures.  \$ cts.  1,104 28  4,664 61 1,453 95  300 00  10,358 72  17,881 56  6,774 93 2,429 08	301 96 32 57 96 72 44 00 150 20 10 00 307 47 140 00 115 00 1,197 82 634 16 240 00 249 56 199 57 493 83
91,443 20 12,058 53 7,372 37 168,395 82 119,094 56 64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 29 640,890 19 1,962,423 89 1,962,423 89 5,529 55 16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 79	100 00 75 00 75 00 150 00 150 00 250 00 200 00 200 00 150 00 150 00 150 00 450 00 7,134 72 100 00	3,007 56i 2,941 32 31,493 63 29,036 49 2,380 20 45,725 58 2,158 05i 2,132 85i 100 00 13,039 01i 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03	14,423 00 23,772 00 1,583 80 9,840 40 239,885 60 33,460 00 101,956 40 41,008 00	3,288 30 17,945 40 15,971 55 31,548 30 9,289 36 70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	334 60 23 30 48 00 587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03	1,104 28 4,664 61 1,453 95 300 00 10,358 72 17,881 56 6,774 93 2,429 08	301 96 32 55 96 72 44 00 150 26 10 00 307 46 140 00 115 00 1,197 82 634 16 249 50 199 56 493 84
12,058 53 7,372 37 168,395 82 119,094 56 64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 1,962,423 89 1,962,423 89 5,529 55 16,038 20 963,545 66 316,268 68 68,700 54 25,127 44 56,303 79	75 00  750 00  150 00  150 00  250 00  200 00  250 00  50 00  150 00  450 00  7,134 72  100 00  10,159 72  50 00  475 00  50 00  100 00  50 00  100 00	2,941 32 31,493 63 29,036 49 2,380 20 45,725 58 2,158 05 2,132 85 100 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	23,772 00 1,583 80 9,840 40 239,885 60 33,460 00 101,956 40 41,008 00 	17,945 40  15,971 55 31,548 30 9,289 26 70,228 95 1,873 95 2,678 70  2,298 90  3,118 50 4,491 30 7,120 50 42,327 3,131 59  215,312 59  21,980 61  274,709 03	23 30 48 00 587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	1,104 28 4,664 61 1,453 95 300 00 10,358 72 17,881 56 6,774 93 2,429 08	301 96 32 55 96 72 44 00 150 26 10 00 307 47 140 00 115 00  1,197 82 634 16 240 00 249 56 199 58 493 84 306 76
7,372 377 168,395 82 119,094 56 64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 5,529 55 16,038 20 963,545 66 316,638 20 963,545 66 316,638 20 963,545 66 316,638 30 963,545 66 316,638 30 963,545 66 316,638 30 963,545 66 316,638 30 963,545 66 316,638 30 963,545 66 316,638 30 963,545 66 316,638 30	750 00 150 00 150 00 250 00 200 00 200 00 50 00 150 00 150 00 450 00 7,134 72 100 00 10,159 72 50 00 475 00 50 00 475 00 50 00 50 00 100 00	31,493 63 29,036 49 2,380 20 45,725 58 2,158 85 2,132 85 100 00 13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	1,583 80 40 239,885 60 33,460 00 101,956 40 41,008 00 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	15,971 55 31,548 30 9,289 26 70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	48 00 587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	301 96 32 57 44 00 150 24 10 00 307 47 140 00 115 00 1,197 82 634 16 240 00 249 56 199 56 493 84 306 76
168,395 82 119,094 56 64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 	150 00 150 00 250 00 200 00 200 00 200 00 50 00 150 00 450 00 7,134 72 100 00 	29,036 49 2,380 20 45,725 58 2,158 05 2,132 85 100 00 13,039 01 240 00 30,676 97 135,936 44 22,929 03 363,815 85 62 75 84,675 00 9,689 99 720 00 288 70	239,885 60 33,460 00 101,956 40 41,008 00  4,961 90 1,486 50 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24  764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	31,548 30 9,289 26 70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 33 3,131 59 215,312 59 21,980 61 274,709 03	587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	150 26 150 26 10 00 307 47 140 00 115 00 1,197 85 634 16 240 00 249 56 199 56 493 84 306 76
64,397 19 113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 620,890 50 326,580 19	150 00 250 00 200 00 200 00 50 00 150 00 150 00 7,134 72 100 00 7,135 72 100 50 00 475 00 50 00 100 00	2,380 20 45,725 58 2,158 05 2,132 85 100 00 13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	33,460 00 101,956 40 41,008 00 4,961 90 1,486 50 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	9,289 26 70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	267 60 325 50 3982 40 586 40 25,857 03 7,240 00 415 80	1,453 95 300 00 10,358 72 17,881 56 6,774 93 2,429 08	150 26 150 26 10 00 307 47 140 00 115 00 1,197 85 634 16 240 00 249 56 199 56 493 84 306 76
113,788 28 200,167 02 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 	250 00 200 00 200 00 50 00 150 00 150 00 7,134 72 100 00 10,159 72 50 00 475 00 50 00 100 00	45,725 58 2,158 05 2,132 85 100 00 13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	101,956 40 41,008 00 1,486 90 1,486 50 1,174 00 14,010 10 3,650 40 253,612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	70,228 95 1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	150 26 10 00 307 47 140 00 115 00 1,197 82 634 16 240 00 249 56 199 58 493 84
200,167 021 13,928 03 39,594 98 8,469 80 11,729 60 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19  1,962,423 89 5,529 55 16,038 20 963,546 63 316,268 58 68,700 54 25,127 44 56,303 72 307 99	200 00 200 00 250 00 50 00 150 00 450 00 7,134 72 100 00 10,159 72 50 00 50 00 475 00 50 00 100 00	2,158 05 2,132 85 100 00 13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03  363,815 85 62 75 84,675 00 9,689 99 720 00 	41,008 00  4,961 90 1,486 50 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24  764,071 64  65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	1,873 95 2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 50 3,131 59 215,312 59 21,980 61 274,709 03	2,080 10 267 60 325 50 3982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	150 26 10 00 307 47 140 00 115 00 1,197 82 634 16 240 00 249 56 199 58 493 84
13,928 03; 39,594 98 8,469 80 11,729 60; 79,764 25; 31,787 28; 32,962 29; 640,890 50;	250 00 50 00 150 00 150 00 450 00 7,134 72 100 00 	100 00 13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	1,486 50 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 	2,678 70 2,298 90 3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	150 26 10 00 307 47 140 00 115 00 1,197 82 634 16 240 00 249 56 199 52 493 8306 76
8,469 80 11,729 62 79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 1,962,423 89 5,529 55 16,038 20 963,545 63 316,268 58 68,700 54 25,127 44 56,303 79	50 00 150 00 450 00 450 00 7,134 72 100 00 	13,039 01 240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03  363,815 85 62 75 84,675 00 9,689 99 720 00  288 70	1,486 50 1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 	3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	10 00 307 45 140 00 115 00 115 00 1,197 82 634 16 240 00 249 50 199 56 493 84 306 70
11,729 60/ 79,764 25 31,787 28 32,962 29 640,890 50 1,962,423 89 5,529 55 16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 150 00 450 00 450 00 7,134 72 100 00 	240 00 30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 363,815 85 62 75 84,675 00 9,689 99 720 00 288 70	1,174 00 14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	267 60 325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	10 00 307 45 140 00 115 00 115 00 1,197 82 634 16 240 00 249 50 199 56 493 84 306 70
79,764 25 31,787 28 32,962 29 640,890 50 326,580 19 	150 00 150 00 450 00 7,134 72 100 00 	30,676 97 9,620 55 32,398 17 135,936 44 22,929 03 	14,010 10 3,650 40 2,666 80 253,612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	3,118 50 4,491 30 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	325 50 390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	300 00 10,358 72 17,881 56 6,774 93 2,429 08	307 45 140 00 115 00 1,197 82 634 16 240 00 249 50 199 56 493 84 306 70
31,787 28 32,962 29 640,890 50 326,580 19 	10,159 72 50 00 50 00 475 00 50 00 100 00 50 00	32,398 17 135,936 44 22,929 03 363,815 85 62 75 84,675 00 9,689 99 720 00	3,650 40 2,666 80 253,6612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	4,491 30' 7,120 50 42,327 39 3,131 59 215,312 59 21,980 61 274,709 03	390 20 3,982 40 586 40 25,857 03 7,240 00 415 80	10,358 72 17,881 56 6,774 93 2,429 08	1,197 82 634 16 240 00 249 50 199 55 493 84 306 70
5,529 55 16,038 20 963,545 68 316,268 58 68,700 54 25,127 44 56,303 72 307 99	7,134 72 100 00 10,159 72 50 00 50 00 475 00 50 00 100 00	135,936 44 22,929 03 	253,612 50 16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	215,312 59 21,980 61 274,709 03	3,982 40 586 40 25,857 03 7,240 00 415 80	10,358 72 17,881 56 	1,197 82 1,197 82 634 16 240 00 249 50 193 54 493 84 306 70
326,580 19 1,962,423 89 5,529 55 16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	10,159 72 10,159 72 50 00 50 00 475 00 50 00 100 00	22,929 03 363,815 85 62 75 84,675 00 9,689 99 720 00	16,580 24 764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	3,131 59 215,312 59 21,980 61 274,709 03	25,857 03 25,857 03 7,240 00 415 80	17,881 56 6,774 93 2,429 08	1,197 82 634 16 240 00 249 50 199 55 493 84 306 70
1,962,423 89 5,529 55 16,038 20 963,545 66 316,686 58 68,700 54 25,127 44 56,303 72 307 99	50 00 50 00 475 00 50 00 100 00	363,815 85 62 75 84,675 00 9,689 99 720 00 288 70	764,071 64 65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	215,312 59 21,980 61 274,709 03	25,857 03 7,240 00 415 80	17,881 56 6,774 93 2,429 08	1,197 82 634 16 240 00 249 50 199 58 493 84 306 70
5,529 55 16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 50 00 475 00 50 00 100 00	62 75 84,675 00 9,689 99 720 00	65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	21,980 61 274,709 03	7,240 00 415 80	6,774 93 2,429 08	634 16 240 00 249 50 199 55 493 84 306 70
5,529 55 16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 50 00 475 00 50 00 100 00	62 75 84,675 00 9,689 99 720 00	65 43 11 00 20,683 23 495,073 63 127,548 83 10,345 00	21,980 61 274,709 03	7,240 00 415 80	6,774 93 2,429 08	634 16 240 00 249 50 199 55 493 84 306 70
16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 475 00 50 00 100 00	84,675 00 9,689 99 720 00 288 70	11 00 20,683 23 495,073 63 127,548 83 10,345 00	274,709 03	7,240 00 415 80	2,429 08	240 00 249 50 199 55 493 84 306 70
16,038 20 963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 475 00 50 00 100 00	84,675 00 9,689 99 720 00 288 70	20,683 23 495,073 63 127,548 83 10,345 00	274,709 03	7,240 00 415 80	2,429 08	249 50 199 55 493 84 306 70
963,545 66 316,268 58 68,700 54 25,127 44 56,303 72 307 99	475 00 50 00 100 00 50 00	84,675 00 9,689 99 720 00 288 70	495,073 63 127,548 83 10,345 00		415 80	2,429 08	199 55 493 84 306 70
316,268 58 68,700 54 25,127 44 56,303 72 307 99	50 00 100 00 50 00	9,689 99 720 00 288 70	127,548 83 10,345 00		415 80	2,429 08	493 84 306 70
68,700 54 25,127 44 56,303 72 307 99	100 00	720 00 288 70	10,345 00	13,888 03			306 70
56,303 72 307 99	50 00						
307 99							51 96
		875 79					73 50 81 90
			771 30				167 10
1,487,835 82	875 00	96,312 23	654,830 92	319,442 22	7,655 80	9,254 01	2,498 15
07.100.40	000 00	15 050 00	4,853 90				
97,166 46	200 00	17,052 22	141,367 00 9,342 00			· · · · · · · · · · · · · · · · · · ·	61 55
			3,342 00				
07.100.10	200 00						
97,100 40	200 00	17,052 22			4 80		61 50
136,437 77	100 00	7,531 44			214 40	947 93	172 35
136,437 77	100 00	7,531 44	133,977 65	10,327 50	214 40	947 93	172 30
2 274 18	50.00	1 747 97	36 084 00			l	
119,970 62	450 00	17.510 56	81,810 80		2.012 80		750 00
67,912 84		14,269 72	14,184 10				200 00
190,157 64	1,375 00	33,527 55	132,078 90	17,803 05	2,012 80		950 00
*3,874,021 58	12,709 72	518,239 29	1,840,522 01	563,171 56	35,744 83	28,083 50	4,879 87
	1	i '	' '	1	1		( )
,				100 01	1		
	136,437 77 136,437 77 2,274 18 119,970 62 67,912 84 190,157 64 3,874,021 58	136,437 77 100 00 136,437 77 100 00 2,274 18 50 00 119,970 62 450 00 67,912 84 875 00 190,157 64 1,375 00 3,874,021 58 12,709 72	136,437 77 100 00 7,531 44 136,437 77 100 00 7,531 44 2,274 18 50 00 1,747 27 119,970 62 450 00 17,510 56 67,912 84 875 00 14,269 72 190,157 64 1,375 00 33,527 55 3,874,021 58 12,709 72 518,239 29	136,437 77 100 00 7,531 44 128,342 85 136,437 77 100 00 7,531 44 133,977 65 2,274 18 50 00 1,747 27 36,084 00 119,970 62 450 00 17,510 56 81,810 80 67,912 84 875 00 14,269 72 14,184 10 190,157 64 1,375 00 33,527 55 132,078 90 3,874,021 58 12,709 72 518,239 29 1,840,522 01	136,437 77 100 00 7,531 44 128,342 85 10,327 50 136,437 77 100 00 7,531 44 133,977 65 10,327 50 2,274 18 50 00 1,747 27 36,084 00 119,970 62 450 00 17,510 56 81,810 80 4,104 90 67,912 84 875 00 14,269 72 14,184 10 13,698 15 190,157 64 1,375 00 33,527 55 132,078 90 17,803 05 3,874,021 58 12,709 72 518,239 29 1,840,522 01 563,171 56	136,437     77     100     00     7,531     44     128,342     85     10,327     50     214     40       136,437     77     100     00     7,531     44     133,977     65     10,327     50     214     40       2,274     18     50     00     1,747     27     36,084     00        2,012     80       67,912     84     875     00     14,269     72     14,184     10     13,698     15         190,157     64     1,375     00     33,527     55     132,078     90     17,803     05     2,012     80       3,874,021     58     12,709     72     518,239     29     1,840,522     01     563,171     56     35,744     83	136,437 77     100 00     7,531 44     128,342 85     10,327 50     214 40     947 93       136,437 77     100 00     7,531 44     133,977 65     10,327 50     214 40     947 93       2,274 18     50 00     1,747 27     36,084 00     2,012 80     2,012 80     2,012 80       119,970 62     450 00     17,510 56     81,810 80     4,104 90     2,012 80     3,012 80       67,912 84     875 00     14,269 72     14,184 10     13,698 15     15       190,157 64     1,375 00     33,527 55     132,078 90     17,803 05     2,012 80       3,874,021 58     12,709 72     518,239 29     1,840,522 01     563,171 56     35,744 83     28,083 50

<sup>\*</sup>This amount exceeds that shown by Statistical Statements Nos. 1 and 4, the reason being that am INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September, 1889.

1888-89.

in Account with Revenue.

Cr.

see Appendix A.)

Other Receipts.	Total Duties Accrued.	TOTAL DEBITS.	Divisions.	Deposited to the Credit of the Receiver- General.	30th June, 1889.	TOTAL CREDITS.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.
150 00	112,746 66	113,387 98	Belleville	113,191 61	196 37	113,387 98
445 00	58,364 83	58,914-06	Brantford	58,574 85	339 21	58,914 06
40 00	9,298 07	9,298 07	Cornwall	$9,298 07 \\ 227,273 72$		9,298 07
$726 32 \\ 1,211 40$	227,225 72 426,178 76	227,369 72	Guelph	227,273 72	96 00	227,369 72
399 51	426,178 76 112,096 66	427,782 63	Hamilton.	427,487 43		427,782 63
390 00	349,036 34	240 016 04	Kingston	112,142 66	010.40	112,142 66
110 00	247,693 84	947,210 24	LondonOttawa	348,297 84 247,693 84	918 40	349,216 24 247,693 84
60 00	19,043 58	19 043 58	Owen Sound	19,013 88	29 70	19,043 58
100 00	44,756 88	44.756 88	Perth	43,999 73	757 15	44,756 88
50 00	25,594 21	25,985 23	Peterborough	25,638 66	346 57	25,985 23
120 00	13,581 20	13,581 20	Port Arthur.	13,581 20		13,581 20
110 00	128,605 52	129,103 65	Prescott	128,910 83	192 82	129,103 65
140 00	49,849 53	49,849 53	St. Catharines	49,849 53		49,849 53
140 00	76,435 41	76,783 96	Stratford	76,451 45	332 51	76,783 96
3,818 88		1,100,365 31	Toronto	1,097,236 25	3,129 06	1,100,365 31
2,399, 67	372,422 12	374,218 86	Windsor Suspense Account	371,782 16	2,436 70	374,218 86
••••••		430 23	Suspense Account		430 23	430 23
10,410 78	3,371,130 88	3,379,923 63	Ontario	3,370,423 71	9,499 92	3,379,923 63
2 27	701 86	701.86	Beauharnois	701 86		701 86-
40 00	27,913 91		Iberville	27 422 51	491 40	27,913 91
40 00	37,060 93		Joliette	36,878 74	263 23	37,141 97
1,985 00	1,834,677 80	1,840,173 41	Montreal	1,831,859 41	8,314 00	1,840,173 41
578 00	457,474 12	458,406,01	Quebec	455.846.08	2,559 93	458,406 01
40 00	94,100 27	94.100 27	Sherbrooke	93.861.62	238 65	94,100 27
20 00	25,279 89 57,780 32	25,279 89	Sorel. St. Hyacinthe.	25,279 89		25,279 89
60 00	57,780 32	57,810 32	St. Hyacinthe	57,810 32		57,810 32
50 00	1,748 18	1,748 18	Terrebonne	1,748 18		1,748 18
60 00	44,842 14		Three Rivers	44,843 44		45,147 73
2,875 27		2,588,423 55	Quebec	2,576,252 05	12,171 50	2,588,423 55
60 00	4,918 70	4,918 70	Cape Breton	4,918 70	1	4,918 70
490 00	256,623 43	257,666 99	Halifax	257,261 79	405 20	257,666 99
20 00	9,362 00	9,362 00	PictouSuspense Account	9,283 86		9,362 00
•••••	• • • • • • • • • • • •	5,860 50	Suspense Account		5,860 50	5,860 50
570 00	270,904 13	277,808 19	Nova Scotia	271,464 35	6,343 84	277,808 19
40 00	5,674 80	5,674 80	Chatham	5,674 80		5,674 80
784 00	284,858 24	285,712 18	St. John	284,323 00		285,712 18
824 00	290,533 04		New Brunswick	289,997 80	1,389 18	291,386 98
40.00	40.105.45	10.005.45				
40 00 320 00	40,195 45	40,235 45	Charlottetown, P.E.I	40,194 65	40 80	40,235 45
200 00	226,929 68 111,339 81	228,039 10	Winnipeg, Man Victoria, B.C	227,024 88	1,014 22	228,039 10
	<del></del>				889 56	112,013 81
560 00	378,464 94		•••••••••••	378,343 78		380,288 36
15,240 05	,,		Totals			6,917,830 71
917 00		1	Less—Refunds as per	Statement No	o. 16.	
14,323 05	6,869,466 68		Net Revenue.			
	!		<u> </u>			

over-collection of \$414.15 was made in Prescott Division which was afterwards refunded.

E. MIALL, Commissioner.

EXCISE,

## No. 4.—Collection Divisions

(For Details, see

DR.

Balances due by Collectors 1st July, 1888.	Amounts received from Department to meet Expenditure.	Deductions from Salaries for Super- annuation.	Balances due to Collectors 30th June,1889.	Total.	Divisions.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ ets.	
43 98	1,173 51 6,135 95 7,445 97 7,97 40 13,982 61 17,397 43 8,323 54 15,394 67 5,235 82 2,070 22 3,847 03 4,897 53 11,025 43 8,269 32 4,236 05 31,391 35	19 96 110 90 137 80 14 00 259 36 325 96 145 23 290 19 96 52 34 96 63 32 87 31 206 50 140 22 79 36 599 02		1,193 47 6,290 83 7,583 77 811 40 14,241 97 17,723 39 8,468 77 15,684 86 5,332 34 2,105 18 3,910 35 4,984 84 11,231 93 8,409 54 4,315 41 31,990 37	Algoma Belleville Brantford Cornwall Guelph. Hamilton. Kingston. London. Ottawa. Owen Sound. Perth Peterborough Prescott. Stratford St. Catharines Toronto
	16,840 43 8,893 09	326 92 140 00	49 08	17,216 43 9,033 09	District Inspectors.
43 98	167,357 35	3,077 53	49 08	170,527 94	Ontario
	590 28 2,011 14 2,482 69 40,097 97 11,917 49 1,976 30 1,228 91 1,178 46 831 78 1,836 44 5,214 84	6 25 34 78 26 28 754 29 212 09 36 14 13 96 17 64 14 00 34 36 50 00		596 53 2,045 92 2,508 97 40,852 26 12,129 58 2,012 44 1,242 87 1,196 10 845 78 1,870 80 5,264 84	Beauharnois Iberville. Joliette. Montreal Quebec. Sherbrooke Sorel. St. Hyacinthe. Terrebonne Three Rivers. District Inspectors
	69,366 30	1,199 79		70,566 09	Quebec
250 00 250 00	749 73 9,849 43 1,946 68 3,686 40 16,232 24	15 00 191 80 29 48 48 00		764 73 10,291 23 1,976 16 3,734 40	Cape Breton Halifax Pictou District Inspector  Nova Scotia
200 00	1,245 35 6,431 80 2,668 41	284 28 24 00 113 44 40 00		1,269 35 6,545 24 2,708 41	
	10,345 56	177 44		10,523 00	New Brunswick
100 00	1,896 60	36 92		2,033 52	Charlottetown, P.E.I
200 00	11,985 48	181 46		12,366 94	Winnipeg, Man
	7,381 23	83 23		7,464 46	Victoria, B.C

53 Victoria.

# Sessional Papers (No. 1.)

A. 1890

1888-89.

in account with Expenditure.

Appendix B.)

Cr.

Balances due to	]	Expenditui		Balances				
Collectors 1st July, 1888.	Salaries.	Seizure Expenses.	Special Assistance	Rent.	Travelling Expenses.	Sundries.	due by Collectors 30th June, 1889.	Total.
\$ cts.	\$ cts.	\$ ets.	\$ ets.	\$ ets.	\$ ets.	\$ cts.	\$ ets.	\$ cts.
••	$1,000 00 \\ 5,697 50$	1		120 00 36 00	15 20 304 90	58 27 208 45	43 98	1,193 47 6,290 83
•••••	6,889 52			120 00	239 30	334 95		7,583 77
	700 00 12,980 82	18 00		48 00	15 40 743 38	78 00 469 77		811 40 14,241 97
	16,365 27		297 26	20 00	302 17	758 69		17,723 39
	7,273 65	4 00		270 00	39 55	881 57		8,468 77
	14,524 86 4,841 66	25 35	110 00 166 08	194 75	209 80 28 32	645 45 270 93		15,684 86 5,332 34
	1,750 00	24 00	100 00	72 00	202 85	56 33		2,105 18
• • • • • • • • • • • • • • • • • • • •	3,500 00			129 98	72 50	207 87		3,910 35
	4,369 64 10,324 96	79.90	100.00	150 00 100 00	282 00	183 20 633 27		4,984 84
******	7,109 12	72 20 38 12	100 00	108 00	1 50 932 20	222 10		11,231 93 8,409 54
	3,970 00				215 70	129 71		4,315 41
49 08	30,231 83	165 75			816 26 223 13	716 53	60 00	31,990 37
	16,481 51 7,000 00	8 00		91 66	1,708 35	454 71 233 08		17,216 43 9,033 09
49 08	155,010 34	355 42	673 34	1,440 39	6,352 51	6,542 88	103 98	170,527 94
				1,110 00	0,002 01		100 00	110,021 01
	500 00	28 14		25 08	16 85	26 46		596 53
	1,946 72	5 65	400.00	140.00	55 60	37 95		2,045 92
	1,500 00 37,921 46	31 51 27 79	499 92 1,407 66	140 00	117 10 149 10	220 44 1,346 25		2,508 97 40,852 26
	10,607 44	89 96	434 07		303 77	694 34		12,129 58
••••	1,805 00	27 64			132 70	47 10		2,012 44
	1,199 92 885 00	• • • • • • • • • • •	100 00	160.00	26 00 13 10	16 95 38 00		1,242 87 1,196 10
****	700 00	2 50	100 00	160 00 18 00	83 70	41 58		845 78
	1,720 00				66 85	83 95		1,870 80
	4,700 00				524 13	40 71		5,264 84
••••••	63,485 54	213 19	2,441 65	343 08	1,488 90	2,593 73		70,566 09
	750 00				3 00	11 73		764 73
	9,592 48				107 92	590 83		10,291 23
	1,475 00	361 41			56 47	83 28		1,976 16
-	2,400 00			• • • • • • • • • •	1,141 88	192 52	• • • • • • • • • • • • • • • • • • • •	3,734 40
	14,217 48	361 41			1,309 27	878 36		16,766 52
••••	1 900 00					ക്ര ടെ		1 900 95
	1,200 00 6,010 00	1 80	126 66		225 90	69 35 180 88		1,269 35   6,545 24
	2,000 00				688 82	19 59		2,708 41
	9,210 00	1 80	126 66		914 72	269 82		10,523 00
	1,850 00					83 52	100 00	2,033 52
	9,081 65		986 00	240 00	1,299 40	559 89	200 00	12,366 94
	4,346 92	1 50	1,597 52		1,153 20	365 32	.,	7,464 46

EXCISE,

No. 4.—Collection Divisions

Dr.

(For Details, see

due by Collectors	Amounts received from Department to meet Expenditure.	from Salaries for Super-	due to	Total.	Divisions.
\$ cts.	\$ cts.	\$ cts.	\$ ets.	\$ ets.	
	36,366 56			36,481 00	General Contingencies
	3,297 54			3,297 54	Legal Expenses
	7,404 43			7,404 43	Queen's Printer
ļ	1,574 67	59 77	. j <b>.</b>	1,574 67	Stationery
	1,967 94		.	1,967 94	Lithographing, Engraving, &c
320 00	15,537 69	59 77	· · · · · · · · · · · · · · · · · · ·		Preventive Service
	4,080 29			4,080 29	Commission to Customs Officers
	117 94			117 94	Commission on sale of stamps for Can- ada Twist
	4,839 87			4,839 87	Duty-pay to officers in charge of most important establishments.
913 98	359,751 69	5,214 86	49 08	365 929 61	Grand Totals

INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September, 1889. Sessional Papers (No. 1.)

53 Victoria.

A. 1890

1888-89.

in account with Expenditure-Concluded.

Appendix B.)

CR.

Balances due to		Expenditure Authorized by Department.										Balances due by			
Collectors 1st July, 1888.	Salarie	28.		zure enses.	Spec Assist		Re	nt.	Trav lin Exper	g	Sundr		Collect	tors	Total.
\$ ets.	*	cts.	ş	ets.	8	cts.	8	cts.	*	cts.	*	cts.	*	cts.	\$ ets.
••••••	• • • • • • •										$28,637 \\ 3,297$	<b>54</b>			36,481 00 3,297 54
											7,404 1,574 1,967	67			7,401 43 1,574 67 1,967 94
***********	•				1 .		i				4,643 4,080		270		15,917 46 4,080 29
•••••											117 4,839				117 94 4,839 87
49 08	266,374			3 32	8,869		ļ	3 47	19,148		67,857		673	98	365,929 61

E. MIALL, Commissioner.

# HYDRAULIC AND OTHER RENTS.

No. 5.—SUMMARY STATEMENT OF LESSEES' ACCOUNTS.

CR.	Total.	\$ cts. 65,357 31	340 00 614 00	15,573 50 9,554 83	91,476 64	sioner.
	Balances due 30th June, 1889.	\$ cts. 64,830 31 12 00	320 00 503 00	15,573 50 9,474 83	90,713 64	E. MIALL, Commissioner.
	Deposited to the Credit of the Receiver- General.	\$ cts. 527 00 25 00	20 00 111 00	90 08	763 00	Pi
(For Details, See Appendix C.	NAME OF WORK.	Chaudière Falls and Ottawa River.	Burlington Bay. Sundry Properties  Land Sales.	Principal AccountsInterest do	Totals	on the Canals have been transferred to the Department of Railways and Canals.  ARIMENT,  Pptember, 1889.
	Total.	\$ cts. 65,357 31	340 00 614 00	15,573 50 9,554 83	91,476 64	s on the Canal PARTMENT, September,
	Accrued during the Year ended 30th June, 1889.	\$ cts.	130 00 131 00	107 07	6,052 33	The accounts of properties on the Canals have had not be intended Bevenue Department, Ottawa, 3rd September, 1889.
DR.	Balances due 1st July, 1888.	\$ cts. 59,700 05 10 00	210 00 483 00	15,573 50 9,447 76	85,424 31	The accor INLAND B

Cr.

Dr. No. 6.—MINOR PUBLIC WORKS, 1888-89.

Balance due 1st July. 1888.	Accrued during year ended 30th June, 1889.	Total.	Works.	Authorized Abatements.	Deposited to credit of Receiver General.	Balances due 30th June, 1889.	Total.
\$ ets.	\$ ets.	\$ cts.	Bridges.	\$ cts.	\$ ets.	\$ ets.	\$ ets
2 600 62		2 600 62	Dunnville			2,600 62	2,600 62
- 000 02		2,000 02	Ferries.			2,000 02	2,000 02
130 00	65 00	195 00	Buckingham and Cum-				
<b>1 -</b>			berland		130 00	65 00	195 00
1,736 79		1,736 79	Hull (old lessee)	• • • • • • • • • • • • • • • • • • • •		1,736 79	1,736 79
1,000 00	$150 00 \\ 50 00$	50.00	do `new lessee Rockliffe and Gatineau	• • • • • • • • • • • • • • • • • • • •	200 00	950 00	1,150 00 50 00
50 00		~~ ~~	Decreek and Ondere				90 U
	400 00	400 00	burg (old lessee) Prescott and Ogdens- burg (new lessee) New Edinburgh and Gat- ineau (old lessee)	• • • • • • • • • • • • • • • • • • • •	50 00		50 0
920 00		920 00	New Edinburgh and Gat-	•••••	200 00		400 0
875 00	350 00		ineau (old lessee) New Edinburgh and Gat- ineau (new lessee)			920 00	920 0
55 00	10 00	65.00	Restiguiche		55.00	1,225 00 10 00	$1,225 \ 0 \ 65 \ 0$
93 00	1 00	94 00	Thurso and Clarence		29 00	65 00	94 0
150 00	50 00	200 00	Restigouche. Thurso and Clarence Fort Erie and Buffalo		200 00		200 0
10 00	10 00	201 (M)	Papineauville and Brown's Wharf Victoria and Black Rock				20 0
$175 00 \\ 1 00$	50 00	225 00 1 00	Pembroke and Allumette				225 0
51 00	51 00	102 00	Island (old lessee) Pembroke and Allumette			1 00	1 0
30 00	10.00	10.00	Island (new lessee)	• • • • • • • • • • • • • • • • • • • •	51 00	51 00	102 0
15 00	10 00 10 00	40 00 25 00	Fitzrov and Onglow		15.00	40 00 10 00	40 0 25 0
10 00	20 00	30 00	Gower Point and Lapasse		20 00	10 00	30 0
2 00	2 00	4 00	Dalhousie		2 00	2 00	4 0
15 00	10 00	25 00	Pembroke and Allumette Island (new lessee) St. Basil Fitzroy and Onslow Gower Point and Lapasse Dalhousie Rockland and Lochaber Montebello & St. Thomas			25 00	25 0
	20 00	20 00	Montebello & St. Thomas		90.00		90.0
	20 00	20 00	d'Alfred		10 00	10 00	20 0 20 0
			Sundries.			15 00	200
8,000 00 4,933 34		8,000 00	Dundas & Waterloo Road.			8,000 00	8,000 0
1,000 04		4,933 34	Old Post Office Building, Montreal			4,933 34	4.933 3
50 00	25 00	75 00	Wiarton Docks		50 00	25 00	75 0
3,437 50	1,376 00	4,813 50	Wiarton Docks Government Telegraph Lines		1.00	4,812 50	
··· ···	1,000 00	1,000 00	Old Post Office Building, Hamilton.				4,813 5 1,000 0
250 00	625 00	875 00	Part of Building, Port-		,		1,000 0
•••••••	100 00		Customs House, City of	250 00			875 0
			Hamilton		100 00		100 0
24,590 25			d ·				

Inland Revenue Department, Ottawa, 3rd September, 1889. E. MIALL, Commissioner.

C.B.	Total.	\$ cts. 6,168 16 55,062 23 1,751 05	62,981 44	
	Balances due 30th June, 1889.	\$ ct. 5,140 82 36,774 65 204 08	42,119 55	E. MIALL, Commissioner.
	Deposited to the Credit of the Receiver General.	\$ cts. 1,027 34 18,287 58 1,546 97	20,861 89	E. MIA.
(For Details, see Appendix A.)	Оffices.	Montreal. Quebec. Three Rivers.	Totals	er, 1889.
-	Total.	\$ cts. 6,168 16 55,062 23 1,751 05	62,981 44	epartment, 3rd September, 1889.
The second secon	Amounts accrued for Measuring and Culling Timber during the Year ended 30th June, 1889.	\$ cts. 1,937 41 17,965 66 1,513 00	21,416 07	Inland Revenue Department, Ottawa, 3rd Septed
DR.	Balances due 1st July, 1888.	\$ cts. 4,230 75 37,096 57 238 05	41,565 37	Inland

No. 8.—CULLERS' EXPENDITURE, 1888–89. (For Details, see Appendix B.)

Dr.				(For Details, see Appendix B.)	penaer D	_				Çĸ.
Balances	Received	Deducted			At	Астновіжь Ехремытскь	XPENDITURE	3.	Balances	
due by sundry persons, 1st July, 1888.	e H	Salaries for Superan- nuation.	Total.		Salaries.	Contingen- cies.	Cullers' Fees.	Annuities.	by sundry persons, 30th June, 1889.	Total.
se cts.	* cts.	s cts.	s cts.		s cts.	* cts.	s cts.	s cts.	\$ cts.	& cts.
:	37,439 65	263 04	37,702 69	Quebec	13,700 00	4,551 02	19,451 67			37,702 69
75 90	3,602 58	25 44	3,703 02	Montreal	1,500 00	190 61	1,937 41	:	75 00	3,703 02
:	1,026 85	3 72	1,030 57	Three Rivers	300 00	730 57	:	:	:	1,030 57
	5,266 68	:	5,266 68	Superannuated Cullers				5,266 68	:	5,266 68
:	135 17		135 17	Queen's Printer		135 17	:			135 17
	96 92		96 92	Stationery Office		96 92			:	96 92
:	250 00	:	220 00	General		990 000	:			250 00
75 00	48,097 89	292 20	48,465 09	Totals	15,500 00	6,234 33	21,389 08	5,266 68	75 00	48,465 09
	Inland Revenue Department, Ottawa, 3rd Septer	VENUE D	EPARTMEN 3rd Sept	Oriawa, 3rd September, 1889.			·	E. M	E. MIALL, Commissioner.	ner.

 $C_{R}$ .

BILL STAMPS, 1888-89.
No. 9.—Bill Stamps Distributors in account with Inland Revenue.

Dr.

BALANCES, 1ST JULY, 1888.	, 1888.			Вагансев, 30тн Лив, 1889.	H JUNE, 186		
Stamps C. on hand. on l	Cash on hand.			Stamps on hand.	Cash on hand.		Total.
\$ cts. 1,372 77	\$ cts. \$ 11 54 33 50	\$ cts. 1,372 77 11 54 :: 33 50 :: 160 00 ::	Post Office Department Belleville, ex-Collector E. R. Benjamin. Three Rivers, ex-Collector B. Lassalle. Col. J. F. McLeod, Fort McLeod	\$ cts. 1,372.77 160.00	\$ c	cts.	\$ cts. 1,372 77 11 54 33 50 160 00
1,532 77	45 04 1,5	1,577 81	Totals.	1,532 77	45 04	04	1,577 81
D <sub>R</sub> .	No. 10.	-LAW	LAW STAMPS, 1888-89.  10.—Law Stamps Distributors in account with Inland Revenue Department.	ıe Departn	ent.	_	C <sub>R</sub> .
Balances 1st July, 1888				of 5 per			1 : : !
Cash Stamps on hand. on hand.	sqmst2 eqmst2 eqe(1 mort	Total.		Commission Cent. allo Departme Stamps s	Deposited isos	eral.	Total.
\$ cts. \$	\$ cts. \$ cts. 75 31 1,975 00 3 25 2,462 00	. \$ cts. 2,050 31 2,499 64	cts. 31 L. A. Audette, Registrar Exchequer Court. 64 R. Cassels, Jr., Registrar Supreme Court	* 102	cts. 10	\$ cts. 1,947 81 2,376 54	\$ cts 2,050 31 2,499 64
34 39 78	78 56 4,437 00	4,549 95	95 Totals	225	09	4,324 35	4,549 96
INLAND REVI	INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September,	чт, ber, 1889.			E. MIALL, Comm	[ALL, Commissioner.	sioner.

Dr. No. 11.—SUNDRY MINOR REVENUES, 1888-89. Cr.

.

Accrued during the year ended 30th June, 1889.	Total.		Deposited to the Credit of the Receiver General.	Total.
\$ ets.	. \$ ets.		\$ cts.	\$ cts.
21 00	21 00	Fertilizers' Inspection Fees	21 00	21 00
21 00	21 00	Totals	21 00	21 00

### No. 12.—SUNDRY MINOR EXPENDITURES, 1888-89.

DR.

(For Details, see Appendix B.)

Cr.

Balances due by Sundry Persons, 1st July, 1888.	Amounts Received from Department to meet Expendi- ture.	Deduction from Salaries for Superannuation.	Total.		Salaries.	Contingencies.	Queen's Printer.	Stationery Office.	Total.
\$ cts.  0 20 0 20	\$ cts.  177 81 2,401 71 23,574 23  26,153 75	126 08	2,401 71 23,700 51	Minor Public Works. Inspection of Staples. Adulteration of Food. Totals		\$ cts.  173 84 2,353 08 17,052 50  19,579 42		144 13	

E. MIALL,

Commissioner.

No. 13.—Statement showing the quantities of the several articles subject to 1887, 1888 and 1889, and

		18	887.	
ARTICLES SUBJECT TO EXCISE DUTY.		QUANTITIES.		D .
	Ex- Manufactory	Ex- Warehouse.	Total.	Duty.
	Gallons.	Gallons.	Gallons.	\$ ets
Spirits	1,904 14,786,285	2,864,935 15,426 i	2,882,265 mported. 14,786,285	3,735,088 65 695 16
	Lbs.	Lbs.	Lbs.	
Malt	6,450,672	36,179,768	42,630,440	426,304 40
•	No.	No.	No.	
Cigars	57,542,503	28,429,320	85,971,823	515,355 75
	Lbs.	Lbs.	Lbs.	
Tobacco, from Foreign Leaf. do Canadian Leaf Snuff. Canada Twist Raw Leaf Tobacco, Foreign. do Canadian	251,790 91,593	7,189,509 206,091	7,996,449 476,742 251,790 91,593 20	1,602,135 83 23,837 10 35,528 40 4,579 65 5 30
Inspection Fees on Petroleum Manufactures in Bond Licenses, Spirits. do Malt Liquor. do Malt do Cigars do Tobacco. do Manufactures in Bond				1,666,086 28 31,989 27 49,079 96 2,250 00 6,350 00 6,825 00 8,925 00 1,916 00 925 00
Totals	.			6,451,790 47

Excise Duty taken for Consumption during the Years ended the 30th June, the Duty collected thereon.

_	1	.888.		,		;	1889.		
	Quantities.					QUANTITIES			
Ex- Manu- factory.	Ex- Ware- house.	Total.	Duty.		Ex- Manu- factory.	Ex- Ware- house.	Total.	Duty.	
Gallons.	Gallons. 2,326,327	Gallons. 2,405,716	\$ 3,096,390	ets.	Gallons. 12,485	Gallons. 2,945,124	Gallons. 2,972,931	\$ 3,870,732	cts.
15,944,002		mported. 15,944,002	697		16,352,507	15,322 i	mported. 16,352,507	6,309	i
Lbs.	Lbs.	Lbs.			Lbs.	Lbs.	Lbs.		
6,063,321	42,577,146	48,640,467	486,404	67	• 4,205,230	46,906,199	51,111,429	511,114	29
No.	No.	No.			No.	No.	No.		
62,280,253	28,503,305	90,783,558	544,729	43	58,182,720	34,396,850	92,579,570	553,621	56
Lbs.	Lbs.	Lbs.			Lbs.	Lbs.	Lbs.		
951,740 355,579 261,600 77,104	7,325,820 276,190	8,277,560 631,769 261,600 77,104	1,666,121 31,588 36,889 3,855	45 50	872,946 404,117 262,235 74,071	7,827,486 308,268 20	8,700,432 712,385 262,235 74,071 20	1,762,246 35,619 37,019 3,703 6	25 20
1,646,023	7,602,010	9,248,033	1,738,454 36,569 52,412 2,625 6,300 6,625 9,337 2,087	10 45 00 00 00 50	1,613,369	8,235,774	9,749,143	1,838,594 35,744 27,133 2,875 6,400 7,125 9,550 1,927 950	83 50 00 00 00 50
			5,983,532	52				6,872,078	34

E. MIALL, Commissioner.

No. 14.—Amounts of Revenue deposited monthly to the Credit of the Hon. the Receiver General, on account of Inland Revenue, during the Fiscal Year ended 30th June, 1889.

	)							
	Ontario.	Quebec.	New Brunswick.	Nova Scotia.	Prince Edward Island.	Manitoba and North West.	British Columbia.	Total.
Jux:	eeeee	<b>9</b> €	& cts.		s cts.	& cts.	♣ cts.	<b>6</b> 9-
Excise and Seizures. Hydraulic and other Rents. Minor Public Works. Cullers. Weights and Measures. Gas Inspection Other Kevenues.	276,045 69 10 00 2,765 70 373 75 100 95	199,273 93 25 00 20 00 1,377 33 611 08	20,634 08	20,121 36	2,486 47	19,149 71	9,413 50	547,124 74 35 00 20 00 1,377 33 3,422 42 489 50 100 95
Totals	279,296 09	201,307 34	20,645 37	20,213 11	2,486 47	19,196 06	9,425 50	552,569 94
August:— Excise and Seizures. Hydraulic and other Rents.	227,732 02	221,018 42	25,665 93	22,125 14	3,892 32	15,588 17	8,189 59	524,211 59
Minor Public Works. Cullers. Weights and Measures. Gas Inspection. Other Revenues.	1,118 06 257 65	2,931 63 539 60 260 25	83 09	45 36	28 19	43 05	2 00	2,931 63 1,883 03 584 90
TotalsSBPTEMBER:	229,107 73	224,749 90	25,770 02	22,216 50	3,944 19	15,631 22	8,191 59	529,611 15
Excise and Seizures. Hydraulic and other Rents. Minor Public Works. Cullers. Weights and Measures. Gas Inspection.	301,586 06 104 00 350 00 915 00 360 50 414 50	215,307 65 3,189 27 639 26 218 25	23,112 51		39 40	19,763 87	7,965 46 63 90 4 50	
Totals.	303,730 06	219,354 43	23,234 50	19,518 46	2,920 07	19,810 07	8,033 86	596,601 45

October:— Excise and Seizures	328,987 44	237,325 10	30,750 57	25,196 72	3,978 71	18,999 81	9,217 24	654,455 59
Hydraulic and other Kents Minor Public Works Cullers Weights and Measures Gas Inspection Other Revenues	225 00 3,234 49 390 00 404 65	2,716 73 1,123 65 402 75	124 44 63 75	62 88 69 69 69	45 75	66 92	5 50 22 75	2,716 73 4,676 65 945 25 404 65
Totals	333,241 58	241,568 23	30,938 76	25,328 61	4,024 46	19,076 74	9,245 49	663,423 87
November:— Excise and Seizures. Hydraulic and other Rents.	303,553 56	236,554 72	27,548 15	27,303 55	3,127 17	20,965 58	9,895 55	628,948 28
Munor Fublic Works. Cullers. Weights and Measures. Gas Inspection. Other Revenues.	1,119 38 401 25 208 55	1,314 49 680 45 176 00	174 99 29 00	107 49 38 75 3 00	8 07	47 10	7 10 28 25	1,314 49 2,144 58 673 25 211 55
Totals	305,282 74	238,725 66	27,752 14	27,452 79	3,135 24	21,012 68	9,930 90	633,292 15
December :—  Excise and Seizures.  Hydraulic and other Rents.  Minor Public Works.  Cullers.  Weights and Messures		263,610 77 2,243 30 505 03		32,520 90	3,617 04	23,364 72	12,189 06 25 00	682,059 47 25 00 250 00 2,243 30 1,958 90
Gas Inspection Other Revenues. Totals,	314 15 343 15 323,378 49		8 25 25,653 64	29 50 32,607 16		1 50  23,366 22		525 65 343 15 687,405 47
JANUARY:— Excise and Seizures Hydraulic and other Rents. Minor Public Works. Cullers. Weights and Measures Gas Inspection. Other Revenues.	283,806 47 227 00 3,204 61 483 75 320 88	186,471 74 16 00 25 00 275 42 304 65 173 25	20,997 62 375 00 47 00	18, 497 86 30 21 72 25	2,477 90	15,771 79 23 00	8,356 30 23 90 21 75	536,379 68 243 00 400 00 275 42 3,841 00 320 88
Totals	288,042 71	187,266 06	21,468 16	18,600 32	2,512 65	16,01 72	8,401 95	542,304 57

A. 1890

No. 14.—Amounts of Revenue deposited monthly to the credit of the Hon. the Receiver-General, &c.—Concluded.

	Ontario.	Quebec.	New Brunswick.	Nova Scotia.	Prince Edward Island.	Manitoba and North West.	British Columbia.	Total.
February:— Excise and Seizures. Hydraulic and other Rents. Minor Public Works. Veights and Measures. Gas Instruction	\$ cts. 227,718 78 51 00 1,470 84 325 25	\$ cts. 184,134 42 1,295 39 421 08 244 50	\$ cts. 17,943 93 108 56 26 50	\$ cts. 15,164 91	\$ cts. 3,036 93 14 22 6 00	\$ cts. 15,378 47 132 45 10 00	\$ cts. 6,481 83 1 00 20 70	\$ cts. 469,859 27 52 00 1,295 39 2,229 31 640 75
Other Revenues. Totals.	229,860 47	186,095 39		15,254 87	3,057 15	15,520 92	6,503 53	297 60
Макен:— Excise and Seizures.  Hydraulic and other Rents.  Minor Public Works.  Cullers.  Weights and Measures.  Gas Inspection.  Other Revenues.	259,187 34 201 00 500 00 ,249 83 322 75 333 55	192,507 62 24 00 448 34 672 77 160 00	21,749 83 17 00 61 04 9 25	20,844 00 59 27 7 25	3,211 56 3,211 56 16 22 4 00	19,203 22 234 50 3 25	8,566 26 20 85	525,269 83 201 00 541 00 448 34 2,314 48 506 50 333 55
Totals	261,794 47	193,812 73	21,837 12	20,910 52	3,231 78	19,440 97	8,587 11	529,614 70
APRIL:— Excise and Seizures. Excise and Seizures. Hydraulic and other Reuts Minor Public Works Cullers. Weights and Measures. Gas Inspection. Other Revenues.	258,697 39 210 00 2,907 86 374 05 715 50	203,407 33 155 00 135 81 1,099 30 191 00	24,174 19 265 00 138 39 47 50 3 00	21,924 26 102 27 50 75 3 00	3,450 60 18 02 12 75	18,871 44 (68 70 3 50	8,872 62	539,397 83 630 00 135 81 4,370 24 679 55 721 50
Totals	262,904 80	204,988 44	24,628 08	22,080 28	3,481 37	18,943 65	8,908 32	545,934 93
MAX:— Excise and Seizures. Hydraulic and other Rents Minor Public Works. Cullers Weights and Measures.	297,475 22 75 00 1,019 06	230,337 02 868 24 1,023 40	24,338 38 125 00 40 23	22,805 38	3,796 36	19,138 36	10,606 95	608,497 67 200 00 868 24 2,416 93

Gas Inspection Other Revenues	356 15 371 10	220 00	32 00	40 50		1 50		650 15 371 10
Totals	299,296 53	232,448 66	24,535 61	23,035 25	3,812 83	19,243 91	10,631 30	613,004 09
JUNE:— Excise and Seizures. Hydraulic and other Rents. Minor Public Works. Veights and Massures. Gas Inspection. Other Revenues.	284,438 65 250 00 2,531 92 343 25 819 92	206,303 33 80 00 4,065 94 1,402 01 414 50	27,520 72 232 84 27 50 3 00	25,481 11 275 74	4,238 92	20,829 74	11,369 89 75 00 62 35	580,182 36 155 00 250 00 4,065 94 4,935 48 785 25 822 92
Totals	288,383 74	212,265 78	27,784 06	25,756 85	4,297 47	21,201 81	11,507 24	591,196 95
Grand Totals	3,404,319 41	2,609,021 47	292,329 45	272,974 72	40,533 96	228,456 96	111,697 62	6,959,333 59
Inland Revenue Department, Ortawa, 3rd September, 1889.	, 1889.	<u>.</u>				본 H	E. MIALL, Commissioner.	oner.

EXCISE No. 15.—Comparative Monthly

	July.	August.	September.	October.	November.
	\$ cts.	\$ cts.	\$ ets.	\$ cts.	\$ ets
Spirits	123,909 33 333,420 88	156,486 97 303,476 65	198,303 35 325,558 20	245,600 40 383,474 91	289,175 11 360,998 86
Increase, 1888-89	209,511 55	146,989 68	127,254 85	137,874 51	71,823 75
Malt Liquor\{\begin{aligned} \text{1887-88} \\ \text{1888-89} \end{aligned}	5,327 00 6,237 32	420 00 1,140 36	184 60 637 40	191 00 628 24	100 00 203 30
Increase, 1888-89	910 32	720 36	452 80	437 24	103 30
Malt	29,149 65 32,172 26	30,619 12 32,507 33	36,481 38 38,450 78	44,774 61 49,373 65	50,336 28 45,848 53
Increase, 1888-89	3,022 61	1,888 21		4,599 04	4,487 75
Tobacco	141,906 52 152,631 12	201,455 84 153,724 55	147,599 44 155,584 96	164,519 64 181,692 41	145,526 49 179,722 10
Increase, 1888-89	10,724 60	47,731 29	7,985 52	17,172 77	34,195 61
Cigars	54,356 08 51,974 47	51,952 13 51,806 04	51,409 29 44,002 59	50,538 91 48,061 04	45,748 83 44,468 5
Increase, 1888-89	2,381 61	146 09	7,406 70	2,477 87	1,280 33
Petroleum $\begin{cases} 1887-88 \\ 1888-89 \end{cases}$		3,234 58 2,974 48	4,587 20 4,832 70	5,438 38 5,055 76	4,277 86 4,181 88
Increase, 1888-89	357 08	260 10	245 50	382 62	95 95
Manufactures in Bond. $\begin{cases} 1887-88 \\ 1888-89 \end{cases}$	3,523 29 2,172 98	4,374 74 1,796 34	4,104 18 2,386 07	6,154 99 3,754 25	3,973 50 2,456 79
Increase, 1888-89		2,578 40	1,718 11	2,400 74	1,516 7
Seizures	5,095 67 161 30	3,001 93 145 97	1,640 45 241 38	351 00 571 95	214 00 307 40
Increase, 1888-89	4,934 37	2,855 96	1,399 07	220 95	93 4
Other Receipts $\begin{cases} 1887-88 \\ 1888-89 \end{cases}$		1,435 00 1,229 83	1,455 00 970 00	790 00 1,041 78	705 0 640 0
Increase, 1888-89	1,380 00	205 17	485 00	251 78	65 0
Total Increase in 1888-89 Total Decrease in 1888-89	216,525 71			155,295 06	98,770 4

REVENUE.

Statement, 1887-88, 1888-89.

\$ cts.			March.	April.	May.	June.	Total.
101,653 54	\$ cts.	\$ cts.	\$ ets.	\$ cts.	\$ cts.	\$ cts.	\$ cts
11,903 15	279,318 17 308,437 53	287,205 16 264,180 74	259,744 94 280,417 44	249,801 83 282,279 66	317,056 42 326,689 42	290,760 49 293,184 14	3,099,015 71 3,874,021 58
10,249 16	29,119 36	23,024 42	20,672 50	32,477 83	9,633 00	2,423 65	775,005 87
158 80 356 92	50 00 514 68	25 00 328 52	585 44	154 80	1,031 92	540 68 890 76	6,997 08 12,709 72
198 12	464 68	303 52	585 44	154 80	1,031 92	350 08	5,712 64
45,702 36 46,466 70	40,971 06 47,867 53	43,657 48 40,930 11	47,467 39 51,231 00	48,942 20 52,442 31	42,013 52 46,909 64	32,914 62 34,039 45	493,029 67 518,239 29
764 34	6,896 47	2,727 37	3,763 61	3,500 11	4,896 12	1,124 83	25,209 62
128,763 61 136,758 61	115,303 36 132,411 22	126,626 44 124,971 01	126,247 51 139,592 63	130,442 70 161,455 34	164,510 96 171,240 66	147,639 07 150,737 40	1,740,541 58 1,840,522 01
7,995 00	17,107 86	1,655 43	13,345 12	31,012 64	6,729 70	3,098 33	99,980 43
42,212 46 45,746 58	41,398 86 43,063 40	37,138 32 38,418 42	38,698 11 43,900 32	43,130 43 46,541 16	48,898 66 52,435 23	48,584 85 52,753 80	554,066 93 563,171 56
3,534 12	1,664 54	1,280 10	5,202 21	3,410 73	3,536 57	4,168 95	9,104 63
4,175 63 3,985 65	3,598 75 3,095 38	2,325 50 2,549 25	2,028 23 2,476 15	1,503 85 1,422 01	1,473 50 1,485 21	1,825 60 1,943 36	36,569 10 35,744 83
189 98	503 37	223 75	447 92	81 84	11 71	117 76	824 27
3,532 08 1,970 72	3,463 68 1,990 72	3,941 87 2,372 26	4,115 16 2,049 69	4,781 17 2,456 12	5,731 38 2,391 58	5,616 41 2,285 98	53,312 45 28,083 50
1,561 36	1,472 96	1,569 61	2,065 47	2,325 05	3,339 80	3,330 43	25,228 98
49 87 344 75	$\begin{array}{c} 170 \ 44 \\ 276 \ 50 \end{array}$	1,355 25 436 45	331 35 701 86	83 50 862 00	293 60 368 00	478 84 462 25	13,065 90 4,879 87
294 88	106 06	918 80	370 51	778 50	74 40	16 59	8,186 03
755 00 1,390 80	635 30 785 00	1,151 72 641 80	901 45 721 20	694 95 972 98	613 96 635 00	1,190 00 1,196 66	13,962 36 15,240 96
635 80	149 70	509 92	180 25	278 03	21 04	6 66	1,277 67
21,920 53	53,532 34	28,598 18	42,141 59	69,205 75	22,594 66	7,943 24	882,051 63

E. MIALL, Commissioner.

No. 16.—REFUNDS, 1888–89.

	Total.	& cts.		5,091 90	•	555 35	
	Amount.	& cts.	25 07 299 91 1,451 88 41 34	114 24 41 75 3,117 71	530 35	25 00	763 93 6 50 6 50 1,443 61 73 79 24 30 550 16 530 12 548 40 64 19
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	Under what Authority Refunded		Refunded under Revised Statutes, do do do do	do do	qo	op	&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&
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	Division.		Quebec Prescott	Prescott Toronto Prescott	19 Halifax	20. Toronto	13. London. 1. Winnipeg. 3. Toronto 3. St. Catharines. 15. Windsor 16. Halifax. 17. do 17. Toronto do 27. do 27. do 27. do 27. do 37. do 40. Winnipeg.
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	To Whom Paid.		P. Lynott A. Whitney T. J. Lyons A. Colquhoun	A. Whitney W. G. Gooderham T. J. Lyons.	W. N. Wickwire	C. Laister & Co	The Carling B. & M. Co. Isaac Laidman John Korman. do H. J. Taylor R. Dempster C. W. Hayward J. C. Oland J. Korman. do do do Manitoba M. & B. Co.
	Articles.		Spirits		Malt Liquor		Malt

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No. 16.—REFUNDS, 1888-89—Continued.

-	Total.	±5.0 €
	Amount.	*  *  *  *  *  *  *  *  *  *  *  *  *
	Under what Authority Refunded.	Refunded under Revised Statutes, Cap. 34, Sec. 259  do do 34 do 259  do do do 34 do 259  do do do 34 do 259  do do 34 do 259  do do do do 36 do 260
EXCISE—Continued.	Division.	Quebec       Refunded um do
	Date.	1885.  Oct. 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	To whom Paid.	E. Fréchette & frère. B. Houde & Co. B. Ritchie & Co. D. Ritchie & Co. D. Ritchie & Co. D. R. Tuckett A. A. Boutell A. A. Boutell J. E. Tuckett J. Lemesurier B. Houde & Co. A. A. Boutell B. Houde & Co. A. Boutell B. Houde & Co. A. A. Boutell B. Houde & Co. A. A. Boutell B. Houde & Co. J. Emerican Cigarette Co. J. Lemesurier D. Ritchie & Co. A. A. Boutell John Lemesurier C. Houde & Cie. John Lemesurier B. Goldstein J. Lemesurier B. Goldstein J. Lemesurier A. A. Boutell J. Lemesurier A. A. Soutell J. Lemesurier A. A. Boutell J. Lemesurier A. A. Boutell J. Lemesurier A. A. Soutell J. Lemesurier A. A. Boutell J. Lemesurier A. A. Boutell J. Lemesurier
	Articles.	Tobacco - Continued. E. J. J. J. A.

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McAlpin Tobacco Co. J. E. Tuckett. J. E. Tuckett. J. Lemesurier. J. Lemesurier. J. Lemesurier. J. E. Tuckett. J. E. Tuckett. J. E. Tuckett. J. E. Tuckett. J. Lemesurier. McAlpin Tobacco Co. McAlpin Tobacco Co. McAlpin Tobacco Co. J. E. Tuckett. J. Lemesurier. J. Lemesurier. J. Lemesurier. J. Lemesurier. J. Lemesurier. J. E. Tuckett. J. Lemesurier. J	do F. J. Schrad	Fortin & Lave Jacob Kirchn	M. Doran.
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No. 16.—REFUNDS, 1888-89.—Concluded.

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Amount.	e cts.	50 00 8 00 6 00 40 00	. 17 00	20 00 20 00	10 00		E. MIALL, Commisioner.
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Refunded		Cap, 29 do 29 do 29 do 29	do 29	92 g qo 93	do 239 do 239	:	
what Authority		levised Statutes, do do do	op	do do	op op	Grand Total .	
Under		Refunded under R do do do	op	do do	op do		
Division.			London	LondonGuelph	Brantford Ottawa		1889.
Date.	.1889.	8888	<b>8</b>	86			tember,
To whom Paid.			J. J. McAdam	Alex. Irvine	Drantford vinegar, Droom and Brush Co		Inland Revenue Department, Ottawa, 3rd September, 1889.
Articles.		Seizures	Other Receipts				Inland Re
	To whom Paid. Date. Division. Under what Authority Refunded.	To whom Paid. Date. Division. Under what Authority Refunded. Amou	To whom Paid.   Date.   Division.   Under what Authority Refunded.   Amula and a standard and a standard.   Amula and a stan	Articles.         To whom Paid.         Date.         Division.         Under what Authority Refunded.         Am           Seizures.         F. C. Lefrançois.         Jan. 22. Quebec.         Refunded under Revised Statutes, Cap. 29 do 78         \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	To whom Paid.   Date.   Division.   Under what Authority Refunded.   Amula	Articles.         To whom Paid.         Date.         Division.         Under what Authority Refunded.         Am           Seizures.         F. C. Lefrançois.         Jan. 22. Quebec.         Quebec.         Refunded under Revised Statutes, Cap. 29. do 78.         \$6           R. B. Algie.         do. 20. Cornwall         do. 20. Cornwall         do. 20. Gornwall         do. 29. do 78.           A. B. Cumingham.         1889.         Halifax         do. 40. do. 29. do 78.           Alex. Irvine.         Jan. 1889.         London.         do. 40. do. 29. do 78.           J. J. McAdam.         Jan. 22. London.         do. 40. do. 29. do 78.           Brantford Vinegar, Broom.         April 9. Guelph.         do. 40. do. 29. do 78.           Brantford Winegar, Broom.         April 9. Guelph.         do. 40. do. 29. do 78.           And Brush Co.         do. 29. Ottawa.         do. 40. do. 29. do 78.	Articles. To whom Paid. Date. Division. Under what Authority Refunded. Am   I889.   Seizures   F. C. Lefrançois   Jan. 22 Quebec   Refunded under Revised Statutes, Cap. 29 do 78   R. B. Augie.   Go 20 Kingston   do 40 29 do 78   R. B. Augie.   Go 20 Halifax   do 20 Gronwall   do 40 29 do 78   R. B. Augie.   Go 20 do 78   R. B. Augie.   Go 20 Halifax   do 40 do 40 do 78   R. B. Augie.   Go 20 do 78   Go 20 do 78   R. B. Augie.   Go 20 do 78   Go 20 do 78   R. B. Augie.   Go 20 do 78   Go 20 do 78   R. B. Augie.   Go 20 do 78   R. B. Augie.   Go 20 do 78   Go 20 do

No. 17.—DEPARTMENTAL EXPENDITURE, 1888–89. (For Details, see Appendix B.)

1,	DB.				(For Details, see Appendix B.)				CR.
	Due by sundry persons, 1st July, 1888.	Disbursed by the Receiver General.	Disbursed Deduction for the Receiver Superanna-tion.	Total.		Salaries.	Contingen- cies.	Due by sundry persons, 30th June, 1889.	Total.
	s cts.	S cts.	s cts.	s cts.		es cts.	e cts.	* cts.	& cts.
		7,000 00		7,000 00	Minister of Inland Revenue	2,000 00		:	7,000 00
	•	39,531 08	96 111	40,309 07	Departmental Officers	40,309 07	:	:	40,309 07
		742 30	:	742 30	Subscription to newspapers	:	742 30	:	742 30
	16 66	313 71	:	330 37	Extra Clerks.		313 71	16 66	330 37
31		716 94	:	716 94	Telegraph Companies	:	716 94	:	716 94
	/	1,369 99	:	1,369 99	Stationery.	:	1,369 99	:	1,369 99
		1,240 65		1,240 65	Printing		1,240 65	:	1,240 65
<u> </u>		2,436 98		2,436 98	Sundry persons	:	2,436 98		2,436 98
		226 13		226 13	Postage	:	226 13	:	226 13
<u> </u>		216 33	:	216 33	Lithographing	:	216 33	:	216 33
	16 66	53,794 11	66 222	54,58 876	Totals	47,309 07	7,263 03	16 66	54,588 76
R	Inla	IND REVEN	Inland Revenue Department Optawa, 3rd Se	Brd September, 1889.	ber, 1889.		E. MIALL,	ALL, Commissioner.	ner.

STAMPS.	acerned.
LAW	venue
AND	t of Re
GAS	amonn
CASURES,	No. 18.—Statement showing amount of Revenue accrued.
AND MI	STATEMEN
WEIGHTS AND MEASURES, GAS AND LAW STAMPS.	No. 18.
<b>&gt;</b>	

	Dr.		No. 18.—	Statement	showing	No. 18.—Statement showing amount of Revenue accrued.	cerued.			CR.
		Weights. and Measures Stamps.	Gas Stamps.	Law Stamps, Supreme and Exchequer Courte.	Total.		Weights and Measures Stamps.	Gas Stamps.	Law Stamps, Supreme and Exchequer Courts.	Total.
		ee cts.	s cts.	s cts.	e cts.		e cts.	e cts.	& cts.	& cts.
L L	Stroyed or returned by Distributors	212 79		225 60	212 79 225 60	By amount of Stamps in the hands of Distributors on 1st July, 1888 By Stamps issued by the	43,040 79	19,877 10	78 56	62,996 45
4 🔄	maining in hands of Distributors, 30th June, 1889. To Balance, being the Rev-	39,637 00	19,483 35	:	59,120 35	ment during the year	34,333 00	7,652 50	4,437 00	46,422 50
i	enue accrued during 1888-	37,524 00	8,046 25	4,289 96	49,860 21					
	Totals.	77,373 79	27,529 60	4,515 56	109,418 95	Totals	77,373 79	27,529 60	4,515 56	109,418 95
	INLAND REVENUE DEPARTMENT, OTTAWA, 3rd Sep	DEPARTM	UE DEPARTMENT, OTTAWA, 3rd September, 1889.	er, 1889.		7		E. MIALL,	ALL, Commissioner.	oner.
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WEIGHTS AND MEASURES, 1888-89. No. 19 (A)—Inspectors in Account with Revenue.

Ī			cts.	22822	ខន	16	4872 4872	33	8228	52	61
	Total		<b>€</b> ÷	2,439 15,435 3,318 3,166 3,905	2,7,7,0 1,99 1,99 1,99 1,99 1,99 1,99 1,99 1,	41,885	11,967 5,460 2,042 3,566	23,037	1,385 1,608 1,703	4,697	1,393
	DUE BY FORS, 2, 1889.	Cash on hand.	e cts.		548 78	3,636 91	678 20	832 80	49 60	49 60	66 16
The state of the s	BALANCES DUE BY INSPECTORS, 30TH JUNE, 1889.	Stamps on hand.	e cts.	1,070 77 2,809 76 1,347 45 1,181 04 2,596 66	2,106 80 3,481 00	15,425 68	6,069 57 3,510 05 1,245 02	13,163 42	1,147 35 1,175 42 1,111 00	3,433 77	747 54 958 43
B. A. S.	Deposited to credit of	Receiver- General.	s cts.	1,271 54 10,115 22 1,676 39 1,798 49 1,309 24 1,644 69	2,544 12 2,453 23	22,812 85	5,219 64 1,950 85 778 83		238 25 433 19 542 71	1,214 15	73 35 369 02
	Stamps returned	or Destroyed	♣ cts.	9 42		9 72	18 72	18 72			
	н) илегоме	LD VIBIOUS.		Belleville Hamilton Kingston London Orillia	Toronto	Ontario	Montreal Quebec Sherbrooke	Quebec.	Fredericton King's St. John	New Brunswick	. Cape Breton. Halifax
ı	Ē	Locat	s cts.	2,439 25 15,435 62 3,318 66 3,166 43 3,905 90	2,485 57 5,199 70 5,934 23	41,885 16	11,967 41 5,460 90 2,042 57	23,037 22	1,385 60 1,608 61 1,703 31	4,697 52	820 89 1,393 61
()	.9	Cartag	\$ cts.		\$ \$	8 18					
	Seizures	and Penalties.	es cts.	62 50 20 00 35 00 5 00	10 00	132 50	10 00 18 00	28 00			
	Stamps	to Inspectors.	s cts.	1,126 00 1,594 00 1,594 00 1,510 00	2,760 00 2,760 00 2,108 00	21,423 00	5,075 00 2,032 00 700 00	7,807 00	300 00 1,245 00	1,545 00	368 00
Dh.	DUE BY FORS, 1, 1888.	Cash on hand.	& cts.	124 22 2,215 55 87 50 238 43		2,665 70	403 26	511 08	11 29	11 29	
Ŧ	BALANCES DUE BY INSPECTORS, 1ST JULY, 1888.	Stamps on hand.	& cts.	1,126 53 3,795 07 1,602 16 1,013 00 2,385 90		17,655 78	6,479 15 3,410 90 1,234 75	3,566 34	1,374 31 1,308 61 458 31	3,141 23	820 89 1,025 61

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WEIGHTS AND MEASURES, 1888-89.—Continued.

No 19 (A)—Inspectors in Account with Revenue.

DR.

BALANCES DUE BY INSPECTORS, 1ST JULY, 1888.	DUE BY ORS, , 1888.	Stamps	Seizures		E	Drenger	Stamps returned	Deposited to credit of	Balances due by Inspectors, 30th June, 1889.	DUE BY FORS, E, 1889.	Total
Stamps on hand.	Cash on hand.	to Inspectors.	and Penalties.	Cartag	Lotal.	DIVISIONS.	or Destroyed	Receiver- General.	Stamps on hand.	Cash on hand.	
s cts.	s cts.	& cts.	\$ cts.	ects.	se cts.		s cts.	& cts.	e cts.	& cts.	s cts.
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2,944 72		948 00			3,892 72	Nova Scotia	0 20	1,030 12	2,695 08	167 02	3,892 72
348 79		270 00			618 79	Charlottetown, P.E.I		292 31	326 48		618 79
2,808 09	34 35	2,140 00	5 00	:	4,987 44	Winnipey, Man	183 85	1,377 33	3,257 15	169 11	4,987 44
1,451 04		200 00	:		1,651 04	Vietoria, B. C.		291 87	1,335 42	23 75	1,651 04
43,040 79	3,222 42	34,333 00	165 50	8 18	80,769 89	Grand Totals	212 79	36,040 91	39,637 00	4,879 19	80,769 89
Inlar	D REVE	Inland Revenue Department, Ottawa, 3rd Sept	ARTMENT, 3rd September, 1889.	ıber, 1	1889.				E MIALL,	LL, Commissioner.	mer.

## WEIGHTS AND MEASURES, 1888-89.

No. 19 (B.)—Deputy Inspectors of the Old Divisions in account Dr. With Revenue. Cr.

Balances due 1st July, 1888. Cash on hand.	· Total.	Divisions.	Balances due 30th June, 1889. — Cash on hand.	Total.
\$ cts.	\$ ets. 87 10	Essex	\$ ets. 87 10	\$ cts. 87 10
87 10	87 10	Ontario	87 10	87 10
5 62	5 62	Hull	5 62	5 <b>62</b>
5 62	5 62	Quebec	5 62	5 62
92 72	92 72	Totals	92 72	92 72

E. MIALL,
Commissioner.

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GAS INSPECTION AND LAW STAMPS, 1888-89.

No. 20—Stamp Distributors in account with Inland Revenue Department.

DR.

			·			
Total.			2,930 2,930 2,930 3,930 8,64 8,64 8,64 8,64 8,64 8,64 8,64 8,64	13,174 85	3,535 50 1,428 00 589 25 266 00 5,818 75	889 00 1,107 25 661 50 1,555 25 4,213 00
Balances, H June, 1889.	Cash on hand.	e cts.	12 00 13 00 13 00 88 25 38 25 197 50	409 25		36 00
BALANCES, 30TH JUNE, 1889	Stamps on hand.	& cts.	2, 245 50 50 50 50 50 50 50 50 50 50 50 50 50	8,463 10	1,394 50 1,080 75 562 25 241 00 3,278 50	887 00 1,058 25 624 50 1,280 75 3,850 50
Deposited to credit of	Keceiver- General.	e cts.	25 25 25 25 25 25 25 25 25 25 25 25 25 2	4,302 50	2,141 00 347 25 27 00 25 00 2,540 25	2 00 49 00 37 00 238 50 326 50
	Distributors of Law Stamps.	s cts.				
Disprecess			Belleville Brockville Cobourg Cornwall Hamiton Kingston London Ottawa Peterborough Port Hope Toronto	Ontario	Montreal Quebec Sherbrooke Three Rivers	Chatham Fredericton Moncton St. John New Brunswick.
Total		e cts.	317 00 731 25 731 25 741 00 548 00 2,930 25 896 25 896 25 891 00 841 00 849 50 514 60 4,774 60	13,174 85	3,535 50 1,428 00 589 25 266 00 5,818 75	889 00 1,107 25 661 50 1,555 25 4,213 00
Stamps	Inspectors.	& cts.	1,190 00 725 00 725 00 525 00 350 00 2,250 00	5,090 00	1,450 00 550 00	150 90
Balances, July, 1888.	Cash on hand.	e cts.	4 50 70 25 45 75 12 00 169 00	301 50		
BALANCES, 1ST JULY, 1888.	Stamps on hand.	e cts.	312 50 731 55 7410 60 1,670 60 1,670 60 70 25 324 55 363 60 2,355 60	7,783 35	2,085 50 878 00 589 25 266 00 3,818 75	889 00 1,057 25 661 50 1,455 25 4,063 00

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2,055 25 110 25	696 00	1,028 25	850 50	27,946 85 4,549 95	oner.
83 50	12 00			540 75	E. MIALL, Commissioner.
1,500 50	637 00	973 50	00 029	19,483 35	Ä Z
471 25	47 00	54 75	180 50	4,324 35	
			:	225 60	
Halifax Pickou  Nous Confin	Charlottetown, P.E.I.	Winnipeg, Man	Victoria, B.C	Grand Totals, Gas Inspection Law Stamps	ottawa, 3rd September, 1889.
2,055 25	00 969	1,028 25	850 50	27,946 85	MENT,
250 00		62 50	100 00	4,437 00	Je Depart Jetawa, 31
91 75		12 00	12 00	34 39	Inland Revenue Department, Ottawa, 3rd Sop
11,713 50		953 75	738 50	19,877 10	Inla

 $C_{R}$ 

WEIGHTS AND MEASURES, 1888-89.

No. 21 (A).—Inspection Divisions in Account with Expenditure.

(For Details, see Appendix B.)

	Total.				3,880 63 2,648 01 17 85		5,640 86 4,453 55 2,727 72 2,591 73	15,413 86	1,818 31 1,593 18 1,814 75	5,226 24	941 69 1,616 42 1,057 26
Balances due by soth June, 1889.		e cts.									: : :
TMENT.	Sundries.		237 491 307 23 23			1,529 36	236 73 225 02 111 43 29 47	602 65	23 23 19 36 12 97	55 56	62 69 83 70 40 65
тне Берлк	Travelling Expenses.				1,029 10 17 85		543 53 586 53 416 29 300 60	1,846 95	195 08 273 82 1 78	470 68	9 00 18 60 116 61
ORIZED BY	Rent.	1	37 50		00 00	377 50	42 00	62 00			70 00 222 50
КХРЕКПОТТИВЕ АСТНОВІЗЕЮ ВУ ТИЕ DEPARTMENT.	Seizure Expenses.	e cts.	105 76		89 08	186 44	10 60	10 60			
EXPEND	Salaries.	e cts.	2,300 5,028 20,028 200 00	1,200 1,700 000 000 000 000 000 000 000 000 000	2,300 00 3,300 00 1,443 55	21,272 54	4,850 00 3,600 00 2,200 00 2,241 66	12,891 66	1,600 00 1,300 00 1,800 00	4,700 00	800 00 1,291 62 900 00
due to persons, 1888,	Balances sundry lst July,	s cts.		19 10		19 10					: : :
	Divisions.		Belleville Hamilton. Kinoston	London Orillia	Utawa Toronto Windsor District Instructors	Ontario	Montreal Quebec Sherbrooke Three Rivers	Quebec	Fredericton. King's St. John	New Brunswick	Cape Breton Halifax Pictou
	Total.	e cts.	169 245 273	88	2,648 01 2,648 01 17 85		5,640 86 4,453 55 2,727 72 2,591 73	15,413 86	1,818 31 1,593 18 1,814 75	5,226 24	941 69 1,616 42 1,057 26
	encitoubed of series Salanda noitsunns	& cts.	45 92 100 67 43 96			421 50	93 44 55 32 43 96 40 76	233 48	32 38 36 36 36 36	90 32	16 00 25 46 18 00
	Amounts from Dep to meet I	es cts.			4,021 33 3,814 75 2,619 18		5,547 42 4,398 23 2,683 76 2,550 97	15,180 38	1,786 35 1,570 82 1,778 75	5,135 92	925 69 1,590 96 1,039 26

1,278 36 23 47	4,917 20	1,205 11	4,241 48	1,561 03	5,408 82 748 97 437 59	67,337 49	
8 25	8 25					8 25	rion er.
16 82 4 77	208 63	61 01	84 05	98 25	1,953 09 748 97 437 59	5,779 16	LL, Commissioner.
253 29 18 70	416 20	144 10	549 43	302 78	655 73	9,178 12	E. MIALL,
	292 50		108 00	210 00		1,050 00	<b>=</b>
			: :			197 04	
1,000 00	3,991 62	1,000 00	3,500 00	950 00	2,800 00	51,105 82	
				:		19 10	
Yarmouth District Inspector	Nova Scotia	Charlottetown, P.E.I.	Winnipey, Man.	Victoria, B.C	General ContingenciesQueen's PrinterStationery Office.	Grand Totals	OTIAWA, 3rd September, 1889.
1,278 36 23 47	4,917 20	1,205 11	4,241 48	1,561 03	5,408 82 748 97 • 437 59	67,337 49	Inland Revenue J Otta
1,258 36   20 00   23 47	79 46	20 00	66 32	16 40	56 00	983 48	NLAND
1,258 36 23 47	4,837 74	1,185 11	4,175 16	1,544 63	5,352 82 748 97 437 59	66,354 01	A

### WEIGHTS AND MEASURES, 1888-89.

No. 21 (B.)—Inspection Divisions in Account with Expenditure.

Dr.

## (Old Divisions.)

Cr.

Ralances due by sundry persons, 1st July, 1888.	Total	l.	Divisions.	Balance due by sund person 30th Ju 1889.	ry s,	Total	
\$ cts	s. <b>\$</b>	cts.		\$	cts.	\$	ets.
39 56	39	56	Essex	, 39	56	39	56
33 53	33	53	Waterloo	33	53	33	53
73 09	73	3 09	Ontario	73	09	73	09
0 33	e	33	Drummond	0	33	o	33
41 45	41	45	Laval	41	45	41	45
26 88	20	88	Montmorency	26	88	26	88
27 51	27	51	Richelieu	27	51	27	51
96 17	96	3 17	Quebec	96	17	96	17
24 00	24	1 00	Lunenburg, Nova Scotia	24	00	24	00
193 26	198	3 26	Totals	193	26	193	26

E. MIALL, Commissioner.

 $C_{R}$ 

GAS INSPECTION, 1888–89.

No. 22.—Inspection Districts in Account with Expenditure.

(For Details, see Appendix B.)

DR.

	Total.	\$ cts.	276 66 58 10	178 95 177 85	1,334 40	163 60	1,820 1,029 95	242 50 103 85	1,148 23	7,261 49		129 76 201 75	4,296 30	168 00 200 00
1 4108 sac	Balances du dry Perso June, 188	e cts.									:			
RTMENT.	Sundries.	s cts.	80 83 0 75	7 15 54 05		0 22				998 63		8 10 1 75:	423 60	18 00
EXPENDITURE AUTHORIZED BY THE DEPARTMENT	Travelling Expenses.	ets.		28 05 101 30	•	19 62 89 63		•	345		89 40	21 70	111 10	
HORIZED BY	Rent.	s cts.	37 50	75 00	58 00	3 E	250 90 250 90	100 00		700 50	40 00 49 00	3 : :	82 00	
птик Аст	Special Assistance	e cts.		22 50	:08 :81 :		15 00			86 50	913 00	96 66	1,012 96	
Expend	Salaries.	e cts.		68 75	1,008	\$ 8 8 5 8 5	1,000 00	139 50	1,000 00	4,534 56	1,316 64		2,666 64	150 00 200 00
	Districts.		Belleville Brockville	Cobourg	Deseronto	KingstonLindsay.	Ottawa	Peterborough.	Toronto	Ontario	Montreal	Sherbrooke Three Rivers	Quebec	ChathamFredericton.
	Total.	st cts.		178 95 177 85								129 76 129 76 201 75	4,296 30	168 00 200 00
ne, Sun-	Balances dr dry Perso June, 1889	e cts.					5			2 00				
-reguer-	oitoube C of seirsis2 noitsunns	s cts.	3 16		1 76 20 12					90 24	56 32		48 78	200
	stmount from Der to meet I ture.	\$ cts.		177 63 177 85								4, 82, 83, 83, 83, 83, 83, 83, 83, 83, 83, 83	4,247 52	165 00 197 50
tal ,ano	Balances due dry Pers July, 1888	s cts.												

GAS INSPECTION, 1888-89—Concluded. No. 22.—Inspection Districts in Account with Expenditure.

		Total.	e cts.	244 45 1,065 44	1,677 89	2,027 07 12 88	2,039 95	229 00	319 15	410 00	2,390 87 97 02 80 17	18,801 84	ner.
	ie by Sun- ons, 30th	Balances du dry Pers June, 188	& cts.	50 00	20 00	12 88	12 88				200 00	262 88	VLL, Commissioner.
	KTMENT.	Sundries.	& cts.	32 50	. 50 50	79 01	79 01	29 00	11 15		2,040 87 97 02 80 17	3,809 95	E. MIALL,
	тне Бера	Travelling Expenses.	ee cts.	44 45 32 94	77 39	425 56	425 56	:	:	. :		1,555 35	턴
and boundary	IORIZED BY	Rent.	e cts.			222 50	222 50		108 00	210 00		1,323 00	:
1101.	EXPENDITURE AUTHORIZED BY THE DEPARTMENT.	Special Assistance	e cts.									1,099 46	
rocours	EXPENDI	Salaries.	e cts.	150 00	1,500 00	1,300 00	1,300 00	200 00	200 00	200 00	00 021	10,751 20	
22.—INSPECTION DISCIPLES III ACCOUNT		Districts.		Moncton St. John	New Brunswick	Pictou	Nova Scotia			Victoria, B.C	General ExpensesQueen's PrinterStationery	Totals	EPARTMENT, .wa, 3rd September, 1889.
77.		Total.	e cts.	244 45 1,065 44	1,677 89	2,027 07	2,039 95	229 00	319 15	410 00	2,390 87 97 02 80 17	18,801 84	r, Septemb
No.	ne Sun- ns, 30th	Balances d dry Perso June, 1889	e cts.									5 00	EPARTMENT, WA, 3rd Se
	r Super-	oitoubed otesinala andanna noitanna	e cts.	3,00	28 50	25 96	25 96	2 50	4 00	4 00	3 00	206 98	
	received strinent dxpendi-	stanomA from Dep to meet I ture.	es cts.	5.7	1,649 39	2,001 11	2,001 11	226 50	315 15	406 00	2,387 87 97 02 80 17	18,576 98	Inland Revenue D
	181 (suc-	Balances due dry Perse July, 1888	& cts.			12 88						12 88	Int.

No. 23.—Statement showing the Amount Voted and the Expenditure Authorized for each Service, 1888-89.

Service.	Grant.	Expenditure.	Over Expended.	Under Expended.
Minister's Salary.	\$ cts.	\$ ets. 7,000 00	\$ cts.	\$ ets.
Departmental Salaries.	41,375 00			1,065 93
do Contingencies	7,000 00	7,263 03	263 03	1,000 00
Excise Salaries	264,587 50	,	200 00	1,663 07
do Contingencies.	75,300 00	76,473 24	1,173 24	1,000 01
Commission to Customs Officers	3,500 00	4,080 29	580 29	
Duty Pay	5,000 00	4,839 87	500 25	160 13
Cullers' Salaries	15,500 00	15,500 00		100 10
do Contingencies	8,000 00	6,234 33		1,765 67
do Fees.	25,000 00			3,610 92
• do Annuities.	6,600 00	5,266 68		1,333 32
Preventive Service	17,000 00	,		1,402 54
Minor Revenues	1,500 00			1,322 19
Tobacco Stamps' Commission	250 00	117 94		132 06
Weights and Measures Salaries.	51,635 22	51,105 82		529 40
do do Contingencies	18,000 00	16,231 67		1,768 33
Gas Inspection Salaries	12,170 00	10,751 20		1,418 80
do Contingencies	8,000 00	8,032 76	32 76	1,410 00
Inspection of Staples	2,500 00	2,401 71		98 29
Adulteration of Food	·			
Total.	25,000 00	23,700 31	9 040 99	1,299 69
1 Otal	594,917 72	579,396 70	2,049 32	17,570 34

E. MIALL, Commissioner.

APPENDIX A.

STATISTICS.

### APPENDIX A—SPIRITS.

## No. 1.—RETURN of Manufactures

		GRAIN	, etc., Usi	ED FOR D	) ISTILLATIO	N.	V	sed for
Revenue Divisions.	Malt.	Indian Corn.	Rye.	Wheat.	Oats.	Barley.	Molasses.	Total grain used Distillation.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$\mathbf{Lbs}.$
Belleville, Ont	105,640	2,000,100	570,015		23,845			2,699,600
Guelph, Ont	187,200	3,628,800	921,600		100,800			4,838,400
Hamilton, Ont	130,226	2,507,920	418,071	32,047	37,276			3,125,540
Perth, Ont	310,708							310,708
Prescott, Ont	526,558	7,019,160	1,143,602		87,970		. ,	8,777,290
Toronto, Ont	1,505,680	33,695,550	6,532,390	240	530,840			42,264,700
Windsor, Ont	1,555,906	26,739,395	5,276,289	66,800	444,800			34,083,190
Halifax, N.S	537,113	2,075,700	144,950		59,750	56,000		2,873,513
Totals	4,859,031	77,666.625	15,006,917	99,087	1,285,281	56,000		98,972,941

In addition to the above, the following articles were used for distillation at Windsor:-

Ground apples	26,367 lbs.
Cider	2,330 ''
Ale	606 "
Apple Pomace	58.059 "
Grape "Sour wine	81,880 ''
Sour wine	12,680 "
Lees	. 7,482 "
Total	189 404 "

for the Year ended 30th June, 1889.

ricen	Fees.	Proof S <sub>I</sub> Manufactr \$1.30, \$1.32 : per gal	ured at and \$1.33	to bring 1	sments production tandard.	Tot	Duty Collected on Assess- ments; deficiencies, and on License Fees.	
	\$	Gallons.	\$ ets	Gallens.	\$ cts.	Gallons.	\$ ets.	\$ ets.
1	250	159,860.95	207,819 2			159,860.95	207,819 24	1,656 43
1	250	280,563.56	364,732 6	30 . ′		280,563.56	364,732 60	4,021 91
1	250	175,050:24	227,565 3	31		175,050.24	227,565 31	2,368 34
2	500	15,301.14	20,197 5	82 47	108 87	15,383.61	20,306 37	787 11
1	250	473,097.35	615,026	54		473,097.35	615,026 54	7,202 45
2	500	2,547,589.67	3,211,866	54		2,547,589.67	3,211,866 54	500 00
3	625	2,049,193.83	2,663,951	62.63	81 42	2,049,256.46	2,664,033 37	970 41
1	250	146,851.66	194,844	18		146,851.66	194,844 18	1,624 65
12	2,875	5,847,508.40	7,506,003 8	36 145 10	190 29	5,847,653.50	7,506,194 15	19,131 30

E. MIALL, Commissioner.

#### APPENDIX A—Continued—SPIRITS.

## No. 2.—Comparative Statement of Spirits manufactured

	Grain, &c., used for Distillation.							used for
Provinces.	Malt.	Indian Corn.	Rye.	Wheat.	Oats.	Barley.	Molasses.	Total Grain u Distillation.
1888.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Ontario	4,213,044 393,500		11,530,004 92,000	$2,255,241 \\ 1,568$	1,274,307 $106,582$	85,693 6,200	90,499	91,925,980 $2,317,886$
Totals	4,606,544	74,285,727	11,622,004	2,256,809	1,380,889	91,893	90,499	94,243,866
Ontario	4,321,918 537,113			99,087	1,227,531 $57,750$	56,000		96,099,428 2,873,513
Totals	4,859,031	77,666,625	15,006,917	99,087	1,285,281			98,972,941

In addition to the above, during 1889, the following articles were used for distillation in Ontario:-

Ground apples	. 26,367 lbs.
Cider	. 2,330 "
Ale	. 606 ''
Annle nomace	. 58.059 ''
Grape do Sour wine	. 81,880 "
Sour wine	. 12,680 "
Lees	. 7,482 "

# during the Years ended 30th June, 1888 and 1889.

Fees.		Proof Manufac \$1.30. \$1.3; per g	tured at 2 and \$1.33		nents to luction up ndard.	Tots	Duty Collected on Assess- ments, De- ficiencies and on License Fees	
	\$	Gallons.	\$ cts.	Gallons.	\$ cts.	Gallons.	\$ cts.	\$ cts.
10 1	$2,375 \\ 250$	5,392,471.97 122,117.06	7,010,473 17 161,249 35	697.69 335.32	907 02 442 62	5,393,169·66 122,452·38	7,011,380 19 161,691 97	
11	2,625	5,514,589.03	7,171,722 52	1,033:01	1,349 64	5,515,622.04	7,173,072 16	63,107 75
11 1	$2,625 \\ 250$	5 700,656·74 146,851·66	7,311,159 68 194,844 18	145:10	190 29	5,700,801·84 146,851·66	7,311,349 97 194,844 18	
12	2,875	5,847,508.40	7,506,003 86	145.10	190 29	5,847,653.50	7,506,194 15	19,131 30

E. MIALL, Commissioner.

## APPENDIX A.—Continued—SPIRITS.

No. 3.—Statement showing the transactions in the Distilleries

Divisions.	Spirits in Process of Manufac- ture	Spirits Manufactured during Year.		Spirits Received at Distillery from other Sources.		
	1st July, 1888.	during 1 ear.	lation.	Duty paid.	In Bond.	
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	
Belleville, Ont	! 	159,860 95	219 33	200 12		
Guelph "	64 88	280,563 56	3,428 10	294 73		
Hamilton "	1,118 60	175,050 24				
Perth "	59 25	15,301 14				
Prescott "	20,898 15	473,097 35	6,703 48	755 50	986 70	
Toronto	26,975 46	2,547,589 67	52,955 02	947 87		
Windsor "	58,671 93	2,049,193 83	51,931 78	551 66		
Halifax, N.S	3,275 17	146,851 66		1,114 15		
Totals	111,063 44	5,847,508 40	115,237 71	3,864 03	986 70	

in the Dominion of Canada during the Year ended 30th June, 1889.

Total.	Spirits Warehoused during Year.	Fuse	l Oil.	Deficiency in Spirits at Stock-taking, 30th June,	Spirits in Process of Manufacture, 30th June,	Total.	
		Destroyed.	Removed.	1889.	1889.		
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	
160,280 40	157,635 52	886 56	395 15	1,363 17	ļ ,	160,280 40	
284,351 27	278,084 87	1,487 14		4,779 26		284,351 27	
176,168 84	166,437 41	366 27	186 55	3,387 55	5,791 06	176,168 84	
15,360 39	14,874 36			322 11	163 92	15,360 39	
502,441 18	484,162 20	2,918 28	599 49	5,675 23	9,085 98	502,441 18	
2,628,468 02	2,571,272 39	9,117 78		258 09	47,819 76	2,628,468 02	
2,160,349 20	$\begin{cases} 2,095,049 & 20 \\ 967 & 60 \end{cases}$	6,443 98 Written off	having been	5,043 70 destroyed by	52,844 72 fire.	2,160,349 20	
151,240 98	148,157 05			1,760 86	1,323 07	151,240 98	
6,078,660 28	{5,915,673 00 967 60	} 21,220 01	1,181 19	22,589 97	117,028 51	6,078,660 28	

#### APPENDIX A—Continued—SPIRITS.

DR.

#### No. 4.—Spirit Warehouse Return

Remaining in Warehouse from last Year.	in Placed Ware- Warehouse in housed warehouse.		Received from other Divisions.	Totals.	REVENUE DIVISIONS.	Entered for Consumption at \$1.30, \$1.32 and \$1.33 per Gallon.		
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.		Gallons.	\$ ets.	
164,721 02	157,635 52		23,050.72	345,407 · 26	Belleville	69,066 72	89,786 77	
2,882 16			13.945 01		Brantford	9,275 78	12,058 53	
			6,445 15		Cornwall	5,671 11	7,372 37	
484,101 68	278,084 87		30,940 47		Guelph	126,441 49	164,373 91	
3,472 29			71,839.76	75,312.05	Governm'nt Ware-			
4 041 : 05	100 497 : 41		73,480 50	944 150 - 96	house, Ottawa Hamilton	90.790.00	110 700 00	
4,241 .95	166,437 41		57,073 50	58 000 · 36	Kingston	89,789 · 29 49,536 · 27	$\begin{array}{c} 116,726 \ 22 \\ 64,397 \ 19 \end{array}$	
6 993 : 01			92,189 00		London	87,529 42	113.788 28	
8 933 06			156,207 42		Ottawa		200.167 02	
			10.998 88		Owen Sound	10,713 84	13,928 03	
	14,874 36		25,548 84		Perth	29,749.00	38,807 87	
<b></b>	·		7,822.12		Peterborough	6,515 20	8,469 80	
2,912.86	: , • • • • • • • • • • • •		10,372.74		Port Arthur	9,022.75	11,729 60	
645,638 84	484,162 20	*15,32242 Re-w'h'd. 139-97	90,225 94	1,235,489 37	Prescott	52,052 87	72,147 65	
6.567 60		100 01	21.133 · 14	27 700 - 74	St. Catharines	24,451.91	31,787 28	
2.016 42			27,110.69		Stratford	25,355 59	32,962 2	
3,207,702.78	2,572,402 63	0.05	117,887 41		Toronto	492,608 15	640,390 50	
$2,583,275\cdot32$	2,095,049 20		68,449 95	4,746,774 47	Windsor		325,609 78	
469 81			7,670 49	8,140 30	Iberville	4,253 53	5,529 5	
1,763 05			11,786 90	13,549 95	Joliette	$12,337 \cdot 07$		
93,412 97		35 34	798,971 78		Montreal		963,545 60	
37,487 24		140.96	250,272 95	287,901 15	Quebec	243,283 36	316,268 58	
			43,548 47	48,073.42	St. Hyacinthe	43,310 56	56,303 72	
1,742 65			55,611 15 19,599 01		Sherbrooke Sorel		68,700 54	
			2,053 26	5 UZ3 - 08 19,109,91	Terrebonne	19,328 91	25,127 4	
			28,749 99	2,000 20 30 080 84	Three Rivers	27.703 23	307 99   36,014 14	
			115,516 22	131 054 90	St. John, N.B	104,767 80	136,437 77	
74,437 21			38,759.05	261,353 31	Halifax, N.S	72,953 50	95,541 83	
			2,157.72	2.189 59	Charlottetown,	12,000 00	50,011 0	
	1	1	,		P.E.T	1 723 79	2.274 18	
11,878 49			94,520 45	106,398 94	Winnipeg, Man	92,284 94		
12,642 70			56,046 55	$68,689 \cdot 25$	Victoria, B.C	52,240 69	67,912 84	
8,612 54				8,612 54	Suspense			
7,423,207:70	+5,916,803.24	Imported 15,322.42	2,429,985 23		Totals		` <u> </u>	
.,	. ,	Re-w'h'd. 316 · 32		,, 33,331 01			0,001,110	

†Spirits warehoused as shown above . . . 5,916,803 24 galls.
do do by Statement No. 3 . . . . . . . . . . . . . 5,915,673 00 do

1,130.24 do Difference being surplus at Toronto.

<sup>\*</sup>Imported for use in Bonded Factory. Paid duty at the rate of 30 cents per gallon.

for the Year ended 30th June, 1889.

Cr.

REMOVED	in Bond.	$\mathbf{F}_{\mathbf{I}}$	REE.		Used	Remaining	
To other Divisions.	To distillery for re- distillation.	Legal Allowance.	Other.	Exported.	in Bonded Factories.	in Warehouse.	Totals.
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
$21{,}745^{\cdot}76\\475^{\cdot}68$					6,224.22	252,674 · 55 851 · 49	345,407 27 16,827 17
174,557 24	3,428.10	10,139.81	297 01	34 49		774 · 04 478,228 · 88	6,445 15 793,127 02
69,684 44					74,084·61 21,351·35 5,836·99	$1,157 \cdot 15 \\ 63,334 \cdot 78 \\ 3,626 \cdot 10$	75,312 05 244,159 86 58,999 36
484 45		·		58.42		$\begin{array}{c} 11,485 \ 07 \\ 10,681 \ 05 \\ 1,716 \ 27 \end{array}$	99,072 91 165,140 48 12,430 11
			• • • • • • • • • • • • • • • • • • • •			41,898 11 1,306 92 4,100 62	71,980 81 7,822 12 13,285 60
279,927 · 08	7,690 18	2,080 43	663 · 96	185.88	15,231 96	877,657 · 01	1,235,489 37
	52,955.02	35,692.56	11,928·90 11,393·51	2,574 39	50,691 11	3,121 · 28 3,771 · 52 4,338,934 · 45 3,496,658 · 47	27,700 74 29,127 11 5,897,992 87 4,746,774 47
•••••		,	• • • • • • • • • • • •			3,886·77 1,212·88 82,324·31	8,140 30 13,549 95 892,420 09
						30,594·29 4,113·00 4,507·25	287,901 15 48,073 42 57,353 80
· · · · · · · · · · · · · · ·					2,053 26	3,257 41	19,789 31 2,053 26 30,960 64 131,054 90
1,145 68 17,880 99		1,517 49	700.55	707 47	5,519 16	19,622 · 26 167,593 · 31	261,353 31
794-13				64·16 149·95		465 80 13,255 71 16,298 61 8,612 54	2,189 59 106,398 94 68,689 25 8,612 54
2,429,985 · 23	116,224 41	75,653 42	‡28,270·34	8,730 83	\$74,084 · 61 144,057 · 04	9,948,182 30	15,785,634 91

‡Of this quantity, 24,889 47 gallons were written off; the balance being the quantity allowed distillers, free of duty, as compensation for duty paid on spirits taken into distilleries.

Duty at 15 cents per gallon on 2,053.26 gallons spirits used in Bonded Factory.

§Used in the manufacture of methylated spirits at Government warehouse, Ottawa.

## APPENDIX A—Coninued—SPIRITS.

DR.

# No. 5.—Comparative Statement of Warehouse

Spirits Remaining in Warehouse from last year.	Spirits placed in Warehouse.	Spirits Re-Ware-housed and Imported.	Spirits Received from other Di- visions.	Totals.	Provinces.	Spirits er Consum \$1.30, \$1.3: per (	ption at 2 and \$1.33
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	1888.	Gallons.	\$ ets.
52,447.99 1,215.18 10,360.13 1,154.05 1,929.70 12,891.82	117,880 23	8,957.07	1,169,260·69 103,169·75 24,489·75 508·02 76,837·69 31,667·57	1,230,665·75 104,384·93 152,730·11 1,662·07 78,767·39 44,559·39	Ontario. Quebec. New Brunswick. Nova Scotia. Prince Edward Isl'nd Manitoba British Columbia Totals.	944,087 ·24 82,306 ·05 43,180 ·31 1,630 ·20 66,571 ·37 31,845 ·28	$1,227,314\ 35\ 107,312\ 81\ 56,592\ 58\ 2,136\ 95\ 86,542\ 56\ 41,398\ 85$
					1889.		
					Ontario		
15,538.68 74,437.21 31.87 11.878.49	148,157.05		115,516·22 38,759·05 2,157·72 94.520·45	131,054 90 261,353 31 2,189 59 106,398 94	Quebec New Brunswick. Nova Scotia Prince Edward Isl'nd Manitoba British Columbia.	104,767 ·80 72,953 ·50 1,723 ·79 92,284 ·94	136,437 77 95,541 81 2,274 18
7,423,207.70	5,916.803.24	15,638.74	2,429,985.23	15,785,634.91	Totals	2,960,446:73	3.854.476 13

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.

## Returns for the Years ended 30th June, 1888 and 1889.

Cr.

Removed	in Bond.	FRE	Е.		Used in	Remaining	
To other Divisions.	To Distillery for Re- Distillation.	Legal Allowance. Other.		Exported.	Bonded Factories.	in Warehouse.	Totals.
Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
2,079,635·81 43,329·32					101.447.57	7,166,877·13 141,801·62	1,230,665.75
33,779 02		271.82		1,061.75	6,540:20	15,538.68 74,437.21	104,384.93 152,730.11
				39:36		31.87 11,878.49 12,642.70	1,662.07 78,767.39 44,559.39
2,157,022 32	115,337.38	38,792:26	10,879.44	7,889:38	335,785.42	7,423,207:70	12,415,240.89
2,367,086·74 43,077·69 1.145·68			3,216.12	137.81	1 99,335 63	130,356.31	13,855,707·00 1,360,241·92 131,054·90
17,880.99		1,517.49	700.55	707 • 47		167,593·31 465·80	261,353.31
				64.16		13,255·71 16,298·61	2,189·59 106,398·94 68,689·25
2,429,985.23	116,224.41	75,653.42	28,270.34	8,730.83	*74,084·61 144,057·04	9,948,182:30	15,785,634.91

\*Used in the manufacture of Methylated Spirits at Government Warehouse, Ottawa.

1888. 1889.
1889. 3,870,732 43
2,625 00 2,875 00

Totals... \$3,099,015 71 3,873,607 43

## APPENDIX A-Continued-MALT.

No. 6.—Return of Malt Manufactured for the Year ended 30th June, 1889.

						<del></del>	
REVENUE DIVISIONS.	No. of Malteters.	License Fees.	Grain placed in Steep.	Malt manufactured at 1 cent per lb.	Paid Duty Ex- manufac- tory.	Ware- housed.	Total Duty Collected Ex-manu- factory, and on Licenses.
		*	Lbs.	Lbs.	Lbs.	Lbs.	\$ ets.
Belleville. Brantford. Guelph. Hamilton Kingston London. Ottawa. Owen Sound Perth. Peterborough. Prescott. St. Catharines. Stratford Toronto. Windsor.	2 12 3 2 3 1 2 2 4 4 4 4 13 2 60	100 100 900 450 100 450 50 100 100 350 200 350 250 250 	274,765 936,305 7,296,956 4,738,295 . 354,154 5,585,137 291,507 235,291 311,449 1,750,995 3,819,206 1,124,339 5,423,080 22,254,197 5,612,000	218,178 758,928 5,846,474 3,818,070 284,455 4,458,109 229,211 189,981 249,051 1,420,572 3,034,441 919,714 4,333,990 17,914,065 4,704,000	106,645 10,740 224,842 245 4,558 424,329 540,373 10,628 563,489	111,533 748,188 5,621,632 3,817,825 284,455 4,458,109 229,211 189,981 249,051 1,416,014 2,610,112 379,341 4,323,362 17,350,576 4,704,000	1,166 45 207 40 3,148 42 452 45 100 00 450 00 100 00 100 00 395 58 4,593 29 5,603 73 456 28 7,384 89 250 00
Ontario		3,600		48,379,239	1,889,849	40,495,590	24,458 49
Montreal Quebec St. Hyacinthe Terrebonne	5 1 1 1	700 150 50 50	10,732,046 1,162,746 36,400 172,291	8,353,764 914,399 23,870 139,865	2,025,090	6,328,674 914,399 139,865	20,950 90 150 00 288 70 50 00
Queboc	8	950	12,103,483	9,431,898	2,048,960	7,382,938	21,439 60
Halifax, N.S	2 1 5 2	100 50 350 75	890,229 165,400 2,084,477 19,229	715,314 126,086 1,643,225 15,086	164,108 91,227 15,086	551,206 126,086 1,551,998	1,741 08 50 00 1,262 27 225 86
Totals	78	7,125	75,270,514	60,310,848	4,205,230	56,105,618	49,177 30

E. MIAIL, Commissioner.

INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September, 1889.

## APPENDIX A-Continued-MALT.

No. 7.—Comparative Statement of Malt manufactured for the Years ended 30th June, 1888 and 1889.

Provinces.	No. of Maltsters.	License Fees.	Grain placed in Steep.	Malt manufac- tured at 1 c. per lb.	Paid Duty Ex- manufac- tory.	Warehoused	Total Duty collected Ex- manufac- tory, and on Licenses.
1888.		\$	Lbs.	Lbs.	Lbs.	Lbs.	\$ cts.
Ontario	53	5,125	53,547,833	41,907,609	3,315,736	38,591,873	38,282 36
Quebec	11	1,050	13,062,523	10,142,355	2,514,243	7,628,112	26,192 43
Nova Scotia	2	100	432,044	332,478	138,919	193,559	1,489 19
Prince Edward Island	1	50	107,200	82,277		82,277	50 00
Manitoba	4	250	1,834,514	1,461,530	89,605	1,371,925	1,146 05
British Columbia	1	50	6,190	4,818	4,818		98 18
Totals	72	6,625	68,990,304	53,931,067	6,063,321	47,867,746	67,258 21
Ontario	60	5,600	60,007,696	48,379,239	1,885,849	46,493,390	24,458 49
Quebec	8	950	12,103,483	9,431,898	2,048,960	7,382,938	21,439 60
Nova Scotia	2	100	890,229	715,314	164,108	551,206	1,741 08
Prince Edward Island	1	50	165,400	126,086	 	126,086	50 00
Manitoba	5	350	2,084,477	1,643,225	91,227	1,551,998	1,262 27
British Columbia	2	75	19,229	15,086	15,086		225 86
Totals	78	7,125	75,270,514	60,310,848	4,205,230	56,105,618	49,177 30

E. MIALL, Commissioner.

# APPENDIX A—Continued—MALT.

Dr.

No. 8.—MALT WAREHOUSE RETURN

Remaining in Warehouse from last year.	Placed in Warehouse.	Increases.	Received from other Divisions.	Imported.	Totals	REVENUE DIVISIONS.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
76,898	111,533		88,020		276,451	Belleville
19,451	748,188	5,830			773,469	Brantford
1,163,355	5,621,632	7,911	28,889		6,821,787	Guelph
1,215,849	3,817,825	29,209	50,180	6,336	5,119,399	Hamilton
79,702	284,455				364,157	Kingston
1,831,035	4,458,109	850	330,551	12,000	6,632,545	London
52,235	229,211				281,446	Ottawa
49,450	189,981		23,400		262,831	Owen Sound
10,709	249,051	82	56,423		316,265	Perth
250,303	1,416,014	947	179,920		1,847,184	Peterborough
			24,000		24,000	Port Arthur
643,766	2,610,112	663	140,400		3,394,941	Prescott
347,169	379,341	5,189	43,200		774,899	St. Catharines
1,649,024	4,323,362	106,627			6,079,013	Stratford
6,048,508	17,350,576	24,612	381,368	23,800	23,828,864	Toronto
3,227,497	4,704,000	7,659	108,000	340	8,047,496	Windsor
	1		24,615		24,615	Iberville
2,311,420	6,328,674		152,203	11,596	8,803,893	Montreal
	914,399		39,600		953,999	Quebec
			72,000		72,000	Sherbrooke
89,293	139,865				229,158	Terrebonne
72,000			788,574	570	861,144	St. John, N.B
149,988	551,206		1,701,447		2,402,641	Halifax, N.S Charlottetown P.E.
27,727	126,086		36,000		189,813	
442,031	1,551,998		79,319	85,887	2,159,235	Winnipeg, Man
13,189				1,401,757	1,414,946	Victoria, B.C
19,770,599	56,105,618	189,579	4,348,109	1,542,286	81,956,191	Totals

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.

# for the Year ended 30th June, 1889.

Cr.

for Consum	Entered for Consumption at 1 cent per lb.		for Consumption at		Exported.	Free and Written off by Authority.	Remaining in Warehouse.	Total.
Lbs.	\$ ets.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.		
184,111	1,841 11		,	1	92,340	276,451		
273,392	$\frac{1,041}{2,733}$ $\frac{11}{92}$	203 551				773,469		
2,834,521	2,735 92 28,345 21		1,124,845			6,821,787		
2,858,404	28,584 04	52,889				5,119,399		
228,020	2,280 20		914,009		136,137	364,157		
4,527,558	45,275 58				2,104,987	6,632,545		
210,805	2,108 05	1		1		281,446		
203,285	2,100 05				59,546	262,831		
******	<b>4,002</b> 00				202	316,265		
1,264,343	12,643 43			510,000		1.847.184		
24,000	240 00	1,000	(			24,000		
2,608,368	26.083 68	113,475	10.800	1	662,298	3,394,941		
401,682	4,016 82		136,000	128,633	108,584	774,899		
3,194,189	31,941 89	994.607	1	73,539	1,816,678	6,079,013		
12,855,155	128,551 55	2.231,910	873,390	10,000		23,828,864		
2,267,903	22,679 03	2,201,010	1.791,984		3,987,609	8,047,496		
6,275	62 75	1	[ <i></i>		18,340	24,615		
6,372,410	63,724 10	46,623	14,310		2,370,550	8,803,893		
953,999	9,539 99					953,999		
72,000	720 00`					72,000		
82,579	825 79					229,158		
753,144	7,531 44	36,000		1	72,000	861,144		
1,531,114	15,311 14	36,000	15,925	537,113	282,489	2,402,641		
169,727	1,697 27				20,086	189,813		
1,624,829	16,248 29				534,406	2,159,235		
1,404,386	14,043 86				10,560	1,414,946		
46,906,199	469,061 99	4,348,109	4,881,913	1,055,348	24,764,622	81,956,191		

## APPENDIX A-Continued-MALT.

Dr.

## No. 9.—Comparative Statement of Malt Warehouse

Remaining in Ware- house from last year.	Placed in Warehouse.	Increases.	Received from other Divisions,	Imported.	Totals.	Provinces.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	1888.
17,549,907 2,215,635 70,200 116,521 45,607 272,514  20,270,384	38,951,873 7,628,112 193,559 82,277 1,371,925 47,867,746			1,237,894 1,267,179	9,928,361 927,462 1,638,773 127,884 1,733,089 1,237,894	Nova Scotia
16,664,951 2,400,713 72,000 149,988 27,727 442,031			36,000	42,476 11,596 570 85,887	189,813	1889.  Ontario Quebec New Brunswick Nova Scotia. Prince Edward Island Manitoba
13,189	56,105,618	189,579	4,348,109	$\begin{array}{c} 35,887 \\ 1,401,757 \\ \hline 1,542,286 \end{array}$	2,159,255 1,414,946 81,956,191	British Columbia

Returns, for the Years ended 30th June, 1888 and 1889.

Cr.

Entered for Consumption at 1 cent per lb.		Removed to other Divisions.	Exported.	Free, and Written off by Authority.	Remaining in Warehouse.	Totals.	
Lbs.	. \$	cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
31,056,672	310,566	79	4,154,943	6,723,387	277,188	16,664,951	58,877,141
6,991,042	69,910		522,476	14,130	211,100	2,400,713	9,928,361
855,462	8,554		022,110	17,100		72,000	927,46
1,059,285	10,592		36,000		393,500	149,988	1,638,77
98,922	989		30,000		1,235	27,727	127,88
1,291,058	12,910					442,031	1,733,08
1,224,705	12,247					13,189	1,237,89
42,577,146	425,771	46	4,713,419	6,737,517	671,923	19,770,599	74,470,60
33,935,736 7,487,263	339,357 74,872		4,175,513 100,596	4,851,678 14,310	518,235	21,363,585 2,481,496	64,844,74 10,083,66
753,144	7,531		36,000			72,000	861,14
1,531,114	15,311		36,000	15,925	537,113	282,489	2,402,64
169,727	1,697	27				20,086	189,81
1,624,829	16,248					534,406	2,159,23
1,404,386	14,043	86		ļ		10,560	1,414,94
46,906,199	469,061	. 99	4,348,109	4,881,913	1,055,348	24,764,622	81,956,19

Total duty collected ex-Warehouse and ex-Manufactory.... on Licenses.....

1888.	1889.
 \$486,404 67 6,625 00	\$511,114 29 7,125 00

\$518,239 29

E. MIALL, Commissioner.

\$493,029 67

# APPENDIX A—Continued—MALT LIQUOR.

No. 10.—Return of Malt Liquor Manufactured for the Year ended 30th June, 1889.

REVENUE DIVISIONS.	No. of Brewers.	License Fees.	Total Quantity of Malt used for Brewing.	Sugar, &c.	Malt Liquor Manu- factured.	Malt Liquor Exported and used by H. M. Army and Navy.	Duty Collected including License Fees,
	Ì	*	Lbs.	Lbs.	Galls.	Galls.	\$ ets.
Belleville	2	100	189,239		61,290	! !	100 00
Brantford	2	75	268,891				75 00
Guelph	+15	750	3,389,398				750 00
Hamilton	3	150	2,228,456		849,609		150 00
Kingston	3	150	243,264		83,575		150 00
London	5	250 200	4,619,364		1,666,313	326	250 00
Ottawa	4 4	200	602,249 325,654		182,339 130,860		200 00
Owen Sound Port Arthur	1	200 50	38,743		16,053		200 00   50 00
Peterborough	5	250	1,279,872		428,244		250 00
Prescott	. 3	150	2,428,693		785,220		150 00
St. Catharines	3	150	761,509		261,785		150 00
Stratford	9	450	810,236		352,443		450 00
Toronto	17	825	11,704,978	65,740	4,333,875		7,134 72
Windsor	2	100	496,291		190,922		100 00
Ontario	78	3,850	29,386,837	65,740	10,651,876	326	10,159 72
Iberville.	1	50	16,339		5,965		50 00
Joliette	1	50	48,429		16,734		50 00
Montreal	10	475	10,138,570		3,227,177		475 00
Quebec	1	50	1,012,048		347,700		50 00
Sherbrooke	$\frac{2}{1}$	100 50	548,676 18,895		$176,300 \\ 6,200$		100 00 50 00
St. Hyacinthe	i	50	20,545		7,135		50 00
Three Rivers	1	50	8,290		4,589		50 00
Quebec	18	875	11,811,792		3,791,800		875 00
St. John, N.B.	2	100	860,962		251,550		100 00
Halifax, N.S	4	200	1,850,871		638,986	132,804	200 00
Charlottetown, P.E.I	1	. 50	169,200		56,400		50 00
Winnipeg, Man	9	450	1,616,101		505,542		450 00
Victoria, B.C	19	875	1,463,041		467,195	6,858	875 00
Totals	131	6,400	47,158,804	65,740	16,363,349	*139,988	12,709 72

<sup>\*</sup>Exported, 4,201 gallons. Used by H. M. Army and Navy, 135,787 gallons. †Two of these are for 1889-90.

E. MIALL,

Commissioner.

## APPENDIX A-Continued-MALT LIQUOR.

No. 11.—Comparative Statement of Malt Liquor manufactured for the Years ended 30th June, 1888 and 1889.

M	i						
Provinces.	No. of Brewers.	License Fees.	Total Quantity of Malt used for Brewing.	Corn, Sugar, Rice, &c.	Malt Liquor Manu- factured.	Malt Liquor Exported and used by H. M. Army and Navy.	Duty collected including License Fees.
1888.		\$	Lbs.	Lbs.	Gallons.	Gallons.	\$ ets.
Ontario Quebec New Brunswick Nova Scotia. Prince Edward Island Manitoba British Columbia.  Totals	78 18 2 4 1 10 15 128	3,850 900 100 200 50 475 725 6,300	28,905,761 11,504,165 850,201 1,493,457 97,200 1,370,483 1,224,955 45,446,222	2,085	255,550 514,875 32,400 434,167 383,813	127,812	4,365 68 900 00 100 00 200 00 50 00 656 40 725 00 6,997 08
1889.  Ontario Quebec. New Brunswick Nova Scotia. Prlnce Edward Island Manitoba British Columbia.  Totals	18 2 4 1 9 19	3,850 875 100 200 50 450 875 6,400	1,616,101 1,463,041		3,791,800 251,550 638,986 56,400 505,542 467,195	6,858	200 00 50 00

E. MIALL,

Commissioner.

# APPENDIX A—Continued—TOBACCO.

No. 12.—RETURN of Manufactures

	Lie	enses.	Total weight of Leaf and other material	ı which duty	Товасо	O MANUFAC	TURED.	Cigarette in Sx	s and Cut Iall Pack Manufac
Inland Revenue Divisions.	No.	Amount	actually used in produc- tion of Tobacco made and excised.	Deficiencies upon which duty was collected.	At 20c. per lb.	Paid Duty	Ware- housed.	At 60c. and per lb.	Paid Duty
		\$ cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Hamilton Toronto Windsor	1 1 1	75 00 75 00 75 00	988,542 307,804 39,285			43,678	$\begin{array}{c} 869,965\frac{1}{2} \\ 270,632 \\ \end{array}$	4,3131	4,010
Ontario	3	225 00	1,335,631		1,342,4404	201,8423	1,140,5971	4,3134	4,0104
Joliette Montreal Quebec	2 12 4	100 00 762 50 275 00	6,177,445	5	5,753,414 <del>1</del> 430,248	174,633 <del>1</del> 368,261	5,578,781½ 61,987	52,9654	37,7254
Quebec	18	1,137 50	7,070,050	72	6,183,6623	542,894	$5,640,768\frac{1}{2}$	52,9654	37,7254
Halifax Pictou	2 1	150 00 75 00			177,323½ 42,888	2,613½ 8,742	174,710 34,146		
Nova Scotia	3	225 00	215,365		220,211½	$11,355\frac{1}{2}$	208,856		
Charlottetown, P.E.I	2	150 00	185,167		188,598	75,208	113,390		
Totals	26	1,737 50	8,806,213	72	7,934,912	$831,300\frac{1}{2}$	7,103,612	57,2781	41,736

INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September, 1889.

for the Year ended 30th June, 1889.

TOBACCO AGES TURED.	Canadian FA	Tobacco	Manu-		Snuf	F MAN	NUFACTUI	RED.		Duty
Ware-housed.	At 5c. per lb.	Paid Duty.	Ware- housed.	At 20c. per lb.	Paid Duty.	Warehoused.	At 12c per lb.	Paid Duty.	Ware- housed.	Collected Including License Fees.
Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	\$ cts.
3021										24,329 00 8,810 60 9,896 41
$302\frac{1}{2}$										43,036 04
15,240	$293,488\frac{3}{4}$	$\begin{array}{c} 170,882\frac{1}{2} \\ 212,529\frac{1}{4} \\ 20,705 \end{array}$		ا۔ ' ا		 5	108,785 148,365			8,644 23 85,200 80 95,737 90
15,240	674,5421	404,1163	$270,425\frac{1}{2}$	5,110	5,105	5	257,150	257,130	20	189,582 93
••••••									· · · · · · · · · · · · · · · · · · ·	672 70 1,823 40
										2,496 10
									ļ	15,191 60
$15,542\frac{1}{2}$	674,5424	$404,116^3_4$	$270,425\frac{1}{2}$	5,110	5,105	5	257,150	257,130	20	250,306 67

# APPENDIX A—Continued—TOBACCO.

# No. 13—Comparative Statement of Manufactures

	Lie	CENSES.	Total weight of Leaf and other materials	m which duty	Товасс	o Manufac	TURED.	Cigarette in S	S AND CUT MALL PACK MANUFAC
Provinces.	No.	Amount	actually used in produc- tion of Tobacco made and excised.	Deficiencies upon which duty was collected.	At 20c. per lb.	Paid Duty	Ware- housed.	At 60c. and \$1 per lb.	Paid Duty
1888.		\$ cts.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Ontario	3 20 3 2	$\begin{bmatrix} 225 & 00 \\ 1,325 & 00 \\ 225 & 00 \\ 150 & 00 \end{bmatrix}$	= 8.034.567		1,793,168 7.168,980 370,897 182,322	$\begin{array}{r} 307,318\frac{1}{9} \\ 476,096\frac{1}{2} \\ 21,646 \\ 101,855 \end{array}$		44,121	39,446
Total	28	1,925 00	10,325,074		9,515,367	906,916	8,608,451	49,5741	44,8241
1889 . Ontario	3	225 00			1,342,440		1,140,5971		
Quebec Nova Scotia P. E. Island	3	$\begin{array}{c cccc} 1,137 & 50 \\ 225 & 00 \\ 150 & 00 \end{array}$	215,365				208,856	52,9654	
Total	26	1,737 50	8,806,213	72	7,934,9121	831,300\frac{1}{2}	7,103,612	57,2781	41,736

# for the Years ended 30th June, 1888 and 1889.

TOBACCO AGES TURED.		IAN TOBA UFACTURI			Snu	<b>Г</b> Ма	NUFACTUE	RED.		Duty Collected
Ware- housed.	At 5c. per lb.	Paid Duty.	Ware- housed.	At 20c. per lb.	Paid Duty.	Warehoused.	At 12c. per lb.	Paid Duty.	Ware- housed.	INCLUDING LICENSE FEES.
$\mathbf{Lbs}$ .	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	$\operatorname{Lbs}$ .	${f Lbs}$ .	Lbs.	\$ ets.
75 4,675	704,3803	355,579 <u>4</u>	348,8011	4,225	4,225		257,175	257,175		63,677 04 167,905 96 4,554 20 20,521 00
4,750	704,3803	355,5794	348,80112	4,225	4,225		257,175	257,175		256,658 20
302½ 15,240 	674,542	404,116‡	270,425½	5,110	5,105	5	257,150	257,130	20	43,036 04 189,582 93 2,496 10 15,191 60
$15,542\frac{1}{2}$	674,5424	404,1163	$270,425\frac{1}{2}$	5,110	5,105	5	257,150	257,130	20	250,306 67

# No. 14.—RETURN for the Year ended 30th June, 1889.

REMAINING IN WARE- HOUSE FROM LAST YEAR.	PLACED IN WAREHOUSE.		Weight Counted for.	Ex-Warehoused for Excise Duty.	Ex-Warehoused FOR Ex-Warehoused FOR FOR Exportation,	SHIPS' TAKEN FOE STORES. RE-WORKING		Total Weight Accounted FOR.
Tobacco.  Gigarettes and Cut Tobacco.  Canadian Tobacco.	Tobacco Re- Warehoused.  Cigarettes and Cut Tobacco.  Canadian Tobacco.  Sauuff.	Tobacco.  Canadian Tobacco.  Tobacco.	Cut Tobacco. Smuff. Smuff.	Tobacco at 20c. per lb.  Cigarettes and Cut Tobacco, at 60c. per lb.  Canadian Tobacco, at 5c. per lb.	Tobacco.  Canadian Tobacco.  Tobacco Exported.  Cut Tobacco and Cigarettes Exported.  Snuff Exported.	Tobacco. Tobacco. Canadian To-	Tobacco.  Gigarettes and Cut Tobacco.  Canadian Tobacco.	Tobacco. Cigarettes and Cut Tobacco. Canadian Tobacco. Bacco.
Lbs. Lbs. Lbs. Lbs.	s. Lbs. Lbs. Lbs	Lbs. Lbs. Lbs. Ll	hs. Lbs. Lbs	Lbs. Lbs. \$ ets	Lbs. Lbs. Lbs. Lbs. Lbs.	s Lbs. Lbs. Lb	s. Lbs. Lbs. Lbs.	Lbs. Lbs. Lbs. Lbs.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	632 3024 1,	$\begin{array}{c cccc} 107,581\frac{1}{5} & 167,347\frac{1}{5} \\ 8,651 & 8,651 \\ 49,745 & 55,116 \\ 616,320\frac{1}{5} & 2,046,445\frac{1}{5} \\ 163,333\frac{1}{5} & 184,768 \\ 482,603 & 556,219 \\ 201,890\frac{1}{5} & 28,190\frac{1}{5} \\ 7,314\frac{1}{5} & 8,087 \\ 4,705 & 8,169 \\ 67,635\frac{1}{5} & 70,050\frac{1}{5} \\ 18,252 & 18,252 \\ 14,153 & 16,070 \\ 1,008,521\frac{1}{5} & 1,459,802\frac{1}{5} \\ 31,173\frac{1}{5} & 38,844\frac{1}{5} \\ 2,876,762 & 4,961,188\frac{1}{5} \\ 63,426\frac{1}{5} & 27,705 \\ 90,562\frac{1}{5} & 18,391\frac{1}{5} & 197,881 \\ \end{array}$	Belleville   Brantford   Cornwall   Guelph   Hamilton   Kingston   London   Ottawa   Perth   Peterborougi   Port Arthur   Prescott   St. Catharines   Stratford   Toronto   Windsor   302½   Ontario   Joliette   302½   Ontario   Joliette   St.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	19,664½ 19,664½ 15,925 3,7	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccc} 70,050\frac{1}{2} \\ 18,252 \\ 16,070 \\ 1,459,802\frac{1}{2} \\ 38,844\frac{1}{2} \\ 302\frac{1}{2} \\ 4,961,188\frac{1}{2} \\ 302\frac{1}{2} \\ \hline 7,013,176 \\ 15,365 \\ 197,881 \\ 18,391\frac{1}{2} \\ \end{array}$
719		$\frac{3,901\frac{1}{2}}{2}$ $\frac{4,620\frac{1}{2}}{2}$		3,856½ 771 30	D		764	4,6203
917		31,349 32,266	5,365   427,476½   25 Quebec	2,189,599½   13,512½   306,883   461,371 83   28,174			4,092	32,266
		639,982	967 St. John	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				. 727,524 967
$\begin{array}{ c c c c c c }\hline & 1,142 & & & \\ & 15,094\frac{1}{2} & & & 174,7 \\ \hline \end{array}$		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1,052 Cape Breton Halifax Pictou	24,165     418     4,853     9       703,471½     140,694     30       37,593     7,518     60	) 11,616½ 44,281½	9,904	9,349 634 252,719½ 634	33,514
327,186½ 208,8	,856	570,700½ 1,052 1,106,743	1,052 Nora Scotia	765,229½ 418 153,066 86	$13,859\frac{1}{2}$ $44,281\frac{1}{2}$	9,904	$273,468\frac{1}{2}$ $634$	1,106,743 1,052
	,390		Charlottetown, P.E.I.	104,462 20,892 40		3,356		
			Winnipeg, Man.	409,054 81,810 80		9101	100 - 11	
15,363½		10 -101		70,9201 14,184 10		219½	6,163	77,338
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		4,802,243½ 47,148½ 14,818,215 15	AND	7,813,973 13,512½ 308,268 1,586,315 70	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	_		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Inland Revenue Department, Ottawa, 3rd September, 1889.

APPENDIX A—Continued—TOBACCO WAREHOUSE ACCOUNT. Dr.

No. 15.—Comparative Statement for the Years ended 30th June, 1888 and 1889.

Cr.

REMAIN HOUSE FE			. Pı	ACED I	n Ware	HOUSE.		PLACED II HOUSE OTHER DI	FROM.		OTAL WE ACCOUNT				Ex-Wa	AREHOUS	ED FOR E	kcise Duty.	FOR REI	EHOUSED MOVAL TO IVISIONS.	HOUSE	D FOR	WRIT- TEN OFF BY AUTH- ORITY.	Ships' Stores.	TAKE Re-Wo	N FOR RKING.	REMAIN	ING IN HOUSE.	WARE-	Тотаl V	VEIGHT A	Accounted
Tobacco.	Cigarettes and	Canadian To- bacco.	Tohacco.	Tobacco Re- Warehoused.	Cigarettes and Cut Tobacco.	Canadian To- bacco.	Snuff.	Tobacco.	Canadian To- bacco.	Товассо.	Cigarettes and Cut Tohacco.	Canadian To- bacco.	Snuff.	Provinces.	Tobacco, at 20c. per lb.	Cigarettes and Cut Tobacco, at 60c. per lb.	Canadian To- bacco, at 5c. per lb.	Duty.	Товассо,	Canadian To- bacco.	Tobacco.	Cut Tobacco and Cigar- ettes.	Tobacco.	Tobacco.	Tobacco.	Canadian To- bacco.	Товассо.	Cigarettes and Cut Tobacco.	Canadian To- bacco.	Торассо.	Cigarettes and Cut Tobacco.	Canadian To- bacco.
Lbs. 615,481! 845,646	$\frac{1}{2}$ Lbs		Lbs. 1,485,849 6,692,883	Lbs.	75		Lbs	2,970,6851	Lbs. 220 25,144	Lbs. 5,072,016½ 7,736,926	Lbs. 75 5,2624	Lbs. 220 413,342		1888.  Ontario	Lbs. 3,358,5741 2,110,3634		Lbs. 220 1 274,658	\$ ets. 671,725 90 437,725 78		Lbs.	Lbs. 7,159 61,0564	75	Lbs.	Lbs.	15,908	Lbs.	Lbs. 943,828 1,419,8824			Lbs. 5,072,016½ 7,736,926	Lbs. 75 5,2624	Lbs. L)
34,736 179,227 10,890 44,261 1,642	1		349,251 80,467	117				634,308 590,465½ 389,578½ 102,028½	1,312			1,312		New Brunswick Nova Scotia Prince Edward Island Manitoba British Columbia Sundry Collectors	580,585 762,209 74,584 346,147 88,219½		1,312	116,117 00 152,441 80 14,916 80 69,229 40 17,709 50	10,421 1,644		15,892 2,944 167		2,8961	456 871	1,791		88,459 327,186 <u>1</u> 10,394		967	669,044 1,119,061 91,357		0.05
1,751,603	587	7½ 39,39	8,608,451	117	4,750	348,801	1	4,885,4625	27,643	15,245,634	5,337 ½	415,841		Totals	7,320,682		276,190	1,479,866 18							36,472		$2,912,358\frac{1}{2}$	125	111,9211	15,245,634	$5,337\frac{1}{2}$	415,841
			:							:		Personal Control of the Control of t		1889.									Snuffex- ported, 1bs.									
10,394 $87,525$ $15,363$	125	5 110,95	208,856 113,390	2	15,240	270,425	61 25	$570,700\frac{1}{1,686}$ $409,705$ $61,974\frac{1}{2}$	46,096½ 1,052	$7,270,735\frac{1}{5}$ 759,790 1,106,743 125,470 $497,230\frac{1}{2}$ 77,338	15,365	427,476 967 1,052	25Q N N P M B	Ditario Quebec New Brunswick Nova Scotia Prince Edward Island Manitoba British Columbia Sundry Collectors	2,189,5994 669,6464 765,2294 104,462 409,054 70,9204	13,512	§ 306,883 967 418	461,371 81 133,977 65 153,066 80 20,892 40 81 810 80	4,054,754 2,705 13,859 5,042 6,702	<u> </u>	56,833 44,281½ 285 110 35	415	25		9,904 3,356	3,7201	$952,991\frac{1}{9}$ $87,438\frac{1}{9}$ $273,468\frac{1}{9}$ $12,325$ $81,364$ $6,163$	1,437 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	$69,724_2^1$	'mun' = 0 0 " i	15,365	1,052
2,912,358	125	5 111,92	7,103,612	1	15,542	$\frac{1}{2}$ 270,425	$\begin{vmatrix} 5_2^1 \\ 25 \end{vmatrix}$	4,802,2431	47,1481	14,818,215	$15,667\frac{1}{2}$	429,495.	25	Totals	7,813,973	13,512	308,268	1,586,315 76	4,802,243	47,1485	109,8325	7171	25	2191	49,481	$3{,}720\frac{\scriptscriptstyle 1}{\scriptscriptstyle 2}$	2,042,465	1,437½	$70,358\frac{1}{2}$	14,818,215	$15,667\frac{1}{2}$	$429,495\frac{1}{2}$ 2

Inland Revenue Department,
Ottawa, 3rd September, 1889.

No. 16.—Return for the Year ended 30th June, 1889, and Comparative Statement for Years 1888 and 1889. APPENDIX A.—Continued.—RAW LEAF TOBACCO, INCLUDING STEMS, SCRAPS AND CUTTINGS.

tal Weights .ccounted r.	٧Ì	Lbs.	13,262	1,067	1,840,281	30,106 30,456	7,871	4,926,835 349	8,967	52.165	4,007	1,999,790	18,145	326,8793	48,427 8,604	2,359	6,187	410,8413	2,417	400	11,241	985	$2,425,674\frac{1}{2}$
msining in Serebouse,	ья М	Lbs.		:	954,052	287	:			1.504		956,371	040	34,913	1 661	1,001		36,814				758	993,943
- Ware- onsed for anufactory.	) q	Lbs.	3,064 3,064		3,717 733,512	3,818	6,672	1, 18,		15 279	2,723	794,207	6,173	40,369	44,332	2.359	3,426	96,659	1,585		7,760		900,211
ritten off by		Lbs.		:		:				100	:	109		500	:			200		:			306
- Ware- sored for xportation.	рų	Lbs.	11,689		1,310 151,618	1068		1,773	6,839	31 186	1,284	226,429	1,584	157,005	7 446	<b>,</b>		163,038	832	400		227	390,926
-Warehous- for remov- to other visions.	eq sj	Lbs.	2,416	1,067	 686. 786.	100	1,199	2,101	2,128	4 087		22,654	10,388	94,3923	4,095	2,434	2,761	$114,130\frac{1}{2}$			3,841		$140,265\frac{1}{2}$
oused for being ies on i, &c.	Duty.	sto ets.				9	3 :	:				9 9			:	:							9
Ex-Warehoused for Duty, being Deficiencies on Samples, &c.	Quantity.	Lbs.				G	3 :	:				20											20
INAND REVENUE DIVISIONS.			Belleville Brantford	Cornwall	GuelphHamilton	Kingston	Ottawa	Peterborough	St. Catharines	Stratford			Iberville.	Johette Montres!	Önepec	Sherbrooke	Three Rivers		St. John, N.B	Halifax, N.S	Winnipeg, Man	Victoria, B.C	Totals
sl Weights -oA ed cor.	$\mathbf{n}$	Lbs.	13,262	1,067	5,259	5,106	7.871	4,925	8,967	191	22,165 4,007	1,999,790	18,145	240	48,427	8,604	6,187	410,8413	2,417	400	11,241	985	2,425,674\frac{1}{2}
rced in Varehouse oun other ivisions,	M TÎ	Lbs.	10,846	102,47	3,070	202,4	1,003	2,555	R :	161	10,994	43,249	6,1671	:			3,426	87,1673	1,585		7,506	758	140,2653
rced in Sarehonse.	M M	Lbs.	2,416	1,067	1,672	901	22,213 2,098	2,370	8,967		40,072 4,007	1,423,392	11,9774	967 5181	701	6,943	2,761	290,431	832	400	3,481	227	1,718,763
naining in Archouse om last ear.	K J	Lbs.		3	517	060,020	5,734.				1,099	533,149		240	4,095			33,243			254		566,646

APPENDIX A—Continued—RAW LEAF TOBACCO, &c.—Concluded.

1889.
and
1888
June,
$30 \mathrm{th}$
Tears ending
for the
for
STATEMENT for
ARATIVE
-COMPA
16.
No.

Weights Account-	Total	Lbs.	1,930,636 435,028 83 2,370 2,048 5,159	2,375,324	1,999,790 410,841½ 2,417 2,417 11,241 11,241	2,425,6743	ner.
-948W ai Zainis. 1940.	у Бет	Lbs.	33,243 33,243	566,646	956,371 36,814	993,943	MIALL, Commissioner.
Ex-Warehoused for Manufactory.		Lbs.	894,911 112,343 83 	1,013,170	794,207 96,659 1,585 7,760	900,211	E. ML
tenoff by Authority.	Writ	Lbs.	255	498	200	309	
/archoused for Ex- tation.	1	Lbs.	455,201 171,713 2,370 1,120	630,404	226, 429 163, 038 832 400	390,926	
srehoused for Re- rai to other Divi- ra.	Ex-W	Lbs.	47,120	164,606	22,654 114,1309 3,481	140,265½	
shoused uty, iciencies les, &c.	Duty.	es cts.			9	00 9	
Ex-Warehoused for Duty, being Deficiencies on Samples, &c.	Quantity.	Lbs.			50	20	
INLAND REVENUE DIVISIONS.		1888.	Ontario Ouebec New Brunswick Nova Scotia Prince Edward Island Manitoba	1889.	Ontario Quebec New Brunswick Nova Scotia Mantioba British Columbia		,, 1889.
Weights to be Ac-	lstoT moo	Lbs.	1,930,636 435,028 83 2,370 2,048 5,159	2,375,324	1,999,790 410,841½ 2,417 400 11,241 985	2,425,6741	Department, September, 1889
esuodersW ni f enoisiviU redions.	pscelq nort	Lbs.	53,203 106,161 83 5,159	164,606	43,249 87,1673 1,585 7,506 7,506	$140,265\frac{1}{2}$	, ,
Placed in Warehouse.		Lbs.	563,090 276,204 2,370 2,048	843,712	1, 423, 392 290, 431 832 400 3, 481 227	1,718,763	Inland Revenue Ortawa, 3rd
esnoders Warehouse 1 Ass Yesr.	kemaA nort	Lbs.	1,314,343 52,663	1,367,006	533,149 33,243 254	566,646	Ini

## APPENDIX A—Continued—CANADA TWIST TOBACCO.

# No. 17.—Statement of Revenue collected from Canada Twist Tobacco for the Year ended 30th June, 1889.

	Lice	NSES.	Canada Twist,	Duty	
Inland Revenue Divisions.	No.	Fees.	5 cts. per lb.	Collected, including Fees.	
Cornwall		8	Lbs. 50 298	\$ cts. 2 50 14 90	
Beauharnois Derville Joliette	5 1	10 2 52	$ \begin{array}{c} 1,108\frac{1}{2} \\ 180 \\ 48,203 \end{array} $	65 43 11 00 2,462 15	
Montreal Quebec Terrebonne	1	88 2 36	18,142 160 5,930	2,402 19 995 10 10 00 332 50 3,893 58	

## COMPARATIVE STATEMENT for Years ended 30th June, 1888 and 1889.

		Lices		Canada Twist,	Duty Collected,	
YEARS.	Provinces.	No.	Fees.	5 cts. per lb.	including Fees.	
			8	Lbs.	\$ ets.	
1888	OntarioQuebec	1 80	160	500 76,604	27 00 3,990 20	
	Total	81	162	77,104	4,017 20	
1889	Ontario Quebec	95	190	. 348 73,723½	17 40 3,876 18	
	Total	95	190	74,071½	3,893 58	

E. MIALL, Commissioner.

# APPENDIX A—Continued—CIGARS.

No. 18.—Return of Manufactures

Inland Revenue Divisions.	Li	CENSES.	Total weight of Leaf and other material actu-	Deficiencies in production of stock of Cigars upon	
	No.	Amount.	ally used in production.	which duty was collected.	
		\$ ets.	Lbs.	Lbs.	
Belleville	1	75 00	9 696		
Brantford	9	675 00	47 469		
Guelph	*16	1,162 50	49 109		
Hamilton	19	1,387 50			
Kingston	2	150 00			
London	13	975 00		140	
Ottawa	2	112 50		· · · · · · · · · · · · · · · · · · ·	
Owen Sound	ī	37 50			
Peterborough	1	75 00			
Prescott	1	75 00 75 00			
St. Catharines.	3				
		. 187 50			
Stratford	4	262 50			
Toronto	15 1	$1,012 50 \\ 75 00$		682	
	88	6,262 50			
Iberville	1				
	26	75 00			
Montreal Shorthroads		1,712 50			
SherbrookeSorel.	1	75 00			
	1	75 00			
St. Hyacinthe	2	75 00 150 00			
Timee Rivers	Z	190 00	28,301		
	32	2,162 50	976,229	10,531	
St. John, N.B.	2	150 00	33,093		
Winnipeg, Man	1	75 00	12,331		
Victoria, B.C	12	900 00	41,894		
Total	135	9,550 00	1,620,649	11,388	

\*5 of year 1889-90.

for the Year ended 30th June, 1889.

CIGARS AT	r \$7 pre The	OUSAND.	Cigars a	т \$6 рек Тн	HOUSAND.		ADIAN CI PER THOU		DUTY COLLECTED INCLUDING	
$P_{ m roduced}$ .	Paid Duty	Ware- housed.	Produced.	Paid Duty	Ware- housed.	Pro- duced.	Paid Duty.	Ware- housed.	LICENSE FEES.	
No.	No.	No.	No.	No.	No.	No.	No.	No.	\$ ets.	
			559,200 2,725,175 2,415,400 4,785,925 1,681,035 10,790,725 312,375 28,830 370,650 436,100 620,850 1,106,300 6,242,165 424,200	1,865,550 881,275 3,893,875 867,435 7,578,900 189,750 28,850 328,150 136,700 312,800 715,000 3,598,115 96,000	850,625 1,534,125 892,050 813,600 3,211,825 122,625 42,500 299,400 308,400 391,300 2,644,050 328,200				1,323 00 11,868 30 6,450 15 24,750 75 5,355 66 46,448 40 1,251 00 210 60 2,043 90 895 20 2,064 30 4,552 50 22,601 19 655 09	
1,110 1,977 3,087	1,110		2,303,375 925 149,900 1,792,475	1,401,955 30,148,695 1,576,045 925 149,900 407,550	17,078,270 727,330  1,384,925	615,750	595,500	20,250	8,486 73 184,450 43 9,545 11 80 55 974 40 2,595 30	
•••			1,672,850	938,150	734,700				5,778 90	
			688,750	301,150	387,600				1,881 90	
			2,176,425	1,947,975	228,450				12,587 85	
3,087	3,087		91,971,175	57,572,745	34,398,430	615,750	595,500	20,250	356,851 21	

## APPENDIX A-Continued-CIGARS.

# No. 19.—Comparative Statement of Manufactures

Provinces.	Li	CENSES.	Total weight of Leaf and other material ac-	Deficiencies in produc- tion and Stock of Ci- gars upon	CIGARS AT \$7 PER THOUSAND.			
	No.	Amount.	tually used in pro- duction.	which Duty was Collected.	Pro- duced.	Paid Duty.	Ware hous'd	
1888.		\$ ets.	Lbs.	Lbs.	No.	No.	No.	
Ontario :	84 29 2	$\begin{array}{c} 6,075 & 00 \\ 2,137 & 50 \\ 150 & 00 \end{array}$	606,844 1,025,154 24,916	37,043 7,817	8,958 19,110	1,158 19,110	7,800	
ManitobaBritish Columbia	$\begin{vmatrix} 2\\11 \end{vmatrix}$	$150 00 \\ 825 00$	7,795 37,128	2,825			1	
Total	128	9,337 50	1,701,837	47,685	28,068	20,268	7,800	
1889.								
*Ontario Quebec New Brunswick Manitoba	88 32 2 1	$\begin{array}{c} 6,262{}^{\circ}50 \\ 2,162{}^{\circ}50 \\ 150{}^{\circ}00 \\ 75{}^{\circ}00 \end{array}$	557,102 976,229 33,093 12,331	857 10,531		3,087	J	
British Columbia	12	900 00	1,620,649	11,388	3,087	3,087	-	

<sup>\*5</sup> of year 1889-90.

for the Years ended 30th June, 1888 and 1889.

Cigars	CIGARS AT \$6 PER THOUSAND.			IGARS AT \$3 PEF	THOUSAND.	DUTY COLLECTED, INCLUDING LICENSE FEES.
Produced.	Paid Duty.	Warehoused.	Produced.	Paid Duty.	Warehoused.	I Dans
No. 33,467,680 56,087,015 1,281,300 418,575 1,816,200 93,070,770	No. 19,113,180 40,480,845 745,850 210,375 1,662,050 62,212,300	No. 14,354,500 15,606,170 535,450 208,200 154,150 30,858,470		No.		\$ cts. 120,984 45 245,203 25 4,625 10 1,412 25 10,814 25 383,039 30
32,498,950 54,934,200 1,672,850 688,750 2,176,425 91,971,175	20,700,400 33,685,070 938,150 301,150 1,947,975 57,572,745	11,798,550 21,249,130 734,700 387,600 228,450 34,398,430	615,750	595,500	20,250	130,470 04 206,132 52 5,778 90 1,881 90 12,587 85 356,851 21

## APPENDIX A-Continued-CIGAR WAREHOUSE ACCOUNT.

DR.

No. 20.—RETURN for the year

Remaining in Warehouse from last year.	Placed in Warehouse.	Placed in Warehouse, Canadian.	Placed in Warehouse from other Divisions.	Total Number to be accounted for.	Inland Revenue Divisions.
No.	No.	No.	No.	No.	
55,350	351,200		49,000	455,550	Belleville
310,350	859,625		60,000	1,229,975	Brantford
529,550	1,534,125		200	2,063,875	Guelph
771,425	892,050		32,500	1,695,975	Hamilton
167,475	813,600		l	981,075	Kingston
1,214,750	3,211,825	<b></b> .	80,000	4,506,575	London
_,,	122,625		<b></b>	122,625	. Ottawa
66,500	,		458,600	525,100	Owen Sound
00,000	42,500		100,000,	42,500	. Peterborough
96,700	299,400		37,100	433,200	Prescott
112,700	308,050		125,500	546,250	. St. Catharines
122,400	391,300		120,000	513,700	Stratford
1,103,075	2,644,050		841,400	4,588,525	Toronto
140,550	328,200		110,000	578,750	Windsor
140,550	520,200		110,000	310,100	w masor
4,690,825	11,798,550		1,794,300	18,283,675	Ontario
988,800 3,806,380 221,415 5,000 530,200	2,058,605 17,078,270 727,330 1,384,925	20,250	ļ	3,047,405 20,949,900 948,745 5,000 1,915,125	. Iberville . Montreal . Sherbrooke . St. Hyacinthe . Three Rivers
				·	
5,551,795	21,249,130	20,250	45,000	26,866,175	Quebec
434,650	734,700			1,169,350	St. John, N. B
••••••			65,000	65,000	Halifax, N. S
40,600	387,600			428,200	Winnipeg, Man
91,400	228,450			319,850	Victoria, B. C
10,809,270	34,398,430	20,250	1,904,300	47,132,250	Totals

ended 30th June, 1889.

Cr.

Ex-Ware	housed for Excis	se Duty.	Ex-Ware- housed for	Ex-Ware-	Remaining	Total Number
At \$6 p. M.	Canadian at \$3 p. M.	Duty.	Removal to other Divi- sions.	housed for Exportation	in Warehouse.	accounted for
No.	No.	\$ ets.	No.	No.	No.	No.
327,550	1	1,965 30			128,000	455,550
1,012,850		6,077 10	20,000		197,125	1,229,978
1,586,900		9,521 40	75,500		401,475	2,063,87
1,132,925		6,797 55	,		563,050	1,695,97
655,600	1	3,933 60			325,475	981,07
3,963,425		23,780 55	16,000		527,150	4,506,57
103,825	1	622 95	10,000	1	18,800	122.62
411,350	1	2,468 10			113,750	525,10
42,500		$2,405\ 10$ $255\ 00$			110,100	42,50
370,550		2,223 30			62,650	433,20
404,500		2,223 30 2,427 00	200			
428,000		2,427 00 2,568 00			141,550	546,25
3,287,700		19,726 20			85,700	513,70
412,750		2,476 50		· · · · · · · · · · · · · · · · · · ·	1,300,825	4,588,52
712,100		Z,4(U JU			166,000	578,75
14,140,425		84,842 55	111,700		4,031,550	18,283,67
2,248,980		13,493 88	88,600		709,825	3,047,40
15,032,975	20,250	90.258 60	1,569,000	32,925	4,294,750	20,949,90
723,820	20,200	4,342 92	1,000,000	02,020	224,925	948,74
5,000	1	30 00			221,020	. 5,00
864,050		5,184 30	135,000		916,075	1,915,12
18,874,825	20,250	113,309 70	1,792,600	32,925	6,145,575	-
1,020	20,200	110,000 10	1,102,000	92,020	0,110,010	- 20,000,14
758,100		4,548 60			411,250	1,169,35
47,700		286 20		5,000	12,300	65,00
370,500		2,223 00			57,700	428,20
185,050		1,110 30			134,800	319,88
34,376,600	20,250	206,320 35	1,904,300	37,925	10,793,175	47,132,2

# APPENDIX A—Continued—CIGAR WAREHOUSE ACCOUNT.

Dr.

No. 21.—Comparative Statement for the

Remaining in Warehouse from last year.	Placed in Warehouse.	Placed in Warehouse, Canadian.	Re- Warehoused	Placed in Warehouse from other Divisions.	Total . Number to be accounted for.	Provinces.
No.	No.	No.	No.	No.	No.	1888.
4,275,350	14,362,300			944,950	19,582,600	Ontario
3,811,805	15,606,170		10,175	73,000	19,501,150	Quebec
229,100	535,450				764,550	New Brunswick
· · · · · · · · · · · · · · · · · · ·	208,200				208,200	Manitoba
189,550	154,150				343,700	British Columbia
8,505,805	30,866,270		10,175	1,017,950	40,400,200	Totals
						1889.
4,690,825	11,798,550			1,794,300	18,283,675	Ontario
5,551,795	21,249,130	20,250		45,000	26,866,175	Quebec
434,650	734,700				1,169,350	New Brunswick
				65,000	65,000	Nova Scotia
40,600	387,600				428,200	Manitoba
91,400	228,450		 		319,850	British Columbia
10,809,270	34,398,430	20,250		1,904,300	47,132,250	Totals

# $Y_{\rm ears\ ended\ 30th\ June,\ 1888\ and\ 1889.}$

CR.

Ex-WA	.REHOUSED	FOR EXCISE I	Э <b>ит</b> т.		Ex-Ware- housed for removal	Ex-Ware- housed	Remaining in	Total Number	
At \$6 per M.	At \$7 per M.	Canadian, at \$3 per M.	Duty.	•	to other Divisions.	for Expor- tation.	Warehouse.	accounted for.	
No.	No.	No.	*	cts.	No.	No.	No.	No.	
14,830,975	7,800		89,040	45	40,000	13,000	4,690,825	19,582,600	
12,914,730			77,488	38	977,950	56,675	5,551,795	19,501,150	
329,900			1,979	40			434,650	764,550	
167,600			1,005	60			40,600	208,200	
252,300			1,513	80			91,400	343,700	
28,495,505	7,800		171,027	63	1,017,950	69,675	10,809,270	40,400,200	
14 * 40									
14,140,425			84,842		111,700		4,031,550	18,283,675	
18,874,825		. 20,250	113,309		1,792,600	32,925	6,145,575	26,866,175	
758,100			4,548	60			411,250	1,169,350	
47,700			. 286	20		5,000	12,300	65,000	
370,500			2,223	00			57,700	428,200	
185,050			1,110	30		·	. 134,800	319,850	
34,376,600		. 20,250	206,320	35	1,904,300	37,925	10,793,175	47,132,250	

A. 1890

## APPENDIX A-Continued-INSPECTION OF PETROLEUM.

No. 22.—Return of Fees for the Inspection of Petroleum, for the Year ended 30th June, 1889.

			Раска	GES.			
Inland Revenue Divisions.	At 30 cts	At 10	cts.	At 5	ets.	At 2½ cts	FEES
INLAND REVENUE DIVISIONS.	Imported.	Canadian.	Imported.	Canadian.	Imported.	Canadian.	COLLECTED.
				,			\$ cts.
Belleville Brantford Guelph Hamilton Kingston London Ottawa Port Arthur Prescott Stratford Toronto Windsor.	1,115 61 160 953 1,780 116 4,684 887 1,085  7,175 1,947	3,019 160,286 6,749 2,247 18,298	1 3 6	10	4 39 40 76	25,310 6,620 31,930	334 60 23 30 48 00 587 80 534 00 16,697 13 2,080 10 267 60 325 50 390 20 3,982 40 586 40
Montreal Quebec	14,464 1,386	28,709	70		458		7,240 00 415 80
	15,850	28,709	70		458		7,655 80
St. John, N.B		2,144		 			214 40
Cape Breton, N.S	16			<u></u>			4 80
Winnipeg, Man	4,857		1		11,112		2,012 80
Total	40,686	221,502	77	10	11,646	31,930	35,744 83

# APPENDIX A—Continued—INSPECTION OF PETROLEUM.

COMPARATIVE STATEMENT for the Years ended 30th June, 1888, and 1889.

YEARS.		PACKAGES.				Fers	
	Provinces.	At 30 cts.	At 10 cts.	At 5 cts.	At 2½ cts.	COLLECTED	
						\$ ct	
1888	Ontario	22,543	196,041	26,200	31,643	28,468 10	
	Quebec	15,730	27,482	450		7,489 70	
	Manitoba	1,753		1,708		611 30	
	Total	40,026	223,523	28,358	31,643	36,569 10	
1889	Ontario	19,963	190,655	86	31,980	25,857 0	
	Quebec	15,850	28,779	458		7,655 8	
	New Brunswick		2,144			214 4	
	Nova Scotia	16				. 48	
	Manitoba	4,857	1	11,112		2,012 8	
	Total	40,686	221,579	11,656	31,930	35,744 8	

E. MIALL,

Commissioner.

## APPENDIX A-Continued-MANUFACTURES IN BOND.

#### No. 23.—Return of Manufactures

			. <b>N</b>	Products		
REVENUE DIVISIONS.		License Fees.	Proof Spirits.	Beer, Wine, &c.	Quicksilver and Nitric Acid.	Vinegar at 4 cts. per gall.
•			Galls.	Galls.	Lbs.	Galls.
Brantford, Ont	1	50	6,224 · 22	366.00		26,357 · 00
Hamilton, Ont	2	100	21,351 · 35	4,226 00		89,559 · 34
Kingston, Ont	1	50	5,836 · 99	599·10 2,219·10	Washings.	26,300.75
Prescott, Ont	1	300	15,231 · 96		78,851	
Toronto, Ont	4	200	50,691 11	13,954 00	7,735	251,548 · 46
Montreal, Que	2	100	30,110 · 67	5,774:00	377	166,873 · 07
Quebec, Que	1	50	7,038 · 32	299 · 49 2,171 · 60	Worts.	36,532 · 93
Terrebonne, Que	1	50	*2,053 · 26		13,909	
St. John, N.B	1	50	5,519.16	284 · 50	1,752	22,448 74
Totals	14	950	144,057 · 04	Wshgs 599 10 Worts 299 49 28,995 20	92,760 9,487	Nitric Acid. Quicksilver. 619,620 29

<sup>\*</sup> Duty at the rate of 15 cents per gallon was paid on the spirits.

for the Year ended 30th June, 1889.

OF MANUFACTU	res.					
Crude Fulminate.	Duties accruing.	Duty C on Vi Ex-Manu	negar	Vinegar entered for Warehouse.	Crude Fulminate.	Total duties Collected including License Fees.
Lbs.	\$ cts.	Galls.	\$ cts	. Galls.	Lbs.	<b>\$</b> ets.
***********	1,054 28	17,233 · 00	689 32	9,124.00		739 32
***************************************	3,582 37	72,806 · 14	*836 64 2,912 24	16,753 · 20		3,848 88
••••••	1,052 03	7,498.50	299 94	18,802 · 25		349 94
9,561					9,561	300 00
•••••	10,061 92	251,548 46	10,061 92			10,261 92
·····	6,674 93	166,873 07	6,674 93	1		6,774 93
•••••	1,461 31	23,007 · 31	920 29	13,525 62		970 29
***************************************				.		50 00
••••••	897 93	22,448 · 74	897 93			947 93
9,561	24,784 77	561,415 · 22	22,456 57 *836 64	58,205 · 07	9,561	24,243 21

<sup>\*</sup> Assessment.

### APPENDIX A—Continued—MANUFACTURES IN BOND.

### No. 24.—Comparative Statement of Manufactures

			MA	TERIALS US	SED.	Pro	DUCTS OF I	Manufactu	RES.
Provinces.	Number of Licenses.	License Fees.	Proof Spirits.	Beer, Wine, &c.	Wood Naphtha.	Vinegar at 4 cts. per Gallon.	Methy- lated Spirits at 15 cts. per Gallon.	Crude Fulminate	Duties accruing.
1888.		<b>\$</b> :	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Lbs.	\$ ets
Ontario	. 1	150 50		5,657·00 247·00		180,594·21 25,997·92 	67,381.05		17,330 9 1,039 8
1889.									
Ontario	4	200	99,335·63 39,202·25 5,519 16	8,245.09	+7,735·	203,406.00		9,561	8,136 2
Totals	14	950	144,057 04	29,893.79	*92,760· +9,487·	619,620.29		9,561	24,784 7

INLAND REVENUE DEPARTEMENT. OTTAWA, 3rd September, 1889.

<sup>\*</sup> Lbs. of nitric acid. † Lbs. of quicksilver.

for the Years ended 30th June, 1888 and 1889.

Duty coll on Vine Ex-Manufe	gar	Vinegar entered for Warehouse.	Duty coll on Mythylate Ex-Manufa	ed Spirits	Methylated Spirits entered for Warehouse.	Crude Fuminate entered for Ware- house.	Total duties col lected, including License Fees.
Gallons.	\$ cts.	Gallons.	Gallons.	\$ cts.	Gallons.	Lbs.	\$ ct
412,613.81	‡220 94 16,504 56			•••••	98,459 04	20,647	17,425 5
154,144 13	6,165 73	26,450.08	67,381.05	10,107 16			16,422 8
25,997.92	1,039 89			,	•••••		1,089 8
592,755*86	‡220 94 23,710 18		67,381.05	10,107 16	98,459.04	20,647	34,938 2
							<del></del>
349,086·10	‡836 64 13,963 42	44,679·45	••••			9,561	15,500 0
189,880.38	7,595 22	13,525.62					7,795 2
22,448.74	897 93						947 9
561,415.22	‡836 64 22,456 57					9,561	24,243 2

<sup>‡</sup> Assessment.

E. MIALL, Commissioner.

#### APPENDIX A.—Continued.—MANUFACTURES IN BOND.

No. 25.—Warehouse Return for the

REMAINING HOUSE FR YE.	OM LAST	Placed in W	AREHOUSE.	· · · · · · · · · · · · · · · · · · ·	TOTAL.		
Vinegar.	Methylat- ed Spirits.	Vinegar.	Crude Fulminate	Vinegar.	Methylated ed Spirits.	Crude Fulminate	REVENUE DIVISIONS
Gallons.	Gallons.	Gallons.	Lbs.	Gallons.	Gallons.	Lbs.	
· · · · · · · · · · · · · · · ·		9,124.00	• · · · · · · · · · · · · · · · · · · ·	9,124.00			Brantford
8,624.03		16,753.20		25,377:23			Hamilton
19,274 56		18,802.25		38,076.81			Kingston.
	<b></b>		9,561			9,561	Prescott
· • · · · · · · · · · · · · · ·	645:35			• • • • • • • • • • • •	645.35		Toronto
22,944:30		13,525.62		36,469.92		 	Quebec
50,842.89	645:35	58,205.07	9,561	109,047.96	645:35	9,561	Totals

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.

# Year ended 30th June, 1889.

Entere	Entered for Consumption.		Crude	_ Vinegar		Totals.	
Vinegar.	Methylated Spirits.	Duty.	Fulminate Exported.	Remaining in Warehouse.	Vinegar.	Methylated Spirits.	Crude Fulminate.
Gallons.	Gallons.	\$ ets.	Lbs.	Gallons.	Gallons.	Gallons.	Lbs.
9,124.00		364 96	<b> </b>		9,124.00		<b> </b>
20,393.49		815 73		4,983.74	25,377:23		
27,600.29		1,104 01		10,476.52	38,076.81		
····		[	9,561				9,561
*********	645:35	96 80				645:35	
36,469-92		1,458 79	<sup> </sup>		36,469.92		
93,587.70	645:35	3,840 29	9,561	15,460.26	109,047.96	645:35	9,561

E. MIALL, Commissioner.

#### APPENDIX A-Continued-MANUFACTURES IN BOND.

### No. 26.—Comparative Warehouse Return

REMAINING IN WAREHOUSE FROM LAST YEAR.		PLACED 1	N WAREHO	ousk.		TOTAL.		Drawnens
Vinegar.	Methylated ed Spirits.	Vinegar.	Methylat- ed Spirits.	Crude Fulmin- ate.	Vinegar.	Methylat- ed Spirits.	Crude Fulmin- ate.	Provinces.
Galls. 22,031 54	Galls.	Galls. 74,236.03	Galls. 98,459 <sup>.</sup> 04	Lbs. 20,647		,	,	1888. Ontario
								Quebec ·
26,814.01		116,581·14	98,459.04	20,647	143,395:15	98,459.04	20,647	Totals
27,898.59	645:35	44,679.45		9,561	72,578.04	645.35	9,561	Ontario
22,944.30		13,525.62			36,469-92			Quebec
50,842.89	645:35	58,205.07		9,561	109,047:96	645.35	9,561	Totals

Inland Revenue Department,
Ottawa, 3rd September, 1889.

for the Years ended 30th June, 1888 and 1889.

Entered for Consumption.		Crude Fulminate Ex-	I	INING N HOUSE.	Totals.			
Vinegar.	Methylated Spirits.	Duty.	ported.	Vinegar.	Methylated ed Spirits.	Vinegar.	Methylat- ed Spirits.	Crude Fulmin- ate.
Galls. 68,368.98	Galls. 97,813·69	\$ cts. 17,406 84	Lbs. 20,647	Galls. 27,898·59	Galls. 645·35	Galls. 96,267 · 57	Galls. 98,459·04	Lbs. 20,647
24,183·28		967 33		22,944:30		47;127:58		
92,552·26	97,813.69	18,374 17	20,647	50,842.89	645:35	143,395.15	98,459.04	20,647
57,117.78		2,381 50		-		72,578 04	645 <sup>'</sup> ·35	9,561
36,469.92		1,458 79				36,469 92		
93,587.70	645:35	3,840 29	9,561	15,460.26		109,047:96	645:35	9,561

		1888.	1889.
Total Duty collec	eted, ex-Manufactory and ex-Warehouse	<b>\$</b> 52,412 :45	<b>\$23,293</b> 21
do	on Licenses	900 00	950 00
		\$53,312 45	<b>\$24,243</b> 21

E. MIALL, Commissioner,

APPENDIX A-Continued.

STATEMENT of Lumber Measured, Culled and Counted, at the Port of Quebec, during the Year ended 30th June, 1889.

Total Amount	Collected.	æ cts.				5,422 04	3,704 45	
Cullers'	Fees.	e cts.			i	2,891 75	2,963 56	
Office Rees		æ cts.				% % % %	740 89	
	Total.	Cts.				$7_{10}^{\delta}$	õ	
Rate.	Cullers' Fees.	Cts.			THE RESIDENCE OF THE PARTY OF T	₹	4	
	Office Fees.	Cts.				3.6 0 10	1	
Tons,	Standard.	Tons. Pts.	63,110 21 6,751 38 122 35 2 19 4 09 16 01	2 28 157 37 346 16 1,374 37 153 27 160 39	22 24 74 08 2 19	72,293 36	19 10 11 18 74,089 01	16,234 28 29,449 10 10,600 30 434 08
Measured,	or Counted.		Stringed do do do do do		999 999	Measured	  တူ	Measured do do
	Description of 11moef.			do Tamarack do Birch do Maple do Wahut do Whitewood do Whitewood	do Chestnut do Cherry. Balm of Gilead.	White Pine	Basswood. Butternut.	Red Pine Oak Elm Ash
	Pieces.		41,958 8,980 80 80 11	2,447 132 132 132 285		59.376		17,079 18,238 9,190 747

216 2 / 126 126 H 126 H 1 B	6 (Tamarack 8 Birch Maple Maple Sprace Hickory Balm of Gilead.	op op op op op op	7,830 21 5,830 21 1 04 3 1 04 1 03 1 03 1 03 0 29					
		<u>'</u>	62,831 07	$2\frac{6}{10}$ 4	616	1,633 61	2,513 24	4,146 85
1,681	Birch	Culled	645 33		$12_{1^{\circ}_{1}}$	52 95	25 83	78 78
13,168 350,464 1,812 22,521 5,020 37,060 383,803 52,643 74,673 362,233 18,650	Pine Deals Spruce Deals Pine Planks Pine Planks Spruce Planks do Boards do Pailings Pine Deals Spruce Deals Red Pine Spars Red Pine Spars West India Staves Barrel Staves	do Counted do	13,188 13 344,622 21 46,690 sup. ft. 383,803 pieces. 348,894 do 12 to 19 in. 75 · 4 · 3 · 22 301 · 8 · 2 · 13 15 · 5 · 1 · 20		88888888888888888888888888888888888888	13 24 22 22 23 23 24 26 26 26 26 26 26 26 26 26 26 26 26 26	65 94 1,723 11 6 34 78 82 17 57 16 34 16 34 11 67 211 38 392 41 13 38	2,067 73 9 06 112 9 06 120 08 20 08 1,099 56 4,08 20 26 32 26 32 26 32 26 32 26 32 26 32 26 32 26 32 27 22 489 01 17 63
2,403,213	Deduct for fractions					7,044 71	10,921 94 0 99 10,920 95 0 46	17,966 65 0 99 17,965 66
						7,045 17	10,920 49	17,965 66
Inla	Inland Revenue Department, Ottawa, 3rd September, 1889.	er, 1889.				E. MI.	MIALL, Commissioner.	oner.

APPENDIX A.—Continued.

STATEMENT of Lumber Measured, Culled and Counted at the Ports of Montreal, Lachine and Sorel, for the Year ended 30th June, 1889.

Pieces.	Description of Timber.	Measured, Culled or Counted.	Tons Standard	Rate.	Office Fees.	Office Fees. Cullers' Fees	Total Amount Accrued.
		Money	Tons. Pts.	Cts.	es cts.	e cts.	& cts.
3,3815 3,198 5,437	Kound Fine Square do Flat do		2,077 32 3,360 19 7,700 37	¥C			385 04
651 4,533	Hard Wood Flat Tamarack	о <del>р</del>	463 38 2,638 07 3,102 05	6.6 6.7		<u>.</u>	204 73
6,710 2,895 2,011 235	Round Hemlock Square do Flat do Mixed do	ඉදිලිදි	5,010 10 8,523 30 1,508 00 201 29 15,243 29	6.0 (c)			533 53
1,382	1,382 Waney Pine (stringed)	Q	1,185 06	7 16		:	88 87
3,22 883	3.242 Round Pine. 634 do Hemlook.	op do	2,686 23				

APPENDIX A-Continued.

STATEMENT of Lumber Measured, Culled and Counted at the Port of Three Rivers, for the Year ended 30th June, 1889.

	£ 842882428422238 8	
Total Amount Accrued.	6 cfs. 6	oner.
Office Fees. Cullers' Fees	26 cts. 234 43 234 43 234 43 24 44 25 24 44 26 26 26 26 26 26 26 26 26 26 26 26 26 2	E. MIALL, Commissioner.
Office Fees.	20 00 10 00 147 98 147 98 147 98 15 96 16 98 16 98 17 98 18 98 18 98 18 98 19 98 10	E. MIA
Rate.	2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
Tons Standard	Tons. Pts. 40,000 20,000 20,000 42,885 147,945 162,357 23,346 1624,738 1,624,738 193 37 3 14 20 28 56.18 9.5 1.7.5.8	
Measured, Culled or Counted.	Counted do do Culled do Gounted do Gounted do Gounted do Gounted do Gounted Culled Culled Golded do	
Description of Timber.	Pine Deals Spruce do Spruce do Spruce do do do Spruce do Spruce Panks Square Birch Round Maple Round Maple	Inland Revenue Department, Ortawa, 3rd September, 1889.
Pieces.	40,000 29,000 142,885 147,917 178,048 28,020 285,219 10 10 1197 14 14 14	INLA

#### APPENDIX B.

# DETAILS OF EXPENDITURE.

### APPENDIX B.

No. 1.—Details of Excise Expenditure, for the Year ended 30th June, 1889.

<del></del>	·			
To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Belleville.	\$ cts.	\$ cts.	\$ ets.
McAllister, A Pole, C. W. Craig, Jos. Bish, P. McCoy, Wm. McCuaig, A. F.	Salary as Collector for the year do Dep. Collector do do Exciseman do	21 08	1,440 60 1,033 92 1,176 00 803 58 737 46 395 04	:
	Salaries		5,586 60 549 35	
	Brantford.			6,135 95
Spence, John	Salary as Collector for the year	28 04 24 00 16 96 16 38 16 04 15 00 12 00 9 38	1,371 96 1,176 00 833 04 803 58 783 96 735 00 588 00 460 18	
	Salaries		6,751 72 694 25	<b>-</b>
	Cornwall.			7,445 97
Mulhern, M. M	Salary as Collector for the year	14 00	686 00 111 40	
	Guelph.			797 40
Powell, J. B. Till, T. M. Earle, R. H. Woodward, G. W. Campbell, J. McD. Spereman, J. J. Broadfoot, S. Kennedy, J. D. Brougham, M. E. Erb, A. A. Howie, A. Robson, Jas. Flynn, Jas. P. Caven, J. McD. Lynes, K. Gow, J. E.	do Dep. Collector for the year do Dep. Collector do do Exciseman, 1st July to 30th Nov do d	23 24 10 00 24 00 24 00 24 00	1,445 64 1,136 76 490 00 1,176 00 1,176 00 1,176 00 901 56 694 20 735 00 735 00 735 00 735 00 583 14 360 15 545 53 96 48	
	Salaries	259 36	12,721 46 1,261 15	13,982 61
	Hamilton.			
Miller, W. F. Ross, S. F. Blair, J. B. Greey, S. Donaghy, Wm. Baby, W. A. D.	Salary as Collector for the year do Dep. Collector do	31 44 25 96 10 00 24 00 24 00 24 00	1,543 56 1,274 04 490 00 1,176 00 1,176 00 1,176 00	
	08			

To whom Paid.	Service.	Deducted for Superannuation	Amounts Paid.	Total.
	${\it Hamilton}{ m -Concluded}.$	\$ cts.	\$ ets.	\$ ets.
Crawford, W. P Egener, E Hobbs, G. N O'Brien, J. F. Courtney, J. J. Mackay, G. W Logan, J Amor, W Dumbrille, R. W	Salary as Exciseman for the year do	16 96 16 44 16 38 16 12 15 00 15 30 15 00	833 04 833 04 806 04 803 58 788 88 735 00 752 16 737 46 705 60	
Irwin, R. McPherson, A. F. Iler, B. Beasley, R. S.	do do do  do Accountant, 1st Dec. to 30th June do Exciseman do do Messenger for the year	. 12 00 . 16 31 . 14 00	588 00 800 31 686 00 134 60	and the second s
	SalariesContingencies	. 325 96	16,039 31 1,358 12	17,397 43
Rowland, F Grimason, T Dickson, C. T Hanley, A. Keogh, P. M. O'Donnell, J. Hamilton, C. M. Browne, G. W. Fahey, E. Hamilton, T. C.	Kingston.  Salary as Collector for the year do Dep. Collector do	17 04 24 00 16 96 12 50 13 20 9 00 9 87 7 04	1,568 04 837 96 1,176 00 833 04 612 50 646 80 441 00 485 94 347 05 180 09	
	SalariesContingencies		7,128 42 1,195 12	8,323 54
Alexander, T Davis, T. G. Power, T. A. Elwood, G. V. McSween, J. Moore, Wm Barrett, T. J. Coles, F. H. Taylor, J. F. Rowlands, E. Yates, J. M. Stewart, J. Lee, E. Adams, J. S. Wilson, D. Neelands, H.	London.  Salary as Collector for the year	25 96 22 04 19 96 19 96 19 92 18 78 19 04 16 96 16 96 17 16 16 38 11 25 12 00 3 60	1,629 24 1,274 04 1,077 96 980 04 980 04 980 04 921 18 930 96 833 04 833 04 833 04 842 82 803 58 551 25 588 00 176 40	15 304 67
	Ottawa.			15,394 67
Battle, M Henry, J. M. B	Salary as Collector, for the yeardo Deputy Collector, for the year	31 36 22 04	1,538 64 1,077 96	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1888-89.—Continued.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	${\it Ottava}$ Concluded.	\$ cts.	\$ ets.	\$ cts.
Heney, J. J Lett, F. P. A	do do do		735 00 646 80 705 60 41 14	
Waller, J	do do for month of June  Salaries  Contingencies	96 52	4,745 14 490 68	
	Owen Sound.			5,235 82
Graham, W. J Lang, V	Salary as Collector for the yeardo Exciseman do	19 96 15 00	980 04 735 00	
	Salaries Contingencies		1,715 04 355 18	2,070 22
	Perth.			2,010 22
Kellock, D Conway, B. J McKimm, U. H Devine, J. J	Salary as Collector for the yeardo Exciseman do do Dep. Collector do do do do do	24 00 6 32	1,371 96 1,176 00 493 68 395 04	
	Salaries Contingencies		3,436 68 410 35	3,847 03
	${\it Peterborough.}$			0,01, 00
Hall, John J	Salary as Collector for the year	16 96 15 25 12 00 12 00 7 00	980 04 833 04 747 25 588 00 588 00 343 00 203 00	
	SalariesContingencies		4,282 33 615 20	4,897 53
	Port Arthur.			,
Ironside, G. A	Salary as Collector for the year	19 96	980 04 193 47	1,173 51
	Prescott.			
Keilty, T Gerald, W. H Cameron, D. M Slattery, R Jamieson, R. C Ferguson, J Marshall, F	do do Ist July to 30th Nov do do for the year do Dep. Coll. do do Exciseman do do do do do	25 20 24 00 10 00 16 38 16 04 15 00 15 00	1,592 52 1,234 80 1,176 00 490 00 803 58 783 96 735 00 735 00 705 60	
Johnston, G. E Macdonald, A. B.			588 00	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1888-89—Continued.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
Keeler, G. S Mason, F	Prescott—Concluded.  Salary as Exciseman, for the year	206 50	\$ cts. 588 00 686 00 10,118 46 906 97	\$ cts.
Caven, A	Stratford.  Salary as Collector for the year	23 04 24 00 19 96 18 00 15 00 5 25	1,568 04 1,131 96 1,176 00 980 04 882 00 735 00 257 25 238 61	,
Hesson, C. A Schram, B Spence, F. H	Salaries	19 96 24 00	980 04 1,176 00 901 56	8,269 32
Milliken, E		16 96 79 36	, 3,890 64 345 41	4,236 05
Stratton, W. C. Bennett, Jas. Macdonell, A. D. Rogerson, J. M. Dudley, W. H. McPherson, A. F. Cox, J. E. Boomer, J. B. Coleman, C. Shanacy, M. Henderson, W. Evans, G. T. Barber, J. S. Murray, A. E. Weyms, C. Dick, J. W. Helliwell, H. N. McDonald, J. A. Dawson, Wm. O'Leary, T. J. Goodman, A. W. Westman, T. Mulligan, J. Wilson, R. Coyle, J. Dodds, E. W. Carver, G. W.	do	30 00 25 96 24 00 24 00 11 65 12 00 21 00 19 96 18 78 18 44 16 96 17 34 17 16 16 38 16 38 16 38 16 04 17 16 04 16 04 17 50 18 70 18 70 19 70 11 4 70	2,097 24 1,470 00 1,274 04 1,176 00 1,176 00 571 65 588 00 1,029 00 980 04 980 04 921 18 901 56 833 04 852 60 842 82 803 58 803 58 1,012 65 783 96 783 96	

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1888-89.—Continued.

	Toronto—C	(			
Neelands, H Blair, J. B. Quinc, J. D Flynn, D. Walsh, D Sullivan, L. D. Hamilton, T. C Taylor, G. W Reddan, C. J Adams, J. S. Williamson, J	do Accountant, I do Exciseman, Is do do fo do do Is Salaries	t July to 31st March st Dec. to 30th June st Dec. to 30th June of the year do st July to 31st Dec st Oct. to 30th June st Dec. to 30th June st Jan. to 30th June st April to 30th June	\$ cts. 10 80 14 00 14 00 14 20 14 28 12 60 5 34 11 42 4 07 6 00 3 75 4 96 599 02	\$ cts. 529 20 686 00 686 00 703 20 617 40 282 28 557 37 292 88 294 00 183 75 395 04 29,632 81 1,698 54	\$ cts.
Kenning, J. H. Ramon, P. Gerald, C. Crowe, W. Mason, F. Dunlop, C. Beasley, R. Standish, J. G. Girard, I. Brennan, J. Falconer, J. Jubinville, J. P. Crotty, J. Reddan, C. J. Cahill, J. W. Allen, G. A. Cox, J. E. Henwood, G. Sullivan, L. D. Weir, Jas. Keogh, P. M.	do Deputy Colle do Exciseman do do Ist do Deputy Colle do Accountant do Exciseman do fo do do do Ist do do do Ist	the year	30 00 24 00 10 00 22 04 18 78 17 34 16 04 15 00 14 22 12 60 6 00 12 00 6 74 3 12 6 00 2 50	2,048 16 1,470 00 1,176 00 1,176 00 490 00 1,077 96 1,077 96 1,077 96 921 18 852 60 783 96 735 00 700 34 617 40 294 00 568 99 588 00 328 70 294 90 246 84 122 50	16,840 43
	Salary as Collector for Contingencies  Iber Salary as Collector for do Exciseman, 1 do Deputy Colle do Exciseman, 1 Salaries	the year	12 62 15 30 5 48 1 38	493 75 96 53 616 41 751 30 434 52 109 71 1,911 94 99 20	590 28 2,011 14

To whom Paid.			Service.	Deducted for Superannuation.	Amounts Paid.	Total.
			Joliette.	\$ cts.	\$ ets.	\$ cts.
Leprohon, R. M Lafontaine, A		as Collector Excisema	for the yearan do		980 04 493 68	
			cies		1,473 72 1,008 97	2,482 69
		i	Montreal.			
Vincent, J. L. Dodd, J. Lawlor, H. Macdonald, D. Baby, J. C. Caven, W. St. Louis, A. Lecours, H. T. Hudon, A. Beauchamp, J. P. Fox, T. Dustan, W. Richard, R. Lynes, K. Quinn, J. D. Hastie, Wm. Ste. Marie, I. C. A. Barker, C. Bulmer, Wm. Goron, D. Malo, T. Tansey, J. P. F. Fox, J. D. Villeneuve, J. Toupin, F.X. J. A. Scullion, J. W. Dumouchel, L. Forest, E. R. Ste. Marie, J. B.E. L. Millier, E. Perry, G. L. Manning, J. Baby, J. Panneton, G. E. Pinsonneault, A. Laporte, G. Watkins, J. A. McClanaghan, M. Coleman, J. J. Costigan, J. J. Dixon, H. G. S. Miller. J. E. Earle, R. H. Harwood, R. U. Cullen, P.	do d	Deputy ( do do Accounts Excisems do	ant do	30 00 30 00 24 00 24 00 24 00 24 00 12 25 21 00 19 96 19 96 19 96 19 96 19 96 19 96 16 98 16 98 16 98 16 98 16 98 16 98 16 98 16 16 98 16	2,097 24 1,470 00 1,476 00 1,476 00 1,176 00 1,176 00 1,176 00 1,176 00 1,176 00 980 04 980 04 980 04 980 04 980 04 980 04 980 375 65 375 65 382 00 882 00 883 04 833 04 833 04 833 04 833 04 833 04 833 04 833 00 783 96 705 60	
			ncies		37,167 17 2,930 80	40,097 97

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Quebec.	\$ cts.	\$ ets.	\$ cts.
LaRue, G	Salary as Collector for the year		1,568 04	
Cahill, J. H Iler, B	do Deputy Collector for the year do Exciseman 1st July to 30th Nov	24 00 10 00	$1,176 00 \ 490 00$	
Browne, G. W	do do 1st July to 30th Nov	7 05	347 10	
Bourassa, G Rouleau, J	$egin{array}{llll}  ext{do} &  ext{do} &  ext{for the year} \dots & \dots $	16 04 15 00	783 96 735 00	
McNamara, M LeMoine, J Bourget, O Lépine, L	do do do	15 00	735 00	
Bourget, O	do do do do do do	14 40 14 40	705 60 705 60	
Lépine, L	do do do		705 60	
Langlois, F. X., dit Traversy	do do do	14 40	705 60	
Fahey, Owen Cameron, D. M	$egin{array}{llll} & & & & & & & & & & \\ & & & & & & & & $	13 20 14 00	646 80 686 00	
Forest, E. R	do do 1st Dec. to 30th April	6 65	326 65	1
Sexton, John	do do 1st to 30th June	1 59	78 40	
	Salaries	212 09	10,395 35	
	Contingencies		1,522 14	11,917 49
	Sher brooke.			,,
Simpson, A. F Pennoyer, H. J	Salary as Collector for the year	22 04 14 10	1,077 96 690 90	- Andrews
	SalariesContingencies	36 14	1,768 86 207 44	1 070 90
	Sorel.			1,976 30
Fortier, J. J. O Duguay, Jos	Salary as Collector for the yeardo Exciseman do	13 96	686 04 499 92	
	SalariesContingencies	13 96	1,185 96 42 95	
	•			1,228 91
	St. Hyacinthe.	An included the second		
Boivin, C. A	Salary as Collector for the year	17 64	867 36	
	Contingencies		311 10	1,178 46
	${\it Terrebonne}.$			1,118 40
Desroches, D	Salary as Collector for the year	14 00	686 00	
	Contingencies		145 78	001 =0
	Three Rivers.		,	831 78
Hébert, C. D Duplessis, C. Z	Salary as Collector for the year	19 96 14 40	980 04 705 60	
agrama, or air.	Salaries	34 36	1,685 64	
	Contingencies	· · · · · · · · · · · · · · · · · · ·	150 80	1,836 44
		:		
	104			

APPENDIX B.—No. 1.—Details of Excise Expenditure, 1888-89—Continued.

The same of the sa				
To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Cape Breton.	\$ ets.	\$ cts.	\$ cts.
McDonald, M. A	Salary as Collector for the year	15 00	735 00 14 73	749 73
7	$m{H}alifax.$			110 10
Grant, H. H. Bouteillier, G. A. King, R. M. James, T. C. Carroll, D. Tompkins, P. Wainwright, T. G. Hagarty, P. Blethem, C. W. Munro, H. D.	Salary as Collector for the year do Exciseman do Deputy Collector for the year do Accountant for the year do Exciseman do	24 00 24 00 19 96 18 44 15 00 16 00 15 00 12 60	1,568 04 1,176 00 1,176 00 980 04 901 56 735 00 786 48 735 00 617 40 725 16	
	Salaries		9,400 68 698 75	
	Pictou.			10,099 43
Mackay, J. H Campbell, G. J	Salary as Collector for the year	15 68 13 80	769 32 676 20	
	SalariesContingencies		1,445 52 501 16	
	Chatham.			1,946 68
Lawlor, R. A Renaud, A	Salary as Collector for the year	19 96 4 04	980 04 195 96	
	Salaries		1,176 00 69 35	
	St. John.			1,245 35
do	Salary as Collector from 29th May to 30th June do Act'g Coll. from 1st July to 28th May	23 04	21 96 1,131 96	
Atherton R	Difference of salary while Acting Collector from 1st July to 28th May Salary as Deputy Collector for the year do Exciseman do	22 04 15 00	$\begin{array}{c} 222 \ 60 \\ 1,077 \ 96 \\ 735 \ 00 \end{array}$	
Mason, J Belyea, T. H. Smyth, B. B.	$\begin{array}{ccccc} \text{do} & \text{Exciseman} & \text{do} & \dots \\ \text{do} & \text{Accountant} & \text{do} & \dots \\ \text{do} & \text{Exciseman} & \text{do} & \dots \end{array}$	13 96 12 60	686 04 617 40	
Hill A M	do do do do Deputy Collector do	12 60 10 04	617 40 489 96	
Dibblee, Wm	do do	3 72	296 28	
	Salaries	113 44	5,896 56 535 24	6,431 80
No. 1 G	Charlottetown.		022.01	
Moore, T	Salary as Collector for the year	19 96 16 96	980 04 833 04	
	Salaries	36 92	$1,813 08 \\ 83 52$	

To whom paid.	Service.	Deducted for Superannuation.	Amounts. Paid.	Total.
	Winnipey.	\$ cts.	\$ cts.	\$ cts.
Costigan, H. A. Christie, W. Gosnell, T. S. Camyré, J. N. Girdlestone, R.J.M. Hicks, W. H. Code, A.	Salary as Collector for the year.  do Deputy Collector for the year.  do Exciseman do  do do do do  do do do do  do Deputy Collector do  do Exciseman do	31 44 25 20 22 30 16 96 15 00 13 96 12 60	1,543 56 1,234 80 1,094 35 833 04 735 00 686 04 617 40	
	Salaries		6,744 19 1,975 13	8,719 32
	Victoria.			,, = :
Jones, R	$egin{array}{lll}  m do &  m do &  m 1stJulyto25thJan. \  m do &  m do &  m 1stMar.to30thJune \end{array}$	21 00 3 50 2 28	783 96 1,029 00 277 36 180 72 32 65	
	Salaries		2,303 69 2,205 34	
`	District Inspectors.			4,509 03
	Ontario.			
Morrow, John	Salary for the year	50 00	2,450 00 390 01	
Gow, James	Salary for the year		2,156 00 425 57	2,840 01
Hamilton, Wm. L.	Salary for the year		2,254 00 1,217 51	2,581 57
	Quebec.			3,471 51
Bellemare, R	Salary for the year	50 00	2,450 00 304 71	•
LeMoine, J. M	Salary for the year		2,200 00 260 13	2,754 71
	Contingencies		200 13	2,460 13
Borradaile, R	Salary for the year Contingencies.		2,352 00 1,334 40	
	New Brunswick.			3,686 40
Moore, J. N.	Salary for the year		1,960 00 708 41	2,668 41
	Manitoba.			2,000 E
l 70	Salary for the year	44 00	2,156 00	

To whom Paid.	Service.	Service. Deducted for Paid.  Amounts Paid.			Total.		
	British Columbia.	Œ.	cts.	\$	ets.	*	ets.
Gill, William	Salary for the year	40	00	1,960		2,872	
	Inspector of Distilleries.					2,612	20
Davis, John	Salary for the year	56	<b>0</b> 0	2,744 1,611		4,355	34
	CHIEF INSPECTOR.					2,000	٠.
Godson, H	Salary for the year Contingencies	56		2,744 <b>24</b> 3	00 28	2,987	. 98
	Officer in charge of Wood Naphtha Warehouse.					2,501	20
Flynn, J. P	Salary for May and June	2	44			120	06
	Inspector of Tobacco Factories.						
Gerald, W. J	Contingencies					204	58
	Inspector of Bonded Factories.						
Morrow, John	Contingencies					281	40

To whom Paid.	Service.	Amou Paid		Tota	,l.
	General Excise Contingencies.	\$	cts.	\$	cts
•	27 days' extra work, from 26th June to 22nd July, inclusive, at \$400 per annum	29	59		
Hackett, C. A	47 days' services in Accountant's Branch for July, and from 15th to 31st August, inclusive, at \$400 per				
Kennedy, C. J	annum. 43 days' extra services, from 30th June to 11th August,		86		
Guilfoyle, Mrs. B	at \$400 per annum	41	12		
Waller, J	to 31st May, at \$400 per annum	30	68		
0. D : M. M. T	March to 10th April; from 12th April to 28th May, at \$400 per annum.	366	84		
	21 days' services preparing returns, from 16th to 26th Oct. and from 3rd to 12th Jan., at \$400 per annum 10 days' services copying, from 28th November to 7th	23	01		
·	December, at \$400 per annum.  10 days' services copying, from 19th to 28th December,	10	96		
	at \$400 per annum		96		
Foran, J. K	28th February, at \$400 per annum		78		
Lyman, Sons & Co	June, at \$400 per annum Bottles and chemicals.	92	53 61 00		
B. A. Bank Note Co	Translation of Tobacco and Cigar Regulations On account of stamps during year Wood, locks, hooks, &c	25,053			
Bailey Geo	Ironwork, &c	44	70		
Can. Atlantic Railway	Counterfeit Detector. Freight on goods from Oertling, Dring & Fage, &c	102 38 785	03		
Wiser & Son, J. P Oertling, L	Expenses assisting Mr. Ins. Davis in measuring tanks. Proof spirits and express charges	54	56		
Birkett T	Abel petroleum tester, and 12 petroleometers Hardware.		91		
Canadian Express Co	Lumber, &c Freight on petroleometers. 6 Westphal's specific gravity balances, raporometer,		00 75		
Graves Bros	&c., &c Hardware, &c		20		
Dring & Fage	Burettes and chemicals. 52 feet Paragon hose.	$\frac{182}{42}$	26		,
Davis, J	Cherry cases		00 85		
Potter, Chas	Repairs, new worm and tub, express charges				
Miller Look Co	scales, &c., &c. Excise locks, &c., &c.		65 24		
Femondo I R	11 conner tobacco dryer 12 conner stoyes	132	00 32		
Gerald, W. H	Lumber. Travelling expenses from Prescott to Ottawa and Lachute.		50		
	Total	28,636			
	Deduct—Received from sale of hydrometers, petroleometers, saccharometers, thermometers, glass burettes, testing apparatus, tank ventilators, &c.	218	84		
	Total General Contingencies			28,41	.7 9

	Service.	Amounts Paid.	Total.
	Law Costs.	\$ cts.	\$ cts.
""CCov. Pearson, Mor-	Services in rc Curless vs. D. Fraser		20 00
Macdonnell J A		18 42	39 00
do	\$32, in re Regina vs. Vanderberg	132 00 54 93	205 35
αο ,	Professional services in re Regina vs. O'Neill (two cases) Legal expenses in re seizure No. 22, Owen Sound	75 00 50 00	125 00
do do	Advance on account of professional services in re Quebec seizures.  Services in re Regina vs. Chouinard, Rodrique, Nadeau, Boucher, &c  Services in re Regina vs. Roy, Thibault, Méthot, LaRue, Harvey.  Services in re Regina vs. Dorval. Ruel, Tremblay, Lapointe.	120 00 266 59 50 00 117 09	125 00
	Services in re Regina vs. Donais and Regina vs. Bergeron Services in re Regina vs. Proulx do Dusseault, Droulet & Vezina	65 40 68 20 98 85	<b>500.10</b>
O'Connor, D	Expenses in prosecution of St. Julien Bros., Taillefer, J. S. Black and A. Sauriol  Professional services in re Regina vs. Parrin do and disbursements in re Regina vs. McKenzie  Professional services in re Regina vs. Decasse and Soulier, Richard, Duhamel, M. & H. Cadieux, N. & S. Parisien.	7 00	786 13 75 00 142 00
Shaw, A. C.	Professional services in re Regina vs. Starke		7 50
Walker	Professional services in re Regina vs. Rolls and vs.  Eberts.  Professional services in re prosecution of Lachapelle.  Professional services in re Regina vs. Calder.		40 00
	Professional services in re Regina vs. Calder  Professional services in re Regina vs. Gendron and Regina vs. Lucke & Mitchell	10 20	70 78
•	Regina vs. Lucke & Mitchell		
	. do in re Regina vs. A. & J. Kennedy  Professional services in re Regina vs. Stratford Bros	148 01 50 10	55 00
do .	do in re Regina vs. D. Frazer, with	11 15	209 26
Hall, John S do	LaLonde, Beaubien, Sénecal, Bérubé, Brazeau, Duggan, Dusseau Bros., Forrest and Goldstein Law costs in re Regina vs. N. Dion, W. J. Robillard,	609 57	
do	J. Crayton, A. Daoust and L. Beauregard	283 54 50 00 68 66	1,011 77

To whom Paid.	Service.	Amounts Paid.	Total.
	${\it Law~Costs.}$ —Concluded.	\$ ets.	\$ cts
Abbott, H., jrdo do Drake, Jackson & Helm- ken. Creasor, Morrison & Smith.	do in re Regina vs. Begg seizure do in re Regina vs. Wilton, Owen		8 18 35 50 20 00
Simpson A. F.	To pay law costs of R. S. Hays re seizure 89 Legal expenses in connection with Sherbrooke seizures Professional services in re Regina vs. Tracy, and Regina		10 0 60 0 68 0
Costigan, J. R Sedgewick, R., for L. N. Harrison.			30 0 279 1
	Total Law Costs		3,297

To whom Paid.	Place of Residence.	Service.	Amounts Paid.	Total.
		Commission to Customs Officers.	\$ cts.	\$ ets.
Elliott, G. M	·	From 1st July, 1887, to 30th June, 1888	150 00	
do	do	From 1st July, 1888, to 30th June, 1889	200 00	250.00
Sing, C. R do	1	From 1st July, 1887, to 30th June, 1888	138 88	350 00
		cember, 1888	67 80	206 68
11	4	From 1st July, 1887, to 30th June, 1888		200 00
McGuire, F. J.	I .	From 1st July, 1887, to 30th June, 1888	1	250 00
I I		From 1st July, 1887, to 30th June, 1888.	: I	50 81
		From 1st July, 1887, to 30th June, 1888.		150 00
Williamson, H. M		From 1st July, 1888, to 30th June, 1889	1	82 59
		From 1st July, 1887, to 30th June, 1888		119 04
11	i	From 1st July, 1887, to 30th June, 1888	1 !	200 00
		From 1st July, 1887, to 30th June, 1888.	1 1	55 73
1 ;	l	From 1st July, 1887, to 30th June, 1888.	1 .1	200 00
11		From 1st July, 1887, to 30th June, 1888.		94 21
§	1	From 1st July, 1887, to 30th June, 1888. From 1st July, 1887, to 30th June,	1	50 62
I !	i	1888. From 1st July, 1887, to 30th June,	· .	250 00
do		1888	190 00	
		ust, 1888	23 30	173 30
		From 1st July, 1887, to 30th June, 1888		200 00
		From 1st July, 1887, to 30th June		150 00
		From 1st July, 1887, to 31st May	,	82 18
		From 24th August, 1888, to 8th		34 11
		From 27th August, 1888, to 12th		7 92
	1	From 1st July, 1887, to 30th June 1888.	<b>,</b>	250 00
Clute, J. S	New Westminster B.C	From 1st July, 1887, to 30th June	,	450
Peck, T. E	Nanaimo, B.C	From 1st July, 1880, to 5th Janu	-	150 00
Leighton, W. K	. do	From 7th January, 1888, to 30tl	n	411 06
Vowell, A. W	Donald, B.C	June, 1888. From 1st July, 1887, to 30th June		75 35
		Total Commission to Custom		286 69
		Officers		4,080 29

To whom Paid.	Place of Residence.	Ser	vice.	Amounts Paid.	Total.
LeBlanc, Ed	St. Alexis do Lavaltrie do St. Alexis do	Allowance of 5 pstamps do do do do do Total Com	Tobacco Stamps.  per cent. on sale of do do do on sale of twist stamps		\$ cts.
		Duty-Pay.		\$ cts.	\$ cts.
Iler, B. Blair, J. B. Caven, W. Dudley, W. H. Dawson, W. Cox, J. E. McDonald J. A. O'Leary, F. J. Flynn, D. Sullivan, L. D. Conway, B. J. Gerald, Chas. Crowe, Wm Falconer, J. E. Brennan, J. Jubienville, J. P. Reddan, C. Cahill, J. W. Allen, J. A. Barrett, T. J. Spereman, J. J. Flynn, J. P. Howie, A. Cameron, D. M. Gerald, W. H. Johnstone, G. E. Keeler, G. S. Craig, Joseph Bish, P. Donaghy, W. Baby, W. A. D. Bouteillier, G. A. Tompkins, P. Mason, F. Crotty, John. Caven, J. McD.	1st March 1st January do do do 9th Februar 1st January do do do do do do do 12th April 2nd Decemb 1st July to 3 do	do d	May, 1888 888.	150 00 200 00 150 00 100 00 97 39 200 00 150 00 200 00 150 00 200 00 50 00 21 95	4,839 87
		• •	• • • • • • • • • • • • • • • • • • • •		333,456 96
	Station	ery	ng, &c	1,574 67	•

To whom Paid.	Service.	Amounts Paid.	Total.
	Preventive Service—  Salaries	15,587 69	26,534 73 359,991 69
ADD—Balances due to C	49 08 673 98	723 06	
LESS—Balances due by do to	913 98 49 08	360,714 75 963 06	
Actual disbursements ag	reeing with Statement No. 4, page 10		359,751 69

E. MIALL,
Commissioner.

Inland Revenue Department, Ottawa, 3rd September, 1889.

# APPENDIX B.—Continued.

No. 2.—Details of Fees paid to Cullers, for the Fiscal Year ended 30th June, 1889.

Grand Total.	\$ cts.		19,451 67
Total.	\$ cts.	9,650 00 7,700 00 2,100 00	
Amount.	s cts.	25	
Names of Cullers.		Duggan, Edward Noel, Elie. Gilchen Thomas. Gorge. Kelly, Edward Frederick, Ant O'Bren, M. WcKendry, Dan. O'Bren, Moseph. Miller, Alfred (late). McInenly, Thos. Bergeron, Joseph. Kely, Michael McPeak, Wm. Lockquell, A. H. Laflamme, Jos. Morency, Louis. Morency, Louis. Morency, Louis. Malone, Thos., sen. Patry, Thos. Cauchy, Chas. Lymb, John Cilchis, John Vachon, J. B. Murphy, Thos. Demers, F. X. Maurphy, Thos. Demers, F. X. Murphy, Thos. Demers, Wm.	Drousseau, 9. D. Total, Quebec.
Department.		Timber.	Dars
Оffice.		Quebro	

968 70 1,937 41 21,389 08	E. MIALL, Commissioner.	
nd Sorel	<b>μ</b>	
Cusson, François.  Barsalo, Edouard.  Total, Montreal, Lachine and Sorel  Total fees paid to Cullers.		
feneral Cullers	Inland Revenue Department, Ottawa, 3rd September, 1889.	
MONTREAL, LACHINE AND' SOBEL	Inland Reven	

# APPENDIX B.—Continued.

No. 3.—Details of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1889.

Grand Total.	84 O
Total.	* cts.
Amounts Paid.	* cs. 1, 258.28
Deducted for Super- annuation.	\$8888888888888888888888888888888888888
Nature of Service,	Salaries. Supervisor of Cullers for the year. Deputy Supervisor of Cullers for the year. Deputy Supervisor do Cashier do
Names.	Patton, James Lane, John Walsh, T. J Walsh, T. J Walsh, T. J Wower, R. Power, R. Powartigny, C. P. L Belland, J. E. Le Vasseur, Z Poliquin, F Gallagher, F Gallagher, F Gallagher, F Gallagher, F Gallagher, T Lavence Corporation Foley, Mary Lavence & Bycomer Tierney, A. R Lawrence & Bycomer Tierney & McManus Behan Bros. Quebec Port Office Miller, Pierre Miller, Pierre Miller, Pierre Miller, Pierre Holmes, Margaret Bell Telephone Co Rancour, N Corbin, Joseph.
Office,	QUEBEC

### decay   ### de	2,498 13			
ries.	13 13 13 14 15 15 15 15 15 15 15 15 15 15		28888888888888888888888888888888888888	29 27
ries. ription aud davertising, "Shareholder" do "L'Evénement" do "Courrier" cription and advertising, "Shareholder" do "Courrier" ription and advertising, "Shareholder" ription and advertising and "Chareholder" ription and "Charehol				
Handa Carlot Art Con a con	nn.  "Mercury". "Budget". "Duotidien". "Canadien". "Courrier". "Courrier". "Out ad advertising, do to "Gazette". "Irish Canadien". "Irish Canadien".	Cullers' Expenses.	xpenses.	ф

APPENDIX B.—No. 3.—DETAILS of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1889—Continued.

Grand Total.	\$ cts. 17,987 98 5,266 68
Total.	\$ cts.
Amounts Paid.	** 111 ** 288 888 888 888 888 888 888 888 888
Deducted • for Super- annuation.	ctps
Nature of Service.	Cullers' Expenses—Concluded.  Cullers' expenses  Total, Cullers' Expenses.  Total, Quebec Expenditure.  Paid to Retired Cullers.  Superamuation.  do d
Names.	Miller, A. (late) Munro, Wm. Jobin, Jacques. Jobin, Jacques. Jownest, P. Morrisette, Jos. Locquell, L. Demers, L. Verrault, Edwd. Wurphy, M. Feore, J. F. Dorval, P. Dorval, P. Gibbons, M. Hamel, M. (late) Villeneuve, J. Gibbons, M. Kafferty, John. McNaughton, J. Beaupre, Noël Frenette, Jos. Malone, T. C. Brentte, Jos. Malone, T. C. Brentte, Jos. McCormack, J. Duggan, Wm.
· Office,	QUEBECContinued.

118

			1,665 17			1,026 85
	1,474 56		190 61	296 28		730 57
882 00 395 04 197 52		98 88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			499 92 75 00 77 00 75 10 8 9 15 6 80 7 7 50	
18 80 84 84 84 88	25 44			8. 8.		
Salaries.  Deputy Supervisor of Cullers for the year  Book-keeper for the year  Clerk	Total Salaries	Rent of office for the year.  Rent of office for the year.  Montawoman.  Montanal Directory  Post Office box.  I. Ready Reckone?  I. Rand mucliage  Specification clerk.  Telegraph, express, &c.	Total Contingencies	Salaries.  Deputy Supervisor of Cullers for the year	Services for the year To enable him to pay for assistance in counting deals. Travelling and other expenses from Quebec to Charlemagne and return. Travelling expenses. The Ready Reckoner, 2 copies. Subscription to "Chronicle".	Total, Three Rivers
MONTREAL, LACHINE Daveluy, George DeServes, George Desembliniers, E.		Seath, David Lussier, Dane Loudy, John Post Office Willer, Pierre Granger et Frère. Davehuy, J. P. Sundries		THREE RIVERS Malone, T., Junior	Gouin, W. G. Malone, Thomas, sen. Cauchy, Chas. Malone & Gouin Miller, P. Foote, J. J. Malone, T.	

APPENDIX B.—No. 3.—DETAILS of Cullers' Expenditure, for the Fiscal Year ended 30th June, 1889—Concluded. .

,							
	ОЩсе.	Names.	Nature of Service.	Deducted for Super- annuation.	Amounts Paid.	Total.	Grand Total.
	Three Rivers	Cook, W. & A. H	General Contingencies.  Legal services in collecting outstanding accounts due to Culler's office	cts:	e Cots.	e cts.	\$ cts.
			Total ADD—Printing. Stationery			135 17 76 96	47,885 76
			Authorized disbursements (less superannuation) And—Balances due by Supervisors, 30th June, '89				48,097 89 75 00
120			LESS—Balances due by Supervisors, 1st July, '88	:	:	:	48,172 89
			Actual disbursements agreeing with Statement No. 8, page 15				48,097 89
	Inland Revenue	REVENUE DEPARTMENT,			Ħ	E. MIALL, Commissioner.	ssioner.
	Ofta	.wa, 3rd September, 12	,88,				

### APPENDIX B—Continued.

No. 4.—Distribution of Seizures, for the Year ended 30th June, 1889.

Division.	To whom Paid.	Service.	Amounts Paid.	Totals.
		Ontario.	\$ cts.	\$ cts.
Cornwall	Officer C. Curless	For his proportion of Seizure No. 4  do do 8 do do 9 do do 17 do do 28 do do 29	5 00 4 50 12 00 9 37 7 28 7 29	45 44
	do C. Curless	To pay informer half penalty in Seiz. No. 4  do do 8  do do 9  do do 17  do do 28  do do 29	2 00	45 44 4
Ottawa	do W. G. Bédard do G. A. Gravelle	For his proportion of Seizure No. 70  do do 59  do do 60  do do 61  do do 62  do do 63  do do 64  do do 66  do do 66  do do 66	0 75 9 00 7 86 4 94 8 56 3 45 3 71 4 28 18 58	20 00
Owen Sound Prescott	do W. J. Graham do C. Curless	To pay informer penalty in Seizure No. 21  For his proportion of Seizure No. 19  do do 20  do do 21  do do 23  do do 24	8 67 6 62 4 37 0 77 0 47	61 13 50 00
Stratford	do A. Caven	To pay informer penalty in Seizure No. 94 do half penalty do 96 do do do 97	50 00	20 90
Toronto	do W. C. Stratton	To pay informer fine collected in Seizure No. 195		200 00 100 00
Beauharnois	do C. Curless	To pay informer penalty in Seizure No. 10 do do 11 do do 12 do do 13	5 00 5 00	
Joliette		To pay informer penalty in Seizure No. 81 For his proportion of Seizure No. 81	0 06	27 50 50 00 5 00
Montreal	do H. G. S. Dickson.	To pay informer penalty in Seizure No. 86 For his proportion of Seizure No. 490 do do 590		5 30 100 00 2 08 12 50 12 50
	do J. L. Vincent	To pay informer half penalty in Seizure No. 590		25 00

### APPENDIX B-Continued.

### No. 4.—Distribution of Seizures—Continued.

Division.	7	Γo whom Paid.	Serv	rice.		Aniou Paic		Tota	al.
			Quebec—C	oncluded.		*	cts.	\$	cts
Quebec	Office	r Geo. LaRue	To pay informer pena do do	lty in Seizure do do	No. 218 219 231		00 00 00		
	do	F. Boulet	For his proportion o do do	f Seizure No do do	215 216 220	19	00 15 00	200	00
	do	M. Macnamara	do do do	do do do	222 224 227	7 10	50 38 00	43	15
	do	B. Iler	} {	do do do	226 234 235	44	13 82 45	18	88
			do do do do do	do do do do	236 237 238 239	4 4 5	37 70 80 75		
	do	J. Rouleau	do do do	do do do	240 241	5	50 37		89
	do	G. A. Gravelle	do do do do do	do do do do do	201 205 211 214 215	9 6 8 30	60 00 75 27 00	52	38
			do do do do do	do do do do do	216 220 224 225 226	30 10 18	85 00 37 50 12		
			do do do do do	do do do do do	234 235 236 237	4 4 4	83 45 38 70 80		
	4		do do do	do do do	239 240 241	4 5	75 50 38	240	25
Sherbrooke	do	C. Curless	do do do do do	do do do do do	17 20 21 to 28 29 30	0 53 13	98 25 62 00 62		
			do do do	do do do	31 32 34 18	1 3 0 39	87 13 03 00		
			To pay ½ informer's 21 to 28	penalty in f	19 Seizures			136 40	50 00
			New Bri	unswick.					
St. John	do	J. C. Ferguson	For his proportion of	f Seizure No do	. 26 27		00 90		

#### APPENDIX B—Concluded.

#### No. 4—Distribution of Seizures—Continued.

Division.	To whom Paid.		Serv	Service.		Amounts Paid.	Tota	ıl.
			New Brunswick	k—Conclu	ded.	\$ cts.	*	ets.
St. John	Officer	J. C. Ferguson	For his proportion of	f Seizure I do	No. 34 35	4 25 6 25	14	40
	do	J. R. McClosky.	do do	do do	26 27	3 00 0 90		
	do	J. Bogue	do do do	do do do	33 37 38	1 70 18 45 8 45		90
	do	P. J. O'Keefe	do do	do do	34 35	4 25 6 25		60 50
			Nova S	Scotia.			10	0.5
Halifax	do	C. Curless	For his proportion of do	do d	No. 85 86 87 88 89 92 93 94 95 96 97 98 99 100 86	21 00 12 06 3 32 2 33 1 22 10 44 1 54 12 04 3 94 0 69 1 77 8 07 9 31 6 30 10 80 2 75	107 12	
Winnipeg	do	J. K. Barrett	To pay informer pena do	lty in Seiz do	sure No. 20 21 L. Garrison	150 00 57 50 65 00	272	50
Victoria	do	Wm Gill	British C To pay informer pena		umo No. 12	1	200	
	uo	W III. (AIII.)	1	Total			2,241	
	Qu Ne No Ma	ebecw Brunswickva Scotiainitobaitish Columbia	RECAPITULATIO		\$ 541 9 1,049 9 57 4 119 6 272 5 200 0	3 0 5 0 0	1	

E. MIALL,

Commissioner,

Inland Revenue Department, Ottawa, 3rd September, 1889.

### APPENDIX B—Continued.

No. 5.—Details of Sundry Minor Expenditures, for the Fiscal Year ended 30th June, 1889.

To whom Paid.	Service.	Amounts Paid.	Total.
La Vallée d'Ottawa Le Canada. Citizen P. and P. Co Weekly Despatch Equity Aylmer Times Morning Review Advertiser, L'Orignal United Canada Conicle, Arnprior Equity	do   do   do   do   do   do   do   do	\$ cts.  6 36 11 40 11 40 28 12 12 60 9 00 9 12 6 90 6 88 11 20 6 12 7 65 47 09	\$ cts.
	Total		173 84
do  do  Wills, E. A., Secretary of the Toronto Board of Trade  Rowland, F., Kingston. Bellemare, R., Montreal Bell, Chas. N., Sec., Winnipeg, Board of Trade Stratton, W. C., Toronto Kidd, Thos., Seaforth, O McNeill. W. J., King-	Expenditure in connection with selection and purchase of grain samples.  Expenditure in connection with examination of applicants for Inspectorship of Leather and Hides.  Fees in re appointm't of Inspector of Hides and Leather  To meet expenses in connection with the selecting of grain standards for 1888-89.  Expenses in connection with flour samples.  Expenses charges on flour samples.  Expenses in connection with meeting of Board of Trade in determining the standards of Manitoba wheat for 1888.  Express charges on flour standards.  Expenses to Ottawa and return at the request of the Minister of Inland Revenue.		809 47 1,395 41 4 36 44 36 64 83 0 56 37 06
	Less—Sale of old flour samples		2,373 8 20 8

# APPENDIX B-No. 5.—Details of Sundry Minor Expenditures.—Continued.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total
Lefebvre, F. X Casey, Thomas Costigan, J. J Ferguson, J. C. Webster, Thomas	Adulteration of Food.  Salary as Chief Analyst for the year	\$ ets.  39 96 25 92 21 96 16 92 7 36 6 00 3 00	\$ cts. 1,959 96 1,274 04 1,077 96 825 45 362 64 294 00 147 00	\$ cts.
Macfarlane, Thos Webster, Thos Costigan, J. J. Ferguson, J. C. McGill A	Total, Salaries	4 96 126 08	245 04	6,186 09
Costigan, H	do do		1,058 25 52 40 200 00 100 00	3,883 91
do	lysis  Fees for analysis		100 00 808 50 200 00 100 00	1,208 50
do	lysis  Fees for analysis		100 00 975 00 200 00 100 00	1,375 00
do	Fees for analysis		100 00 1,390 00 200 00 100 00	1,790 00
		 n ana-	100 00 919 90 200 00 100 00	1,319 90
do Fiset, M do do	Fees for analysis		100 00 840 00 200 00 100 00	1,240 00
do Kenrick, E. B do	lysis  Fees for analysis		100 00 640 01 88 16 44 08	1,040 01
do	do do materials used is lysis		129 37 256 00	517 61

# Appendix B-No 5.—Details of Sundry Minor Expenditures—Continued.

		1	
To whom Paid.	Service.	Amounts Paid.	Total.
	Contingencies—Concluded.	\$ cts.	\$ ets.
Marsan, C. F do	Expenses in connection with Board of Examiners Analysing samples and expenses incurred therein	154 00 140 00	
Tourchot, A. L.	Analysing samples and expenses incurred therein  Analysing samples and chemical apparatus  Expenses attending meetings of the Board of Public		294 00 360 00 687 00
Eimer & Amend Dunne, Mrs. S Whitehead, Mrs. J	Analysts  Chemicals and chemical apparatus for laboratory  Cleaning, &c., at Laboratory on Sparks street  Cleaning instruments, sample bottles &c.		149 00 577 70 286 38 162 00
McKinley & Northwood Graves Bros	Plumbing at Sparks street Laboratory, &c		84 00 46 18 10 18 7 59
J. R. Esmonde Ottawa Gas Co  J. Courtman	Sheet lead for Laboratory, repairs, &c. Gas rent, Sparks street Laboratory, from 1st April, 1888, to 31st March, 1889. Petty expenses freight express charges cartage &c.		137 75 55 50 77 02
Citizen P. and P. Co Archambault, R	Advertising agricultural fertilizers		178 29 125 00 58 68 311 05
Maciariane, A. U	Work in Laboratory from 23rd March to 30th June,	1	65 00
	Painting, lettering, &c. Cone for Sparks street Laboratory Sponges for Laboratory Towels, &c. do	1	54 04 6 50 2 50 7 95
Bailey, Geo	Services in Acct. Branch from 1st to 15th August's Iron work 1 safe for Sparks street Laboratory. Lumber for use in Laboratory.		16 44 5 97 105 00
Graham, W	Professional services in re Regina vs. various persons under the Adulteration of Food Act.		0 75 54 00
Abbott, H., jr			107 00 34 14 5 20 34 10
Canada Atlantic Ry Pensky. B	Freight on chemical apparatus		33 05 11 96 39 10
Samuel Rogers Oil Co Cornwall Standard	3 juice presses for Laboratory. Books and instruments for Laboratory. Ether and oil for analyst Advertising Act respecting Agricultural Fertilizers.		4 80 160 12 1 30 20 00
White, Richard	do Advertising Act to prohibit the manufacture and sale of substitutes for butter and respecting agricul- tural fertilizers	• • • • • • • • • • • • • • • • • • • •	24 00 100 00
Rowland, F	Lumber Purchase of samples for analysis		200 00 5 00 12 05
Canadian Express Co	do do Express charges on samples for analysis		6 14 11 90
	Less-Sale of instruments, chemicals, &c		23,296 35 57 76
	Total		23,238 59
	Grand Total		25,765 51

53 Victoria.

# Sessional Papers (No. 1.)

A. 1890

# APPENDIX B-No. 5-Details of Sundry Minor Expenditures-Concluded.

To Whom Paid.	. Service.	Amounts Paid.	Total.
	Contingencies—Concluded.  ADD—Printing	\$ cts. 244 31 144 13	\$ cts.
	Authorized disbursements less Superannuation LESS—Balances due by Inspectors on 1st July, '88		26,153 95 0 20
	Actual disbursements agreeing with Statement No. 12, page 17	• • • • • • • • • • • • • • • • • • • •	26,153 75

E. MIALL, Commissioner.

Inland Revenue Department, Ottawa, 3rd September, 1889.

### APPENDIX B—Continued.

No. 6.—Details of Departmental Expenditure for the Year ended 30th June, 1889.

Name						
Costigan, Hon. J.   Minister.   For the year   0,7000 00     Miall, E.   Commissioner   Commis	Name.	Rank.	Period.	Deducted for Superannuation.		Total.
Miall, E.   Commissioner   do   64 00   3,136 00	: 		,	\$ ets.	\$ cts.	\$ cts.
Of Tobacco Factories   do   50 00   2,450 00	Miall, E	Commissioner				
Robins, P. M.   Chief Accountant   do   47 50   2,327 50   do   do   do   do   1,960 00   do   do   do   do   do   do   do		of Tobacco Factories	do	50 00	2,450 00	
do	Robins, P. M	Chief Accountant	1		2,327 50	
Heron, W. L.			ao	40 00	1,960 00	
Campeau, F. R.   Assistant Accountant.   do   36 00   1,764 00   Valin, J. E   Accountant's Branch Clerk   do   33 00   1,617 00   do   do   do   32 00   1,617 00   do   32 00   1,528 00   1,421 00   do   32 00   1,372 00   do   32 00   1,274 0		of 27th June, 1888.				****
Valin, J. E.	Genneau F R E	Assistant Accountant				
Hall, C. R.   do   do   do   22 00   1,568 00	Valin, J. E	Accountant's Branch Clerk	do			
Nettle, R.   Statistical Clerk   do   28 00   1,372 00	Hall, C. R	do do	do	32 00		
Nettle, R.   Statistical Clerk   do   28 00   1,372 00	Stewart, Neil	Shorthand Writer and Corner	do	29 00	1,421 00	
Nettle, R.   Statistical Clerk   do   28 00   1,372 00		pondence Branch Clerk		28 00	1.372 00	
Teakles, B. H.   Statistical Clerk   do   28 00   1,372 00	Nettle, R	Statistical Clerk	do	28 00	1,372 00	
Walsh, M. F.         Clerk do         do         28 00 1,372 00 600 600 00           Lusignan, A.         Translator and Correspondence Branch Clerk         do         27 00 1,323 00           Devlin, R.         Statistical Clerk         do         26 00 1,274 00           Shaw, J. F.         do         do         26 00 1,274 00           Chubbuck, C. E.         Hydraulic Rents and Adulteration of Food Clerk         do         26 00 1,274 00           Doyon, J. A.         Accountant's Branch Clerk         do         26 00 1,274 00           Brunel, J.         Weights and Measures Branch Clerk         do         25 00 1,225 00           Byrnes, J.         Accountant's Branch Clerk         do         25 00 1,225 00           Brown, J. F.         do         do         20 00 980 00           Guain, R.         do         do         20 00 980 00           Fowler, Geo.         Stamps Branch Clerk         do         20 00 980 00           Fowler, Geo.         Messenger         do         6 25 493 75           Courtman, J.         do         From 1st July, 1889, 188, to 30th January,1889, 3 01         241 92           McCullough, A.         do         From 1st July, 1889, 19 10         40 318 47           LaMothe, H. G.         Extra Services from 26th June, 18	Blatch, F. K	Clerk of Supplies				
Devlin, R.   Statistical Clerk   do   27 00   1,323 00	Walsh, M. F.	Clerk	1 1			
Branch Clerk	do	Private Secretary	do			
Devlin, R.   Statistical Clerk   do   do   26 00   1,274 00	Lusignan, A	Translator and Correspondence	J	07.00	1 909 00	
Shaw, J. F.	Devlin, R	Statistical Clerk	3			
Doyon, J. A	Shaw. J. F	do				
Doyon, J. A.	Chubbuck, C. E	Hydraulic Rents and Adulter-	<b>J</b> _	00.00	1.054.00	
Brunel, J.   Weights and Measures Branch   Clerk.   do   25 00   1,225 00	Dovon, J. A	Accountant's Branch Clerk	1			İ
Byrnes, J.	Brunel, J	Weights and Measures Branch		20 00	1,2,1 00	
Brown, J. F.	Purmon T	Clerk				
Quain, R.         do         do         do         do         22 00 1,078 00 do           Brunel, Geo.         Stamps Branch Clerk.         do         6 88 543 12 do         6 25 493 75 do           Fouer, Geo.         Stamps Branch Clerk.         do         6 25 493 75 do         6 25 493 75 do           Courtman, J.         do         From 1st July, 1888, to 30th January, 1889 3 01 241 92 do         318 47 do           McCullough, A.         do         For the year.         4 03 do           LaMothe, H. G.         Stamps Branch Clerk.         From 1st July, 1888 do           LaMothe, H. G.         Stamps Branch Clerk.         From 1st July to 31st Oct., 1888.         9 32 457 32           Total, Salaries.         9 32 457 32         777 99         46,531 08           Contingencies.         Contingencies.         777 99         46,531 08           W. H. Mossman         Extra services from 26th June, 1888, to 9th July, 1889; 18th to 27th July, 31st August to 10th September; 20 half days, November 8th to 26th, at \$400.         59 18           W. H. Mossman         Technical work from 11th December, 1888, to 8th January, 1889, 28 days, at \$2.00.         56 00           G. A. Waters.         Extra Writer, 24 days' work during January.         59 64           Extra Writer, 24 days' work during January.         59 64           Extra Wr	Brown, J. F	do do				
Brunel, Geo   Go	Quain, R	do do				
Archambault, R.   Messenger   do   6 25   493 75   Courtman, J.   do   From 1st July, 1888, to 30th January, 1889   3 01 241 92   McCullough, A.   do   From 1st July to 31st Oct., 1888   9 32   457 32   Total, Salaries.   777 99   46,531 08   Contingencies.  Miss D. Smith   Extra services from 26th June, 1888, to 9th July, 1889; 18th to 27th July, 31st August to 10th September; 20 half days, November 8th to 26th, at \$400.   59 18   W. H. Mossman   Technical work from 11th December, 1888, to 8th January, 1889, 28 days, at \$2.00   56 00   Extra Writer, 24 days' work during January   59 64   Extra Messenger, 1st to 23rd February and 4th March to 8th April, 59 days, at \$1   60   H. O'Hagan   do   from 25th to 28th February   4 00   Ambrose Conway   do   from 25th to 28th February   4 00   Ambrose Conway   do   from 25th to 28th February   4 00   Ambrose Conway   do   from 25th to 28th February   4 00   Ambrose Conway   do   from 25th to 28th February   4 00   Ambrose Conway   do   from 25th to 28th February   4 00	Brunel, Geo	do do	do	20 00	980 00	
Courtman, J.   do	Archambault, R.	Messenger				
McCullough, A.   do		do	From 1st July.	0 20	499 19	
McCullough, A.   do			1888, to 30th		245	
Contingencies   From 1st July to 31st Oct., 1888   9 32   457 32	McCullough. A	do	For the year	4 03		
Total, Salaries.   9 32 457 32	LaMothe, H. G	Stamps Branch Clerk	From 1st July	× 00	210 41	
Total, Salaries.   777 99   46,531 08			to 31st Oct.,			
Contingencies.   Contingencies.			1888	9 32	457 32	
Contingencies.   Contingencies.		Total, Salaries	l	777 99		46,531 08
18th to 27th July, 31st August to 10th September; 20 half days, November 8th to 26th, at \$400.	4 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9					·
W. H. Mossman	Miss D. Smith	Extra services from 26th June, 18th to 27th July, 31st Av	1888, to 9th July	entem-		
G. A. Waters. Extra Writer, 24 days, at \$2.00. 56 00  Extra Writer, 24 days' work during January. 59 64  Thos. P. McGovern Extra Messenger, 1st to 23rd February and 4th March to 8th April, 59 days, at \$1. 59 00  Ambrose Conway. do from 25th to 28th February. 4 00  Ambrose Conway. 4 00	W. H. Mossman	Technical work from 11th Dece	t \$400. h .Ian-	59 18	•	
H. O'Hagan do from 25th to 28th February and 4th March do from 25th April, 59 days, at \$1.	G A Waters	uary, 1889, 28 days, at \$2.0	O .			
H. O'Hagan 59 00 do from 25th to 28th February 4 00 Ambrose Conway do from 26th April to 15th Lynn 41 00	Thos. P. McGovern	Extra Messenger, 1st to 23rd F	March	59 64		
Ambrose Conway. do from 25th to 28th February. 4 00		to oth April, 59 days, at \$1			59 00	
Ambiose Conway 41 92	H. O'Hagan	do from 25th to	28th February		4 00	
Annie Hartnedy Extra Writer from 2nd January to 1st February, 1889,	Annie Hartnedy	Extra Writer from 2nd Januari	rii to lõth June zto let Februare	1880	41 92	
31 days, at \$400 per annum		31 days, at \$400 per annum	TOO T COLUMN	, 1000,	33 97	

# APPENDIX P.—No. 6.—Details of Departmental Expenditure—Continued.

Name.		Service.	Amounts Paid.	Total.
		Contingencies—Continued.	\$ cts.	\$ cts.
The Daily Sun	Subscription		6 00	
THE Evening Gazette.	do do		$\begin{array}{c c} 1 & 67 \\ 12 & 00 \end{array}$	
The Spectator. Welland Telegraph.	do		1 00	
-ullin Breeman	do	**********	3 00	
1 reshuterian Witness	do		2 00	
440 Colonist	do		$\begin{array}{c c} 2 & 00 \\ 2 & 50 \end{array}$	
The Prince Albert Times Journal de l'Instruction	do		2 50	
Philipping	do		1 00	
Ournal of Waterloo	do		1 00	
rost	do		3 00	
Canadian Workman The Investigator	do do	••••••	2 00 3 00	
- ue Maritime Farmer	do		2 00	
OIID.	do		10 10	
ausurance and Financial	,		0.70	
Chronicle	do do		3 50	
Acton Free Press Canadian Trade Review	do		1 50 6 00	
Dally Eyaminer	do		5 00	
4 He Waskly Dignatch	do		4 50	
+116 ( )all	do		20 00	
Clentine American	do		7 00	
and Trade Review	do		2 00	
Journal de Onébec	do	************************	6 00	
The Canadian Gazette			1	
(London)	do		8 86	
Daily Globe Evening Telegram	do do		15 00 3 00	
~ ally Wight	do		20 00	
Courrier de Fraservine.	do		2 00	
Cintha	do		6 00	
-Vally Citizen	do		24 00	
Quotidien	do do		1 221	
Dally Mercury	do			
∨uiten t:anana	do		1 1	
- ue National	do		2 00	
448 Berlin News	do		2 00	
The Guelph Herald The Daily Intelligencer.	do do		1 1	
~velling lournal	do		20 00	
~Guurnay Budget	do		6 00	
	do		12 00	
The Weekly Planet	do do		1 00 6 00	
Cally Herold	do			
4c nicomona (+iiaraian			2 00	
Autorning Chronicle	l do			
Canadian Manufacturer Aylmer Times	el do		1 1	
LISh Canadian	l do			
148 Shareholder	l do			
* Clerhorough Review	do			
The Canadian Lumber-	-		0.00	
Toronto World.	do do			
Catholic Record	do			

# APPENDIX B.—No. 6—Detail of Departmental Expenditure—Continued.

Name.		Service.	Amounts Paid.	Total.
		Contingencies Continued.	\$ cts.	
Daily News	Subscripti	·	6 00	
Veekly Standard	do		2 00	
a Patrie	do		3 00	
e Canadien	do do		$\begin{array}{c c} 12 & 00 \\ 3 & 00 \end{array}$	
L'Evénement	do		4 00	
Daily Gazette	do		12 00	
a Lyre d'Or	do		4 00	
e Canada	do do		16 00 12 00	
The Brantford Courier.  A Presse Courrante	do		1 50	
ittoral	do		2 00	
he Enterprise	do		1 50	
a Vallée de l'Ottawa	do do		16 00 6 18	
Chemical Industry	do		5 96	
Morning Herald	. do		6 00	
Daily Witness	do		3 00	
e Trait d'Union	do do		$\begin{array}{c c} 3 & 00 \\ 12 & 00 \end{array}$	
star (London, Eng.)	do		12 86	
he Bay Pilot Weekly .	do		1 00	
Evangéline	do		1 00	
Canadi'n Health Journal	do		8 00 2 00	
The Volksblatt	do do		10 92	
Dominion Mechanical &	ao	,		
Milling News	do		0 50	
he Argus	do		$\begin{bmatrix} 2 & 25 \\ 0 & 90 \end{bmatrix}$	
Chronicle (Lakefield)  The Spectator (Anna-	do		0.90	
polis)	do		2 75	
es Modes Françaises	do		3 75	
Monde Illustré	do	•••••	4 50	
ndex of Current Events ndépendant	do do		6 00 0 50	
lanada Français	do		1 00	
he Daily World	do		7 47	
he American Gas Light	٠.		1	
Journal The Times (Almonte)	do do		1 50 3 00	
The Casket	do		2 00	
Courrier des Provinces				
Maritimes	do do		5 20 2 50	
Iuskoka Herald Daily Telegram, Brant'fd	do		4 00	
Simes, Brockville	do		4 00	
he Enterprise, Dutton.	do		4 00	
The Advocate	do do	••••••	1 00	
The Critic	do		1 50	
The Church Guardian	do		4 00	
e Monde	do		6 00	
La Presse	do do		4 84 3 50	
Times, Moncton	do	***************************************	4 00	
Courrier	do	***************************************	10 00	
The Commercial and Fi-	.3.		!	
nancial Chronicle, N.Y	do do		1 65 4 00	
The Herald, C.B	do		1 00	

# APPENDIX B.—No 6.—Details of Departmental Expenditure—Continued.

Name.		Service.	Amounts Paid.	Total.
		Contingencies— Continued.	\$ cts.	\$ cts.
The Colonial Standard. The Herald, Richmond	Subscription	1	1 50	***************************************
Hill	do		1 00	
The Canadian, Sarnia	do	*** ********	3 00	
Gazette, Sherbrooke Union Standard	do	• • • • • • • • • • • • • • • • • • • •	3 00 1 00	1
JournaldesTroisRivières	do do		2 00	
The Sentinel	do	***************************************	1 00	
The Catholic Weekly	_			
Review	do	• • • • • • • • • • • • • • • • • • • •	4 00	
North-West Review William Ridgeway, Lon-	do	***************************************	3 00	}
don, Eng	do	sundry papers	43 07	i
L'Etudiant	do	Fek	2 00	
Canadian Sportsman	do	•••••	4 35	i
The Trenton Advocate	do do		5 00	
Le Sud L'Impartial	. do do		3 00	İ
Pontiac Advance		*******************************	2 17	1
The Brussels Budget	do		2 00	i
Canadian Journal of	a		0.00	
Commerce	do do	***************************************	$\begin{array}{c c} 2 & 00 \\ 0 & 50 \end{array}$	
Manitoba Colonist The Equity			1 00	1
Jury	do		0.001	
Paris-Canada	do		2 63	
WeeklyTimes, Peterboro			2 00	
Weekly Review The Spectator, Rapid	do	••••••	2 00	1
City	do		2 50	
The Brandon Times	do		2 00	
La Vérité	do		2 50	
Journal of Commerce,	A		9.00	
Montreal Canadian Mining Review	do do		2 00 3 00	
La Minerve	do		12 00	
J. Durie & Son, Ottawa	Periodicals,	&c	65 50	
Costigan, Hon. John	Travelling e	expenses	150 00	
Gerald, W. J	do do		$\begin{bmatrix} 237 & 75 \\ 50 & 00 \end{bmatrix}$	
Miall, E	do do		1	1
Bliss, D. C. F.	do	while acting Private Secretary	39 11	:
Himsworth, Wm.	do		2 32	
Campeau, F. R. E	do	••• •••••	20.40	
Robins, P. M	do Rent of Tel	ephone Index		
Routh, A. J	Repairing c	locks	2 00	
Hutton, John	Cab-hire for	Minister	241 00	
Duggan, H	Delivery of	night mails at residence of Minister and	47.00	
Gratton, G	of the Cor	mmissionerthe Minister	47 00 20 25	
Hotte, F		the almster	11 00	
Beaupré, H	do		14 00	
U. P. R. Telegraph Co	Telegraphin	g for the year	265 72	
G. N. W. Telegraph Co.	Tolophous	do	451 22   33 55	
The Bell Telephone Co. Gouin, J. A	: Leiepnone : Postage	dodo	226 13	
Govt. Stationary Office.	Stationary.		1.369 99	
do do	Books, &c.		499 66	
Queen's Printer	Printing, &	<b>c</b>	1,240 65	
do	Lithographi	ing	216 33	
1			<u> </u>	

# Sessional Papers (No. 1.). A. 1890

# APPENDIX B.—No. 6.—Details of Departmental Expenditure—Concluded.

Name.	Service.	Amounts Paid.	Total.
	Contingencies—Concluded.	\$ ets.	\$ ets.
Dominion do	Express charges for the year do do Cartage for the year do	126 09 81 20 93 95	
Mrs. Keegan	Washing towels	65 00	
Shaw & Co	Sundries for the Departmentdo	8 78 2 00	
Brennan, H. H	Soap, &c do	1 60 3 50	
Harris & Campbell Kavanagh Bros	do do	14 65	
Imperial Warehouse C. A. Railway Co	do do	15 12 1 85	
Archambault, R	Sundry petty expenses Cartage and cab hire	55 96 37 54	
Courtman, J	Sundry petty expenses	47 50	
do	Cartage and cab-hire	10 00	
	Total Departmental Contingencies		7,263 03
	Authorized disbursements (less Superannuation) ADD—Balance due 30th June, 1889		53,794 11 16 66
	Less—Balance due 1st July, 1888		53,677 45 16 66
	Actual Disbursements agreeing with Statement No. 17, page 31		53,794 11

E. MIALL, Commissioner.

INLAND REVENUE DEPARTMENT, OTTAWA, 3rd September, 1889.

#### APPENDIX B-Continued.

No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1889.

To whom Paid.	Service.	Deducted for Superannuation	Amounts Paid.	Total.
Johnson Wm	Belleville. Salary as Inspector for the year	\$ cts.	\$ ets.	\$ cts.
Slattery, Thos. Irwin, Samuel	do Mechanical Assistant for the year.	13 96 12 00	686 04 588 00	
	Salaries	45 92	2,254 08 869 64	3,123 72
	Hamilton.			
McKenzie, T. H	Salary as Inspector for the year	28 04 16 04 16 04	1,371 96 783 96 783 96	
Beattie, Thos	do Assistant Inspector for the year do do do	7 98 12 00 12 00	391 98 588 00 588 00	
Park, J. D	to 31st October, 1888	3 25	159 65 260 81	
	Salaries	100 67	4,928 32 916 84	5,845 16
	Kingston.			0,010 10
Macdonald, J. A Giffln, W. W Whitteker, Wm	Salary as Inspector for the yeardo Assistant Inspector for the yeardo do	19 96 12 00 12 00	980 04 588 00 588 00	
	Salaries		2,156 04 1,012 17	3,168 21
	London.			
Egan, James. Coughlin, D Thomas, J. S	Salary as Inspector for the year	24 00 12 00 12 00	1,176 00 588 00 588 00	
	Salaries		2,352 00 574 06	2,926 06
	Orillia.			
Bolster, Geo. I Lyons, John	Salary as Inspector for the year	19 96 13 96	980 04 686 04	l de la companya de l
	Salaries	33 92	1,666 08 534 25	2,200 33
		<u> </u>	1}	

APPENDIX B.—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1889.—Continued.

To whom Paid.		Service.		Deducted for Superannuation.	Amounts Paid.	Total.
Code, A	do Assist do do Salarie	tant Inspect do do s	or for the year	12 00 12 00 6 32 54 32	\$ cts. 1,176 00 588 00 588 00 493 68 2,845 68 1,175 65	\$ ets.
Piper, H Kinnee, D Wright, R Milligan, R. J	do Assist do do Salarie	tant Inspecto do do	yearor for the yeardodo	. 13 96 . 13 96 . 13 96 . 65 88	1,176 00 686 04 686 04 686 04 3,234 12 580 63	4,021 33 3,814 75
Hayward, W. J Hughes, R. A	do Assist tember, 188 Salarie	tant Inspect 38, to 30th J	year or, from 30th Sep une, 1889	8 87	980 04 434 68 1,414 72 1,204 46	2,619 18
Chalut, J. O. Urquhart, Jas Daoust, J. A Dorion, J. T Dillon, S Desrivières, F. L.	do Assist do do do do Salarie	tant Inspecto do do do do	year or for the year do do do	. 16 04 16 04 15 00 12 00 6 32 93 44	1,371 96 783 96 783 96 785 00 588 00 493 68 4,756 56 790 86	
Bourassa, P. E. Simard, H. Adams, W. C. Chabot, F. X. Kelly, M. J. Petit, J. B. Moreau, Alfred	Salary as Inspe do Assist do do do do Caret	tant Inspecte do do do do aker	year or for the year do do do do	. 12 00 6 32 6 32 6 32 4 40	980 04 588 00 493 68 493 68 493 68 345 60 150 00 3,544 68	5,547 42
					853 55	4,398 23

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Appendix B.—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1889—Continued.

	Market server variation server server server server server server server server server server server server ser			
To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Sherbrooke.	\$ cts.	\$ ets.	\$ ets.
Clark, E. Richard, J. U. Baker, J, S.		19 96 12 00 12 00	980 04 588 00 588 00	
	SalariesContingencies		2,156 04 527 72	2,683 76
	Three Rivers.	1	į	
Olivier, J. A Bruneau, P. C. A		19 96	980 04	
Provost, J. J	1888, to 30th June, 1889 do Assistant Inspector for the year	6 84 13 96	534 82 686 04	
	Salaries		2,200 90 350 07	2,550 97
	Fredericton.			
Freeze, E. C. Bois, Geo. A.	Salary as Inspector for the yeardo Assistant Inspector for the year	19 96 12 00	980 04 588 00	
	Salaries	31 96	1,568 04 218 31	1,786 35
	$m{K}ing$ 's.			
Scovil, W. B	Salary as Inspector for the yeardo Assistant Inspector for the year	16 04 6 32	783 96 493 68	
	Salaries	22 36	1,277 64 293 18	1,570 82
	St. John.	i		_,
Wilmot, J. B Cowan, E	Salary as Inspector for the yeardo Assistant Inspector for the year	24 00 12 00	1,176 00 588 00	
	Salaries Contingencies		1,764 00 14 75	1,778 75
	Cape Breton.			7,110 19
Tremaine, L. E	Salary as Inspector for the year Contingencies	16 00	784 00 141 69	925 69
Ryan, J. B	Halifax. Salary as Inspector for the year	19 96	980 04	
Kelly, Edw	do Assistant Inspector, from 1st December, 1888, to 30th June, 1889		286 12	
	SalariesContingencies	25 46	1,266 16 324 80	1 500 00
				1,590 96

Appendix B.—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1889.—Continued.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Pictou.	\$ ets.	\$ ets.	\$ ets
McKay, John	Salary as Inspector for the year	18 00	882 00 157 26	1,039 26
	Yarmouth.			
Allison, Chs	. Salary as Inspector for the year	20 00	980 00 270 11	1,250 11
	Charlottetown.			
Reddin, Jas	Salary as Inspector for the year	20 00	980 00 205 11	1,185 11
	Winnipeg.			•
Huggard, R. T. Cowley, W. Ross, H. E. Costello, J. W. Patterson, A. C. Girdlestone, R. J. M.	. do do do do do	12 00 12 00 12 00	980 04 588 00 588 00 588 00 493 68 195 96	
	Salaries	66 32	3,433 68 528 58	3,962 20
	Victoria.			
Jones, R Horne, A. H	. Salary as Inspector for the year		588 00 345 60	•
	Salaries Contingencies		933 60 611 03	1,544 6
do	Ontario Contingencies., Nova Scotia do Manitoba do		23 47	254 25
	General.			201 2
	Salary as Commissioner of Standards for the year Salary as Chief Inspector of Standards for	16 00	784 00	
	the year	40 00 56 00	2,744 00	
do	Travelling expenses		757 48	3,501 4
Burgess, Thos Bailey, Geo Birkett, Thos	181 days service as Mechanical Asst., at \$2 p 172 do do Iron work	do	344 00 76 32	
British American Bar Note Co., The	Stamps, &c		. 94 91	

Appendix B.—No. 7.—Details of Weights and Measures Expenditure, for the Year ended 30th June, 1889—Concluded.

To whom Paid.	Service.	Amounts Paid.	Total.
	General Contingencies—Concluded.	\$ cts.	\$ cts.
Hall, J. S. Loudon, W. J	Law costs and professional services	67 14 175 00 35 50	
Publishing Co Annual Register	Advertising Weights and Measures noticedo do in issue of Register for 1887-88.	44 00 200 00	
Morrow, J.	Professional services in re Cosgrove vs. Joleau Petty expenses Expenses Professional services in re Regina vs. Rublee,	24 00 5 81 43 50	
	Riddell & Co. 6,000 post cards for printing Law costs in re Regina vs. Anthony Healy Steel stamps Expenses repairing scale	16 85 60 00 17 00 5 40	
Meredith J. G.	Law costs in re Kepina is. Honos	10 (10)	
"Equity". The Catholic Record The Glengarrian North Ontario Times	doz. weight cases.  Repairing barometer.  Advertising Weights and Measures notice.  do do do do do do do	9 90   19 80   16 50   9 90	
The Journal	do do do do do do	22 44 9 90 17 16	
Irish Canadian	do do	85 80 2 50 10 00 4 00	
-	TotalLESS—Refund from R. T. Huggard for Weights		1,856 09
	and Measures apparatus lost	·····	1 951 24
	Grand Total	-	1,851 34 65,140 10
	ADD—Printing Stationery	748 97	1,186 56
!	Authorised Disbursements (less Superannuation)  ADD—Balances due by Officers, 30th June, 1889  do to do 1st July, 1888	201 51	66,326 66
	uo vo as 2000 asy, 2000	10 10	220 61
	LESS-Balances due by Officers, 1st July, 1888		66,547 27 193 26
	Actual Disbursements agreeing with Statements Nos. 21 A and 21 B, pages 39 and 40		66,354 01

Inland Revenue Department, Ottawa, 3rd Sept., 1889. E. MIALL, Commissioner.

### APPENDIX B-Continued.

No. 8.—Details of Gas Inspection Expenditure, for the Year ended 30th June, 1889.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Belleville.	\$ cts.	\$ cts.	\$ cts.
Johnson, Wm	Salary as Inspector for the year	3 16	155 17	
,	Contingencies		118 33	273 50
	Brockville.			A PARTICIPATION OF THE PARTICI
Hubertus, H. J	Contingencies			58 10
	Cobourg.			1
Cahill, T	Salary as Inspector for the year	1 32	67 43 110 20	
	Cornwall.	·		177 63
Burrows, Wm	Contingencies			177 85
	Desoronto.			
Johnson, Wm	Salary as Inspector for the year	1 76	89 87	89 87
	Hamilton.			
McPhie, D Dennis, W. A	Salary as Inspector for the year do Asst. do for June.	19 96 0 16	980 04 8 17	
	Contingencies	20 12	988 21 326 07	1,314 28
	$m{K}ingston.$	! !		
Burrows, Wm	Salary as Inspector for the year	8 00	392 00 197 92	589 92
	Lindsay.			
Cahill, T.	Salary as Inspector for the year	1 32	67 43 94 85	
	London.			162 28
Williams, J	Salary as Inspector for the year	20 00	980 00 820 08	1 200 02
	Ottawa.			1,800 08
Hubertus, H. J	Salary as Inspector, from 1st July, 1888, to 28th February, 1889	10 44	514 53	
Giffin, Wm	June, 1889	0 11	5 44	
ş	Contingencies	10 55	519 97 499 43	1,019 40
1	1		1	

Appendix B.—No. 8.—Details of Gas Inspection Expenditure for the Year ended 30th June, 1839—Continued.

	ended som sine, 10 5—Contin			
To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Peterborough.	\$ cts.	\$ ets.	\$ cts.
Cahill, T	Salary as Inspector for the year	2 69	136 81 103 00	239 81
	Port Hope.			
Cahill, T	Salary as Inspector for the year	1 32	67 43 35 10	102 53
	Toronto.			
Johnstone, Jas. K	Salary as Inspector for the year	20 00	980 00 148 23	1,128 23
	Montreal.			
	Salary as Inspector, from the 1st July to 30th September, 1888	6 99	342 99	
	Salary as Inspector, from 1st October, 1888, to 30th June, 1889	18 00	882 00	
Aubin, A	30th June, 1889	1 33	65 33	
	Salaries	26 32	1,290 32 1,138 03	2,428 35
	Quebec.			
LeVasseur, N Moreau, Alfred	Salary as Inspector for the year do Assistant Inspector for the year	19 96	980 04 150 00	
	Salaries	19 96	1,130 04 360 12	1,490 16
	Sherbrooke.			2,200
Pennoyer, H. J	Contingencies			129 76
	Three Rivers.			
Marchand, N	Salary as Inspector for the year	2 50	197 50 1 75	199 25
	Chatham.			_
Lawlor, R. A	Salary as Inspector for the year	3 00	147 00 18 00	165 00
	Fredericton.			
Purdie, S. A	Salary as Inspector for the year	2 00	197 50	197 50
	190			

APPENDIX B.—No. 8.—Details of Gas Inspection Expenditure for the Year ended 30th June, 1889—Continued.

To whom Paid.	Service.	Deducted for Superannuation.	Amounts Paid.	Total.
	Moncton.	\$ cts.	\$ cts.	\$ cts.
Lawlor, R. A	Salary as Inspector for the year	3 00	147 00 44 45	191 45
	St. John.			
Rowan, A	Salary as Inspector for the year	20 00	980 00 65 44	1,045 44
	Halifax.			,
Miller, A Munro, H. D	Salary as Inspector for the year	24 00 1 96	1,176 00 98 04	
	Salaries	25 96 	1,274 04 727 07	2,001 11
	Charlottetown.			
Knight, Jos	Salary as Inspector for the year	2 50	197 50 29 00	226 50
	Winnipeg.			
Huggard, R. T	Salary as Inspector for the year		196 00 119 15	315 15
	Victoria.			
Jones, R	Salary as Inspector for the year	4 00	196 00 210 00	406 00
	General.			
Aubin, N	Salary as Consulting Inspector, from 1st July to 30th September, 1888	3 00	147 00	147 00
	Contingencies.			
District Inspector	Ontario contingencies			37 77
	General Contingencies.			
1	To pay for 4 photometers and other work the Gas Inspector's Office, Montreal. Expenses in accompanying Chief Insp	done for	341 99	
Miller, A	ingrapation town		79 74 1	
American Meter Co.	36 lbs. ammonia 45 ft. rubber tubing at \$1.50, \$67.50, and 1			
New York	One test meter		27 75 108 04	

APPENDIX B.—No. 8.—Details of Gas Inspection Expenditure for the Year ended 30th June, 1889—Concluded.

To whom Paid.	Service.	Amounts \ Paid.	Total.
The Gutta Percha and	General Contingencies—Concluded.	\$ ets.	\$ ets.
Rubber Manuf, Co	Tubing, &c	18 00	ļ
Wallace & Son, Jno	Part payment on account of meter testers and photometers	1,400 00	2,045 37
	Less—Sale of old stove		4 50
	Total, General Contingencies		2,040 87
	Grand Total. ADD—Printing. Stationery.	97 02 80 17	18,154 79
			177 19
	Authorized Disbursements (less Superannuation) ADD—Balances due by Inspectors, 30th June, 1889		18,331 98 262 88
	Less—Balances due by Inspectors, 1st July, 1888 do to do 30th June, 1889	12 88 5 00	18,594 86
			17 88
	Actual Disbursements, agreeing with Statement No. 22, page 42		18,576 98

E. MIALL, Commissioner.

INLAND REVENUE DEPARTMENT,
OTTAWA, 3rd September, 1889.

#### APPENDIX B.—Continued.

No. 9.—List of Persons employed by the Inland Revenue Department on Salary, during the Year ended 30th June, 1889.

	Service.						
Name.	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulteratin of Food.
Adams, J. S.		1					
Adams, Wm. C		; .		1			
Alexander, Thos		1 1					
Allison, Chas				1			
Amor, Wm		i					
Archambault, R	1						
Atherton, R		1			1		
Baby, J. C		1					
Baby, JosBaby, W. A. D							
Bannerman, Wm					1		
Barber, J. S.				1	l	1	
Barker, C		1					ļ,
Barrett, J. K		1					
Barrett, Thos. J		1				1	
Battle, M					1		
Beasley, RBeattie, Thos		1		····i	1		
Beauchamp, J. P.		1	1	1	1	1	1
Bédard, W. G.	1	î					l
Belland, J. E	1		1				
Bellemare, R	1	1					
BelleRive, Chas.	1		1	1			
Belyea, T. H.				1			
Bennett, Jas				1		1	1
Black, C. E. S.				1	1	1	
Blair, J. B.	1	1			j	1	
Blatch, F. K	1						
Blethen, C. W	1	1					
Boggs, G. W				1			
Bois, G. A. Boivin, C. A			.	i			1
Bolster, G. I.			1	i	1	1:::::	1
Boomer, J. B.							
Borradaile, R		1					
Bourassa, G		1			.		
Bourassa, P. E				1			
Bourget, O			ļ				
Bouteiller, G. A. Brennan, John.			i i i i i i i				
Broadfoot, S.			1		1		
Brougham, M. E.							
Brown, J. F	1	٠					
Brown, J. J.				.			
Browne, G. W. Brunel, G		1					
Brunel, J.	i						
Bruneau, P. E. A.				i	1		
Bulmer, Wm		. i	1	.	.		
Burke, T		. 1					
Burrows, Wm			1	-	. 1		
Byrnes, John	. 1	i		.			
Cahill, J. H			1	.	. ···i		
Cameron, D. M.			1		.   -	.1:::::	
Campbell, G. J.		11/				.]	.
÷ *	1	1	1	1	1	1	1

# Appendix B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—Continued.

	Service.						
Name.		Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulterati'n of Food.
Campbell, J. McD.	1	1					 
ampeau, F. R. E							
Zamyré, J. N		1					
Carroll, D Carter, Wm	1	1					
Casey, Thos							1
aven, A		1					
Caven, W							
Chabot, F. X. Chalut, J. O		1	1				
Christie, W. J	1	1		<i></i>			
nubbuck, C. E. D	1			<i></i>			
lark, A. F		1					
lark, E			J				
ode, Abraham.							
oleman, Chas		1					
Soleman, J. J.		1					
oles, F. H	;	1					
onway, B. J	1		1				1
ostello, J. W							
ostigan, H. A		1					
Ostigan, J. J.	. 1	1					
Courtney, J. J. Cowan, Edgar		1					
Coyle, Jas.							
raig, J.		1					
Prawford, W. P	.	1					
rotty, John		1		<b></b> .			
Prowe, W		1	1				1::::
Daoust, J. A.							1
Daveluy, George	.¦	1	i 1	1			1
Pavis, John		1					
Davis, T. G.	•   • • • • • •	1					<b>\</b>
Dawson, W De Martigny, C. R			1		1		1::::
Desaulniers, Eugène			. 1				
Deserres, G	.		. 1				
Des Rivières, F. L.				1	·····		1
Desroches, David	1	1					1
Oevlin, R							[
Dibblee. Wm		1	1		.		1
Dick, J. W	.)	.) 1					
Dickson, C. T		1 1	ì				
Dingman, N. J.	1	i		1			
Podd, John		. 1			.		
Podds, E. W		1					.
Donaghy, Wm		. 1					
Donoghue, Geo				i	1		
Dovon, J. A	. 1						.
Oudley, W. H			1				
Duguay, Joseph		1 1	1			.	
Dumbrille, R. N. Dumbrille, J.	.1		1	1	1	1	1
Dumouchel, Léandre.			1				
yy	1	1	1		1		1

APPENDIX B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—Continued.

	,						
	Service.						
Name.	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulterat'n of Food.
Dunlop, C. Duplessis, C. Z. Dustan, Wm. M. Earle, R. H. Egan, Jas. Egener, A. Elwood, G. V. Erb, A. A. Elwood, G. T. Fahey, Ed Falconer, Jas. Ferguson, J Ferguson, John C. Flynn, D. Flynn, D. Flynn, D. Flynn, D. Flynn, J. P Fowler, Geo Fox, Thomas Fraser, John. Freeze, E. C. Gallagher, F. Gerald, C. Gerald, W. H. Gerald, W. J. Giffin, Wm. W. Gill, Wm. Gill, Wm. Girard, Irénée. Girdlestone, R. J. M. Godson, H. Goronn, D. Gosnell, T. S. Gow, James Gowen, Edmund Graham, W. J. Grant, H. H. Greey, S. Grimason, Thomas. Grogan, S. E.	1		1	1		1	1
Hagerty, P. Hall, C. R. Hall, J. J. Hamilton, T. C. Hamilton, W. L. Hanney, A. Harney, Thos Hart, P. D. Harwood, R. U. Hastie, Wm. Hawkins, W. L. Hayward, W. J. Hébert, C. D. Helliwell, H. N. Henderson, W. Henry, J. M. B. Henwood, Geo. Heron, W. L. Hesson, C. A. Hicks, W. H. Hill, A. M. Himsworth, Wm. Hobbs, G. N.	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1			

Appendix B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—Continued.

	Service.						
Name.	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulterat'n of Food.
Horn, A. H. Howie, A		1		1			
Hudon, A		1					
Huggard, R. T. Iler, B.		1					
Ironside, G. A. Irwin, Robt		1					
Jack, Wm. James, T. C.		1					
Jamieson, R. C. Johnson, Wm.		1			1		
Johnston, G. E. Johnstone, W. J.		1					
Jones, Richard				1	1		
Jubenville, G. P. Keilty, Thos.		1					
Kellock, D		1		i			
Kenning, J. H. Keogh, P. M		1					
Kinnee, Daniel. Knight, Jos		! ,		1			
Knowlson, J. B.		1					
Lane, John. Lang, V.		1	1				
Langlois (dit Traversy), F. X		1 1					
LaRue, Geo Lawlor, H.		1 1					
Lawlor, R. A. Lecompte, S.	1	1					
Lecours, H. T.	1	1	1				
Lee, Edward Lefebvre, F. X							1 ····
LeMoine, Jules LeMoine, J. M.	1	1 1					
Lépine, Louis Leprohon, R. M	1	1 1					
Lett, F. P. A. LeVasseur, N.	1	1					]
LeVasseur, Z	1		1	<i></i>	·		
Lusignan, A.	1	1					····
Lynch, P. Lynes, K.	 	····i		1	ļ		
Lyons, John MacDonald, D	1	1		1			
MacDonald, A. D	1	1					
Macdonald, J. A. Macdonald, J. A.	1	1		1			
Macfarlane, Thos							1
Malo, Ť. Malone, Thos.	į	1	··· ·i				
Manning, J. Marchand, N.		1	J		1		
Marentette, Alex				1			
Marshall, F. Mason, F					.		
Mason, Jas Miall, E	1	11		i			
145	<u> </u>		!	<u> </u>		1	

APPENDIX B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—Continued.

			s	ERVICE.			2 - 6°.
NAME.	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulterat'n of Food.
Miller, A	ļ				1		
Miller, J. E							
Miller, W. F. Miller, E.	• • • • •	1		• • • •			
Milligan, R. J				1			
Milliken, E. Moore, J. N.		1					
Moore, T		1					
Moore, W				····i	·····i		
Morrow, John		1					
Mulhern, M. M. Munro, H. D.		1 1			····i		
Murphy, F		1					
Murray, A. E. McAllister, A.							
McClanaghan, M		1					
McCoy, Wm							
McDonald, J				1			
McDonald, M. A. McEachern, A.		1 1					
McKay, John				1			
McKay, J. H				i			
McKimm, U. H		1					
McNamara, M. McPherson, A. F		1 1					• • • • • •
McPhie, Donald		;.			1		
McSween, James Nash, S. C							
Neelands, H. Nettle, R.		1					
Nettle, R. Nichols, J.T.		1				• • • • • •	
Olivier, J. A				1			
O'Brien, J. F		1					
O'Donnell, John		1					
O'Leary, T. J		$\begin{bmatrix} & 1 \\ & 1 \end{bmatrix}$		· · · · · ·			
Patton, Jas. Patterson, A. C.			1				
Pennoyer, H. J.		1		1			
Perkins, L. A. Perry, G. L.		1					
Petit. J. B.				····i	<i></i>		
Pinsonnault, Alfred C. Piper, H		1					
Pole, C. W		1		1			
Poliquin, F. Powell, J. B.		····i	1				
Power, Thos. A		1	:				
Provost, J. J. Quain, Redmond.	<u>i</u>	ļ		1			
Quinn, J. D		1					
Ramon, Pierre		1					
Regnier, P		1		1			
Rennie, George		1					
Richard, D				1			
146							

APPENDIX B.—No. 9.—List of Persons employed by the Inland Revenue Department, &c.—Continued.

			s	ERVICE.		-	
Name.	Inside.	Excise.	Cullers' Office.	Weights and Measures.	Gas.	Preventive.	Adulterat'n of Food.
			_		_		
Richard, J. U. Richard, R.							
Robins, Paul M Robson, James		1					
Rogerson, J. M				1			
Ross, S. F. Rouleau, J		1	• • • • •				.,
Rowan, A. Rowland, E. Rowland, F.					1		
Schram, B. Scovil, W. B.		1		1			
Scullion, J. W. Schanacy, M		1 1					
Shaw, J. F	1			1			
Simpson, A. F. Sinon, E. Hy		1					
Slattery, R   Slattery, Thos   Smyth, B. B	<i></i> .	1 1		1			
Spereman, J. Spence, F. H.							
Spence, John Standish, J. G		1 1					
Stewart, Jas Stewart, Neil		1					
Stratton, W. C. Ste. Marie, L. C. A.		1					
Tansey, J. P. F Taylor, J. F		1					
Teakles, B. H. Till, T. M.		1	 				,
Tompkins, P. Toupin, F. X. J. A. Tremaine, L. E.				······i			
Urquhart, Jas. Valin, J. E				1			
Villeneuve, J. Vincent, J. L.							
Wainwright, F. G		1 1					
Walsh, Daniel	····i	1					
Walsh, T. J. Watkins, J. A.		1 1	1				
Webster, Thos Westman, T Weyms, C		1					
Whelan, W. F			1	1			
Williams, J. Wilmot, J. B.				1	1		
Wilson, R. Woodward, G. W.		1				· · · · · · · ·	
Wright, Robt. J		1		1			
Total.	26	244	19	59	14	3	5
INLAND REVENUE DEPARTMENT, OTTAWA, Sept. 3rd,	1889.		Ε.	MIA	LL, Co	mmissi	oner.

#### APPENDIX B-Concluded.

No. 10.—List of Persons employed by the Inland Revenue Department on Salary, during a portion of the Year ended 30th June, 1889.

			s	ERVIC	E.	
Name.	Period.	Inside.	Excise.	Weights and Measures.	Gas.	Adulteration of Food.
Aubin, A. Aubin, N. Beasley, R. S. Bickle, J. W. Cahill, Thomas. Carver, G. W. Courtman, John Davies, A. E. Dennis, W. A. Dowling, Thomas Gatien, F. Giffin, Wm. Gow, J. E. Hart, Wm. Heney, J. J. Howden, R. Hubertus, H. J. Hughes, R. A. Hamilton, C. M. Kelly, Edward. do Kennedy, J. D. La Mothe, H. G. Magness, Robert. Mulligan, Jas. McCabe, Chas. Parks, J. D. St. Marie, J. B. E. L. St. Louis, A. Sexton, J. Taylor, G. W. Vowell, A. W. Waller, J. Weir, Jas.	do 22nd Jan., 1889, to 30th June, 1889. do 1st July, 1888, to 30th Sept., 1888. do 1st July, 1888, to 30th Sept., 1888. do 1st July, 1888, to 8th Oct., 1888. do 1st July, 1888, to 14th April, 1889. do 1st July, 1888, to 31st Jan., 1889. do 14th May, 1889, to 30th June, 1889. do 3rd Dec., 1888, to 30th June, 1889. do 1st July, 1888, to 25th Jan., 1889. do 1st June, 1889, to 30th June, 1889.	i	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1  1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
	RECAPITULATION.	1	1	<u> </u>	1	
Employed durin do	g the year, as per Statement No. 9		• • • •	. 37		
Deduct employe do do do do do do	Total d in the Inside and Excise Service do do Weights and Measures Service do Excise and Weights and Measures Service do do Adulteration of food do do Gas Service do Weights and Measures and Gas Service do Preventive Service and Adulteration of Food  Net Total		1 1 1 5		6	
Inland Revenu	E. MIALL, E DEPARTMENT, OTTAWA, 3rd Septembe				ier.	
	148					

# APPENDIX C.

HYDRAULIC AND OTHER RENTS.

### APPENDIX

Dr.

# Hydraulic and other Rents, &c.-

171%						
Balances due on 1st July, 1888.	Accrued, year ended 30th June, 1889.	Total.	Number.	Location.	Original Lessee.	Present Occupant.
\$ cts.  11,368 98 2,000 00 8,772 00 7,818 07 2,360 00 2,400 00 7,080 00  2,360 00 13,920 00  25 00  200 00 96 00	\$ cts.  397 33 80 00 376 00 294 93 80 00 2980 00 2,980 00 80 00 100 00 100 00 96 00 8 00 1 00	\$ cts.  11,766 31 2,080 00 9,148 00 8,113 00 2,440 00 2,480 00 7,320 00 2,980 00 2,440 00 14,400 00 100 00 100 00 16 00 75 00  1 00 200 00 1 00 200 00 96 00 96 00	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23	do do	Thompson & Perkins. Lyman Perkins John McKay & Co. J. & J. Petrie. P. H. & L. R. Church. Perley & Pattee. J. M. Currier. Harris, Bronson & Co. L. M. Coutlee  Hon. J. Skead.	do do J. R. Booth Thos. McKay, heirs of Mrs. Petrie Blaisdell & Co Levi Young Philip Thompson N. S. Blaisdell Bronson & Weston Levi Young J. R. Booth Bronson & Weston do Perley & Pattee Mary Conroy John Rochester N. Têtreau G. A. Grier & Co Hector Pruneau
260 00 380 00 59,700 05 6 00	5,657 26	260 00 . 380 00 65,357 31 7 00	24 25 1	do do St. La wrence River		John Rankin
200 00 10 00 86 00	1 00 25 00 100 00 20 00 10 00 10 00 10 00	5 00 25 00 300 00 20 00 20 00 10 00 86 00	2 3 4 5 6 7 8	do do Burlington Bay. do do Brantford Presqu'Isle Har- bor	mission L. T. Pinze Richelieu and Ontario Navigation Co. N. F. Birely B. Perry. J. C. McKeand B. Heyd	S. K. Birely
2 00 140 00 165 00	20 00	2 00 160 00 165 00	10 11 12 13	Collingwood do Fort Francis	Great Northern Transit Co S. H. Fowler Henry Holbrooke	<b>b</b>
90 00	25 00 25 00 50 00	90 00 25 00 25 00 50 00	14 15 16	do	Jonathan Maury Roderick Finlayson Joseph Spratt Corporation New West	
703 00	288 00	991 00			minster	

C.'
Lessees' Accounts, 1888–89.

Cr.

Lessees' Accounts, 1888–89.					CR.
Description of Property.	Number.	Date to which the Account is made up.	Paid during Fiscal Year.	Balances due 30th	Total.
			\$ cts.	\$ cts.	\$ cts.
Lot A, Chaudière Street, service ground Lots B and C do do Lots D do do Lots E, F and G, South Head Street, service ground. Lots H, I and J, Grist Mill, South Head Street. Lot K, Fanning Mil do Lot L, service ground do Lots Q, R and T, service ground, North Middle St. Lots M, N, O and P, service ground. No water used. Lot S, service ground Lots U, V, W, X, Y and Z, service ground Two strips of land. Lumber yard, head of slides Bridge over slides. Strip of land (Amelia Island) Reserve, head of island. Strip of Lot 39, Con. A, Nepean Portion of Lot 39, Con. A, Nepean Excavated channel, slide and two dams, Little Chau-	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	do April 1, 1889. May 1, 1889. June 30, 1889. April 1, 1889. John 1, 1889. Go Jan. 1, 1889. Sept. 20, 1889. July 1, 1889. July 1, 1889. do do July 1, 1889.	200 00 104 00 10 00 10 00 96 00 16 00	2,080 00 9,148 00 8,113 00 2,440 00 2,480 00 7,320 00 2,980 00 2,440 00 14,400 00	11,766 31 2,080 00 9,148 00 8,113 00 2,440 00 2,480 00 7,320 00 2,980 00 2,440 00 14,400 00 200 00 100 00 96 00 16 00 650 00
dière  Covering over portion of Ottawa slides.  Site for boathouse, foot of Rideau Canal Locks  Water lots opposite Lot 30, Con. A, Nepean  Three small islands do  Water Lot, Calumet.  East portion of Hawley's Island.	20 21 22 23 24	Mar. 1, 1889 Nov. 10, 1889 June, 1, 1889 Dec. 1, 1881 May 1, 1882 June 30, 1881 do	1 00	2 00 200 00 96 00 260 00 380 00	75 00 1 00 2 00 200 00 96 00 260 00 380 00 65,357 31
	: 1				
Small Lot of Land near Custom House, Quebec do for an Office, Rivière du Loup	1 2	Sept. 1, 1886. June 30, 1887.		7 00 5 00	7 00 5 00
Roadway from Pier at Coteau Landing	5 6	Jan. 1, 1888. do	20 00	300 00	25 00 300 00 20 00 20 00 10 00
Lots on North Bay Use of old log house formerly used as Custom House, Shrewsbury Ont.	8	Nov., 1887. Sept. 11, 1886.		86 00	86 00
Use of old breakwater for storing coal.  Lot near town of Alberton, for piling lumber.  Camp reserve with wharf and building, New West-	10 11	Feb. 5, 1888. May 1, 1889.	<u> </u>	2 00	1 00 2 00 160 00
minster. Portion of Assay office, New Westminster	13 14	June 30, 1881.			165 00 90 00
Privilege to erect two Bulk-heads, Rock Bay, Victoria Harbor.  Privilege to build a Wharf opposite his own property, Victoria Harbor.	15	1	. 25 00 . 25 00		25 00 25 00
Two Lots of Land for C. P. R. purposes			1		50 00
			156 00	835 00	991 00
	·	•			

DR.

# APPENDIX C.—HYDRAULIC and other Rents, &c.—

Balances due 1st July, 1888,	Accrued year ended 30th June, 1889.	Total.	Number.	Location.	Name of Proprietors.
\$ ets.	\$ ets.	\$ ets.			LAND SALES—PRINCIPAL ACCOUNT.
12,092 83 433 34 330 00 147 80 248 40 154 80 600 00 333 33 533 33 63 00 15,573 50		12,092 83 433 34 333 34 300 00 147 80 248 40 600 00 333 33 533 33 63 00 15,573 50	1 2 3 4 5 6 7 8 9 10 11 12	Bonner's property, Quebec	Choat & Kern. Timothy Sullivan, now M. Murphy. John Bailey, now Alex. Powell. Abraham Thompson. John Boomer John Garbatz, now J. C. Nolan. N. H. Bowen. Estate Robert Reid. Jean Chevalier. Daniel Holden. George Creeley. Thomas McAdam.  Land Sales—Interest Account.
6,298 25 558 00 180 00 288 00 146 35 260 91 199 66 792 00 190 00 298 68 35 91 100 00 100 00	20 00 18 00 8 87 14 91 9 29 36 00	6,298 25  558 00 200 00 306 00 155 22 275 82 208 95 828 00 190 00 298 68 35 91 100 00 100 00	1 2 3 4 5 6 7 8 9 10 11 12 13	Bonner's property, Quebec	Choat & Kern (matured). Timothy Sullivan, now M. Murphy John Bailey, now Alex. Powell. Abraham Thompson. John Boomer John Garbatz, now J. C. Nolan. N. H. Bowen Estate Robert Reid Jean Chevalier. Daniel Holden George Creeley. Thomas McAdam Joseph Brook, tenant.
9,447 76	107 07	9,554 83			

Inland Revenue Department, Ottawa, 3rd September, 1889. Lessees' Accounts, 1888-89-Concluded.

Cr.

Description of Property.	Number.	Date to which the account is made up.	Paid during fiscal year.	Balances due 30th June, 1889.	Total.
Hamilton and Port Dover Road and Caledonia Bridge Lot No. 1, Wolfe street.  do 9, do do 49, do do 73 and 74 Tower street. do 64 Wolfe street and 211 and 252 Ware street. do 67 and 68 Monument street. do 22 and 23 Wolfe street do 32 Wolfe street do 65 and 66 Wolfe street do 31 Wolfe street do 31 Wolfe street do 31 Wolfe street	2 3 4 5 6 7 8 9	3	\$ cts.	\$ cts. 12,092 83 433 34 330 00 147 80 248 40 154 80 600 00 333 33 533 33 63 00 15,573 50	\$ cts. 12,092 83 433 34 330 00 147 80 248 40 154 80 600 00 333 33 533 33 333 33 63 00 15,573 50
Lot No. 1 Wolfe street	. 2 3 4 . 5 . 6 . 7 . 8 . 10 . 11	d do do do do do Nov. 1, 1863 do do do	80 00	6,298 25 558 00 120 00 306 00 155 22 275 82 208 95 828 00 190 00 298 68 35 91 100 00 100 00 9,474 83	6,298 25 558 00 200 00 306 00 155 22 275 82 208 95 828 00 190 00 298 68 35 91 100 00 100 00

E. MIALL, Commissioner.

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II.		

# SIXTEENTH REPORT

ON

### INSPECTION

 $\mathbf{or}$ 

# WEIGHTS, MEASURES AND GAS,

BEING

### SUPPLEMENT No. 12 TO THE REPORT

OF THE

# DEPARTMENT OF INLAND REVENUE, 1889.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

### REPORT

OF THE

# COMMISSIONER OF INLAND REVENUE

ON THE

### INSPECTION OF WEIGHTS AND MEASURÉS, AND GAS.

To the Honorable

The Minister of Inland Revenue.

SIR,—I have the honor to submit herewith my report on the inspection of Weights and Measures and Gas, with the usual statements in relation thereto, for the year ended 30th June, 1889.

1. The total revenue collected during the year for the inspection of Weights and Measures was thirty six thousand and forty dollars and ninety-one cents (\$36-040.91,) as against thirty seven thousand eight hundred and eighty-five dollars and thirty-nine cents (\$37,885.39) collected during the year ended 30th June, 1888.

The total expenditure was sixty-seven thousand three hundred and ten dollars and fourteen cents (\$67,310.14) as against sixty-seven thousand four hundred and seventy dollars and sixty-eight cents (\$67,470.68) expended during the year ended 30th June, 1888.

2. Appendix "A" gives a summary statement of the expenditure and receipts of each inspection division.

Hamilton is the only division in which the receipts exceed the cost of collection.

3. In Appendices "B", "C" and "D" will be found a detailed statement of weights and measures and weighing machines presented for verification, verified, and rejected during the year.

The number	of all o	descriptions	may	be summarily	stated as follows:—

	Presented.	Verified.	Rejected.	Percentage of Rejections.
Weights, Dominion	83,161	82,781	380	0.45
Measures of Capacity, Dominion	85,805	85,405	400	0.46
Lineal Measures	4,274	4,101	173	4.04
Balances, equal arms	13,001	12,820	181	1.39
do Steelyards	5,485	5,442	43	0.78
do Platform Scales	22,612	22,341	271	1.19
Irregular Weights	4,334	4,246	88	2.03
do Measures	318	318		
Troy Weights	37	35	2	5.40

- 4. In order to comply with the requirements of Sec. 34 of the Weights and Measures Act, relative to the comparison of the Departmental with the Parliamentary copies of the Dominion standards of weight and length, I had the comparisons scientifically made by W. J. London Esq., Lecturer in Physics, University College, Toronto, whose report in full will be found in Appendix "H."
- 5. Since the date of my last report, Mr. Johnstone, Chief Inspector Standards Branch, has visited and inspected the offices, books, standards &c., of the divisions of Montreal, Ottawa, Toronto, Orillia, Hamilton, London, Windsor, Manitoba and British Columbia, taking in en route Brandon, Qu'Appelle and Calgary; he also carefully adjusted, verified and stamped the whole of the 50 lbs iron standards of weight in use in the above named divisions and offices. Mr. Johnstone reports having found the work progressing fairly well, and the public generally satisfied with the manner in which the Weights and Measures Act is now being administered.
- 6. I again take the liberty to call your attention to and urge upon you the necessity of immediately securing the services of a first class practical scale maker to attend to the repairing and adjusting of the "local" standards &c. It is really next thing to an impossibility, to keep this branch of the service in anything like proper condition without the mechanical assistance suggested.

### INSPECTION OF GAS.

7. The total revenue collected during the year for the inspection of gas and gas meters was seven thousand nine hundred and twenty-two dollars and seventy-five cents (\$7,922.75) as compared with six thousand nine hundred and forty-six dollars and sixty-five cents, (\$6,946.65) collected during the year 1887–88.

The total expenses were eighteen thousand five hundred and thirty-eight dollars and ninety-six cents, (\$18,538.96) as against twenty thousand eight hundred and ninety-four dollars and ninety-eight cents, (\$20,894.98) during the year ended 30th June, 1888.

- 8. Appendix "E" gives a summary statement of the expenditure and receipts of each gas Inspection District.
- 9. The details of gas meters will be found in Appendix "F". The result, as compared with the previous year, may be stated as follows:—

	Presented for	Finally
	verification.	rejected.
1887–88	7,945	158
1888–89	9,629	198

### Illuminating Power.

10. A statement of the illuminating power and purity of gas inspected during the year will be found in Appendix "G."

The illuminating power, where inspection has been made, has been as follows:—

Places.	Number of tests made.	Number of times below standard.	Places.	Number of tests made.	Number of times below standard.
Belleville Brockville Brantford	36 16 12	1 0 0	St. Thomas	$12 \\ 104 \\ 12$	0 0
Chatham	$\frac{12}{11}$	0	Woodstock	$\frac{12}{108}$	0
Cornwall	$\frac{12}{12}$	5 0	Quebec	$^{12}_{12}$	0
Guelph	$\frac{12}{12}$	0	Three Rivers	$\frac{52}{0}$	1 0
Ingersoll	$\begin{array}{c} 12 \\ 46 \end{array}$	0	FrederictonSt. John	$\frac{11}{90}$	0 0
Lindsay	$\frac{12}{36}$	0	Moneton	$\begin{smallmatrix}0\\24\end{smallmatrix}$	0
Napanee	0 36	0 19	Pictou	$\frac{12}{12}$	0 2
Peterborough Port Hope	12 11	0	Charlottetown Winnipeg	$\begin{array}{c} 37 \\ 12 \end{array}$	0
Stratford	11 12	0	Victoria, B.C	28	. 0

From the preceding table it will be seen that a very great improvement has been made in the illuminating power of the gas supplied to consumers during the year covered by this report, Ottawa and Cornwall being the only two places whose record is greatly deficient.

### Tests for purity.

- 11. Gas has only been tested regularly for sulphur and ammonia at Ottawa, Toronto, Montreal, Quebec, St. John and Halifax.
  - 12. In Ottawa the total number of tests made was:—
    For sulphur, 25 tests, once in excess of standard.
    For ammonia, 25 tests, never in excess.
    For sulphuretted hydrogen, 36 tests, never in excess.

#### 13. In Toronto:

For sulphur, 24 tests, none below.

For ammonia, 24 tests, none below.

For sulphuretted hydrogen, 104 tests, once present.

### 14. In Montreal:-

For sulphur, 49 tests, 22 times in excess.

For ammonia, 49 tests, never in excess.

For sulphuretted hydrogen, 108 tests, never present.

### 15. In Quebec:-

For sulphur, 24 tests, never in excess.

Por ammonia, 24 tests, never in excess.

For sulphuretted hydrogen, 24 tests, never present.

### 16. In St. John N. B.:-

For sulphur, 49 tests, never in excess.

For ammonia, 49 tests

For sulphuretted hydrogen, 90 tests, never present.

### 17. In Halifax:-

For sulphur, 24 tests, never in excess.

For ammonia, 24 tests

do

For sulphuretted hydrogen, 24 tests, never present.

18. In addition to the foregoing, tests for sulphuretted hydrogen have been made at each of the following places, where illuminating power has been tested, with the following results:—

Places.	Number of tests.	Present.	Places.	Number of tests.	Present.
Belleville Brantford Brockville Chatham Cobourg Cornwall Dundas Guelph Hamilton Ingersoll Kingston Lindsay London Napanee Peterborough Port Hope	36 12 16 12 11 12 12 12 12 12 12 46 12 36 36 36	2 0 0 0 0 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Stratford Stratford, 2nd St. Thomas. St. Catharines. Windsor. Woodstock Sherbrooke Three Rivers. Chatham, N. B Fredericton Moncton Pictou Yarmouth Charlottetown Winnipeg Victoria	12 37	1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

### REPORT OF PROGRESS.

19. Since the date of my last report, gas inspection offices have been fitted up and the inspection of gas and gas meters regularly established at Galt, Listowell and

Owen Sound. The gas inspection office at Stratford has been removed and conveniently fitted up in the basement of the Government building there. Three of the four American meter provers purchased by the Department, between two and three years ago, which were found not to comply with our Gas Inspection Act as regards the required 3 inch pressure, have been altered and re-graded so as to meet the requirements of the Act,—they are now in the offices at Toronto, Hamilton and London. The English meter provers at those places, which were replaced by the American, were sent to Hamilton, where they were re-lined with rolled copper, and thus made more durable and better in every way than they were when new. They are now set up and in use in the Galt, Listowell and Owen Sound offices.

Four "Aubin" Photometers were sent to Hamilton—three from Montreal and one from the Department. After overhauling, &c., three of these photometers were set up in the Galt, Listowell and Owen Sound offices. The fourth is now at Hamilton ready for shipment to any point where it may be required.

During the present year, the Department has had made by Messrs Wallace & Son, of Hamilton, four meter provers and four photometers.

The meter provers are, as regards material, workmanship and style of finish, far superior to anything of the kind hitherto furnished the Government by either English or American makers, and at considerably less cost.

As several important improvements, suggested by Mr. Inspector McPhie, have been adopted by the makers, the photometers made by Messrs. Wallace & Son are, in many respects, much superior to the original sample.

It will be seen by the foregoing that the Department has on hand at present four full sets of gas inspection apparatus, and one spare photometer. Gas inspection is asked for at Berlin, Sarnia, Barrie, Napanee and Deseronto.

The fitting up of new gas inspection offices at Galt, Listowell and Owen Sound, and the removal and re-fitting of the Stratford office; the altering and re-grading of the American meter provers, the re-lining and repairing of the English holders, the overhauling and repairing of the four Aubin photometers, with various improvements, were all done under the immediate supervision of Mr. McPhie, Gas Inspector, Hamilton, to whom much credit is due for his valuable and painstaking services.

Respectfully submitted.

EDWARD MIALL.

Commissioner.

# APPENDIX

	STATEMENT of Expenditure and Receipts for Year ended 30th June, 1889.	diture and	Receipts	for Year	ended 30t	h June, 18	889.		
	Inspectors	A CONTRACTOR OF THE CONTRACTOR			EXPENDITURE.				Raceinte
Inspection Divisions.	and Assistant Inspectors.	Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	receipes.
Provů	Province of Ontario.	& cts.	& cts.	ee cts.	e cts.	& cts.	\$ cts.	es cts.	& cts.
Belleville	Wm. Johnson Thos. Slattery. Samuel Irwin.	2,300 00	105 76		37 50	489 19	237 19	3,169 64	1,271 54
Hamilton	T. H. McKenzie John McDonald. W. G. McDonnell Thos. Beattie. C. E. S. Black A. Marentette Robt. Magness. J. D. Park	5,028 99				425 46	491 38	5,945 83	10,115 22
Kingstou :	J. A. Macdonald W. W. Giffin Wm. Whitteker	2,200 00		:	00 06	614 94	307 23	3,212 17	1,676 39
London	Jas. Egan. D. Coughlin. Jos. S. Thomas.	2,400 00	:	:	:	467 72	106 34	2,974 06	1,798 49
Orillia	G. J. Bolster	1,700 00	:	:	:	481 75	52 50	2,234 25	1,309 24
Ottawa	A. Code M. Gorman John Cosgrove Pat. Lynch	2,900 00			250 00	76 622	145 68	4,075 65	1,644 62

1 12		:	2 85		5,219 64	1,950 85	88 83	1,072 96	9,022 28	
2,544 12	2,453 23		22,812 85		5,21	1,95	2.2	1,07	9,02	
3,880 63	2,648 01	17 85	28,158 09		5,640 86	4,453 55	2,727 72	2,591 73	15,413 86	
94 36	94 68		1,529 36		236 73	225 02	111 43	29 47	602 65	
486 27	1,029 10	17 85	4,792 25		543 53	586 53	416 29	300 60	1,846 95	
			377 50			42 00		20 00	62 00	
	80 08		186 44		10 60				10 60	
3,300 00	1,443 55		21,272 54		4,850 00	3,600 00	2,200 00	2,241 66	12,891 66	
Toronto. Harry Piper R. J. Wright D. Kinnee.	Windsor W. J. Hayward R. A. Hughes.	District Inspector		Province of Quebec.	Montreal J. O. Chalut. J. R. Urquhart. J. T. Dorion. S. Dillon. J. A. Daoust. F. L. Desrivières	Quebec       B. E. Bourassa.         W. Adams       H. Simard         J. B. Petit       F. X. Chabot.         M. J. Kelly.       M. J. Kelly.	Sherbrooke. E. Clark. Jos. S. Baker. J. N. Richard.	Three Rivers. J. A. Olivier. J. J. Provost. P. C. A. Bruneau		

APPENDIX A.—Continued.

<i>0</i> 2	STATEMENT of Expenditure and Receipts for Year ended 30th June, 1885.—Continued.	and Rece	ipts for Y	ear ended	30th Jun	e, 1885.—	Continued.		
	Inspectors	000000000000000000000000000000000000000		<u> </u>	Expenditure.				Rossinte
Inspection Divisions.	and Aisistant Inspectors.	Salaries.	Seizure Expenses.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	Tracerbus
Province	Province of New Brunswick.	ets.	ets.	ss cts.	& cts.	se cts.	es cts.	♣ cts.	æ cts.
Fredericton	E. C. Freeze Geo. Bois.	1,600 00				195 08	23 23	1,818 31	238 25
King's.	W. B. Scovil.  David Richard	1,300 00				273 82	19 36	1,593 18	433 19
St. John	J. B. Wilmot	1,800 00	:		:	1 78	12 97	1,814 75	542 71
		4,700 00				470 68	55 56	5,226 24	1,214 15
Provinc	Province of Nova Scotia.		-						
Cape Breton	L. E. Tremaine.	00 008			70 00	00 6	65 69	941 69	73 35
Halifax	J. B. Ryan Edward Kellv	1,291 62			222 50	18 60	83 70	1,616 42	369 02
Picton		00 006				116 61	40 65	1,057 26	352 68
Yarmouth	Chas. Allison	1,000 00	•			253 29	16 82	1,270 11	235 07
	Distric Inspector	:			:	18 70	4 77	23 47	
		3,991 62			292 50	416 20	208 63	4,908 95	1,030 12
The second secon				_	-	_	-		

Charlottetown.         Jas. Reddin.         1,000 00           Prorince of Manitoba.         1,000 00           Winnipeg.         R. T. Haggard           W. Cowley J. W. Cowley J. W. Cowley J. W. Cowley J. W. Coxtello         8,500 00           R. J. W. Girdlestone.         A. C. Patterson.           A. C. Patterson.         British Columbia.           Province of British Columbia.         950 00			549 43	61 01	1,205 11	292 31
		108 00	549 43			
		108 00	549 43	3		
				84 05	4,241 48	1,377 33
		210 00	302 78	98 25	1,561 03	291 87
RECAPITULATION.	APITULATION.					
Ontario       21,272 54       186 44         Quebec       12,891 66       10 60         New Bernswick       4,700 00         Nova Scotia.       3,991 62         Prince Edward Island       3,990 60         Manitoba.       3,500 00         British Columbia       950 00         General Contingencies.       2,800 00         Queen's Printer       2,800 00         Stationery Office.       2,800 00		877 50 62 00 292 50 108 00 210 00	4,792 25 1,846 95 1,846 95 416 96 114 10 549 43 302 78 655 73	1,529 36 602 65 55 56 55 56 61 01 84 95 1,953 09 748 97 437 59	28,158 09 15,256 24 5,256 24 4,908 95 1,205 11 4,241 48 1,541 08 5,408 82 748 97 437 59	22,812 85 9,022 28 1,214 15 1,030 12 292 31 1,377 33 221 87
Grand Total	197 04	1,050 00	9,178 12	5,779 16	67,310 14	36,040 91

APPENDIX

Return of the Weights and Measures Inspected during the Fiscal Year tion, Verified and Rejected, for each Division, for

			Mile - mineral	Weigh	TS.	of Additionance of			
	Do	minion.	II.	Irr	egular			Troy	
Name of Inspection Office.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
Ontario,									ļ
Belleville Hamilton Kingston London. Orillia Ottawa Toronto Windsor	2,061 20,004 2,504 1,257 1,823 3,416 6,330 4,328	2,061 20,004 2,364 1,257 1,823 3,412 6,330 4,324	140  4 	197 163 250 88 118 271 	197 163 193 88 118 271 	57		10	
Quebec.	41,723	41,575	148	1,393	1,334		12		, 2
Montreal	15,689 9,302 1,189 4,167	15,577 9,259 1,187 4,163	112 43 2 4	694 1,035 128 383	680 1,028 128 382	7	9	9	
New Brunswick.	30,347	30,186	161	2,240	2,218		9	9	· · · ·
Fredericton Kings St. John.	453 913 1,359			$\begin{array}{c} 62 \\ 104 \\ 172 \end{array}$	62 104 172	·			
Nova Scotia.	2,725	2,725		338	338				
Cape Breton Halifax. Pictou. Yarmouth.	90 1,205 511 618	$\frac{1,205}{485}$	26	7 125 58 151	7 125 51 151	7			
Prinec Edward Island.	2,424	2,398	26	341	334	7			
Charlottetown	540	540		15	15		ļ 		
Manitoba.									
Winnipeg	5,050	5,005	45						
British Columbia.									
Victoria	352	352		7	7		16	16	

B. ended 30th June, 1889, showing the Total Number brought for Verificaeach Province, and for the whole Dominion.

Down	nion Me	'A SIT	RES			ASURES					Balan	ces, &	c.			
	F Сарас					OF NGTH,		Equal	Armed.		Steel	yards.		W	m Scales eigh es, &c.	5,
Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
1,683 4,634 10,587 10,664 1,626 3,140 11,252 2,842	1,683 4,629 10,273 10,663 1,626 3,134 11,252 2,840	5 314 1 6	 <sub>2</sub>	1 10 199  2 52	36 52 202 80 362 295 213 380	36 51 128 80 313 295 213 379	74 49	335 4,061 403 227 334 489 973 788	335 4,048 358 226 334 488 973 788	45 1 	92 3,874 47 63 109 1 490 114	$\frac{62}{109}$	2 12 1 	734 7,485 1,100 778 874 1,258 1,388 1,751	733 7,464 1,023 758 872 1,258 1,388 1,729	20
18,454 5,605 1,660 3,959	18,454 5,603 1,626 3,931	 ··· <u>2</u>	18	18	1,620 1,303 709 149 206	1,495 1,303 681 144 199		$ \begin{array}{r} 7,610 \\ 2,154 \\ 1,220 \\ 186 \\ 603 \end{array} $	7,550 2,118 1,204 179 574	36 16 7	4,790 427 38 21 17	4,775 412 35 21 17	15 3	2,768 543 446 590	2,731 535 421 576	37
29,678	29,614		18	18	2,367	2,327	40	4,163	4,075		503	485		4,347	4,263	
719 942 3,319	719 942 3,317		i	···i	4 18	4 18		75 154 241	75 154 240		5 24 21			172 340 273	172 337 273	) :
4,980	4,978	2	1	1	22	22		470	469	1	50	50		785	782	
185 1,363 810 733	185 1,363 806 732	4	19 4 12	4	16 35 41 123	16 35 33 123	···.8	15 155 118 114	15 155 96 113	22	14 11 25	11	1 	30 254 244 170	30 254 233 169	11
3,091	3,086	5	35	35	215	207	8	402	379	23	50	49	1	698	686	15
297	297				11	11		95	95		5	5		237	237	
1,209	1,208	1			39	39		208	202	6	45	43	2	934	905	29
122	122							53	50	3	42	35	7	243	243	

### APPENDIX

RETURN of the Weights and Measures Inspected during the Fiscal Year tion, Verified and Rejected, for each Division, for

RECAPITU

				Weigh	TS.				
	Do	minion.		Irı	egular.		,	Troy	
Quebec New Brunswick. Nova Scotia Prince Edward Island Manitoba	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
New Brunswick. Nova Scotia Prince Edward Island Manitoba British Columbia.	41,723 30,347 2,725 2,424 540 5,050 352 83,161	41,575 30,186 2,725 2,398 540 5,005 352 82,781	161  26  45	1,393 2,240 338 341 15  7 4,334	1,334 2,218 338 334 15 7 4,246	22 7 	12 9  16 37	9	

### B—Concluded.

ended 30th June, 1889, showing the Total Number brought for Verificaeach Province, and for the whole Dominion.

### LATION.

Down	NION MI	7481'	PFS			SURES					Balan	ces, &	c.			
	CAPACI		, LL			of GTH.		Equal	Armed.		Steel	yards.		W	m Scales eigh ges, &c.	3,
Brought for Verification.	Verified.		Brought for Verification.	Verified.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.	Brought for Verification.	Verified.	Finally Rejected.
46,428 29,678 4,980 3,091 297 1,209 122 85,805	46,100 29,614 4,978 3,086 297 1,208 122 85,405	64 2 5  1	18 1 35	18 1 35 	1,620 2,367 22 215 11 39  4,274	• • • •	8	7,610 4,163 470 402 95 208 53	7,550 4,075 469 379 95 202 50	88 1 23  6 3	4,790 503 50 50 5 45 42 5,485	4,775 485 50 49 5 43 35 5,442	18 1 2 7	15,368 4,347 785 698 237 934 243 22,612	15,225 4,263 782 686 237 905 243 22,341	84 3 12 

APPENDIX

# Return showing the Number of Dominion Weights and Lineal Measures during the Fiscal Year

										Dom	IINION
Division.											Avoir
27,000.1	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lbs.	8 ozs.	4 ozs,
Ontario.							:				
Belleville Hamilton Kingston London Orillia Ottawa Toronto Windsor		6 	·····	· · · · · · · · · · · · · · · · · · ·	$\begin{array}{c} 3 \\ 2 \\ 3 \\ \cdots \\ 1 \\ 4 \\ 32 \\ \cdots \end{array}$	36 344 85 16 37 107 228 50	103 2,658 145 100 111 229 625 273	400 4,456 389 258 361 597 1,045 786	382 4,664 424 208 325 559 1,018 777	267 1,563 367 150 228 467 781 572	252 1,491 319 147 214 447 690 528
Quebec.	10	6	1	4	45	903	4,244	8,292	8,357	4,395	4,088
Montreal Quebec Sherbrooke Three Rivers.	72	89 85 	4 42 	10 72 1 4	58 231 15 19	971 642 59 282	1,189 664 113 323	2,214 1,416 221 701	2,172 1,382 189 663	2,134 $1,288$ $157$ $627$	2,029 1,160 155 585
New Brunswick.	72	187	49	87	323	1,954	2,289	4,552	4,406	4,206	3,929
Fredericton King's. St. John.						7 28 38	8 36 28	116 237 312	85 169 259	$\begin{array}{c} 65 \\ 127 \\ 208 \end{array}$	62 106 172
Nova Scotia.						73	72	665	513	400	340
Cape Breton Halifax Pictou. Yarmouth		 8 	· · · · · · · · · · · · · · · · · · ·	3 	 3  2	2 59 8 11	2 36 18 17	$28 \\ 274 \\ 128 \\ 150$	18 224 111 113	10 159 68 90	8 137 59 81
Prince Edward Island.		9	1	4	5	80	73	580	466	327	285
Charlottetown						14	19	147	98	74	60
${\it Manitoba}.$											
Winnipeg					231	559	751 	1,496	1,246	412	112
British Columbia.						$_2$	14	75	56	54	51

C. of each Denomination presented for Verification in each Inspection Division ended 30th June, 1889.

Weigh	TS.										T	- Ma	avinna.	
dupois.	,								ts.		LINEA	L NIEA	SURES.	
2 ozs.	1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	½ dr.	Total number Verified.	Troy Weights.	Irregular Weights.	Yard.	½ yard.	2 feet.	1 foot.	Total number Verified.
241 1,478 286 145 195 386 617 486	195 1,447 251 119 178 320 544 431	121 1,327 150 96 104 205 383 283	44 568 55 12 45 74 247 118	9 3 14 2 12 14 51 19	4 3 6 3 8 5 55 4	$egin{array}{c} 4 \\ 2 \\ 1 \\ 4 \\ 2 \\ 1 \\ 1 \end{array}$	2,061 20,004 2,504 1,257 1,823 3,416 6,330 4,328		197 163 250 88 118 271	36 52 202 80 362 295 213 380				
3,834	3,485	2,669	1,163	124	88	15	41,723	12	1,393	1,620				
1,863 1,000 126 444	1,635 803 95 322	972 384 44 160	225 131 12 20	$egin{array}{c} 23 \\ 1 \\ 2 \\ 1 \end{array}$		2	15,689 9,302 1,189 4,167	9	694 1,035 128 383	1,303 709 149 206				
3,433	2,855	1,560	388	27	28	2	30,347	9	2,240	2,367				- • • •
53 96 162	42 73 137	13 23 35	2 7 8	6	· 5		453 913 1,359		$\begin{array}{c} 62 \\ 104 \\ 172 \end{array}$	4 18				
311	252	71	17	6	5		2,725		338	22				
8 116 50 64	7 102 33 57	4 73 22 28	$egin{array}{c} 3 \\ 11 \\ 11 \\ 2 \end{array}$	2	i		90 1,205 511 618	• • • • • •	7 125 58 151	16 35 39 123	<u>2</u>			
238	199	127	27	2	1		2,424		341	213	2			
56	50	18	4				540	• • • • • •	15	11		• • • • • •		
87	75	47	25	5	4		5,050			39				,
44	34	19	3				352	16	7					

APPENDIX

Return showing the Number of Dominion Weights and Lineal Measures during the Fiscal Year

										Dox	MINION
Division.											Avoir
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	11b.	8 ozs.	l ozs.
Ontario,											- <del></del>
Belleville			1	2	3 2 3  1 4 32	36 344 81 16 37 107 228 50	103 2,658 144 100 111 229 625 273	400 4,456 361 258 361 596 1,045 786	382 4,664 397 208 325 558 1,018 777	267 1,563 336 150 228 466 781 569	252 1,491 300 147 214 447 690 528
Quebec .	10	6	1	4	45	899	4,243	8,263	8,329	4,360	4,069
Montreal Quebec Sherbrooke Three Rivers.			42	10 72 1 4	231	970 642 59 282	1,188 661 113 323	2,192 1,405 221 699	2,152 1,373 189 662	2,113 1,281 156 626	2,004 1,154 154 585
New Brunswick.	72	187	49	87	323	1,953	2,285	4,517	4,376	4,176	3,897
Fredericton King's. St. John.						7 28 38	8 36 28	116 237 312	85 169 259	65 127 208	$\begin{array}{c} 62 \\ 106 \\ 172 \end{array}$
Nova Scotia.		· · · ·				73	72	665	513	400	340
Cape Breton Halifax Pictou Yarmouth.		<sub>8</sub>	 i	3 1	3 2	2 59 8 11	2 36 18 17	$28 \\ 274 \\ 119 \\ 150$	18 224 104 113	10 159 64 90	8 137 54 81
Prince Edward Island.		9	1	4	5	80	73	571	459	323	280
Charlottetown						14	19	147	98	74	60
${\it Manitoba}.$											
Winnipeg					231	556	751	1,487	1,233	405	108
British Columbia.						2	14	75	56	54	51

C—Continued.

of each Denomination, Verified in each Inspection Division ended 30th June, 1889.

Weight	rs.										Linina	r Mra	SURES.	
lupois.									ts.		LINEA	L MES	SURES.	
2 ozs.	1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	ı dr.	Total Number Verified.	Troy Weights.	Irregular Weights	Yard.	½ yard.	2 feet.	1 foot.	Total Number Verified.
241 1,478 269 145 195 385 617 485	195 1,447 240 119 178 320 544 431	121 1,327 148 96 104 205 383 283	44 568 55 12 45 74 247 118	9 3 14 2 12 14 51 19	4 3 6 3 8 5 5 4	4 2 1 4 2 1	20,004 2,364 1,257	10	197 163 193 88 118 271	36 51 128 80 313 295 213 379				
3,815	3,474	2,667	1,163	124	88	15	41,575	10	1,334	1,495				
1,848 997 126 444	$\substack{1,628\\800\\95\\322}$	$972 \\ 383 \\ 44 \\ 160$	225 $131$ $12$ $20$	$\begin{array}{c} 23 \\ 1 \\ 2 \\ 1 \end{array}$	27 1	2 	$15,577 \\ 9,259 \\ 1,187 \\ 4,163$	9	680 1,028 128 382	1,303 681 144 199				*
3,415	2,845	1,559	388	27	28	2	30,186	9	2,218	2,327				
53 96 162	42 73 137	13 23 35	2 7 8	6	5		453 913 1,359		62 104 172	4 18				
311	252	71		6	6		2,725		338	22				
8 116 50 64	7 102 33 57	4 73 22 28	$\begin{array}{c} 3 \\ 11 \\ 10 \\ 2 \end{array}$	2	1		485		7 125 51 151	16 35 31 123	2			
238	199	127	26	2	1		2,398		334	205	2			
56	50	18	4				540		15	11				
84	71	46	24	5	4		5,005			39				
44	34	19	3				352	16	7					

APPENDIX

# Return showing the Number of Domion Weights and Lineal Measures during the Fiscal Year

										Do	MINION
Division.		-		,				entre de la company			Avoir
Division.											
	60 lbs.	50 lbs.	30 lbs.	20 lbs.	10 lbs.	5 lbs.	3 lbs.	2 lbs.	1 lb.	8 ozs.	4 ozs.
Ontario.											
Hamilton Kingston Orillia				1		4	i 1	 28	 27	31	19
Ottawa. Toronto Windsor								1	1	1 3	• • • • •
Quebec .						4	1	29		35	
Montreal			1			1	1 3		20 9	21 7 1	25 6
Three Rivers		1				1	4	35	30	$\frac{1}{30}$	••••
Nova Scotia.								9	7	4	5
Manitoba.						-					
Winnipeg	ļ			ļ	<b> </b>	3		9	13	7	4

# C-Concluded.

of each Denomination rejected in each Inspection Division. ended 30th June, 1889.

WEIGH	TS.						· .				Linea	l Meas	SURES.	
dupois.									its.					
2 ozs.	1 oz.	8 drs.	4 drs.	2 drs.	1 dr.	} dr.	Total Number Rejected.	Troy Weights.	Irregular Weights.	Yard.	½ Yard	2 Feet.	1 Foot.	Total Number Rejected.
i7	11	2							57	1 74 49				
19	<del></del>	2					148	•••••	2					
15 3	7 3	i					112 43 2 4		14 7 1	28 5 7				
18	10	1					161		22	40				
• • • • • •			1				26		7	8				• • • •
3	4	1	1				45							,,,,

# APPENDIX

RETURN showing the Number of Dominion Measures of Capacity, Balances in each Inspection Division, during

				Mı	EASURE	s of C	APACIT	Υ.			
					De	ominio	n.				,
Division.	1	-									ımber ed.
	Bushel.	4 Bushel.	Peck.	(tallon.	½ Gallon.	Quart.	Pint.	½ Pint.	G:III.	1 Gill.	Total Number Presented.
Ontario.		1		:							
Belleville Hamilton Kingston London Orillia Ottawa Toronto Windsor		$\begin{array}{c} 11\\168\\1,542\\171\\9\\115\\36\\108\\\end{array}$	22 242 1,881 143 16 124 310 118	156. 537. 2,488 993 190 388 1,030 484	$\begin{array}{c} 278 \\ 711 \\ 1,300 \\ 1,579 \\ 397 \\ 536 \\ 2,282 \\ 569 \end{array}$	666 1,539 1,988 3,364 574 842 3,663 910	483 1,264 1,098 3,734 390 747 3,438 565	58 161 97 679 30 305 488 83	<sub>11</sub>		1,683 4,634 10,587 10,664 1,626 3,140 11,252 2,842
Quebec.	207	2,160	2,856	6,266	7,652	13,546	11,719	1,901	111	10	46,428
Montreal Quebec Sherbrooke, Three Rivers		868 173 61 321	944 147 71 174	2,942 722 204 536	2,800 1,045 401 831	3,354 1,157 551 860	3,636 1,177 246 629	2,420 821 97 403	1,488 352 27 149	8 1	18,454 5,605 1,660 3,959
New Brunswiek.	4	1,423	1,336	4,404	5,077	5,922	5,688	3,741	2,016	67	29,678
Fredericton	١	$\begin{array}{c} 32 \\ 1 \\ 461 \end{array}$	$\frac{28}{1}$	162 206 471	229 331 723	151 260 600	82 118 481	$\begin{array}{c} 31 \\ 23 \\ 226 \end{array}$	2		719 942 3,319
Nova Scotia.		494	290	839	1,283	1,011	681	280	102		4,980
Cape Breton Halifax Pictou Yarmouth	3	12 83 13 25	5 55 11 14	8 224 90 138	20 200 241 230	68 297 278 187	24 308 141 102	48 118 36 24	65	·	185 1,365 810 735
Prince Edward Island.	15	133	85	460	691	830	575	226	66	10	3,09
Charlottetown	3	5		6	23	154	78	28			29
${\it Manitoba}.$			_								
Winnipeg	57	48	2	85	195	493	302	27			1,20
British Columbia.											
Victoria					26	24	48	24			12

D. and Weighing Machines of each Denomination presented for Verification in the Fiscal Year ended 30th June, 1889.

IRREGULAR MEA- SURES					agent PROPAGE AND AND AND AND AND AND AND AND AND AND		ad I produce	Ваг	ANCES.			and the second	o yan anan mananan		
IRREGUI SURES	Wi	ith Equ	ıal Arn	ns.			ls, wi Arm		Wei	gh-brid	lges, or	Platfo	rın Sca	les.	
Presented.	5 lbs. and under.	5 lbs. to 50 lbs.	50 lbs. to 100 lbs.	100 lbs. and upwards.	500 lbs. and under.	500 lbs. to 1,000 lbs.	1,000 lbs. to 2,000 lbs.	2,006 lbs. to 4,000 lbs.	250 lbs. and under.	250 lbs. to 500 lbs.	500 lbs. to 2,000 lbs.	2,000 lbs. to 4,000 lbs.	4,000 lbs. to 6,000 lbs.	6,000 lbs. and upwards.	191,1 Total Number Presented.
1 10 199  2 52	72 1,541 115 67 95 49 371 285	263 2,520 282 160 239 440 602 503	6		89 3,501 46 62 105 1 480 113	114 1 1 		3 	406 233 328 594 629	57 604 147 27 23 147 74 109	257 2,620 399 390 380 420 432 616	72 402 60 51 69 33 87 143	25 58 15 8 39 39 21	38 132 73 69 74 25 127 102	1,161 15,420 1,550 1,068 1,317 1,748 2,851 2,653
264	2,595	5,009	6		4,397	123	263	7	6,904	1,188	5,514	917	205	640	27,768
18	455 249 28 26	1,692 889 158 528	25 43	7 57 6		2		26 1		679 253 99 188	967 170 150 213	$121 \\ 16 \\ 7 \\ 8$	$125 \\ 5 \\ 22 \\ 8$	98 9 13 8	5,349 1,801 653 1,210
18	758	3,267	68	70	468	7	1	27	1,188	1,219	1,500	152	160	128	9,013
·····i	20 36 39	55 92 202	25	1	4 24		١		84 164 85	36 98 111	42 56 55	7 5 14	8 5	3 9 3	252 518 535
1	95	349	25	1	28	22			333	245	153	26	13	15	1,305
19 4 12	3 23 24 26	$\begin{array}{c} 12 \\ 127 \\ 94 \\ 73 \end{array}$	4 3	1 12	8 11 25		2	i 	13 92 116 118	4 59 64 31	3 89 34 11	$\begin{array}{c} 3 \\ 10 \\ 3 \\ 2 \end{array}$	1 1 14 5	$\begin{matrix} 6\\3\\13\\3\end{matrix}$	45 423 373 309
35	76	306	7	13	44	3	2	1	339	158	137	18	21	25	1,150
	25	69	1		4			1	89	34	87	11	10	6	337
••••	19	186	3		45				353	108	295	100	36	42	1,187
	16	37			38	4		ļ	103	26	86	9	9	10	338

APPENDIX

Return showing the Number of Dominion Measures of Capacity, Balances each Inspection Division, during the

				Mi	EASURE	s of C	APACITY	ř <b>.</b>			
					D	ominio	n.				
Division.	Bushel.	g Bushel.	Peck.	Gallon.	½ Gallon.	Quart.	Pint.	½ Pint.	Gill.	1 Gill.	Total No. Verified.
Ontario.											
Belleville Hamilton Kingston London Orillia. Ottawa Toronto Windsor		11 167 1,507 171 9 115 36 108	$\begin{array}{c} 22 \\ 238 \\ 1,834 \\ 143 \\ 16 \\ 124 \\ 310 \\ 117 \end{array}$	156 537 2,431 993 190 388 1,030 484	278 711 1,243 1,579 397 535 2,282 568	666 1,539 1,930 3,363 574 841 3,663 910	483 1,264 1,048 3,734 390 744 3,438 565	58 161 96 679 30 304 488 83		 9 i	1,683 4,629 10,273 10,663 1,626 3,134 11,252 2,840
Quebec.	198	2,124	2,804	6,209	7,593	13,486	11,666	1,899	111	10	46,100
Montreal. Quebec Sherbrooke. Three Rivers.	3	868 173 53 310	944 147 61 168	2,942 722 200 529	2,800 1,043 396 831	3,354 1,157 550 857	3,636 1,177 245 628	2,420 821 93 403	1,488 352 26 149	$\begin{array}{c} 2 \\ 8 \\ 1 \\ 56 \end{array}$	18,454 5,608 1,626 3,931
New Brunswick.	4	1,404	1,320	4,393	5,070	5,918	5,686	3,737	2,015	67	29,61
Fredericton		$\begin{array}{c} 32 \\ 1 \\ 461 \end{array}$	$\frac{28}{1}$	162 206 470	229 331 723	151 260 600	82 118 481	31 23 226	4 2 96		719 942 3,317
Nova Scotia.		494	289	838	1,283	1,011	681	280	102		4,978
Cape Breton Halifax Pictou Yarmouth	3	12 83 9 24	5 55 11 14	224 90	20 200 241 230	68 297 278 187	24 308 141 102	48 118 36 24	65		183 1,363 806 733
Prince Edward Island.	15	128	85	460	691	830	575	226	66	10	3,086
Charlottetown	3	5		6	23	154	78	28			29
${\it Manitoba}.$				İ							
Winnipeg	57	48	2	84	195	493	302	27			1,20
British Columbia.					26		48	24			12

D—Continued.

and Weighing Machines of each Denomination Inspected and Verified, in Fiscal Year ended 30th June, 1889.

IRREGULAR MEA-							was server and or	BAL	ANCES.	The second secon					
IRREGUI	Wi	th Equ	ıal Arn	ns.	Steel Div		ls, w Arm		Wei	gh-brid	lges, or	Platfo	orm Sca	les.	jed.
Verified.	5 lbs. and under.	5 lbs. to 50 lbs.	50 lbs. to 100 lbs.	100 lbs. and upwards.	500 lbs. and under.	500 lbs. to 1,000 lbs.	3	2,000 lbs. to 4,000 lbs.	250 lbs. and under.	250 lbs. to 500 lbs.	500 lbs. to 2,000 lbs.	2,000 lbs. to 4,000 lbs.	4,000 lbs. to 6,000 lbs.	6,000 lbs. and upwards.	Total Number Verified.
1 10 199  2 52	72 1,537 90 67 95 49 371 285	263 2.511 263 159 239 439 602 503	5		89 3,499 34 61 105 1 480 113	2 114 1 1  4 1	257 1	$egin{array}{c} 2 \\ \cdots \\ 3 \\ \cdots \end{array}$	285 3,661 389 223 327 594 629 759	57 601 127 23 23 147 74 108	257 2,617 374 385 380 420 432 601	72 399 55 51 68 33 87 142	14 8 39 39	37 129 64 68 74 25 127 98	1,160 15,384 1,416 1,046 1,315 1,747 2,851 2,631
264	2,566	4,979	5		4,382	123	263	7	6,867	1,160	5,466	907	203	.622	27,550
	450 247 26 25	1,662 877 153 501	25 42	6 55 6	382 32 21 16	4 2 		25 1 	775 89 146 165	666 250 92 184	951 166 143 204	119 16 7 8	123 5 20 8	97 9 13 7	5,261 1,774 621 1,167
18	748	3,193	67	67	451	7	1	26	1,175	1,192	1,464	150	156	126	8,823
i	20 36 39	55 92 201	25	1	4 24 21	1			84 164 85	36 98 111	42 56 55	7 4 14	7 5	3 8 3	252 515 534
1	95	348	25	1	49	1			333	245	153	25	12	14	1,301
19 4 12	13	12 127 83 72	3	1 12	 8 11 25		2		13 92 109 117	4 59 60 31	89 34	$\begin{array}{c} 3 \\ 10 \\ 3 \\ 2 \end{array}$	1 14	$\begin{matrix} 6\\3\\13\\3\end{matrix}$	45 422 240 307
35	65	294	7	13	44	3	2		331	154	137	18	21	25	1,114
	25	69	1		4			1	89	34	87	11	10	6	337
	18	181	3		43			<u></u>	339	107	286	100	34	39	1,150
• • • • •	13	37			33	2			103	26	86	9	9	10	328

APPENDIX

Return showing the Number of Dominion Measures of Capacity, Balances each Inspection Division, during

				М	EASURE	s of C	APACIT	Υ.			
					De	ominio	1.				
Division.	Bushel.	g Bushel.	Peck.	Gallon.	½ Gallon.	Quart.	Pint.	3 Pint.	Gill.	इ. Gगा.	Total No. Rejected.
Ontario.											
Belleville	9	1 35	47	57	 57	58 1	50	1			31
Ottawa Windsor		• • • • • • • • • • • • • • • • • • •	i		1 1		3 				
Quebec.	9	36	52	57	59	60	53	$-\frac{2}{}$			32
Montreal Quebec Sherbrooke Three Rivers		 8 11				1	i	4	1		
New Brunswick.		19	16	11	7	4	2	4	1		(
			1	·····i							
Nova Scotia.			1	1							
HalifaxPictou Yarmouth											
Manitoba.	: :: :-::										
Winnipeg				1	<u>.</u>				<u> </u>		
British Columbia.											
Victoria							ļ				

#### D—Concluded.

and Weighing Machines of each Denomination Inspected and Rejected in the Fiscal Year ended 30th June, 1888.

#### BALANCES.

ted.	les.	rm Sca	Platfo	lges, or	gh-Brio	Weig	vided	vith Di	ards, v Ar	Steely	ns.	al Arn	th Equ	Wi
Total Number Rejected.	6,000 lbs. and upwards.	4,000 lbs. to 6,000 lbs.	2,000 lbs. to 4,000 lbs.	500 lbs. to 2,000 lbs.	250 lbs. to 500 lbs.	250 lbs. and under.	2,000 lbs. to 4,000 lbs.	1,000 lbs. to 2,000 lbs.	500 lbs, to 1,000 lbs.	500 lbs. and under.	100 lbs. and upwards.	50 lbs. to 100 lbs.	5 lbs. to 50 lbs.	5 lbs. and under.
1 36 134 22 2	1 3 9 1	1	3 5	3 25 5	3 20 4	8 17 10				2 12 1		1	9 19 1	$\frac{4}{25}$
	4		:	15	i	1	••••						· · · · · · ·	
218	18	2	9	48		36				15	1	1	30	
88 27 32 43	i	2 2	2	16 4 7 9	13 3 7 4	3 1 9	1			3 		1		5 2 2 1
190	2	4	2		27	13	1		•••••	17	3	1	74	
3	1	1	1										i	
4	1	1	1			<u></u>							1	
33 2			• • • • • •		4		1						 11 1	ii
36					4	8	1						12	11
37	3	2		9	1	14				2			5	1
10									2	5	,			3

# APPENDIX E.

STATEMENT of Gas Inspection Expenditure and Receipts for the Year ended 30th June, 1889.

				EXPEND	TURE.			
Districts.	Inspector.	Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	Receipts.
Ontario.		\$ cts.	\$ cts.	\$ ets.	\$ cts.	\$ cts.	\$ cts.	\$ ets.
Brockville	D. McPhie Wm Burrows Thos. Cahill John Williams. H. J. Hubertus. Thos. Cahill do J. K. Johnstone	, -	22 50 22 00 27 00 15 00	37 50 75 00 58 00 45 00 75 00 60 00 250 00 100 00	57 35 28 05 101 30 	80 83 75 7 15 54 05  55 59 78 72 25 393 58 178 98 3 00 12 25 133 48	276 66 58 10 178 95 177 85 91 63 1,334 40 597 92 163 60 1,820 98 1,029 95 242 50 103 85 1,148 23	62 50 65 75 38 25 14 00 628 00 80 00 585 50 213 25 60 00 24 00 2,531 25
Quebec.	District Inspec'r.	4,534 56	86 50	700 50	37 77 941 30	998 63	37 77 7,261 49	4,302 50
Sherbrooke Three Rivers	(N. Aubin) (Wm. Hartt) N. Lavasseur H. J. Pennoyer . N. Marchand	1,316 64 1,150 00 200 00 2,666 64	913 00	40 00 42 00  82 00	89 40 21 70  111 10	95 63 318 12 8 10 1 75 423 60	2,454 67 1,510 12 129 76 201 75 4,296 30	2,141 00 347 25 27 00 25 00 2,540 25
Frederiction Moneton	R. A. Lawlor S. A. Purdee R. A. Lawlor A. Rowan	150 00 200 00 150 00 1,000 00			44 45 32 94	18 00	168 00 200 00 194 45 1,065 44	2 00 4\$ 00 37 00 238 50
Nova Scotia.		1,500 00			77 39	50 50	1,627 89	326 50
$\left. \begin{array}{l} Halifax\\ Pictou\\ Yarmouth \end{array} \right\}$	A. Miller	1,300 00		222 50	425 56	79 01	2,027 07	471 25
P. E. Island.								
Charlottetown	Joseph Knight	200 00				29 00	229 00	47 00
	R. T. Huggard	200 00		108 00		11 15	319 15	54 75
British Columbia				100 00				
Victoria	Richard Jones	200 00		210 00			410 00	180 50

# APPENDIX E-Concluded.

Statement of Gas Inspection Expenditure and Receipts for the Year ended 30th June, 1889.—Concluded.

#### RECAPITULATION.

			E	XPENDITURI	c.		
	Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	Total.	Receipts.
Ontario Quebec New Brunswick Nova Scotia Prince Edward Island Manitoba British Columbia General Expenses Queen's Printer Stationery	150 00			\$ cts.  941 30 111 10 77 39 425 56	\$ cts.  998 63 423 60 50 50 79 01 29 00 11 15 2,040 87 97 02 80 17 3,809 95	\$ cts.  7,261 49 4,296 30 1,627 89 2,027 07 229 00 319 15 410 00 2,190 87 97 02 80 17  18,538 96	\$ ots. 4,302 50 2,540 25 326 50 471 25 47 00 54 75 180 50

#### APPENDIX F.

Return of Gas Meters presented for Verification, Verified, Verified after First Rejection and Rejected, during the Year ended 30th June, 1889.

Inspection Office.	for Verifi-	Ki	ind.	within tole	ed as con the E erated l Law.	rror		fied a First jectio		Re	jecte	d.	Tota Verif and Rejec	ied 1
Inspection office.	Presented   cation.	Wet.	Dry.	Correct.	Fast.	Slow.	Correct.	Fast.	Slow.	Unsound.	Fast.	Slow.	Verified.	Rejected.
Belleville Brantford Brockville. Chatham Cobourg Cornwall Dundas Guelph Hamilton Ingersoll. Kingston London. Ottawa. Peterboro' Stratford St. Catharines. St. Thomas Toronto Windsor Woodstock Montreal Quebec Sherbrooke Three Rivers. Fredericton. St. John. Halifax Pictou. Yarmouth. Charlottetown. Winnipeg. Victoria	25 3 23 381 122 381 166 124 381 156 115 118 3,561 22 2777 6 2 2777 6 2 41 242 2462 462 462 462 462 462 462 462 46	362	56 1111 93 35 25 32 122 381 16 124 381 165 115 118 3,561 22,725 130 6 2 2 41 1242 100 18 125 115 115 115 115 115 115 115 115 115	22 23 1 13 6 3 27 58 6 6 6 6 6 133 14 4 520 7 4 384 36 1 198 3 5 198 3 5 198 4 198 198 198 198 198 198 198 198 198 198	14 41 29 10 4 11 14 33 33 52 29 53 52 15 565 86 820 124 6 11 36 130 5 7 7	15 2 16 80 288 37 177 93 22 32 58 46 2,415 6 22 1,482 111 25 1544 129 9 11 10 14 138	33	3	1	23	32 1 2 36 6  1  4 	2 5 22 · · · · · · · · · · · · · · · · ·	55 111 85 34 25 3 121 379 16 122 373 159 14 55 3,500 21 11 22,686 271 11 6 2 2,686 271 17 17 17 12 30 45 45 45 45 45 47 47 47 47 47 47 47 47 47 47 47 47 47	13 61 1 2 39 6  2 1 5 1 
	9,629	509	9,120	1,740	2,164	5,527	8	12	14	38	107	53	9,431	198

INSPECTION OF GAS AND GAS METERS.

APPEN
RETURN of Illuminating Power and Purity of Gas

i		Illun	ninating I	ower.				Su	lphur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	ests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of 1	No. of Tests.	Grains.	Grains.	Grains.
Belleville:— July. August. September. October. November December. January. February. March April May		17 60 16 39 16 14 20 75 21 27 15 37 22 50 19 32 	18 45 16 75 16 41 21 65 22 69 17 16 22 59 19 86	16 16 16 16 16 16 16 16 16	0 0 0 0 0 1 0 0	$\frac{3}{2}$ $\frac{2}{3}$ $\frac{5}{3}$ $\frac{4}{2}$ $\frac{2}{3}$ $\frac{2}{5}$			
June	22.48	18.42	21 04	16	0	36			
Brantford:— July. August September October November. December January February March April May. June			18 50	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1			
Brockville:— July. August September. October. November. December January. February March. April May June	22 · 29 20 · 10 19 · 91 22 · 65 20 · 00			16 16 16 16 16 16 16	0 0 0 0 0 0 0 0	3 3 2 2 2 1			

A. 1890

DIX G. Inspected during the Year ended 30th June, 1889.

100 Cubic	Feet.		, A	Ammonia	per 100	Cubic Feet		Sul H	phure ydrog	etted en.	
Standard.	Fimes in excess of Allowance.	rests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	times ab-	No. of times pre- sent.	Tests.	Remarks.
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of Al	No. of times a	No. of sent.	No. of Tests.	
•••••	 							1 0	0 0 0	3 2 3	
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											Inspector dead.
* * * * * * * * * * * * * * * * * * * *											

APPENDIX
Return of the Illuminating Power and Purity of Gas

		11101	ninating I	Ower.				Юu.	phur pe
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of low S	No. of	Grains.	Grains.	Grains.
Chatham :—	<u> </u> 								
July			17:09	16	0	1			
August			17:35	16	0	1			
September			17.60	16	0	1			
October		, .	16:50	16	0	1			
November			16.62 17.00	$\begin{array}{c c} & 16 \\ & 16 \end{array}$	0	1 1			
December January			16.86	16	0	1			
February			16.86	16	ő	i			
March			16.19	16	ŏ	î		·	1
April			16.95	16	ő	ī			
May			16.36	16	0	1			I
June	: ,••••••		16 36	16	0	1			
		and the second			0	12		i	
obourg:								;	
July			16.67	16	0	1			
August			16:63	16	0	1			
September				16 16	0	1			
November			16 19	16	0	1			
December			17.00	16	0	1			
January				16	ő	ī			
February				16	ŏ	î			
March			17:35	16	0	1			
April			17.94	16	0	1			
May				16	0	1			
June									
					0	11	-		
Cornwall:—		1							[
July			22.53	16	0	1	1		1
August				16	0	1			
SeptemberOctober				16 16	0	1			
November			16.65	16	0	1			
December			17:47	16	ő	ī			1
January			15 08	16	1	ī			
February			15 70	16	1	1			
March		1	15 06	16	1	1			
April			16.64	16	0	1			
May			14 83	16	1	1	1		
			17.00	16	1 0	1	1	1	1
June			17.80	10	1	1			1

# G-Continued.

Standard.	100 Cubic	Feet.		1	Ammonia	per 100 (	Cubic Feet.			Sul <sub>l</sub> Hy	ohure drog	tted en.	
	Standard.	in excess lowance.	Tests.	1		Average	Standard.	in excess lowance.	rests.	times ab-	times pre-	Ties.	Remarks.
1	Grains.	Times of Al	No. of	Grains.	Grains.	Grains.	Grains.	Times of Al	No. of	No. of sent.	No. of sent.	No. of	
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 ${\bf APPENDIX}$  Return of the Illuminating Power and Purity of Gas

		Illur	ninating I	Power.				Su	lphur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	of tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of t	No. of t	Grains.	Grains.	Grains.
Dundas:— July. August. September. October. November. December. January February March April May. June			17 · 85 18 · 30 18 · 19 19 · 00 19 · 42 19 · 57 17 · 20 16 · 99 18 · 55 17 · 85 19 · 57 16 · 86	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1			
Guelph:— July. August. September. October. November. December. January February March April May June				16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Hamilton:— July. August. September. October. November. December. January February March. April May. June			17 · 20 16 · 12 17 · 87 16 · 43 18 · 46 16 · 36 17 · 35	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	]	ļ	i	į	0	12	1	1	

# G—Continued.

100 Cubic 1	Feet.		A	Ammonia	per 100 (	Cubic Feet.			Sulp Hy	hure drog	tted en.	
Standard. Grains.	in excess lowance.	Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	Tests.	No. of times absent.	No. of times pre- sent.	Tests.	Remarks.
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of A	No. of	No. of sent.	No. of 1	No. of Tests.	
							•		1 1 1 0 1 1 1 1 1 1 1	0 0 0 0 1 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1	
		ĺ		1			1		12	0	12	

 $\label{eq:APPENDIX} \textbf{Return of the Illuminating Power and Purity of Gas}$ 

		Illun	ninating I	ower.				$\operatorname{Sul}$	phur pe
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	of Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of t	No. of	Grains.	Grains.	Grains.
Ingersoll:— July. August. September. October. November December January February March. April May. June			18 · 44 17 · 35 17 · 11 17 · 21 17 · 40 18 · 37 17 · 50 17 · 00 17 · 00 17 · 00 17 · 00 17 · 00	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1			
Kingston:— July. August. September. October November December - January February March April May. June	24 · 02 23 · 84 25 · 96 25 · 85 23 · 47 22 · 68 22 · 34 22 · 86 22 · 30	22·62 22·08 20·30 21·46 20·50 21·16 19·90 20·77 21·10 20·23 21·52	23·14 23·05 22·00 23·36 22·79 22·27 21·68 21·41 21·67 21·42 21·77	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 4 4 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			
Lindsay:— July. August. September. October. November December January. February March. April May. June			24 · 27 23 · 86 24 · 37 22 · 50 21 · 30 22 · 00 23 · 42 19 · 66 23 · 87	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
					0	12	-		

# G—Continued.

00 Cubic	Feet.		_	Ammonia	per 100 (	Cubic Feet.			Sulp Hy	hure drog	tted en.	
Standard.	mes in excess of Allowance.	rests.	Highest	Lowest.	Average	Standard.	limes in excess of Allowance.	rests.	No. of times absent.	No. of times pre- sent.	rests.	Remarks.
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of Al	No. of	No. of t	No. of ti	No. of Tests.	
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									3 2 4 4 5 4 4 4 4 4 4	0 0 0 0 0 0 0 0 0 0 0 0	3 2 4 4 4 5 4 4 4 4 4 4 4	
									1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									12	0	12	

APPENDIX
RETURN of the Illuminating Power and Purity of Gas

	Illur	ninating H	Power.				Sul	lphur per
Highest.	Lowest.	Average.	Standard.	n excess owance.	ests.	Highest	Lowest.	Average
Candles.	Candles.	Candles.	Candles.	Times i	No. of T	Grains.	Grains.	Grains.
20 00 23 62 22 02 20 32 22 00 21 48 22 45 22 11 20 82 20 50	20 · 65 19 · 91 19 · 40 18 · 84 19 · 76 20 · 91 19 · 41 20 · 00 21 · 46 20 · 01 19 · 41 19 · 11	21 37 19 97 20 97 20 69 20 05 21 37 20 50 21 02 21 12 20 49 20 00 19 43	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			
16 · 09 17 · 23 16 · 30 15 · 92 15 · 25 15 · 30	14 · 53 13 · 10 14 · 37 16 · 30 14 · 17 12 · 50 14 · 53	15·70 14·94 15·44 16·30 15·07 13·92 14·83	16 16 16 16 16 16 16	3 4 3 0 3 3 3	5 5 4 1 3 3	24·18 20·34 18·46 24·04 17·18 16·80 47·87	16·31 15·98 17·16 24·04 13·62 15·30 11·91	20·73 17 98 17·81 24·04 15·22 15·98 26·80
17·67 19·59 20·87	17:03 18:59 18:53 19:62	17:35 18:57 19:74 19:62	16 16 16 16	0 0 0 0	2 5 4 1 36	26·60 14·33 11·19 11·63	24 34 8 19 11 19 11 63	25·47 10·34 11·19 11·63
		17 30 17 30 18 63 17 64 17 64 17 76 17 64 17 80 17 94 18 70 17 70 17 70	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1			
	Candles.  22 23 20 00 23 62 22 02 20 32 22 00 21 48 22 45 22 11 20 82 20 50 20 00  16 50 16 09 17 23 16 30 15 92 15 25 15 30  17 67 19 59 20 87 19 62	Highest. Lowest.  Candles. Candles.  22.23 20.65 20.00 19.91 23.62 19.40 22.02 18.84 20.32 19.76 22.00 20.91 21.48 19.41 22.45 20.00 22.11 21.46 20.82 20.01 20.50 19.41 20.00 19.11  16.50 14.53 16.09 13.10 17.23 14.37 16.30 16.30 15.92 14.17 15.25 12.50 15.30 14.53	Highest. Lowest. Average.  Candles. Candles. Candles.  22 23 20 65 21 37 20 00 19 91 19 97 23 62 19 40 20 97 22 02 18 84 20 69 20 32 19 76 20 05 22 00 20 91 21 37 21 48 19 41 20 50 22 45 20 00 21 02 22 11 21 46 21 72 20 82 20 01 20 49 20 50 19 41 20 00 20 00 19 11 19 48  . 16 50 14 53 15 70 16 09 13 10 14 94 17 23 14 37 15 44 16 30 16 30 16 30 15 92 14 17 15 07 15 25 12 50 13 92 15 30 14 53 14 83  . 17 67 17 03 17 35 19 59 18 59 18 57 20 87 18 53 19 74 19 62 19 62	Candles. Candles. Candles. Candles.    22 23	Highest. Lowest. Average. Standard.	Highest. Lowest. Average. Standard.	Highest. Lowest. Average. Standard.	Highest   Lowest   Average   Standard

G—Continued.

100 Cubic I	Feet.		A	Ammonia	pe <b>r 100 (</b>	Cubic Feet.			Sul <sub>1</sub> Hy	phure ydrog	etted en.	
Standard.	Times in excess of Allowance.	rests.	Highest	Lowest.	Average	Standard.	imes in excess of Allowance.	Fests.	times ab-	imes pre-	of Tests.	Remarks.
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of All	No. of Tests.	No. of times sent.	No. of times I sent.	No. of	
				Ē					000000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>න න න න න න න න න න</b> න	
									36	0	36	
35 35 35 35 35 35 35	0 0 0 0 0 0	3 3 2 1 3 3 3	3·14 2·54 3·03 2·55 2·87 2·54 3·34	2 · 00 2 · 04 2 · 55 2 · 55 2 · 04 2 · 29 2 · 01	2·65 2·30 2·79 2·55 2·48 2·41 2·41	4 4 4 4 4 4	0 0 0 0 0	3 2 1 3 3	5 5 4 1 3 3	0 0 0 0 0 0	5 5 4 1 3 3	Inspector ill; no inspe
35 35 35 35	0 0 0	2 3 1 1	2·10 0·00 26·04 0·00	2·00 0·00 26·04 0·00	2·05 0·00 26·04 0·00	4 4 4 4	0 0 0 0	2 3 1 1	2 5 4 1	0 0 0	2 5 4 1	tion.  By Acting Inspector Codo do do do do do do do do do do do do
	1	25					0	<b>2</b> 5	36	0	36	
									1 1 1 1 1 0 1 1 1 1	0 0 0 0 0 0 1 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									11	1	12	

 ${\bf APPENDIX}$  Return of the Illuminating Power and Purity of Gas

		Illun	ninating F	ower.				Sul	phur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	rests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	lo. of low S	No. of Tests.	Grains.	Grains.	Grains.
Port Hope:— July August. September October. November December January February March April May. June			17 · 26 18 · 00 17 · 21 17 · 35 17 · 20 17 · 72 16 · 73 17 · 63 17 · 26 18 · 39 17 · 50	16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		
Stratford:— July August September October November December January February March April May June			16.86 16.86 16.50 16.89 16.86 17.32	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Stratford, (W. "Gordon's Co. July August September October. November. December January February March April May. June									

A. 1890

# G—Continued.

		hure droge				Cubic Feet.	per 100 C	ımmonia	A		Feet.	100 Cubic
Remarks.	Pests.	imes pre-	No. of times absent.	rests.	es in excess Allowance.	Standard.	Average	Lowest.	Highest	rests.	limes in excess of Allowance.	Standard.
	No. of Tests.	No. of t	No. of sent.	No. of Tests.	Times   of All	Grains.	Grains.	Grains.	Grains.	No. of Tests.	Times   of All	Grains.
					9							
	1 1 1 1	0 0 0 0	1 1 1 1									
	1 1 1 1 1	0 0 0	1 1 1 1 1				1					
	i 	ŏ	i 									
	11	0	11						ĺ		1	
Slightly impure caused	1 1 1 1 1 1	0 0 0 0 0 1	1 1 1 1 0 1									
Slightly impure caused cleaning pipes from deposit of naphtha.  No illuminating por test, office being moved.	1 1 1 1 1	0 0 0 0	1 1 1 1									
	12	1	11								1	
				i				1			· · · · · ·	
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Tests for purity only ma mains not yet conn ted with office.	1 1 2 1	1 1 1 0 0	0 0 1 1 1									
	$\frac{1}{7}$	3	1 4									• • • • • • • • • • • • • • • • • • • •

APPENDIX
RETURN of the Illuminating Power and Purity of Gas

		Illun	ninating F	ower.		:		Sul	phur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of the low St	No. of T	Grains.	Grains.	Grains.
St. Catharines:— July August September October. November. December January February. March April May June			20·64 21·14 18·44 20·11 19·34 17·79 19·22 19·34 19·32 18·50	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0	1 1 1			
St. Thomas :— July August September October. November. December January February March April May June			16 43 16 36 16 00 16 50 16 50 16 94 17 65 16 86 16 09 16 18	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Foronto:— July August September October November December January February March April May. June	17 45 17 76 18 44 18 85 18 06 18 09 18 26 18 96 19 13 19 44	16 · 84 16 · 47 17 · 06 17 · 21 16 · 81 17 · 06 16 · 52 16 · 50 16 · 91 17 · 64 17 · 08 16 · 20	17 · 22 17 · 18 17 · 45 17 · 45 17 · 46 17 · 67 17 · 31 17 · 52 17 · 88 18 · 08 18 · 07 17 · 50	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 9 9 9 8 9 8 9 8 9 9 104	12 60 14 05 13 61 16 65 13 99 17 36 15 67 16 49 17 07 11 25 14 49 13 98	12 · 04 11 · 32 11 · 60 13 · 74 12 · 29 16 · 80 14 · 11 14 · 59 14 · 39 9 · 50 11 · 11 8 · 94	12·3 12·6 12·6 15·1 13·1 17·0 14·8 15·5 15·7 10·3 12·8 11·4

G—Continued.

100 Cubic	Feet.		A	mmonia	per 100 (	Cubic Feet.			Sulp Hy	hure drog	$_{ m en.}^{ m tted}$	
Standard.	Fimes in excess of Allowance.	Fests.	Highest	Lowest.	Average	Standard.	E 0	Tests.	times ab-	No. of times present.	Tests.	Remarks.
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times   of Al	No. of	No. of sent.	No. of sent.	No. of Tests.	
									1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1	
									12	0	12	
								١	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		İ						_	12	0	12	
35 35 35 35 35 35 35 35 35 35 35	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.79 2.04 2.02 2.02 2.03 2.57 2.26 2.00 3.00 2.03 3.03 1.78	1·53 1·81 1·78 1·75 1·99 2·25 1·99 1·75 2·52 1·50 2·53 1·35	1 · 66 1 · 92 1 · 90 1 · 88 2 · 01 2 · 41 1 · 12 1 · 87 2 · 76 1 · 76 2 · 78 1 · 66	4 4 4 4 4 4 4 4 4 4 4 4	0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 9 9 9 7 9 8 9 9 8	0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 9 9 9 9 8 9 8 9 9 8	Certificates for illumina ting power and sulphur etted hydrogen tes were given 48 time during year. Quarterly certificates of sulphu and ammonia were also given.
	0	24					0	-	103	-	104	~

APPENDIX
RETURN of the Illuminating Power and Purity of Gas

		Illun	ninating P	ower.				Sul	lphur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	tane	of tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of 1	No. of t	Grains.	Grains.	Grains.
Windsor:— July. August September October November. December January February March April May. June			16.70 17.20 17.00 16.36 17.00 17.10	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1			
Woodstock :— July August September October November December January February March April May June			20:00 20:65 20:27 20:48 18:88 19:48 18:59 20:44 20:03	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1			
Montreal:— July August. September October. November December. January February March April May June	19·73 20·03 19·51 20·45 19·52 22·73 22·32 19·15 20·17	16·44 16·92 17·24 16·45 17·10 16·48 16·26 17·70 17·44 17·27 17·15 18·18	17·82 18·07 18·24 18·17 18·61 18·05 19·20 19·08 18·23 18·29 18·17 19·89	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 9 9 8 10 11 8 9 9 8 9	32·25 40·53 43·63 41·30 20·40 66·74 45·36 49·63 20·75 67·46 65·14 52·61	20·27 8·39 25·56 35·40 13·53 24·33 13·53 4·19 9·63 12·34 11·62 46·51	26 26 24 46 34 59 38 30 16 99 48 08 28 13 21 11 15 44 44 49 40 91 49 56

G—Continued.

00 Cubic	Feet.		A	mmon a	per 100 (	Cubic Feet.		1	Sulpl Hyo	uret Iroge	ted n.	
Standard.	Times in excess of Allowance.	ests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	ests.	sent.	No. of times present.	ests.	Remarks
Grains.	Times i	No. of tests.	Grains.	Grains.	Grains.	Grains.	Times of All	No. of tests.	sent.	No. of t	No. of tests.	
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
35 35 35 35 35 35 35 35 35 35 35	0 1 1 2 0 8 3 1 0 2 2 2 2	2 2 2 2 2 9 11 7 4 3 3				4 4 4 4 4 4 4 4 4 4 4 4 4 4	0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 9 11 7 4 3 3 2	11 8	0 0 0 0 0 0 0 0 0 0 0 0	9 9 9 9 8 10 11 8 9 9	
-	22	-	1				0	49	108	0	108	

APPENDIX
RETURN of the Illuminating Power and Purity of Gas

		Illun	ninating P	ower.				Su	lphur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	o. of times below Standard.	Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of low S	No. of	Grains.	Grains.	Grains.
Quebec:— July August September October November December. January February March April May. June			18 '70 17 '51 17 '81 17 '94 16 '55 17 '34 18 '85 16 '60 16 '84 22 '13 16 '91 17 '51	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	111111111111111	14·80 13·43 12·87 23·72 17·65 16·25 12·56 23·67 16·95 16·87 19·16	13·36 11·12 12·51 18·76 16·22 11·32 12·53 12·17 15·91 14·43 18·50	14·08 12·27 12·69 21·24 16·93 12·05 14·39 12·36 19·79 16·43 15·65 18·83
Sherbrooke :— July August September October. November. December. January February March. April May. June			29 · 90 24 · 00 24 · 93 26 · 03 24 · 75 22 · 31	16 16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Three Rivers : July. August September October. November December January February March April May June	16·97 17·49 17·35 17·61 17·10 16·55 17·18 16·47 17·01 16·78	17 · 16 16 · 04 16 · 26 16 · 07 16 · 80 16 · 16 16 · 13 15 · 71 16 · 16 16 · 05 16 · 43	17·59 16·57 16·82 16·79 17·19 16·44 16·40 16·68 16·68 16·47 17·20	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 4 5 4 5 4 5 4 4 5 4 4 5 4 4 5 4 4 4 5 4 4 4 4 5 4			
					1	52			

G—Continued.

.00 Cubic	Fect.		A	mmonia	per 100 (	Cubic Feet.			Sulp H	ohure ydrog	tted gen.	
Standard.	Times in excess of Allowance.	Tests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	Tests.	No. of times absent.	No. of times present.	Tests.	Remarks
Grains.	Times of Al	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of Al	No. of	No. of sent.	No. of sent.	No. of Tests.	
35 35 35 35 35 35 35 35 35 35 35	0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	444444444444444444444444444444444444444	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	0	24					0	24	24	0	24	
									1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									12	0	12	
						ì			5 4 4 5 4 5 4 4 4 4 4	0 0 0 0 0 0 0 0 0 0	5 4 4 5 4 5 4 5 4 4 5 4 4 4 4 4 4 4 4 4	
	1	1	1	1	1			- -	52	0	52	4

 ${\bf APPENDIX}$  Return of the Illuminating Power and Purity of Gas

		Illun	ninating H	ower.				Su	lphur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	No. of times below Standard.	Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	No. of low S	No. of 7	Grains.	Grains.	Grains.
Fredericton:  July.  August September October November December January February March April May June				16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
St. John:  July August September October November December January February March April May June	17.65 17.71 17.71 17.17 17.17 17.49 17.99 17.35 17.93 17.48	16·36 16·67 16·36 16·34 16·70 16·22 16·36 16·36 16·36 16·47 16·04 16·28	17 · 00 17 · 16 17 · 14 16 · 92 16 · 90 17 · 18 16 · 97 16 · 88 16 · 77 16 · 90 16 · 84 16 · 66	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0	8 7 7 6 7 7 8 8 8 8 8 8 8	21 · 40 20 · 38 22 · 79 20 · 18 22 · 72 22 · 69 19 · 85 22 · 30 22 · 85 22 · 65 20 · 04 22 · 67	17·76 15·88 18·48 18·69 15·60 19·43 16·51 15·85 15·97 16·83 16·81 16·68	19·36 18·28 20·45 19·48 18·36 20·53 18·90 18·90 18·79 19·62 18·78 19·51
Halifax:— July August. September October November December January February March April. May June	19·36 19·03 19·56 19·40 19·37 19·94 19·33 20·28 23·70 22·72	17 · 70 18 · 75 18 · 38 19 · 45 18 · 00 19 · 12 19 · 67 18 · 49 20 · 27 21 · 91 20 · 80 20 · 15	18·09 19·05 18·70 19·50 18·70 19·24 19·80 18·91 20·27 22·80 21·76 20·80	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	29·38 22·97 26·76 16·60 10·69 24·09 11·05 13·78 9·55 9·68 14·21 13·88	23 · 23 22 · 97 24 · 67 6 · 98 8 · 17 9 · 85 8 · 75 11 · 33 9 · 46 8 · 26 8 · 26 13 · 78	26 · 30 22 · 97 25 · 71 11 · 79 9 · 43 16 · 97 9 · 90 12 · 55 9 · 50 8 · 97 11 · 23 13 · 83

G—Continued.

.00 Cubic	Feet.		A	mmonia	per 100 (	Cubic Feet.				phure /drog		
Standard.	Times in excess of Allowance.	rests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	rests.	times ab-	No. of times present.	lests.	Remarks.
Grains.	Times of All	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times   of All	l No. of	No. of times sent.	No. of t	No. of Tests.	
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									8	3	11	
35 35 35 35 35 35 35 35 35 35 35 35 35 3	0 0 0 0 0 0 0 0 0	5 4 4 4 4 4 4 4 4 4 4 4	1.08 1.75 2.67 2.40 1.05 1.55 1.00 2.60 1.20 2.63 2.58 1.39	·59 ·65 1·25 ·55 ·46 1·12 ·45 ·60 1·18 ·55 ·25	95 1·37 2·20 1·59 ·75 1·26 ·73 1·48 ·99 1·61 ·87	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	0 0 0 0 0 0 0 0 0	5 4 4 4 4 4 4 4 4 4 4 4 4	8	0 0 0 0 0 0 0 0 0 0 0 0	8 7 7 6 7 7 8 8 8 8 8 8	
	0	49					0	49 —	90	0	90	
35 35 35 35 35 35 35 35 35 35	0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	.00 .00 .00 2.03 1.73 1.24 .00 .503 1.02 1.51 .00	.00 .00 .00 .76 1.49 .997 .00 .00 .778 .596 .00	00 00 1395 1614 11185 00 2515 899 1055 00	4 4 4 4 4 4 4 4 4 4 4 4	0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	0	24					0	$\frac{-}{24}$	24	0	24	

APPENDIX
RETURN of the Illuminating Power and Purity of Gas

•		Inui	ninating I	ower.				Su	lphur pei
Inspection Office.	Highest.	Lowest.	Average.	Standard.	f times be- Standard.	Tests.	Highest	Lowest.	Average
	Candles,	Candles.	Candles.	Candles.	No. of t	No. of 1	Grains.	Grains.	Grains.
Pictou:— July August September October November December January February March April May June			20 · 63 18 · 20 19 · 13 16 · 72 19 · 30 18 · 41 18 · 70 18 · 95 18 · 60 19 · 27 19 · 00 19 · 75	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1			
Yarmouth:— July August September. October November December. January February March April May. June			17·50 18·00 19·00 18·45 17·59 16·77 17·57 15·85 18·09 15·42 18·49 19·04	16 16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 1 0 1 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Charlottetown:— July August September October November December January February March April May June	20·03 18·86 20·25 19·10 20·02 17·65 18·24 19·06 18·50	19·29 18·50 18·51 17·97 17·81 17·65 18·13 17·22 17·71 18·85 17·24 18·14	19·71 19·00 19·05 18·46 19·27 18·22 18·79 17·41 17·95 18·95 17·88 18·32	16 16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3 3 4			

# G—Continued.

00 Cubic	Feet.		J. A	Ammonia	per 100 (	Cubic Feet.			Sul <sub>l</sub> Hy	ohure odrog	tted en.	
Standard.	u o	Tests.	Highest	Lowest.	Average	Standard.	Fines in excess of Allowance.	Tests.	times ab-	No. of times present.	Tests.	Remarks.
Grains.	Times i	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of Al	No. of Tests.	No. of times a sent.	No. of sent.	No. of Tests.	
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									1	0	1	
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									1	0	1	
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APPENDIX
RETURN of the Illuminating Power and Purity of Gas

		Illnr	ninating F	ower.				Sul	phur per
Inspection Office.	Highest.	Lowest.	Average.	Standard.	Times in excess of Allowance	Tests.	Highest	Lowest.	Average
	Candles.	Candles.	Candles.	Candles.	Times i of All	No. of T	Grains.	Grains.	Grains.
Winnipeg:— July. August. September October. November. December January February March April May. June			20 · 82 20 · 70 20 · 40 20 · 40 19 · 40 20 · 20 20 · 53 19 · 52 21 · 31 20 · 79 19 · 20 19 · 41	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1			
Victoria:— July August. September. October. November December. January February March April May. June	18.42 17.94 18.60 18.33 18.07 18.10 18.05	17 74 16 92 17 61 18 27 17 34 17 70 17 56 17 57 18 97 18 42 17 46	17 · 79 17 · 67 17 · 77 18 · 41 17 · 86 17 · 90 17 · 81 17 · 81 18 · 15 18 · 48 18 · 21	16 16 16 16 16 16 16 16 16 16 16	0 0 0 0 0 0 0 0 0	3 2 2 3 3 3 2 2 2 2 3			
			1 1		0	28			

G-Concluded.

100 Cubic	Feet.		, and	Ammonia	per 100 (	Cubic Feet.			Sulp Hy	ohure drog	tted en	
Standard.	Times in excess of Allowance.	rests.	Highest	Lowest.	Average	Standard.	Times in excess of Allowance.	l'ests.	times ab-	imes pre-	lests.	Remarks.
Grains.	Times i	No. of Tests.	Grains.	Grains.	Grains.	Grains.	Times of All	No. of Tests.	No. of sent.	No. of times l	No. of Tests.	
									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
									3	0	3	
										0 0 0 0 0 0 0 0 0	3 3 3 3 2 2 2 3 3 3 3 2 2 2 3 3 3 3 3 3	
									28	0	28	

#### APPENDIX H.

REPORT on the comparison of the Departmental standards of weight, marked "A," with the Parliamentary copies marked respectively "B" and "C" by W. J. Loudon, Esq., of Toronto University, dated 29th January, 1889.

The Commissioner of Inland Revenue, Ottawa.

Sir,—In accordance with your instructions to examine and compare the Departmental and Parliamentary standards of weight, I commenced on 3rd January, 1889, the comparison of the standard pounds, having spent the preceding three days in adjusting the Oertling, balance No. 1, and in endeavoring to avoid, as far as possible, all constant sources of error. Let me here briefly enumerate and describe the standards of weight in possession of the Dominion of Canada.

1. Departmental standards of weight, in charge of the Weights and Measures Branch of the Inland Revenue Department, consisting of a platino-iridium avoirdupois pound and a platino-iridium Troy ounce. These have been described fully in previous reports and are marked "A." They are enclosed in gold caskets, also marked "A," and the caskets are enclosed in a small cube of bronze, with a lid screwed down by means of four screws, one in each corner, the key for adjusting the screws being itself screwed firmly into a socket in the centre of the lid of the box.

2. Similar copies, similarly enclosed, marked "B," deposited with the Senate.
3. Similar copies, similarly enclosed, marked "C," deposited with the Commons. In making the comparisons I used Gauss' method, usually adopted in England and Germany in preference to Borda's, the former being known as a method of double weighing and the latter that of substitution. The reason for using Gauss' method is that less observations are required to ensure accuracy. The divisions on the scale of the balance I read with the cathetometer belonging to the Department and I was able, in that way, to read to the tenth part of a single division.

The operation of comparison then was to place a weight in each scale pan and notice the position of equilibrium by watching the oscillations of the pointer and the scale through the cathetometer. Then to interchange the weights and again notice the position of equilibrium; then to add a tenth of a grain to either pan, in order to obtain the value of a division on the scale in grains; three sets of readings were taken

in each comparison.

Comparison of the platino-iridium avoirdupois pound "A" with platino-iridium avoirdupois pound "B."

	A	В	Position of Equilibrium.	
(1)	In right hand pan—R.	In left hand pan—L.	M <sub>1</sub> = 61.5	'1 grain added to A in L gives
(1) {	In L.	In R.	$M_2 = 60.2$	$\mathbf{M}_3 = 64.7$
(2)	In L.	In R.	M <sub>1</sub> = 60·15	'1 grain added to B in L gives
(2)	In R.	In L.	M <sub>2</sub> = 60·43	$M_3 = 64.91$
(3) {	In R.	In L.	M <sub>1</sub> = 60.55	'1 grain added to B in L gives
	In L.	In R.	M <sub>2</sub> = 59.73	$M_0 = 55.71$

Temperature = 65° Fahrenheit Barometer H = 29.7 inches. The differences:  $M_1$ — $M_2$  are 1.3, .28 and .82

The numbers of divisions for 1 of a grain are 4.5, 4.48, 4.02.

1.3, .28, .82 give a mean of .8 of a division.

The mean of 4.5, 4.58, 4.02 gives  $4\frac{1}{8}$  divisions.

 $4\frac{1}{3}$  divisions  $=\frac{1}{10}$  grain.

1 division  $=\frac{\frac{1}{3}0}{130}$  grains = 023 grains.  $B = A + \frac{1}{2}$  (·8) divisions  $= A + \frac{1}{2}$  (·8 × ·023) grains = A + 0022 grains. Finally "B" is heavier than "A" by ·0092 grains.

Comparison of the platino-iridium avoirdupois pound "A" with platino-iridium avoirdupoids pound "C."

A	С	Position of Equilibrium.	
In L.	In R.	$M_1 = 59.67$	1 grain added to A in R gives $M_s = 57.33.$
In R.	In L.	$M_2 = 60.23$	$M_s = 57.33.$
In R.	In L.	$M_1 = 60.13$	1 grain added to C in R gives
In L.	In R.	$M_2 = 59.6$	$M_s = 55.51.$
In L.	In R.	$M_1 = 59.8$	1 grain added to C in L gives
In R.	In L.	$M_2 = 60.33$	$\mathbf{M_3} = 64.9.$

Temperature = 66 Fahrenheit.

Barometer H = 29.6 inches. Mean of differences,  $M_1 - M_2$  is 55 divisions.

·1 grain gives as mean 3·88.

 $\tilde{\cdot}$   $\frac{1}{10}$  grain = 3.88 divisions.

1 division  $=\frac{1}{38.8}$  grains.

And  $C = A + \frac{1}{2}$  (.55) divisions.

 $C = A + \frac{1}{2} (.55) \times \frac{1}{38.8} grains = A + .0071 grains.$ 

Finally "C" is heavier than "A" by .0071 grains.

COMPARISON of the platino-iridium troy ounce "A" with the platino-iridium Troy ounce "B."

A	В.	Position of Equilibrium.	
In R.	In L.	$M_1 = 57.06$	1 grain added to A in L gives
In L.	In R.	$M_2 = 57.26$	$M_s = 61$ .
In L.	In R.	M <sub>1</sub> = 57·16	'1 grain added to A in R gives
In R.	In L.	$M_2 = 56.95$	$M_3 = 53\cdot12\cdot$
In R.	In L.	$M_1 = 56.73$	1 grain added to A in L gives
In L.	In R.	$M_2 = 57.02$	M <sub>3</sub> = 61·17·

Temperature = 67°.5 Fahrenheit. Barometer H = 29.9 inches.

Mean of  $M_1 - M_2$  is ·23 divisions. Mean of divisions for ·1 grain is 3·91 divisions. 3·91 divisions = ·1 grain =  $\frac{1}{10}$ 

1 division  $\frac{1}{39 \cdot 1}$  grains.

 $B = A + \frac{1}{2} (\cdot 23) \text{ divisions} = A + \frac{1}{2} (\cdot 23) \times \frac{1}{39 \cdot 1} \text{ grains.}$ 

"B" is heavier than "A" by  $\cdot 00294$  grains.

COMPARISON of the platino-iridium troy ounce "A" with the platino-iridium troy ounce "C."

A	С	Position of Equilibrium.	
In L.	In R.	$M_1 = 57$	1 grain added to A in R gives
In R.	In L.	$M_2 = 56.97$	$M_s = 52.93$
In R.	In L.	$M_1 = 56.95$	'1 grain added to A in L gives
In L.	In R.	$M_2 = 56.98$	$M_3 = 61$
In L.	In R.	M <sub>1</sub> = 56.97	'1 grain added to A in R gives
In R.	In L.	$M_2 = 56.75$	$M_s = 52.8$

Temperature = 67°.5 Fahrenheit.

Barometer H = 29 9 inches.

Mean of differences, M<sub>1</sub>—M<sub>2</sub> is 03 divisions. Mean of divisions corresponding to 1 grains = 4.04 div. and  $A = C + \frac{1}{2}$  (.03) divisions

and 
$$A = C + \frac{1}{2}$$
 (.03) dirisions

$$=$$
C  $+\frac{1}{2}$  (·03)  $\times \frac{1}{40.4}$  grains,

A = C + .00037 grains.

"A" is heavier than "C" by 00037 grains.

The comparisons then give the following results:-Avoirdupoids pounds-

B = A + .0092 grains.

C = A + .0071 do

Troy ounces.

B = A + .00294 grains. A = C + .00037

I have not reduced the weights to vacuum as they displace almost equal amounts of air, being practically of same volume and density. I had not time to determine the densities.

In conclusion I may add that the standard weights seem to have preserved their original relative values, and have not deteriorated in any way that I can observe. This is due, without doubt, to the excellent and durable metal of which they are made.

All of which is respectfully submitted.

W. J. LOUDON, Lecturer in Physics, University College, Toronto.

#### REPORT ON THE STANDARDS OF LENGTH.

To the Commissioner of Inland Revenue.

SIR,—I beg leave to submit the following report of the comparisons made by me at Ottawa of the standards of length with each other:—The "Airy" stardard yard and the Departmental yard marked "A," "A" with "B," the latter of which is in charge of the Senate. "A" with "C," "C" being the property of the Commons. Also of the comparison made by me of the platino-iridium pound known as "A," in charge of the Department of Standards, with the bronze commercial pound made in 1844, and presented to the colony of Canada by the British Committee on restored standards.

The "Airy" standard of length and the "bronze pound" are especially interesting on account of their age, being both made about 1844-45. I have taken particular care, as far as lay in my power, to notice if any great change has taken place in either of them, and have not found any alteration of vital importance. In the following summary I have given the results only, without placing down all the figures; these latter will be found in the book which I used in the comparisons, and which I

have sent you along with this report.

In the operation of comparing two standards of length I used the comparing apparatus in the basement of the Inland Revenue Department. Unfortunately I was unable to obtain any thermometer but a Fahrenheit one, which read only to about a tenth of a degree, and was graduated in half degrees. Still, by allowing sufficient time to elapse between readings, and by taking proper precautions as to temperature, I think I obtained fairly good results; of course for a rigid investigation it would be absolutely necessary to place the bars in either water or mercury so as to ensure them always being at the same temperature throughout their length.

The first comparison was made between the "Airy" standard and "A." The differences given by twenty observations were taken and the mean determined. These differences are in divisions of the micrometers, which are attached to the microscopes. The value of the division on each micrometer was the first thing I determined, and as a mean of a large number of readings (see book) I found that:

$$\begin{cases}
1 & \text{division on micrometer "B"} = \frac{.5}{25228 \cdot 8} = .0000198 & \text{inches,} \\
\text{and 1} & \text{do} & \text{do} & \text{"A"} = \frac{.33}{16587 \cdot 95} = .0000199 & \text{inches.}
\end{cases}$$

Instead of multiplying the divisions on "A" and on "B" throughout by these values, respectively, I have chosen the mean of the two, and used it as a multiplier, the error caused by so doing not amounting to anything appreciable. Value of one division then is 00001985 inches.

The comparison of "Airy" with "A" gives the following differences:-

```
"Airy" -
             1 35
1 30
              1.00
             3.30
             \frac{5.90}{5.00}
                                                          Twenty observations give then a mean equivalent to +3^{\circ}1025 divisions for Airy—A. The value of a division being '00001985 inches, the "Airy" Standard would then be longer than "A" by 3^{\circ}1025 \times 00001985 inches, that is by '0000616 inches.
             4.60
4.90
4.80
             3.95
             6.30
             5:30
             \frac{2}{3} \cdot \frac{10}{00}
                                     0.25
              4.30
           62:30
                                     0.25
             0.25
      + 62.05
             3.1025 divisions.
```

The second comparison made was "A" with "C." The differences are:-

```
13·4
11·7
13·2
              15 4
14 9
14 3
9 1
              10.4
              14·8
6·4
                                                  Twenty observations give
as a mean + 11·26 divisions. "A" is then longer than "C" by 11·26
 \times '00001985 inches, that is by '0002235 inches.
              10.0
              \frac{8.1}{16.1}
              11.2
                9.0
              11.6
              10.0
              10.7
              10.4
           225 \cdot 2
20
            11.26 divisions.
```

```
The third comparison was "A" with "B."
                                                                               The differences are :--
     3.4
     \begin{array}{c} 7.0 \\ 7.0 \\ 8.9 \\ 8.5 \\ 6.6 \\ 7.6 \\ 2.9 \\ 9.3 \end{array}
    11 5
14 5
                                         Twenty-three observations give as a mean \frac{231}{23} divisions. "A" is then
                                   longer than "B" by \frac{221\cdot3}{23} \times \cdot 00001985 inches.
    12.6
    13.8
    \frac{11}{12} \cdot \frac{4}{7}
                                   That is by '0001913 inches.
    12.0
    12.1
    11.4
    12.0
    10.0
    221 3 divisions.
```

By referring to the Second Report of Weights and Measures (May 1, 1875), it will be found that arcording to the comparison made by the Warden of the Standards in London.

"A" = 36.00002841 inches
"B" = 35.99994581 "
"C" = 35.99981332 "

at the same temperature.

From these, then, the last comparison would have given at the same temperature (in the neighborhood of 60° Fahr.):—

A - B = .0000826 inches. A - C = .00021509 "

The present comparison gives

A - B = .0001613 inches. and A - C = .0002235 "

The alteration may of course be in A or B or C or in all. Relatively, however, to one another and even absolutely I think it may be said that no change has taken place in the bars A, B, C greater than the fifty thousandth part of an inch.

Regarding the "Airy" standard it was said to have been the same as the Imperial standard at a temperature of 61°.94 Fahr. "A" being standard at '61°.94 Fahr., the difference between the "Airy" and "A" would be

 $03 \times 36 \times$  coefficient of expension for 1° F. =  $03 \times 36 \times 00000985 = 00001$  inches.

That is, A was longer than the "Airy" by 00001 inches.

By my determination the Airy is longer than "A" by 00006 inches.

In my comparison, however, it must be borne in mind that I had no thermometer reliable beyond the tenth part of a degree Fahrenheit, and so ,as the difference is so very slight, I could not be justified in saying that the "Airy" is longer than "A" by the above quantity. It would require a new determination, with special apparatus and precautions, to decide on the exact difference and the sign of the difference between A and Airy. But one thing is certain that whatever change has taken place is extremely small.

#### Comparison of the "Bronze Pound" with "A."

In the different weighings which were made to find the difference in weight between "Bronze" and "A," I used Gauss' method of double weighing, adding at the

end of each set of readings 1 grain in order to determine the value of one division on the scale of the balance. The Balance used was Oertling's No. 1, and the divisions on the scale were read by means of the cathetometer. In each case, the thermometer, barometer and hygrometer were read. All the readings and calculations will be found in the book which I used. I only give here the results of determinations 4, 5, 6 which I considered to be quite free from error of any constant nature.

These weighings 
$$(4, 5, 6)$$
 give as results:—

No. 4. "A" = "Bronze" + .6080 grains.

No. 5. "A" = "Bronze" + .6077 "

No. 6. "A" = "Bronze" + .5061 "

As a mean "A" = "Bronze" 
$$+\frac{1.8218}{3}$$
 = "Bronze"  $+\frac{.6072}{3}$  grains.

These weighings are made of course in air. To reduce to vacuum I have calculated the amounts of air displaced by both at normal pressure and temperature, by means of measurements. My results agree closely with the previous qualities determined by Prof. Miller in 1854. I find that Bronze pound displaces 1 156 grains of air. Platino-iridium pound "A" 400.

Hence, in vacuo  $(A - \cdot 4) = (Bronze - 1 \cdot 156) + \cdot 6072$  grains.  $\therefore A = Bronze - 1 \cdot 156 + \cdot 6072 + \cdot 4$   $= Bronze - 1 \cdot 156 + 1 \cdot 0072$ 

$$\therefore$$
 A = Bronze - 1·156 + ·6072 + ·4  
= Bronze - 1·156 + 1·0072  
= Bronze - ·1488 grains

or in a vacuum Bronze weighs more than A by 1488 grains. In a vacuum

Bronze = A + ·1488 grains.

From previous determination by Prof. Miller Bronze  $= 7000 \cdot 11611$  grains in vacuo. and "A" = 699.97694

.:. Bronze — "A" = 13917 grains.

Former determination:

Bronze — "A" =  $\cdot 13917$  grains in vacuo.

Present determination:

Bronze — "A" = 1488 grains in vacuo.

Change = .00963 grains.

That is the bronze pound has no doubt become slightly oxidized in spite of the gilding to the extent of 00963 grains. This change is remarkably small, seeing that the pound has not been tested since 1854, and that it has had many opportunities of becoming tarnished.

In conclusion I may say that the standards appear to have preserved their original values with but slight changes, changes in fact so slight, that it would require a much more rigid investigation than I was able to make in order to discover

their true significance.

The only thing I noticed, in the way of rusting was on the "Airy" bar; the mid line of the three which are engraved on the gold stud at one end was badly blotched with rust, and a few more years of similar rusting would entirely efface the What has caused it, it is difficult to say, as the lines are engraved on gold; however, I cleaned the stud thoroughly and imagine that the process of rusting has been arrested. The bar "C" was in excellent order, just as good probably as the day it was made. The surfaces of the gold stud in "B" were slightly dulled.

All of which is respectfully submitted.

W. J. LOUDON.

# REPORT, RETURNS AND STATISTICS

OF THE

# INLAND REVENUES

OF THE

### DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30th JUNE

1889.

# ADULTERATION OF FOOD.

Presented to both Houses of Parliament by Command of His Excellency.

JOHN COSTIGAN,

Minister of Inland Revenue.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

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## INSPECTION OF FOOD.

To the Honorable

The Minister of Inland Revenue.

SIR,—I have the honor herewith to submit my report respecting the analysis of food; also the reports of the Analysts appointed under the Act.

The following is a summary statement of the whole number of samples reported upon by the official Analysts:—

Summary of the whole number of Samples analysed by the Dominion Analysts for the year ending 30th June, 1889.

Name of Sample.	Genuine.	Adulterated	Doubtful.	Total.
Baking powder Butter Cheese Cheese Chewing gum Canned lobster Cream of tartar Lard Milk Vinegar Whiskey Fertilisers	45 24 18 4 2 79 189 164 62 6	63 192 40 28 6	3 12 2	150 31 18 4 2 145 393 207 90 12 10
Total	603	431	28	1,062

The Chief Analyst having been authorized to publish independent Bulletins in respect of the specific articles dealt with in the Departmental Laboratory at Ottawa (which are republished herewith), there is no necessity for any extended remarks. The results of such analyses are given very fully in the Bulletins.

The first six Bulletins were published with my report of last year. Those accompanying this report are as follows:—

No. 7. Lard.

No. 8. Fertilizers.

No. 9. Winter Milk.

No. 10. Baking Powders.

No. 11. Summer Milk.

No. 12. Cream of Tartar.

One hundred and nine samples of lard were examined, of which 38 were of Canadian, 11 of unknown and 60 of United States origin. Of the Canadian 3 out of the were adulterated, while of the United States product only 1 was genuine.

The examination of winter and summer milk was undertaken in order to furnish data upon which to determine a standard. Of 267 samples of winter milk, 71 were

passed by the Inspector as undoubtedly genuine and 196 were subjected to analyses. Of these, 87 were found to be defective—nearly one-third of the entire samples taken.

The unadulterated samples showed a general average of 12.58 per cent. total solids and 3.79 per cent. of butter-fat. The average given by the analysis of summer milk is 12.65 total solids and 3.69 butter-fat.

Mr. A. McGill furnishes a very able and interesting report upon baking powders and a further one upon cream of tartar.

The Chief Analyst, as well as his Assistant, take very strong grounds against the use of alum in baking powders. In the report of the former, which will be found on page 86, he says that the use of alum in bread-making is prohibited in most countries where food adulteration laws have been enacted, and that alumina is not to be found in any species of food or drink used by man, nor does it occur in any part of the system. On these grounds he thinks the use of alum in compounding baking powders should be prohibited. The latter reason appears to have considerable force, but I am inclined to think the use of alum in bread is prohibited on the ground that it is an agent by the use of which bread made from inferior flour can be so whitened as to be undistinguishable from that made from the best, the legislation being directed rather against commercial fraud than against the unwholesome character of the agent.

It is a pleasure to note that the larger cities are beginning to avail themselves of the facilities offered by the Act, more especially as regards the inspection of milk. As simple methods of detecting frauds in respect of other articles of food are discovered, it is hoped that municipal action will be further extended, as by this means the ground can be fairly covered.

I have the honor to be, Sir,

Your obedient servant,

E. MIALL,

Commissioner Inland Revenue.

OTTAWA, 28th May, 1890.

#### 1.—DISTRICT OF NOVA SCOTIA.

Office of the Public Analyst, Halifax, 21st November, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—I have the honor to submit my report on foods and drugs received by me for analysis during the year ending 30th June, 1889.

I have analysed 230 samples in all, 144 of which were genuine, 85 adulterated

and 1 doubtful, tabulated as follows:-

	Genuine.	Adul- terated.	Doubtful.	Total.
Baking powder Cream of tartar Lard Milk Vinegar	21 28 24 38 33	5 7 47 9 17	1	26 35 71 48 50
Total	144	85	1	230

#### Cream of Tartar.

In seven cases starch was present, and in two of these sulphate of lime as well. Six others, though genuine, were of inferior quality.

#### Lard.

Of the seventy-one samples examined, fourteen were of native production and fifty-seven American. Neither water nor cotton seed oil were detected in the former, while over 82 per cent. of the latter were found to be adulterated as follows:

Genuine	*,	10
Adulterated with	cotton seed oil	25
do	water	10
do	do and cotton seed oil	11
do	beef stearine	1
	_	

In those cases where water was found it ranged from 13 to 34 per cent.

#### Milk.

Thirty-eight of the forty-eight samples were genuine; of the remainder, five were watered, four deficient in cream and one doubtful.

#### Vinegar.

Of the seventeen adulterated samples, ten contained less than the standard amount of acetic acid, and seven had an excess of mineral acid, but were otherwise uninjurious.

I have the honor to be, Sir,

Your obedient servant.

MAYNARD BOWMAN, Public Analyst.

#### 2.—DISTRICT OF NEW BRUNSWICK.

CHEMICAL LABORATORY, 74 GERMAIN St., St. John, N.B., 28th October, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—I have the honor to submit to you my report on certain samples of food, &c., received for analysis during the year ending 30th June, 1889.

The following is a summary of my results, viz.:—

Nature of Sample.	Adulter- ated.	Not Adulter- ated.	Doubtful.	Total.
Baking powder	13 21 9 11	24 12 33 27 29	i i	24 25 55 36 40
Total	54	125	1	180

#### Baking Powders.

The samples examined appear to be free from objectionable substances, although a large percentage of flour is found in some of the samples.

#### Cream of Tartar.

About half the samples are classed as adulterated, some of them containing a large amount of insoluble residue.

#### Lard.

Nearly half the samples were found to be adulterated with cotton seed oil. (This adulterant was only found in American lard).

#### Milk.

About one-third of the samples were classed as below the standard.

#### Vinegar.

Out of forty samples, eleven were found below the standard strength.

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

> W. F. BEST, Public Analyst.

#### 3.—DISTRICT OF QUEBEC.

Office of the Public Analyst, Quebec, 28th October, 1889.

To the Commissioner of Inland Revenue, Ottawa.

Sir,—I have the honor to forward to you the following report on my operations in 1888-89.

I have analysed during the year 125 samples, and reported 80 genuine, 40 adulterated and 5 doubtful.

Here follows a statement indicating the nature of the samples analysed, and the proportion of their adulteration:—

Nature of Samples.	Good.	Doubtful.	Adulterated	Total.
Milk	31	1	4	36
Cream of tartar	4		6	10
Baking powder	4		20	24
Lard	41	4	10	55
Total	80	5	40	125

Milk.

Not satisfactory this year.

Cream of Tartar.

Ten samples were examined; 4 were pure, 6 adulterated, out of which 4 were not cream of tartar.

Baking Powder.

Out of 24 samples, 4 are pure, 18 adulterated and 2 doubtful.

#### Lard.

Out of 55 samples, 10 are adulterated by the addition of cotton seed oil. A certain number of samples classified as good contained also a very small quantity of cotton seed oil. It is to be remarked that foreign lard is generally adulterated.

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

> M. FISET, M.D., Public Analyst.

#### 4.—DISTRICT OF MONTREAL.

Office of the Public Analyst, Montreal, 12th November, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—I have the honor to submit to you my fourteenth annual report on the result of my analysis of samples of food and of articles entering into the composition of food, which have been submitted to me for analysis during the year.

The present report is for the year ending 1st July, 1889, during which 216 samples have been submitted, of which I have reported 111 genuine, 91 adulterated

and 14 doubtful, as shown in the table annexed :--

Nature of Sample.	Genuine.	Adulterated	Doubtful.	Total.
Milk	33	17	1	51
Butter	7		7	14
Canadian cheese	10			10
Canadian lard	32	9	1	42
American lard	8	20	4	32
Confectionery	4			4
Canned lobsters	<b>2</b>			2
Baking powder	3	23		26
Cream of tartar	12	22	1	35
Total	111	91	14	216

#### Milk.

On the important subject of milk, I have to report that the Civic Board of Health have so far adopted the suggestions contained in your report as to appropriate a sum of money for the regular inspection of milk, day by day or week by week; and have appointed one of their sanitary officers as a milk inspector and myself as civic analyst. The Board, however, does not proceed under the Adulteration of Food Act, 1885, but under the city by-laws, of which in this connection I enclose a copy. Since April last to the date of this report (12th November), a period of eight months, 891 samples of milk have been taken by the inspector, and of these 821 have been passed by him on the Feser and Lactodensimeter tests, taken as 2.5 of butter fat on Feser and 1029 to 1033 of Lactodensity. Below these standards, 70 samples have been submitted to me for full analysis. Of these I found 11 genuine, 57 adulterated, and 2 doubtful; the standard being, however, lower than those of the milk bulletins published by the department. In some few cases the butter fat was in excess, reaching 3.75 and 4.25 in two instances, showing the fallacy of the Lactodensimeter and Feser tests. Of these cases before the Recorder, 42 have been fined an average of \$10 each. Six cases have been dismissed on some technical grounds.

It is proposed to make some alterations in the city by-laws to correct these incertitudes and to adopt a higher standard for commercial whole milk.

#### General Groceries.

It will be observed that the articles of tea, coffee, cocoa, sugar, spices and confectionery have almost been ignored during the past year, and I venture to suggest, in the interest of the public, that some surveilance of such goods should be annually maintained. Whilst the special enquiries are going on in reference to the great Dominion exports of butter, cheese and lard are of the greatest importance to

the country, I beg to submit that the quality of the imports of home consumption should be annually inspected; and the subject of drugs, as imported as well as manufactured, is of no less importance than that of food. All those could be handled conveniently in the intervals of the long series of special enquiry.

#### Sugars.

The comparative purity of the refined sugars of Canada and those imported from Great Britain and the United States has created a lively discussion in the press during the past year, and I would also suggest that being now provided with costly polariscopes by the Department, the analysts should be called upon annually to report on the quality of imported and Canadian sugars, respectively, without local reference.

#### Lards.

It is very difficult to define a "commercial lard." Pharmaceutically it is the hard adipose secretion surrounding the omentum and mesentery and kidney of the fat pig, separated from its membrane and fused at a low temperature on a water bath.

This is a different product from that produced by superheated steam from the internal fat of the whole hog. The removal of lard oil by pressure from this product and the substitution of cotton seed oil is an undoubted adulteration, and can now be readily detected.

#### Butter and Cheese.

It would appear from the results of analysis that oleomagarine and "filled cheese" are unknown on the Canadian market.

#### Confectionery.

The fatal issues recorded in the press from the use of ice creams during this year call, in my judgment, for some investigation as to the poisonous character of the flavoring essences used in their manufacture. It is well known that the oil of bitter almonds is a virulent and deadly poison, containing from 8 to 12 per cent. prussic acid; and its substitute, nitro-benzine, is a narcotic poison of another class, but still dangerous. Oil of wintergreen is also dangerous in excess, and many of the etherial essences sold to confectioners for flavoring are narcotics more or less. As these are offered in the open squares and streets of our cities at the temptingly low price of 1 cent per glass, I submit that this subject is worthy of official investigation.

#### Soda Water, Ginger Ale and Cream Soda.

I have been called upon to investigate, during the season, no soda fountains which, in several instances, were proved so defective the previous summer; but I have also been called upon, not by the Department, but by private manufacturers, to examine the metallic buttons ingeniously dropped into ginger ale and cream soda bottles. I found that the ginger ale was not affected by the lead contained in these stoppers, but the cream soda, being alkaline, dissolved a notable quantity of lead, which in some cases caused serious illness from the effects of the lead stoppers. From this experience these old-fashioned stoppers have been abandoned, and a clever invention of white rubber, with a block-tin stopper, has been substituted therefor, which promises to avoid any metallic contamination in the future. As many leather stoppers for grated beverages are still in use by some manufacturers, I consider this matter of some importance for official investigation.

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

> JOHN BAKER EDWARDS, Public Analyst.

#### 5.—DISTRICT OF KINGSTON.

OFFICE OF THE PUBLIC ANALYST, OTTAWA, 12th October, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR.—I have the honor to submit for your appreciation a general report on the

work carried on in my laboratory during the fiscal year 1888-89.

During this period 177 samples of various products were collected by the inspector and sent to me for analysis, the results of which are given in the following table:-

Samples.	Description.	Genuine	Bad.	Fair.	Doubt- ful.	Total.
Butter. Cheese. Baking powder. Drugs. do do Mo Lard Milk. Whiskey.	Cream of tartar. Comp. cream of tartar. Cream of tartar substitute	8 9 15 34	15 4 6	6 3 1 1 2	3 2	17 8 24 18 6 1 55 36 12
		87	68	13	9	177

#### Milk, Butter and Cheese.

The farm products have, with a few exceptions, given, on examination, satisfactory results. It is, however, to be regretted that now and then adulterated or skimmed milks are met with, and that samples of cheese, although genuine, are offered for sale in a state of complete deterioration.

#### Baking powder.

I beg to refer to my previous report for my opinion on the composition of baking powders. I wish only in this instance to state, that the market is infested with such more or less injurious articles, and that the Government should take steps to rule their manufacture and banish from commerce those possessing deleterious properties.

The relative value of different brands has recently been made known in a special bulletin published under authority of the Inland Revenue Department by Mr. A.

McGill, who treated the question in a masterly manner.

In my opinion, only 25 per cent. of the number of samples I have examined were fit for sale as wholesome products.

#### Cream of Tartar and Substitutes.

The remarks made on baking powders are equally applicable to these drugs, for a simple incorporation of a suitable quantity of bi-carbonate of soda with them constitutes their different brands of leavening agents offered in commerce.

About 65 per cent, of so-called cream of tartar is fraudulent and injurious to

health.

#### Lard.

Since the last few years much has been said, especially in England, on the invasion of American refined lard on the market, and mostly every food analyst has been engaged in chemical researches on their ingredients, principally cotton seed oil.

This latter constituent is not altogether unobjectionable as food, as has already been judiciously remarked, from the fact that, possessing siccative properties to a certain degree, it is apt to become unfit for digestion. At any rate, genuine lard bears to such mixtures the same objection as does butter to oleomargarine and should alone be allowed to be sold as lard.

Sixty per cent. of the lard retailed in my district is cotton seed oil mixtures.

#### Whiskey.

Early in June last twelve samples of whiskey of different brands were sent to

me by the Kingston officer for examination.

Four only were found genuine. The rest were more or less deficient in alcohol. For want of defined standards established by the Department, I have classed them according to British pharmacopæia.

None contained methylic or arnylic derivatives, except No. 2945, which was

doubtful in this respect.

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

> F. X. VALADE, M.D., Public Analyst.

#### 6.—DISTRICT OF TORONTO.

School of Practical Science.
Toronto, 27th November, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—I have the honor to submit my report for the past year. Since July, 1888, I have analysed 121 samples, viz.:—

Nature of Sample.	Genuine.	Adul- terated.	Total.
Lard Cream of tartar Baking powder Fertilizers	32 10 11	38 5 15	70 15 26 10
Total	53	58	121

#### Lard.

During the past year I have examined 70 samples of lard.

In all these samples the action of nitrate of silver, the amount of iodine absorbed, and the specific gravity at the temperature of boiling water were determined. In 22 samples the quantity of water and of matter insoluble in ether were also ascer-

tained, and a special microscopical examination made for beef fat crystals.

The result of these examinations was to show that none of the lards contained water, and that the quantity of matter insoluble in ether in no case exceeded 4 per cent. Also in all cases where the nitrate of silver and iodine tests led me to infer the presence of cotton seed oil, crystals of beef fat were found, leading to the conclusion that the most common adulteration, by far, is a mixture of cotton seed oil and beef stearine.

Of the 70 samples examined, 32 were found genuine and 38 adulterated.

#### Cream of Tartar.

Of 15 samples of cream of tartar, 10 were pure and five adulterated. In four cases the adulteration was of wheat or corn starch, varying in quantity from 8 to 33 per cent. One sample consisted almost entirely of calcium sulphate, with a percentage of starch. Two samples were adulterated with a quantity of burnt alum.

#### Baking Powder.

Twenty-six samples were analysed. Ten were cream of tartar powders of good quality, and yielding from 33 to 63 cubic centimetres of carbon dioxide per grain. One was a cream of tartar powder, with a small quantity of carbonate of ammonia.

Fourteen samples were alum and phosphate powders. These gave off from 8 to 53 cubic centimetres of carbon dioxide per grain. All contained a very small per cent, of ammonia. I have reported all these alum containing powders as adulterated in such a mannar as to injure health.

#### Fertilizers.

Ten samples were analyzed. These consisted chiefly of phosphoric acid and nitrogen as ammonia. One sample was composed of hydrated sulphate of lime, and another of 98 per cent. nitrate of soda.

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

W. H. ELILS.

#### 7.—DISTRICT OF MANITOBA.

St. John's College, Winnepeg, Man., 14th October, 1889.

To the Commissioner of Inland Revenue, Ottawa.

Sir,—I beg to submit my report for the year ending 30th June, 1889.

From the time of my appointment up to that date I was engaged in the analysis of lard. Fifteen of these lard samples were collected in the Winnipeg district, and the results of their analysis are tabulated in Appendix B. In all, 32 samples were examined, viz., 12 American, 15 Canadian, and 5 labelled "pure lard."

The American samples were all adulterated.

Seven of the Canadian stmples were reported genuine and five adulterated. Concerning the remaining three, no opinion was expressed.

Of the "pure" samples, one was undoubtedly genuine, three—evidently Amer-

ican—contained cotton seed oil, and the fifth contained tallow.

Those American samples collected in Manitoba contained cotton seed oil, but

were free from water. No other foreign fat was looked for.

The native samples from this Province were all reported genuine. At the time the returns were forwarded no special tests had been made for tallow. A subsequent examination of No. 5827 (apparently a native sample) clearly showed the presence of tallow.

The samples from Ontario, Quebec and the Marime Provinces were all specially

tested for tallow.

The imported samples, with possibly one exception, all contained cotton seed oil. They were all watered—in two cases the water amounting to nearly 30 per cent.—and five at least out of the six contained tallow. No. 8463, a unique specimen, requires further examination.

Of the Canadian samples, three appeared genuine, and three gave doubtful results. The remaing five gave distinct evidence of tallow, and one contained cotton seed oil as well. It is now well known that some of the tests for cotton seed oil are not to be depended on after the lard has attained a certain age. As these samples were collected some months previous to the analysis, it is not impossible that some of the other samples may have contained small quantities of cotton seed oil.

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

EDGAR B. KENRICK.

8.—SPECIAL REPORTS.

(BULLETIN No. 7; LARD.)

LABORATORY OF THE INLAND REVENUE DEPARTMENT, 14th February, 1889.

To the Commissioner of Inland Revenue.

SIR,—The numerous prosecutions for selling adulterated lard which have, within the last twelve months, taken place in England, as well as the convictions and punishments which followed, have been instrumental in calling attention to the same subject in Canada. Representations having also been made to the Department from other quarters regarding the same matter, it was deemed wise to investigate it. Accordingly in August last, you issued instructions for the collection of a large number of samples of the lard sold throughout the Dominion. The reports made by the Public Analysts regarding these were not in all cases based upon the most appropriate methods of examination, and therefore, the analysis of a number of the samples was undertaken in this Laboratory. The results obtained are given in the following tables, together with some by Dr. W. H. Ellis, of Toronto, who adopted, for the most part, the same process as employed here. Besides the names of the vendors of the samples, the names of the manufacturers or furnishers are given, but it is to be remarked that these are reported on the authority of the vendor or collector, and may not be, in all cases, entirely reliable.

	Remarks.		65.9 No coleration T. Macfarlane Adulter a ted with	Slightly adulterated	Adulter a t e d with water. Sample accidentally lost under	treatment.	72.48 Yellowish brown T. Macfarlane Adulterated with cot-	con secu on.	op	op	op	ор	op	Adulterated with	Adulter a ted with water, and cotton	seed oil.	Adulterated with water
	Analyst.		T. Macfarlane	ob	op	F. X. Lefebvre.	T. Macfarlane	F. X. Lefebvre.	A. L. Tourchot.	ф	ф	F. X. Lefebvre	op	op	T. Macfarlane Adulter a ted water, and	F. X. Lefebvre.	op
Properties of the Fat.	Silver Test.		No coleration	67.17 Light chocolate		51.8 Slightly brown. F. X. Lefebvre	8 Yellowish brown	81.84 Brown F. X. Lefebvre.	76.12 Slightly grey A. L. Tourchot.	2 do	88.98 Dark olive green	85.85 Light brown F. X. Lefebvre	69.68 Slightly brown	62.63 No coloration	1 do	73.66 Slightly grey F. X. Lefebvre	58.86 No coloration
operti	-groeds absorp- tion.		6.99	67.1	<u>:</u>		72.4	81.8	1.92	83.72					70.71		
Pr	Spec. gravity at 98° C.		198-(	3.8615	•	3.8635	1.861	).864	0.8649	0.8656	6998.0	0.8645	0.8620	0.8605	0.862	0.862	0.8600
	Total.		6.00 100.00 0.861	4.65 100.00 0.8615	2.13 100.00	0.80 100.00 0.8635	1.14 100.00 0.861	0.61 100.00 0.864	0.41 100.00 0.8649	0.42 100.00 0.8656	0.36 100.00 0.8669	0.46 100.00 0.8645	0.43 100.00 0.8620	0.38 100.00 0.8605	1.56 100 00 0 862	0.73 100.00 0.862	0.59 100.00 0.8600
sis.	Other sub- stances.		6.00	4.65	2.13	0.80	1.14	0.61	0.41	0.42	98.0	0.46	0.43	0.38	1.56	0.73	62.0
Analysis.	Fat.		84.28	95.35	79.41	99.20	98.86	68.66	69.26	85.99	99.64	99.54	29.66	75.15	92 89	89.86	88.75
	Water.		9.42	:	18 · 46	:	:	:				:	:	24.47	5.55	5.20	10.66
	Manufacturer or Wholesale Dealer.		163 Wa-Chas. F. Tietjen, New	Armour & Co., Chi-	Sackville J. H. Bruggeman, 18-46 Cincinnati.	Vendors	ampbell Armour & Co., Chi-	cago. Unknown	Armour & Co., Chi-	cago.	N. K. Fairbanks &	co., Chicago.	Kentville, Armour & Co., Chi-	genan,	Cincinnati. Chase & Deecken, New York.	0 Dock C. F. Tietjen, New	York. Chase & Deecken, New York.
	$\begin{array}{c} \text{Name} \\ \text{and } Address \text{ of} \\ \text{Vendor.} \end{array}$		Robert H. Campbell,	Richard O'Neill, 143 Lower Armour & Co., Chi-	Water Street, Hallax. Dillon Bros., 80 Sackville. Street, Halifax.	J. W. Seaman & Co., Bedford Vendors	Row, Halifax. Edwin Wright, 109 Campbell	Road, Halifax. Joseph H. Parrett, Liverpool, Unknown.	N. S. Alexander Young, Summer-Armour & Co., Chi-	ville, N.S. Edward Young, Burlington, C. F. Tietjen, New 13·59	George T. Gibson, Brooklyn, N.	N. S. F. C. Chambers, Newport	Station, N.S. Calvin Bishop,	Strong,	N.S. Cinci F. S. McPherson, 181 Union Chase Street, St. John, N.B. New	John O'Gorman, 10 Dock	Street, Portland, St. John. York. Dean Bros., West Street, City Chase & Deecken, 10.66 88.75 Road, St. John.
·le.	Number of Samp		8330	8332	8335	8338	8345	8356	8366	8367	8368	8369	8370	8371	8297	8305	8303
·u	roiteeloO lection	1888.	Sept. 10	Aug. 11	do 11	do 11	Sept. 11	do 11	Aug. 24	do 24	do 24	do 24	do 25	do 25	do 13	do 14	do 14

Macfarlane   L. Tourchot Adulterated with cot-	ton seed oil. Adulterated with water	Adulterated with water	do do	Ä	ton seed on.	68.56 Olive brown T. Macfarlane Adulterated with cot-	F. X. Lefebvre Adulterated with water	and cotton seed ou.	Adulterated with water		Ą	ton seed oil.	Adulterated with cot-	ton seed oil.	op	op		L. Tourchot., Adulterated, with cot-	ton seed oil. do	op	do,	op	op
T. Macfarlane	ор	ор	F. X. Lefebvre	T. Macfarlane	F. X. Lefebvre	T. Macfarlane	F. X. Lefebvre	ob	op · ·	-: op	T. Macfarlane	F. X. Lefebvre	ор	ор	A. L. Tourchot	F. X. Lefebvre	do	A. L. Tourchot	T. Macfarlane	F. X. Lefebvre	A. L. Tourchot	F. X. Lefebvre	op
<ul><li>54·14 do T.</li><li>90·44 Dark olive green A.</li></ul>	69.76 No coloration	84.24 Slightly grey	69.34 Greyish	91 .08 Dark grey	49.22 No coloration F. X. Lefebvre.	58.56 Olive brown	74.12 Greyish	66.86 Slightly grey	58.30 No coloration	49·22 do	83.99 Dark grey	57.43 No coloration F. X. Lefebvre.	85 · 45 Dark grey	79.12 Grey	88.67 Dark brown	86 · 93 Dark grey	47.07 No coloration	89.20 Dark green	73.74 Yellowish brown T. Macfarlane	87.69 Light brown	84.72 Dark greenish A.	71.24 Slightly brown. F. X. Lefebvre	88.45 Light brown
0.92 100.00 0.8682	0.45 100.00 0.8667	0.51 100.00 0.8687	0.64 100.00 0.8610	5.27 100.00 0.862	0.47 100.00 0.8585	2.67 100.00 0.864	0.57 100.00 0.863	0.48 100 00 0.8615	0.46 100.00 0.8600	0.72 100.00 0.8620	0.8635	6.87 100.00 0.8645	0.40 100 00 0.8650	0.53 100 .00 0 .8630	0 48 100 00 0 8672	8 69.0 00.001 22.0	0.82 100.00 0.860	0.25 100.00 0.8674 8	0.88 100.00 0.861 7	0.46 100.00 0.8645	0.13 100.00 0.864	0.36 100.00 0.8620	0.41 100.00 0.8645 8
. 99·12	81 89.74	14 93.35	8.59 90.97	1.58 93.15	99.53	97.33	22 88.88	20.68 24	82 89.72	99.28	:	. 93.13	09.66	. 99.47	22.66	. 99.23	. 99·18	. 99.75	99.12	. 99.54	. 99.87	. 99·64	. 99.59
e	, 9.81	6.14			:	<u>:</u>	v 10·55	, 10.47	- 9.82	:	:	<u>:</u>	: 	<u>:</u>	:	_ :		:		:			
Princ nd. 1, Nev	ecken	:	Deecken,	s, Chi	Char		ı, Nev	ecken	s, Chi	nbnry	7. Co.,		Ço.,	& Co.,	Ço.,	, Chi-	Son,	G	, Chi-	Ço.,	, Chi-	:	Ç <sub>0</sub> .
ermain Imported from Prince Edward Island. Prince C. F. Tietjen, New	York. Chase & Deecken, Now York	Queen Unknown	indian-Chase & De	T. O. Daniel	J. H. Myrick,	sboro', Fairbanks & C	Cape, C. F. Tietjen, New	Mem-Chase & Deecken,	College T. O. Daniels, Chi-	kville, William Rattenbury,	King Fairbanks &	acques Vendor	Dor- Fairbanks &	we. Co., 362 F. W. Garde &	Æ	<0	cago. M. Laing &	Fairbanks &	Chicago. Armour & Co.,	Fairbanks &	Armour & Co.,	cago. do	Fairbanks & Chicago.
	et, St. John. 3 St. James' br.			". Indiantown,	airville, N.B.	o., Hillsboro',			nier, College	ramcook. tt, Sackville,	1t, 170 King	c. vuin, Jacques	32	, Que. uil & Co., 362	eet, Que.	te, Somerset,	:	ie, Somerset,	mell, Somer-	r, Somerset,	Victoriaville,	Victoriaville,	Victoria-
Samuel Strang, Street, St. John. Samuel McGirr, 2	William Street, St. John. York John Doody, 43 St. James Chase	E. C. Wilson, 1 Street, St. John.	Thos. F. Granville,	T. Nase & Son, Indiantown, T. O. Daniels, Chi-	George Irvine, Fairville, N.B. J. H. Myrick, Char-	John Lewis & Co., Hill	John L. Pye, Hopewell	F. McManus & Son,	P. D. & E. Sc	Bridge, Memramcook H. R. Fawcett, Sac	Jean B. Parant, 170	Street, Quebec. Marceau & Drouin, J.	Cartier, Que. Louisa Martinetti,	J. E. E. Montreuil &	St. Joseph Street, Qu François Bédard, 2St. J	Joseph D. Lacirte, Somerset,	op do	7434 Joseph A. Savoie, Somerset, Fairbanks	7436 Antoine E. Brunell, Somer-	set, Que. N. C. Cormier, Somerset, Fairbanks	J. D. Bourbeau, Victoriaville, Armour &	Paul Tourigny, Victoriaville,	Alfred Belanger, ville, Que.
8293	8294	8296	8309	8312	8315	8321	8322	8324	8326	8328	7427	7428	7429	7430	7431	7432	7433	7434	7436 4	7437	7439	7440 I	7442
12	13	13	21	21	21	4	4	9	9	9	18	18	18	18	18	83	23	83	23	63	31	31	31
දා	qo		qo	qo	qo	Sept.	$^{\mathrm{qo}}$	ф	qo	ф	qo	မွ	qo	ф	Aug.	qo	ф	qo	ဝှ	ф	qo	ф	óp

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	Remarks.			:		73.10 Olive brown F. X. Lefebvre Adulterated with cot-	do do		87.36 Light brown A. L. Tourchot Adulterated with cot-	ton seed oil.	Adulterated with cot-	do do	84.70 Greenish grey A. L. Tourchot Adulterated with cot-	ton seed oil.				Adulterated with cot-
	Analyst.		T. Macfarlane.	op	do .	F. X. Lefebvre.	T. Macfarlane .	F. X. Lefebvre.	A. L. Tourchot.	F. X. Lefebvre.	do .	greenish A. L. Tourchot.	A. L. Tourchot.	F. X. Lefebvre.	op	do .	op	. op
Properties of the Fat.	Silver Test.		51.86 No coloration T. Macfarlane	op 2	op 9	Olive brown	77.21 Greyish	56.27 No coloration F. X. Lefebvre	6 Light brown	61.5 No coloration F. X. Lefebvre.	89.9 Olive brown	88.92 Dark greenish	grey. Greenish grey	No coloration F. X. Lefebvre	3 do	op /	55.78 Unchanged	1.17 100 00 0 8650 88 7 Brown
ropert	-qroads aniboI		8.19	60.72	53.46		2.22	26.2							65.83	57.27		2.88
	Spec. gravity, at 98° C.		098.0	0.861	098.0	298.0	0.863	098.0	998.0	0 . 862(	0.865	9.867	0.865	0.828	3098.0	0.860	0.882	0.8650
	Total.		0.87 100.00 0.860	0.73 100.00 0.861	0.42 100.00 0.860	0.97 100.00 0.8625	0.37 100 .00 0 .863	0.57 100.00 0.860	0.44 100:00 0.8664	0.97 100 .00 0 .8620	2.68 100.00 0.8655	0.54 100.00 0.8679	0.49 100.00 0.8654	0.76 100.00 0.8580	0.51 100.00 0.8605	0.73 100.00 0.8600	0.58 100.00 0.8859	100.00
Analysis.	Other sub-					_							0.49					
Anal	Fat.		99.13	99.27	99.32	80.66	69.26	99.43	92.66	80.66	97.32	99.46	99.21	99.24	99.49	22.66	99.42	88.86
	Water.			:	0.50	:	0.04	:	:	:		:	:	:	:	:	:	:
	Manufacturer or Wholesale Dealer.		lictoria- M.J. McGrail & Son,	esfossés Vendor	Not known	167 St. Armour & Co., Chi-	Fairbanks & Co., Chicago.	115 St. F. Libercent, St., Mon- Lawrence Market.	Armour & Co., Chi-	real. cago. 210\(\frac{1}{2}\) St. F. Libercent, St.	Urbain Fairbanks & Co.,	cincago.	Georges Armour & Co., Chi-	cago. W. Laing & Son,	Montreal. Vendor	ор	Berlin, Moses Wisner, Doon	lle, Ont. Thos. Lawry & Son, Hamilton, Ont.
	Name and Address of Vendor.		Désire A. Bourbeau, V	- C - 88	Street, Quebec. Elie Brodeior, 609 Dorchester Not known		ic Aubin, 2 St. Law- Market Square, Mon-	er & Tiganet, inique Street	Matthew Hodge, 181 St. Law- Armour & Co., Chi-	rence Street, Montreal. Charles C. Lapierre, 210\( \) St. Lawrence Street Montreal	John Brunet, 129 St. Urbain		Albert Evans, 211 St. Georges	Street, Montreal.  Hormida Riendeuu, Chambly W. Laing	A. Bondreaul, Bonsecours Vendor.	Henri Reynaud, 183 Lagau-	β.,	Ont. M. McMillen, Bellevi
bje,	Number of Sami		7443	7453	7384	7385	7386	7387	7388	7389	1391	7396	7397	7407	7408	7472	7971	7974
'uc	Date of Collectio	1888.	Aug. 31	do 31	do 10	do 10	do 10	do 10	do 10	do 10	do 10	do 10	do 10	July 15	do 15	Sept. 7	Aug. 18	do 18

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op	ор	ф	. ор		63.51 No coloration do 92.44 Greenish brown. A. L. Tourchot Adulterated with cot-	ton seed oil. Adulterated with cot-	ton seed oil. do	do		¥	ton seed oul. Adulterated with cot-	ton seed ou. do	op	op	op	•		F. X. Lefebvre. Adulterated with cot-	ton seed ou. Adulterated with cot-	ton seed oil. Adulterated by ad-	seed oil.
op	ор	A. L. Tourchot	op	F. X. Lefebvre	do A. L. Tourchot	F. X. Lefebvre	W. H. Ellis	do	ор	do F. X. Lefebvre	W. H. Ellis	ор	ф	ф	ф	ор	••• ор	F. X. Lefebvre	W. H. Ellis	op op	
ор	ор	91.04 Dark greenish A.	90.25 Dark olive green.	Brown	No coloration	No coloration Brownish	Dark brown	$\begin{vmatrix} do & \cdots \\ Unchanged \dots \end{vmatrix}$	Slight tinge	Unchanged	Faint color Dark brown	op	Brown	do	Dark brown	Unchanged	ор	80 · 42 Dark grey	Unchanged	Unchanged	
.02	.06		90.2	8.09		50 55 38	88.3	82·40 57·8	59.9	56.0 85.6	56·4 78·9	84.1	75.9	86.1	87.2	58.5	21.1	80.45	57·0 89·0	53.4 83.0	
1.00 100.00 0.8650	1.53 100.00 0.8650	0.31 100.00 0.8665	0.33 100.00 0.8661	1.00 100.00 0.8650	0.65 100.00 0.8590 0.63 100.00 0.8680	0.67 100.00 0.8585 0.89 100.00 0.8610	0.8645	0 · 8652 0 · 8652	0.8620	1.67 100.00 0.8640	0.8610 0.8655	0.8655	0.8625	0.8635	0.8620	0.8230	0.8600	1.04 100.00 0.8635	0.8600	0.8650	
00.00	-00.00	90.00		00.00	88. 88. 88.	88.8	- <u>-</u> -		- <u>-</u> -			<u></u>	:	_ <u>_</u> : :	_ <del></del> :	 : :	. <u> </u>	00.00	::	::	
1.00[1	1.531	0.31	0.331	1.001	0.651	0.89	:		:	1.67	- <u>: :</u>	:	<u>:</u> :	- <u>:</u>	:	:	<del></del> -	1.041	: :	: :	
00.66	98 · 47	69.66	92.13	00.66	99 · 35 99 · 37	99°33 99°11	<u>:</u>	<u>:</u> :	<del>- :</del> :		- <del>: :</del> - : :	- <u>:</u>	<u>:</u> :	- <u>:</u> - <u>:</u>	:	:	- : :	96.86	: :	::	
66 	<b>-8</b> 6 	-66 ∵		- 25 	- 25 S	88 ::	_ <u>:</u>	::	:	-: & -: :	- : :	<u>:</u> :	<u>:</u>	<u>:</u>	<u>:</u>	<u>:</u>	<u>:</u>	 	<u>: :</u>		_
: -	: - <u>:</u>	- <u>-</u>	<u>:</u>		<u> </u>	<u>: :</u>	<u>:</u>	<u>: :</u>	<u>:</u>	<u>:</u> ::	- : :	<u>:</u>	:	:	<u>:</u>		<u>:</u>	_ <u>:</u>	: :		
E. G. Blaine & Co.,	Corn- Armour & Co., Chi-	S. O. Daniels, Chi-	cago. Fairbanks & Co.,	F. W. Fearman,	Hamilton. do Fairbanks & Co.,	VendorArmour & Co., Chi-	hitby, Park & Son, Toronto	do George Perkins, To-	ronto. F. W. Fearman,	Vendor	Unicago. D. Gunn, Toronto Unknown	R. Thompson, To-	ronto. Armour & Co., Chi-	cago. Davison, Scott & Co.,	N. K. Fairbanks,	Onicago. Not known (Cana-	John White, Mitchell,	Vendor	do Fairbanks,	Chicae Vendor Unknow	
7981   G. T. Ham, Napanee	7994 Cameron & McDonald, Corn-	7995 A. Tracy, Ottawa	7996 E. Elliott, Ottawa	Hanrahan Bros., Ottawa	W. H. Beaty, OttawaJ. Hopper, Ottawa	George Mathews, Peterboro'. M. R. Kidd, Peterboro'	7954 R. J. J. Campbell, Whitby,	Unt. W. C. Lawlon, Whitby, Ont.	7957 H. A. Houch, Whitby, Ont	John Curtis, Port Hope	do Simpson Reed, Port Hope	George Glass, Port Hope	7965 W. E. Johnston, Grafton	7966 G. H. Bloomfield, Oshawa	7967 M. E. May, Oshawa	7972 E. Morrill, Galt, Ont	7973 Wm. Maude, Galt, Ont	8017 Mrs. Davis, Perth	J. Davison, TorontoJ. Brown, Toronto	8031 T. Murray, Toronto	
1862				2662	7998 8000	7952 7953		7955 7956		7958 7959	7960 7961	7962		2962	7967	7972	7973		8019 8030		•
18	21	25	252	25	88	24	Sept. 4	44	4	50 50		70	9	9	ţ-	13	13	Aug. 27	∞ ⊙	<u></u>	_
do do	ф	qo	ဝှ	qo	op op	do do	$\mathbf{Sep}$	ဗု	qo	မှ	දි දි	do	우	дo	qo	qo	ф	Au	Oct.	අද	

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	Remarks.			Adulterated with cot-	do		Adulterated with cot-		Adulterated with cot-	ton seed ou.		Adulterated with cot	ton seed oil.		Adulterated.		Adulterated with beef tallow and cotton seed oil.
	Analyst.		W. H. Ellis	op	ф	F. X. Lefebvre.	W. H. Ellis	do do do	ор	ор ор	ор	ор	F. X Lefebvre.	op	op		op
Properties of the Fat.	Silver Test.		51.0 Unchanged	Dark brown.	Black	53.39 Unchanged F. X. Lefebvre	Light brown	Slight brown Brown Unchanged	Light brown	Brown	op	69.0 Brown	50.87 No coloration F. X Lefebvre.	<b>,</b> ob	67.56 Slight brown		0.74100.60 0.8655 96.6 Dark grey
pertie	Iodine absorp-			2.02	95.0	53.39	0.18	68.0 78.0 51.0	64.5	81.0 59.0	54.5	0.69	50.87	59.03			9.96
Ā	Spec. gravity, at 98° C.		0.8610	0.8640	998.0	.859	0.8650	$\begin{array}{c} 0.8630 \\ 0.8650 \\ 0.8610 \end{array}$	0.8630	6.8450 0.8600	0.8600	0.8635	8280	0098.	.8615		.8655
	Total.		- <u>-</u> -		998.0	0.68 100.00 0.859	:		:	::	:	:	0.58 100.00 0 8580	0.50 100.00 0.8600	0.94 100.00 0.8615	***************************************	) 
sis.	Other sub- stances,		 :	:	- <u>:</u> :	0.681	<del></del> -		:		- <u></u> :	:	0.581	0.20	0.941		0.741
Analysis.	Fat.		- <u>·</u> : :	- <u>-</u> -	<u>-</u> -	99.32	-		<u></u>		 :		99.42	06.66	90.66		93.56
	Vater.		:	- <u>-</u> -		:	:		:		:	:	:		15·16		:
	Manufacturer or Wholesale Dealer.		F. W. Fearman,	Hamilton. Unknown	N. K. Fairbanks,	F. W. Fearman,	Hamilton. Armour & Co., Chi-	₽≥	Hamilton. Armour & Co., Chi-	Cago. Unknown J. Dayidson, Butch-	er, Hamilton. H. Robb, Seaforth,	F. W. Fearman,	Hamilton. B. R. Slipp, Queen's	Co., N.B. Chas. H. North & Co.	John, Chase & Deecken, New York		St. An-Fairbanks & Co
	Name and Address of Vendor.		do	8034 T. H. Noble, Toronto	J Heffernan, Hamilton	F. McCusher, Hamilton	O'Hara & Co., Hamilton	G. Vonn, Hamilton	Somerville & Bond, Hamilton Armour & Co., Chi-	H. Boen, HamiltonJ. McKay, Hamilton	R. H. Munrow, Hamilton H. Robb, Seaforth,	J. Munn, Paris	G. S. Wetmore, St. John,	N.B. Bernard McCrossin, St. John, Chas. H. North & Co.	James Moulson, St. John,		7572 Louis T. Cormier, St. Antoine Street, Three Rivers, Que.
•əlc	Number of Sam		8033		8035	8036	8037	8038 8039 8040	8041	8042 8043	11 8044	8045	8458	8460	8461		7572
·uc	Date of Collectic	1888.	Oct. 9	g op	do 10	do 10	ог ор 14	do 10 do 10 do 10	do 10	do 10 do 11	do 11	do 11	Dec. 27	do 28	do 28	1889.	Jan. 4

									_
Adulterated.	:	:	Adulterated with cot-	ton seed on. Adulterated.		:	Adulterated with beef	tailow and cotton seed oil.	
ф	qo	op	op	op		op	qo	ор	
Slight brown	99.37 0.63 100.00 0.8605 62.6 No coloration	ор	99·16 0·84 100·00 0·864 92·9 Brown	99·51 0·49 100·00 0·862 69·2 Slightly brown-		0.82,100.00 0.8580 56 5 No coloration	99.15 0.85 100.00 0.8630 91.36 Dark grey	op	
6.44	9.79	99.50 0.50 100.00 52.7	92.9	69.5		56.5	91.36	0.97 100.00 0.8640 89.40	-
0.8630	3098.0	<u>:</u>	0.864	0.862		0.828	)0.863	0.864	
100.00	100.00	100.00	100.00	100.00		100.00	00.001	100.00	-
1.0	0.63	0.20	0.84	0.40		6.82	0.85	0.97	
89.86	99.37	99.20	99.16	99.21		99.18	99.15	99.03	
0.32	:	:	:	:		:			
Wiltons, Chicago	Vendor	ор	24 Hen- Not known	ор		Hy. Shippell, Mon-	Bleury N. K. Fairbanks,	do	1
do 4 7573 J. M. Spenard & Co., 11 Ba-Wiltons, Chicago   0.32 98.68   1.0   100.00   0.8630 77.9   Slight brown	4 7574 Louis Gingras, fils, Market, Vendor	Narcisse Cloutier, 30 Hender-	Eduard Brosseau, 24 Hen-	do 4 7577 Sam P. Street, vau: Street, Que.		Dec. 28 7564 J. E. Laramer, 2064 St. Cath. Hy. Shippell, Mon-	H. F. Adams, 237 Bleury	do 28 7567 Thos. O'Hara & Co., corner Aylmer and Major Street, Montreal.	
7573	7574	7575	7576	7577		7564	7566	7567	
do 4	do 4	do 4	do 4	do 4	1888.	ec. 28	do 28	do 28	
-	-	-	-	-		-	-	-	1

These tables contain the results of the examination of 109 different samples of lard, of which 38 were of native, 11 of unknown, and 60 of American origin. Where any one of these has been found to be genuine nothing is entered in the column for remarks.

The properties of the fat which have been depended upon for pronouncing as to its purity are its specific gravity at 98°C. as ascertined by means of the method with the Westphal balance, described in Allen's Organic Analysis (II, 16); the percentage of iodine absorbed, as ascertained by Hubl's process; and the Becchi test by nitrate

of silver as described by Conroy in the Analyst (XIII, p. 206).

Among the samples of American lards mentioned in the tables there appears to be only one which is genuine, namely, No. 8460, St. John, N.B., from Charles H. North & Co., Boston. Generally the manufacturers in the United States make no pretence of exporting pure lard. The chief adulterant found is cotton seed oil, but in a great many cases, no doubt, beef tallow should also have been mentioned. It is a matter of extreme difficulty to say to what extent these substances are substituted for lard, or indeed to be certain that they do not replace it entirely. The following conclusions may, however, be fairly drawn from the data above given. The samples said to be manufactured by Fairbanks, Chicago, since they have generally the highest sp. gr., absorb the greatest percentage of iodine, and give the darkest colors with the silver test, probably contain the highest percentage of cotton seed oil and the lowest amount of lard. With some of the samples it seems very doubtful as to whether any lard can be present. Nos. 7566, Montreal, and 7572, Three Rivers, absorbed respectively 91:36 and 96:60 per cent. of iodine, amounts which come surprisingly near the iodine absorption of cotton seed oil itself, which is 105-108 according to Allen. When the fats from the two samples mentioned are melted and allowed to cool slowly, separation of oil takes place on the surface, and this when poured off showed an iodine absorption in the case of 7566 of 10147 p. c., and in the case of 7572 of 102.74 p.c. When the oil is filtered off and the stearine subjected to pressure at ordinary temperatures until no more oil can be separated from the fat thus produced from sample 7566 absorbs only 35.87 p.c. of iodine, and from sample 7572, 37:39 p.c. of iodine. These figures are indicative of beef tallow rather than lard, for Hübl places the iodine absorption of lard at 59, and Allen at 59.3. I found the iodine absorption of beef tallow, home rendered, to be 41:49. It seems, therefore, in the case of some samples of Fairbanks' manufacture open to doubt as to whether they contain any lard at all. In the case of the samples said to be of Armour's manufacture, the sp. gr. of the fat is generally lower and the iodine absorption less. results which indicate a lower degree of adulteration. Neither Fairbanks' nor Armour's lard contain any water, which is found in many of the samples supplied to the Lower Provinces from New York. The amount of this adulterant detected varies from 5 to 24 p.c., besides varying proportions of cotton seed oil and beef tallow.

With regard to the samples of native lard, if we exclude those which have only been derived from trading firms not concerned in the packing business, and which may therefore be of American origin, we find that out of 35 samples examined 3 were adulterated. Almost all the lards rendered by the vendors themselves are pure, but still there are to be found a few cases from which it would seem that our manu-

facturers are beginning to imitate American practices.

There cannot be any doubt that the sale of such adulterated lard as is described in this bulletin is a contravention of the Adulteration Act. Apart altogether from the question as to whether it is as wholesome or nutritious as pure lard, it is plain that "an inferior or cheaper substance has been substituted, wholly or in part, for the article," and food of this character the Act declares shall be deemed adulterated. To prosecute the vendors where the sale of the adulterated article is so general would scarcely be a reasonable proceeding, and the result would probably be to dissipate the adulteration of food grant in the shape of legal expenses. Nor is it certain that convictions would follow, because, no doubt, the offenders would, as such have often done before, shelter themselves under the provision contained in the second paragraph

of the 23rd section of the Adulteration Act, and which reads as follows: "Provided that if the person accused proves to the court before which the case is tried that he did not know of the article being adulterated, and shows that he could not, with reasonable diligence, have obtained that knowledge, he shall be subject only to the liability to forfeiture under the 21st section of the Act." The Department has at present under consideration the advisability of making such arrangements as will enable vendors, with the exercise of "reasonable diligence," to obtain certainty regarding the character of the goods they sell; but in the meantime it finds itself face to face with a system of extensive adulteration which it has no practical means of suppressing.

The only available remedy is one which has been suggested by you namely, to impose a higher duty on lard imported from the United States, and that without reference to its being adulterated or genuine. There is no doubt that this would be the best cure, and that it would be in the highest degree advantageous to the agricultural interests of the Dominion. To discuss the latter part of the subject

would, however, be out of place in this report.

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

THOMAS MACFARLANE, F.R.S.C., Chief Analyst

#### (Bulletin No. 8-Fertilizers, 1889.)

LABORATORY OF THE INLAND REVENUE DEPARTMENT, 10th May, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—The number of samples of agricultural fertilizers furnished to the Department this year has somewhat increased, as has also the number of importers and manufacturers. Many of the latter unacquainted with the provisions of the Fertilizers Act, neglect to send in samples early in the year, and some were received as late as the 26th of April. Hence the delay in issuing this Bulletin.

Some manufacturers seem to consider it necessary to wait until they have manufactured their first parcel of goods before furnishing samples, and similarly, some importers plead that they cannot provide these until after their first spring importations. There does not seem, however, to be anything in the Fertilizers Act which prevents such parties from providing out of their former stock, or even from making up on a small scale, samples of the fertilizers they intend placing on the market, and transmitting these to the Department. With regard to the samples of next year, I understand it to be your intention to take no notice of those which reach Ottawa after the time mentioned in the Act: the 31st January, 1890.

The following is a list of the samples received for 1889, in which the names of the manufacturers and vendors are given together with some of the selling prices to

consumers:-

Analyzed.
Fertilizers A
ō
RECORD

	Price per Ton.	\$8 28 28 4 4 4 3 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8
	By whom Sent.	Lomer, Rohr & Co., Montreal  do do do do do do do do do do do do do do Manufacturers  e, Irwin, Hopper & Co., 71 St. François Xavier Street, Montreal. do do do do do do do do do do do do do McGregor & Co., New Glasgow, N.S Manufacturers  do do do do do do do do do do do do do Manufacturer Manufacturer Manufacturer Manufacturer Manufacturer Manufacturer Manufacturers Manufacturers
THEOREM OF TOTAL STREET, SOUTH	Name of Manufacturer.	Manufactured in England for Vendor.  Manufactured in England for Vendor.  Manufactured in England for Vendor.  Lomer, Rohr & Co., Montreal  do do do do  The Standard Fertilizer and Casing Works, Ham- Bradley Fertilizer Co., Boston, Mass  Manufacturers  Manufacturers  An do do do do do do do do do do do do do
	Designation.	No. 1, "Compound General Fertilizer"  No. 2, "Cereal Compound Fertilizer"  No. 4, "Compound Root Fertilizer"  Soluble Facilic Guano"  "Bone Meal"  "Fertilizer"  Exhibit "A," "Blood and Bone Fertilizer"  Exhibit "A," "Blood and Bone "Fertilizer"  Exhibit "B," "Blood and Bone "  "Special Fertilizer"  "No. 1 Fertilizer"  "No. 1 Fertilizer"  "An 'Undry Fertilizer"  "B. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "A. Quality Fertilizer"  "An Maple Brand Hard Wood Ashes"  "Eureka Superphosphate"  "Bureka Superphosphate"  "Bureka Superphosphate"
	No.	13 80 80 100 100 100 100 100 100 100 100 1

40 38	40	¥ & #	Less than 3 tons, \$54 p.		ī	1 rom 34c. to 34c. per lb.				
ච ප ප ප	op	do do	ork Auld Bros., Agents, Charlottetown, P.E.I.	op op	Geo. Carter & Co., Importers, Charlotte town, P.F.I.	Manufacturer	op op	ор	op op	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hamilton Fertilizer and Casing Works, East Hamilton, Ont.		W. F. Churchill, Yarmouth, N. S	Clarke's Cove Guano Co., New Bedford, Mass.	J. Carter & Co., London, E	T. E. Vasey, Montreal	S. Archibald, Truro, N. S. Provincial Chemical Fertilizer Co., St. John,	G. H. Dichols & Co., Albert Mines, Capelton Chemical Works, P.Q.	do do Cory, Consecon	
132 "Ceres Superphosphate". 133 "Gone Meal". 134 "Ground Bone".	n Done one Meal"		139 "Ground Bone" 140 "Mapes' Manure for light soil" 141 "Mapes' Potato Manure"		144 "Carter's Turnip Fertilizer"	145 "Sulphate of Ammonia"	146 "Superphosphate". 147 "Imperial Superphosphate".	148 "Reliance"	149 "Victor". 150 "Fertilizer".	

The following Tables contain the results of the Analyses of these Samples.

# ANALYSES OF FERTILIZERS.

	Analysts.	Macfordance	Lefebvre. do	op	op	op	do	op	op	op
	Moisture.	p. c.	i	. 14.67	15.76	16.93	5.55	7 to 12	8.10	2.03
	Potash.	p. c. 1 to 13 9:37	$1rac{3}{4}  ext{ to } 2rac{1}{2}$	6 to 9 6.02	7 to 10 7.53	2 to 3.50 3.74	: :	0.20		2.74
	Total Available.	p. c. 9 to 11 9 9 91	9 to 11 10·71	8 to 10 9·12	8 to 10 9.68	8.35	24.75	10.21	10.37	8.45
sid.	Total.	p. c. 11 to 13 10·63	11 to 13 12·26	10 to 12 10 ·12	10 to 12 10 60	11 to 14 10·69	24.75	10.21	10.51 10.37	7.61
Phosphoric Acid.	Insoluble.	p. c.	1.55	1.00	0.92	2.14	: :	: :	: :	
Pho	Reverted or as Bone Phosphate	p. c.	0.84	0.25		1.77	24.75	10.21	1.60	3.19
	Soluble in Water.	p. c.		18.8	28.8	6 to 8 6.78	: : : : : : : : : :		8	5.26
Ammonia.	Sometimes as as Nitrogen.	p. c. 1½ to 2½ 1.61	2½ to 3½ 2·30	$3\frac{1}{2}$ to $4\frac{1}{2}$	2 to 3 1 :95	2.50 to 3.50 3.23	3.75	6.54	8.26 7.82	F.2. 9 90. 9
	Name or Brand of Fertilizer.	"No. 1 Compound General Fertilizer"— Guaranteed. Found	"No. 2 Cereal Compound Fertilizer"— Guaranteed. Found	"No. 3 Compound Root Fertilizer "— Guaranteed Found	"No. 4 Compound Fruit Fertilizer"— Guaranteed. Found	"Soluble Pacific Guano"— Guaranted. Found	"Bone Meal"— Guaranteed. Found	"Fertilizer"— Guaranteed. Found	"Exhibit 'A' Blood and Bone Fertilizer"— Guaranteed Found	"Exhibit 'B' Blood and Bone"— Guaranteed. Found
·bJe.	msS to .oN	<u> </u>	001	ੁ ਹੁੰ 20	105	103	104	105	901	107

ANALYSES OF FERTILIZERS—Continued.

						And the second s				
bje•	•	Ammonia.		Pho	Phosphoric Acid.	j				
ms2 to .oV	Name or Brand of Fertilizer.	Sometimes as Nitrogen.	Soluble in Water.	Reverted or as Bone Phosphate	Insoluble.	Total.	Total Available.	Potash.	Moisture.	Analyst.
120	<u>.</u>		p. c.	p. c.	p. c.	p.c.	p. c.	p. c.	p. c.	
	Guaranceca.	15 to 24 2 · 50	11:49	90.0	1.42	12 to 14 12 :96	11.54	1.12	13.33	A. L. Tourchot.
121	"Dissolved Bone Compound," No. 1— Guaranteed. Found	$\frac{1 \text{ to } 1_2^4}{2.15}$	8.52	5.62		12 to 14 14·14	9 to 10 14·14		11:45	op
<sup>81</sup> 22	"Special Dissolved Bone Compound"— Guaranteed. Found	1 <sup>2</sup> / <sub>2</sub> to 2 2·81	10.11	2.61	: :	13½ to 14 12·72	10 to 11½ 12·72	3 to 4 1·53	11.33	op
123	<b>%</b>	2½ to 3½ 3.67	8.70	0.53	98.0	10.09	8 to 11 9·23	2 to 3 1.49	12.79	op
124	124 "Superphosphate of Lime"— Guaranteed. Found		11.45	Traces.	2.74	14.19	12° 11°45		12.02	do.
125	"Potato Fertilizer"— Guaranteed. Found	2½ to 3½ 2.85	6 to 8 11 · 68	2 to 3 0.49	0.83	8 to 10 13.00	12.17	6.	11.43	do
126	"Ammoniated Bone Superphosphate"— Guaranteed. Found	2½ to 3 4·08	7 to 9 10:90	2 to 3	2 to 3 1·69	11·13 12·59	9 to 12 10·9	2. 4.81	8.92	qo
127	"Superphosphate, Artificial Fertilizer"— Guaranteed Found	4.52 6.33	4.04	9.53		11.45	13.57	: :	20.05	· op
128	"Maple Brand Hard Wood Ashes"— Guaranteed. Found					1.58		6.71	9 24	op

129	129 "Eureka Superphosphate"— Guaranteed. Found	3.0 4.80	69.9 0.9	2.97	0.9			4.50 3.64	2.40	op
130	"Superphosphate"— Guaranteed Found	1.97	8·20 6·30	Trace. 1·49	2.62 2.59	10.38	62.2	2·31 2·11	14·22 16·49	Macfurlane and
131	"Popular Phosphate"— Guaranteed. Found	1.20 to 1.62	2.18	2.18		5.71	4.36	1.12 to 1.24 2.57	13.29	A. L. Tourchot.
132	"Ceres Superphosphate"— Guaranteed. Found	2 to 2·67	4.76	27.9		9.95 10.23	10.23	2·13 to 2·44 3·12	9.92	op
133	"Bone Meal"— Guaranteed. Found	3.01 to 3.32 6.54	0.14	20:31	: :	23·27 20·45	20.45	: :	9.52	op
134	"Ground Bone"— Guaranteed. Found	$3.01  ext{ to } 3.32 \\ 7.12$	0.14	24.14	: :	23·27 24·28	24.28			op
23 23	"Medium Bone"— Guaranteed. Found	3.01 to 3.32 7.88	0.12	23 08		23·27 23·20	23.20			op
136	"Pure Bone Meal "— Guaranteed. Found	3.62	: :	25.67	: :	25.67	25.67		5.05	Macfarlane and
137	"Pure Animal Fertilizer"— GuaranteedFound	5 to 7 4·59		17:30		5 to 8 17:30	17.30		3.17	do
138	"Farmers' Pride"— Guaranteed. Found	1 to 2 2·77	96.2	2.93		9 to 12 10·89	9.93	2 to 3 0·24	11.97	op
139	"Ground Bone"— Guaranteed.	3.81		19.98		19.98	19.98		7.59	op
140	140 "Mapes' Manure for light soil"— Guaranteed Found	6 to 8	1.50	5.57	4.34	8 to 10 11:41	7.07	6 to 8 5·51	15.47	op

ANALYSES OF FERTILIZERS—Concluded.

.ele.		Ammonia.		Pho	Phosphoric Acid.	id.				
No. of Samp	Name or Brand of Fertilizer.	Sometimes as Nitrogen.	Soluble in Water.	Reverted or as Bone Phosphate	Insoluble.	Total.	Total available.	Potash.	Moisture.	Analysts.
141	"Mares' Potato Manne "	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	
	Guaranteed.	4.50 to 5 4.32	2.71	4.72	20.9	8 to 10 12:50	7.43	6 to 8 7 · 16	8.35	8.35 Macfarlane and Lefebvre.
142	142 "No. I Peruvian Guano"— Guaranteed. Found	9.42	2.00	4.50	4.84	14·28 14·34	13.09	2.62	13·16 14·88	do
143	"Bay State Fertilizer"— Guaranteed. Found	2½ to 3½ 2°64	7.58	1.47	0.57	9 to 12 9 62	90.6	2 to 3 2 · 14	19.61	op
144	"Carter's Turnip Fertilizer"— Guaranteed. Found	1.00 0.46	9.20 8.98	1.81	3.22 0.94	12·42 11·73	10.79	1.62	16.99	ф
145	"Sulphate of Ammonia"— Guaranteed. Found	25·00 24·36								T. Macfarlane.
146	"Superphosphate"— Guaranteed. Found	1.02	0	3.64	2.26	6.82		1.22	17.99	17.99 Macfarlane and Lefebvre.
147	"Imperial Superphosphate"— Guaranteed. Found	3.30 1.63	1:30	15.72		10.65 17.02	17.02	1.20	9.13	ф
148	"Reliance"— Guaranteed. Found	2.00	4.76	1.32	2.66	8.74	6 to 7 6 · 08	2 to 4 4·03	9.20	op ,
149	"Victor"— Guaranteed. Found	2 to 3 2·22	6.16	1.15	3.47	10.78	7 to 8	3 to 4 4·32	98.6	

I have the honor to be, Sir, Your obedient servant,	THOMAS MACFARLANE, Chief Analyst.		
or to be, Sir,	THOMAS MACFARLANF	•	
oor to be, Sir, Cour obedient servant,	THOMAS MACI		
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## (BULLETIN No. 9-WINTER MILK.)

LABORATORY OF THE INLAND REVENUE DEPARTMENT, 17th June, 1889.

To the Commissioner of Inland Revenue, Ottawa.

In December, 1887, Bulletin No. 2 was issued, giving the results of analyses of milk samples collected during the previous months of August and September. In the same publication the instruments adopted by the Department for the preliminary testing of milk, and referred to by yourself in your report of 23rd December, 1886, were described, and directions given for their use. No opportunity occurred of applying these instruments to market samples until March and April in the present year, and it is now proposed to report the results obtained by the food inspectors in using them, and to compare the percentage of butter fat indicated with that found on analysis. Some of the samples from New Brunswick were collected as late as 10th May, but there was then little or no pasture. It is therefore to be understood that all the milks now to be referred to are from stall-fed cows.

The following tables show where and from whom the samples were taken, the indications obtained by the collectors when testing and the results of the analyses, which were always done in duplicate. Where the duplicate analyses do not very closely agree, it is almost always in the case of those milks which became sour previous to analysis. Where no observation is placed in the colum for remarks, the

milk in question is to be regarded as genuine.

RESULTS of Analysis of Samples of Milk sold as Whole Milk.

	Remarks.		Partly skimmed.	op				1 0342 Partly skimmed.						Below average.		
ORS'	Specific Gravity at 15° C.		1.0347	1.032	1.0335	1.0326	1.0322	1.0342	1.0326	1.0342	1.0326	1.0347	1.0347	1.028	$1.0335 \\ 1.0324$	1.0326
Inspectors' Results.	Per cent. Specific by Feser Lactorscope.		3.00	3.25	4.50	4.50	4.52	3.20	2.00	3.75	4.00	3.75	3.75	4.00	5.00	4.75
	Total Solids.		11.65 11.64	11.40		:	:	11.70		13.35	:	$\begin{array}{c} 13.10 \\ 13.13 \end{array} \right\}$	12 95 ) 13 01 }	11.06		
a ventralismente arquire sitta amanta, an	Other Solids.		9.16	8.49	:	:	:	9.00	:	9.72		9.40	9.21	7.61		:
Analysis.	Butter Fat.		2·49 2·46	2.91	:	:	:	2.61	:	3.63 3.63	:	3.70	3.74	3.45 3.48	: :	
A	Water.		88.35 88.36	88 57			:	88·30 88·19		86.65		28.98 06.98	86.99	88.94		
1	By whom Supplied to Vendor.		Robert Bissett, Dartmouth, N.S.	Margaret Shea, Halifax	5 Blowers Street. Hugh Brown, Halifax	ор	Peter Coon, Coal Harbour, N.S.	M. Pickings, Halifax	Buckingham St. Patrick Cann, Halifax	M. Cross, Dartmouth	op	W. W. Pickings, Halifax	ор	Not known	Self Robert Boomer, Brookfield,	N. S. A. W. Etter, Shubena-
	Name and Address of Vendor.	Haufax, N.S.	8494 Margaret Sheehan, 6 Salter Street Robert Bissett, Dartmouth, N.S.	8495 Bridget Walsh, 5 Salter Street	8496 Johanna Nyhan, 5 Blowers Street. I	Samuel H. Corrigan, 327 Barring- ton Street.	8498 J. P. Wambolt, 355 Barrington St. Peter Coon, Coal Harbour, N.S.	9499 John De Young, 233 Brunswick St. M. Pickings, Halifax	8500 Philip Clansen, 64 Buckingham St. I	8501 Lucy Tuck, 34 Grafton Street M. Cross, Dartmouth	William Forsyth, 36 Grafton Street	Dillon Bros., 80 Sackville Street W. W. Pickings, Halifax	8504 C. Tobin, 160 Queen Street	8505 Mary O'Malley, 19 Brunswick St. Not known	S. B. Cross, 22 Sackville Street Hugh Brown, Kempt Road	8508 Alexander Bond, Kaye Street
oje•	No. of Samp					8497	8498	8499			8502	8503	8504		8506 8507	8208
lection.	Date of Col	1889.	Mar. 26	26	26	26			. 98	27	27.	27	27	27.	88	88
		11	Mar	qo	op	ಕಿ 27	පි 7	မှ	qo	op	qo	do	op	qo	ල්	op

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REBULTS of Analysis of Samples of Milk sold as Whole Milk-Continued

	Remarks.							Below average.									
fors' TS.	Specific Gravity at 15° C.		1.034	1.0322	1.0324	1.0324	1.0324	1.0335	1.0326	1.032	1.0312		1.0326	1.0328	1.0338	1.0347	1 0322
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		2.00	4.50	2.00	4.75	3.00	3.75	4.00	3.25	4.00		4.75	2.20	4.00	4.00	4.00
,	Total Solids.		:		:		12.82 12.82	12.50 $12.52$	$\frac{13.25}{13.24}$	12.58 $12.58$	$\frac{13.13}{13.12}$				:	:	
	Other Solids.		:	:		:	$\frac{9.11}{9.20}$	9.21	9.37	66.8 8.88	9.11			:			
Analysis.	Butter Fat.		:	:	:	:	3.71	3.29	88.8 9.88	3.58	40.4		:	:	:	:	
¥	Water.				:		87·18 87·18	87·50 87·48	92.98	87·42 87·42	88.98		:		:	:	:
	By whom Supplied to Vendor.		Edward Tupper, Brook-	gricola Street Brookfield Milk Company.	Fred. Gordon, Hants Co	520 Water Wm. Wallace, Shubena	cadie. Wm. Keeler, Dartmouth	M. Aitken, Truro, N.S	Not known	M. Dickerson, Morris Street.	Mrs. Ryan, Spring Garden		M. Isener, Dartmouth	Self	J. Boutellier, Waverly	F. Boutellier, Dartmouth	Webster, Eisener, Coal Harbour Road.
	Name and Address of Vendor.	Halifax—Continued.	Η,	8510 Crofton Dickie, Agricola Street	J. A. Sproul, 60 Room Street Fred. Gordon, Hants Co		Street. Sack-William Keeler, Milk Cart, Sack-Wm. Keeler, Dartmouth ville Street.	8514 Mary Sullivan, 194 Lower Water M. Aitken, Truro, N.S Street.	8515 Henry Gulleckson, 120 Lower Wa-Not known	_ ≥	l, 19 G	DARTMOUTH.	8518 John Donovan.	8519 A. Lloyd	8520 J. Lawer & Son	8521 Mrs. J. Martin	April 1 8522 W. Eisener, Portland Street
.əle.	No. of Samp		8509		8511	8512	8513	8514		8516							8522
ection.	IloO to stad	1889.	do 28	do 28	do 28	do 28		do 29	do 29	do 29	do 29.		do 30	do 30	do 30	do 30	April 1

		r				Watered.					Partly skimmed.	Mostly cream.					
1.0338	1.0333	1.0333	1.034	1.0344	1.0333	1 0226	1.0316	1.0342	1.0347	1.0335	1.0335	1.0245	1.0274	1.0314	1.0342	1.0335	1.0286
4.25	3.75	4.00	4.00	4.00	4.00	3.00	4.25	4.00	2.00	3.75	3.50		2.00	4.25	3.75	3.50	3.75
14.73)	$\frac{13.12}{13.09}$	13.38 $13.34$	13·64) 13·67		13·94)	9.14)		:		$13.21 \atop 13.19 \rbrace$	11.78	$23.19 \atop 23.17)$	:			12·77 12·75	12.16 $12.15$
9.53	9.20	9.07	9.40	:	9.22	6.12	:	:	:	9.02	8.80	19. L	:	:	:	9.00	7.94
5.20	.3.92 3.93	4.33	4.24	:	4.86	3.02		:	:	4.19	3.05	15°50 15°50	:	:	:	3.82	4.22
85.27 85.28	86.98 86.91	86.62 86.66	98.38 98.33	:	86·06 86·04	98.06 98.06		:		86·79 86·81	88.22 88.20	76·81 76·83		:	:	87 · 23 87 · 25	87.84 87.85
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ب		в }ор	a }op		op		Dan. Donavon, Preston Road.	M. Wright, Onslow	Self	::	<u> </u>	}	ор	ор	ор	ор	ор
George Ritchie, Coal Har-	Josiah Ross, Portland Street Self	Chas. F. Lydiard, Portland Street. do	}op	J. Lawlor & Sons, Portland Street Self	} ор	Donavon, Portland John Coon, Coal Harbour.		TRURO, N.S.  Mrs. B. McLellan, Railway Es-M. Wright, Onslow	planade. Hugh Cameron, Railway Esplan-Self	ade. Mrs. T. Shea, Railway Esplan-M. Wright, Onslow	Railway Esplan-Jeheil Fulton, Onslow	Hiram Eaton, Salmon River Self		Isaac A. Archibald do	John A. Wright, Central Onslow.	}op	} ор
8523 Geo. Ritchie, Portland Street George Ritchie, Coal Har-	8524 Josiah Ross, Portland Street Self	8525 Chas. F. Lydiard, Portland Street. do	8526 Fred. Bissett, Portland Street do	8527 J. Lawlor & Sons, Portland Street Self	8528 Alexander Ennis, Portland Street, do	8529 Elizabeth Donavon, Portland John Coon, Coal Harbour.	8530 John Donavon, Portland Street Dan. Donavon,	8531	8532	ade. 8533 Mrs. T. Shea, Railway Esplan-M. Wright, Onslow	8534 Hugh Currie, Railway Esplan-Jeheil Fulton, Onslow	8535 Hiram Eaton, Salmon River Self	8536 Jeheil Fulton, Central Onslow	8537 Isaac A. Archibald	8538 John A. Wright, Central Onslow.	8539 Isaac Hoar, Onslow do	} ор
George Ritchie, Coal Har-	Josiah Ross, Portland Street Self	Chas. F. Lydiard, Portland Street. do	}op	J. Lawlor & Sons, Portland Street Self	} ор	Donavon, Portland John Coon, Coal Harbour.			8532	ade. Mrs. T. Shea, Railway Esplan-M. Wright, Onslow	Railway Esplan-Jeheil Fulton, Onslow	Hiram Eaton, Salmon River Self		8537 Isaac A. Archibald	John A. Wright, Central Onslow.	8539 Isaac Hoar, Onslow do	

RESULTS of Analysis of Samples of Milk sold as Whole Milk-Continued.

	Remarks.		Partly skimmed.		Partly cream.				Below average.	Partly cream.	Below average.			,	
rors'	Specific Gravity at 15° C.		1.034	1.032	1.0304	1.0334	1.0276	1.0344	1.0347	1.0308	1.032	1.0344		1.0342	1.0314
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		3.00	3.00	3.75	3.20	4.50	4.25	4.00		3.50	5.00		3.75	4.00
	Total Solids.		$12.21 \ 12.23$	$12.32 \ 12.28$	$14.50\ 14.54$	14.17 $14.13$	:		$12.98 \atop 12.98$	14.06) 14.13 £	11.97			:	:
	Other Solids.		9·43 9·44	99.8 89.8	8.89	9·21 9·19	:		9.73	8.33	8.81 8.80	:		:	
Analysis.	Butter Fat.		2.78	3.64	5.61 5.63	4.96	:		3.25 3.25	5.82	3·16 3·16	:		:	:
Ą	Water.		87.78 87.77	87.68 87.72	85°50 85°46	85·83 85·87	:		87.02 87.02	85.94	88.03 88.04			:	:
	By whom Supplied to Vendor.		ор	W. A. Robinson, North Sydney.	Self	ф	ор	ф	do	ор	ф	ор		ор	ор
	Name and Address of Vendor.	TRUBO-Continued.	8541 Mrs. McKay, Prince Street Sydney, C.B.	8542 K. R. McKenzie & Co., Water St. W. A. R. Sydney.	Charles Green S	8544 A. G. Musgrave	8545 W. Moffatt, West Road	8546 Angus Matheson, Wentworth St.	S547 John McVicar, Charlotte Street	8548 Mrs. Mary Gillis	8549 James T. Gordon	8550 Dr. McDonald	Antigonish.	James Hunter, Elmwood Cottage.	William Hurlbert, Church Street.
p <b>je</b> •	No. of Sam				8543			8546	8547	8548		8550		8551	8552
lection.	Date of Col	1889.	4	6	9	9	9.	10	10	10	10	10		15	10
		Ä	ор	op	့ <b>30</b>	op	op	op '	op	qo	ор	op		op	ф

			Below average.			op	op					-						
1.0324	1 · 0324	1.0314	1.0344	1.0314	1.0312	1.0344	1.0322	1.0324		1.0328	1.0314	1.0306	1.0312	1.033	1.032	1.0317	1.033	1.032
4.00	3.25	3.25	3.75	3.20	3.75	3.50	3.25	4.25		4.00	4.00	3.75	4.00	4.00	3.75	3.50	3.75	3.75
:	$12.76 \ 12.79$	12.12 $12.12$ $12.12$	$13.22 \ 13.21$	12.49 $12.50$	:	$12.65 \ 12.58$	$\frac{12 \cdot 28}{12 \cdot 29}$	:		:	:	:	:	$12.91 \ 12.92 $	12.67 $12.63$	12.33	$13\ 14 \\ 13 \cdot 30 \Big\}$	:
:	8.78 8.79	8:54	9.82	8.75	:	9.37	86.8 86.8			:				9.11	8·49 8·45	8.52 8.51	9·16 9·43	
<u> </u>	3.98 4.00	3.58	3.40 3.40	3.74	:	3.28	3.20 3.31		10 10 10 10	:		:		3.80 3.79	4.18	3.81 3.76	3.98 3.87	
<u>·</u> :	87·24 87·21	87 · 88 87 · 88	82.98 86.79	87·51 87·50	:	87·35 87·42	87·72 87·71	:				:	•	80.28	87.33	87·67 87·73	86.86 86.70	1
ор	} op	} op	} ор	ор		ор	ор							ор	John Hallett, Caribou	Self	Naaman McDonald, Beeches Road.	Self
.   8553  Alex. Kell, Church Road	Thomson, Main Street	Thomas Trotter, Hawthorne Farm	Fitz McPhie	8557 Rupert Cunningham	8558 L. C. Archibald, South River Road	8559 C. Edgar Whidden, Main Street	8560 Mrs. W. Randall, Main Street	16 8561 Thomas Trotter, Hawthorne Farm	Picrou.	8563 John Simpson, Melrose Vale	W. D. Smith, Tiptree Cottage	8565 Mrs. James Foote, Sea View Cot-	tage. James P. En	8567 John A. Gordon	8569 Mrs. Mitchell Mitchell, Coleraine John Hallett, Caribou Street	8570 N. K. Dickson, Old Road	18. 8571 Thos. Curry, St. Andrew Street	do 19 8572 D. M. Grant, Cariboo
8553	15 8554	8555	8556				8560	8561			8564	8565	8566	8567	8569		8571	8572
	15.	15	April 15	15	15		15			18	18.				18	18		19.
	ф	op	Apri	op	op	qo	op	do	31	ф	ф	op	qo	op	qo	op	op	qo

RESULTS of Analyses of Samples of Milk sold as Whole Milk—Continued.

	The second secon	Remarks.												æ.		
	- Company of the Comp	Rei												Below average.		1.0298 Watered.
	Tors'	Specific Gravity at 15° C.		1.0337	1.0337	1.0324	1.0317	1.027	1.033	1.033	1.033	$1\!\cdot\!0324$		1.0328	1.0344	1.0298
ontinuea.	Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		3.75	4.00	3.25	3.20	3.75	3.75	3.20	4.00	4.00		3.20	3.25	3.00
w hole Milk—Continued.		Total Solids.		13·11) 13·13∫	13.67 $13.35$	$\frac{12.21}{12.21}$	13.13 $13.04$		$\frac{13.87}{13.85}$	12.63) 12.63		:		11.94) $11.94$	12.93) $12.03$	10.42 $10.39$
w note		Other Solids.		$\begin{array}{c} 9.07 \\ 9.10 \end{array}$	9.60 9.63	8·59 8·59	8.64 8.66	:	9·12	8.84 8.80		:		8.55	90.6	7.47
1	ANALYSES.	Butter Fat.		4.04	4.07	3.62	4.49		4.75	3.79				3.45 3.39	3.87	2.95 2.95
Milk sold as	A	Water.		68.98 28.98	86.33	87·79 87·79	28.98 28.98		86·13 86·15	87.37 87.37		:		90.88	10.18	89.58 89.61
Analyses of Samples of		By whom Supplied to Vendor.		Self	ор	ор	ор	ф	Evan McLelan, New Glas- gow.	Self	do	ор		28 Brussel Street, M. Graham, Sussex, N.B	39 Brussel Street. C. W. Stewart, Garden St.	McCauley & Hoyt, St. John.
KESULTS OF AL		Name and Address of Vendor.	New Glasow.	8573 Allan Graham, Glin Allan	8574 John Cameron, Prospect Hill	8575 John McDonald, Plainfield	8576 D. C. McDonald, Church Hill	John Ross, Prospect Farm	8578 John McDonald, from cart on road Evan McLelan, New Glasses	8579 George McDougall, Orion Farm	8580 H. J. Townsend, Brookside Farm.	8581 A. C. Bell, Provost Street	St. John, N.B.	C. A. Paddock,	8583 J. D. McAvity, 39 Brussel Street.	8584 R. B. Gilmour, 1 St. Patrick St McCauley John.
	pje.	ms2 to .oV						8577		8579				8582		
	lection.	Date of Col	1889.	8.	20.	20.	20.	28	20.	20		20.		24	24.	24
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									eam.			erage.								
op						Watered.	ф		Partly cream.	Watered.	ф	Below average.		Skimmed.						
1.0298	1.0308	1.0318	1.033	1.034	1.0312	1.0302	1.0282	1.0334	1.0292	1.0274	1.0294	1.0317	1.0304	1.0327	1.0317		1.0332	1.0304	1.0334	
3.00	3.75	00.#	3.75	3.50	3.75	3.50	3.00	3.75		3.75	3.00	3.75	3.20	2.25	3.75		3.75	3.75	3.20	
$10.26\ 10.27$		:		$\frac{12.57}{12.55}$	:	11.19)	10.49 $10.49$	:	$\frac{19.01}{19.02}$	11.10 $11.12$	11.20	$11.20 \atop 11.21 $	:	$10.15\ 10.18$	:		:		:	
7.60		:	:	86 6 %	:	8.09 8.11	7:41	:	7.83	7.34	7.46	8:24 8:26	:	8. 38 8. 38 8. 40	:			:		
5.66 2.66	:	:	:	3.57 3.56	:	3.10 3.10	80.8 80.8		11 · 18 11 · 18	3.76	2, 2, 24, 45, 24, 45,	2 5 2 5 3 6	:	1.77	:		:	:		
89·74 89·73	:	:	:	87·43 87·45	:	62.88	89.51 89.51		66.08 88.08	9.88 8.88 8.88	90.06	62.88 08.88	:	89.85 89.82	:		:	:	:	-
<u>~</u>	-re	- <del>,</del>	<del>-</del>	<u>_,_</u>	:	<u> </u>	<u> </u>		=======================================		<del>-;-</del>	<del></del>	:	<u> </u>	:			· :	;	
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ıley,	I's,			Hea	:	ing`s	Leam	:	:	Susse	John	:	Lean	nd			St. J.	ssex,	Gree	
McCauley, City	Lrthu B.	Graham,	qo	. Ked	:	, K	Mc		rmer	llett,	St.	ik C	Mc	mmo	k C		ker,	s, Sur		
	Ä.			bson,		enwi	ick &	:	x Fa	. На	foyt,	x Mi	ick &	Dru	x Mil		, Bar	allet	ah Bi tland	
Albert	Joseph Arthurs, Falls, N.B.	×. N.E		Ą. G.	Self.	M. F	Fenw	Self	Susse	W. H	Mr. I	Susse	Penw	ľhos.	Susse		¥. W	W. H	Hann Por	; •
y, St. David Street Albert Road	:	. Titus, corner Carmar. W. G. Leinster Streets.	:	reet.	Beard, from cart on Self	: 45	Brown, 71 Krin Street Fenwick & McLean	:	cCauley, from cart on Sussex Farmers	228 Prince William W. H. Hallett, Sussex, N.B	пеев	:	et	reet	seur		G. W. Barker, St. John	ieper, Paradise Row W. Hallett, Sussex, N. B	Ow	-
treet	treet	·Carr ts.	treet	on St	r card	Stre	rin Sc	et.	ı car	Wil	k, Q	street	Stre	ıke St	ıd Ja		et	Rov	ise R	
vid S	eitt S	orner Stree	ion S	Uni	fron	Erin	71 E	378 Erin Street.	fron	rince	rmac	ney £	inces	36 Du	te an	ë	Stre	radise	arad	
t. Da	, 73 1	tus, c nster	4 Un	er, 32	eard,	e, 58	own,	3 Eri	uley,	28 P	McC	$^{0}\mathrm{Syd}$	58 Pr	ey, 1	narilot	Portland.	Main	r, Pa	ick, I	
ıly, S	asher	E. Ti Len	sh, 25	orim		llespi				ř.	W. ]	in,	ey, 1	ahon	ir, Cl	Pol	988,	tiepe	/arw	
S. Da	um B	heodore E then and	Smi	В. Г	J. v	ur Gi	Anni	Rya	eet ?	ohn Fost Street.	Irs. R. W. Street West	Carl	ahon	₽, №	Spille eets.		Spr	nna S	A. V	
Mrs. 3	William Basher, 73 Pitt Street.	Theoc the	J. H.	John	Mrs. stre	Arth	Mrs.	John Ryan,	Hoyt Stre	John Foster, Street.	Mrs. R. W. McCormack, Queen Mr. Hoyt, St. John. Street West.	1	H. M	John	Geo. Str		D. H	Johan	Wm.	
8585 Mrs. S. Dal	8586	8587 Theodore E.	8588 J. H. Smith, 254 Union Street	8589 John B. Lorimer, 329 Union Street A. Gibson, Red Head	8590 Mrs. J. W street.		8592 Mrs. Annie	8593	8594	8595	8596	8597	8598 H. Mahoney, 158 Princes Street Fenwick & McLean.		8600 Geo. Spiller, Charlotte and James Sussex Milk Co. Streets.		8601 D. H. Spragg, Main Street.	8602 Johanna St	29 8603 Wm. A. Warwick, Paradise Row. Hannah Bros., Greenwood,	_
24	24.	24		25	25	25.	25	25.		25	25.		26		95		8	29.	29	
op	ခု	April 24	op	qo	qo	op	do	qo	ફ 33	ф	op	ф	qo	<del>Q</del>	d <sub>D</sub>		qo	op	qo	
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RESULTS of Analysis of Samples of Milk sold as Whole Milk—Continued.

	Remarks.	1.0274  Watered.	Partly skimmed.	Below average.	do		qo		Watered.			Below average.	op	ор
rors'	Specific Gravity at 15° C.	1.0274	1.0337	1.0337	1.0304	1.0322	1.0312	1.0322	1.0282	1.0342		1.034	1.0340	1.0330
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.	3.25	3.20	3.20	3.20	3.75	3.50	4.00	3.20	4.00		3.25	3.50	3.20
	Total Solids.	10.191 $10.19$	12.00	12.13 12.16	11.35)	:	11.41 $11.39$	:	11.22)	:		12.23 $12.21$	$12.22 \ 12.23 $	12.12)
	Other Solids.	7.43	9.13	8.84 7.82	8·01 7·99	:	8 8 22 23 25 25 25	:	7.74			8.85 8.85	8.91 8.92	8.77
Analysis.	Butter Fat.	2.76	2.87	3.29 3.34	3.34	:	3.16	:	3.48 4.88	:		3.38 3.38	3.31	3.35 3.35 3.35 3.35
A	Water.	18.68	86.28	87.87	88.65 88.65	:	88.59 88.61		88.78			67·78 87·79	87·78 ( 87·77	87.88
	By whom Supplied to Vendor.	Hoyt & McCauley	C. W. Stewart, Wall Street, Portland.	Wall Street John Peacock, Sandy Point Road.	M. Kiltrith, St. John	M. Stewart, St. John	John G. Carvell, Adelaide Road.	Sussex Milk Co	Apohagin Farmers	C. W. Stewart, Nanwigewank.		rotection Street. Sussex Milk Co	T. Stackhouse, Carleton	Frederick McRae, Mana-
	Name and Address of Vendor.	Portland. 8604 Arch. Duncan, Paradise Row	29 8605 Joseph E. Cowan, Wall Street	8606 J. D. Robertson, Wall Street	8607 James B. Clark, Robinson's Wharf M. Kiltrith, St. John	8608 C. W. Higgins, Bridge Road	fain Street	8610 Wm. Vanwort, Main Street	8611 Fenwick & McQean, cart on street Apohagin Farmers.	Wm. Dalton, Main Street	CARLETON.	8613 Hugh Glasgow, Protection Street. S	8614 D. G. Davis, Union Street	8615 Theodore Stackhouse, Ludlow St. Frederick, McRae,
·əJe•	ImeS to .oX		8605	9098					8611	8612		8613		8615
ection.	Date of Coll	1889. April 29	do 29	do 29		do 30	do 30	do 30	do 30	do 30		May 1	do 1	do 1

	Below average.			Below average.	op							Watered.		Below average.		
1.0300	1.0330 E	1.0332	1.0357		1.0323	1.0323	1.0304	1.0333	1 0327	1.0327	1.0322	1.0384	1.0316	1.029	1.0333	1.0327
3.50	3.50	3.75	70. 70.	7	3.00	3.25	3.00	3.25	3.50	3.20	3.50	3.00	3.50	3.00	3.20	4.50
12.16 $12.16$ $12.16$	12.06 $12.04$	12·38) 12·37		$12.00\ 12.13$	12·27)	$\frac{12.91}{12.98}$	11.77	12.78)	:	:	12.93 $12.99$	10.45 $10.43$	$\frac{12.06}{12.05}$	$\frac{11.02}{11.00}$	12.76)	:
8·16 8·15	8.77	8.67 8.67		8.92 8.92	8.87 8.81	$\frac{9.10}{9.07}$	8.17	8.99	:		8·67 8·67	7.38	8.52	92.1	8.93	-
4.00	3.29	3.71		3.09	3.40	3.81 3.81	3.60 3.55	3.76 3.78		:	4.32	3.07	3.54 3.55	3.24	3.84	
87.84 87.84	87 · 94 87 · 96	87 · 62 87 · 63		88.00 87.87	87·73 87·78	87.09 87.12	88.31 88.31	87 · 22 87 · 23		:	87·07 87·01	89·55 89·57	87 · 94 87 · 95	86.88 .08 .08	87 · 24 87 · 23	:
<u></u>				<u>:                                    </u>		<u> </u>		<u> </u>	- <u>:</u>	·:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Sussex Milk Co	Murray, King Street G.W. Graham, Sussex, N.B.	G.W. Graham, Sussex, N.B.	, ,	do	ор	ор	ор	ор	ор	ор	ор	ор				
8616 Charles Cook, Ludlow Street Sussex Milk Co	Mrs. E. E.	Mrs. Charlotte Larkins, Union St. G.W. Graham, Sussex, N.B.	FRE	<ul><li>K. H. Phillips, Beechnount.</li><li>J. C. Kitchen, King Street.</li></ul>	Cornelius Kelly, Charlotte Street	A. W. Rainsford, Fairfield	Robert Hamilton, Charlotte Street do	Jacob Woodward, Charlotte Street. do	8626 Thomas Edgar, Kingsclear	Mrs. John C. O'Brien, 286 King St.	Moncron, N.B. Byron Hollicott, Harrisville	Andrew Somers, Salisbury Road	R. Milner, Stone Bridge	8631 Peter Dowd, Lewisville	10., 8632 Malcolm Snellgrove, Lewisville	10 8633 Mrs. Joseph Stultz do
9198	8617	8618		8619 8620	8621	8622	8623	8624	8626	8627	8628	8629	8630	8631	8632	8633
							;-		:		10	10	10	10	10.	10
qo	op	op		ද ද	ф	ор	op	ှာ <b>35</b>	op	op	ф	qo	op	qo	ф	do
	12 0	.1														

RESULTS of Analysis of Samples of Milk sold as Whole Milk-Continued.

	Remarks.				Partly skimmed.		Below average.	op	Partly skimmed.		Skimmed.		1.0282 Below average.
TORS'	Specific Gravity at 15° C.		1.0316	1.0194	1.0332	1.034	1.034	1.035	1.035	1.0294	1.034	1.027	1.0282
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		3.75	3.75	2.75	3.25	က်	3.75	2.20	ė	2.25	3.20	3.25
Ē	Solids.			$12.02 \\ 11.99 $	11.98)	12·77 ) 11·76 )	12.38) 12.33	$12.55 \ 12.56 $	12·43)	13.16 $13.15$	10.53 10.52	12.84 12.85	$11.37 \atop 11.37 $
	Other Solids.			7.71	9.10	90.6	90.6 60.6	9.44	9.95	8.77	86.8 8.98	7.79	7.81
Analysis.	Butter Fat.		:	4.31	2.88	3.71 3.70	3.29	3.11	2.48	4.39	1.54	5.05	3.57
A	water.			87 · 98 88 · 01	88·02 88·01	87·23 87·24	87·62 87·67	87.45 87.44	87.57 87.57	86.84 86.85	89·47 89·48	87·16 87·15	88 .63
	by whom Supplied to Vendor.												
	Name and Address of Vendor.	Moncron—Continued.	James and Wesley McFarlane, Fox Creek.	John Fryers, Mountain Road THEER RIVERS. OUE.	O. T. N	Enger Brunelle, St. Oliver Street	T. Levasseur, St. Mauvin Street	F. F. Plau, 66 Commissaire Street.	8830 Victor Demarais, 30 St. Pierre Street.	Félix Levasseur, Prison Street	Sherbrooke, Que. R. W. Evans, Rast Sherbrooke	F. G. Becket, Oxford	8834 J. G. Mallory, Lennoxville
pje,	Imas to .oV		8634	8635	8826	8827	8828	8829	0883	8831	8832 ]	8833	8834
lection.	IoD to ets (	1889.	do 10	do 10	8 Mar. 25	do 25	do 25	do 25	do 25	do 25	April 3	do 3	Sept. 3.

	do				Partly skimmed.	Mostly cream.		Below average.			Partly skimmed.		Below average.	op ————	
-	1.0292	1.0312	1.0292	1.0332	1.0354	1.0244	1.0318	1.0318	1 · 031	1.0312	1.029	1.033	1.033	1.031	
,	က်	က်	4.25	3.25	2.20	:	3.25	က်	3.25	3.25	2.25	က်	2.75	÷	
	11.55	12.85) 12.83)	:	13·35)	$12.48 \atop 12.48 $	20.69 $20.74$	12·33) 12·32)	12.25 $12.25$	13.85 $13.87$	14·03 14·07	10.48 $10.49$	12.91 $12.93$	11.88 $11.89$	$11.39 \atop 11.57$	
•	8.14 8.09	8.74	:	9.08	9.54	8.06	88.88 8.83	8.97 8.96	9.26	8 · 52 8 · 53	80.8 80.8	8.90 8.92	62.8 62.8	8.02	
	3·41 3·47	4.11		4.30	2.94	12·63 12·62	3.45 3.50	3.28 3.28	4.59	5.51 5.24	2.45	4.01	3.09	3.37	-
	88·45 88·44	87·15 87·17	:	86.65 86.66	87.52 87.52	79.31	89.28	87 75 87 75	86·15 86·13	85·97 85·93	89.52 89.51	60 · 28	88·12 88·11	88·61 88·43	
	nnoxville	1. From milk vendors who supply the town of	:		8839 John Corey, 191 Wellington Street.	8840 E. Lomas, Drummond Street	RICHMOND.		Melbourne	Lévis.	n, St. David		ure, St. Joseph	St. Joseph	OUKBEC.
	S. Mallory, Lennoxville.	O'Neill Gordon	H. Armitage & Son, Ascot.	8838 F. Olivier	John Corey, 19	E. Lomas, Dru	Rісні W. McLaughlin.	John Brooks	4 8843 George Smith, M	LÉ 8844 Louis Begin	André Gosselin, St. David	8846 John Vézina	Cléophas Couture,	8849 Joseph Poire, St.	
	3 8835	9836	8837		6883		8841	8842	8843		8845		8847		
	 	ec.	3	က	3.	 	÷	4.	<del>-</del> ;	تن :	5	 	5	April 5	
	qo	Sept.	q	qo	qo	do	ф	do	- 37	op	op	op	qo	April	

RESULTS of Analysis of Samples of Milk sold as Whole Milk—Continued.

	Remarks.			Below average.			Skimmed.						
ors' ts.	Specific Gravity at 15° C.		1.033	1.031 B	1.033	1.032	1.0332  S	1.0332	1.0326	1.0322	1.0337	1.032	1.033
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		2.15	÷	·6	÷	.5	2.20	3.20	3.20	3.50	3.25	3.25
1	Total Solids.		$\frac{12.79}{12.78}$	11.85 $11.80$	11.69 $11.69$ $11.69$	11:89)	8.86	13·39) 13·39}	13·36)	$\frac{12.74}{12.76}$	13·41) 13·41	12.79)	13.02) 13.13)
	Other Solids.		8.76	8·42 8·48	8.05	8.10	7.91	9.17	8.95	88.88	9.38 9.39	8.98 8.95	9.26
Analysis.	Butter. Fat.		4.03 4.03	3.43 3.32	3.62 3.64	3.79 3.68	0.95 0.91	4.22	4.41	98 88 88	4.03	3.81 3.83	3.76 3.82
A	Water.		87.21 87.22	88·15 88·20	87.31 87.31	88·11 88·21	81·14 81·19	19.98	86·64 86·65	87·26 87·24	86.59	87·21 87·22	86.98 86.87
	By whom Supplied to Vendor.									These samples are all from milk vendors, and were taken from	carts on various streets, from 6 to 8 a.m., 6th April, '89.		
	Name and Address of Vendor.	QUEBEC—Continued.		Raymond Bussière	8853 Mrs. Joseph Bussière	8854 Louis Durand, Lorette	Chas. Savard, Lorette	8856 François Gobin, 203 Richelieu St	8857 F. Vézina, 139 d'Aiguillon Street.	8858 Eugène Gagnon, 251 Richelieu St	Joseph Dubuc, 239 d'Aiguillon St.	8860 François Faucher, 254½ do	8862 Théodore-Gilbert, Richelieu Street
le,	No. of Sampl		8851	8852			8855				8859		
.noito	Date of Colle	1889	do 5	do 5	do 5	gg 92	do 5	do 6	do 6	do 6	do 6	do 6	do 6

	Partly skimmed.		op	op			Below average.	do	Watered.	op	op	Below average.	Watered.	Partly skimmed.	op	ф	Below average.
	1.0324	1.0282	1.0296	1.0312	$1\!\cdot\!0318$	1.0326	1.0322	1.0246	1.0266	1.0236	1.0288	1.0335	1.0298	1.0298	1.0288	1.0347	1 · 0258
	2.75	3.75	2.20	3.00	4.00	00.+	3.00	3.00	2.75	2.25	27.5	3.00	2.12	2.75	2.75	3.00	2.75
	11.54 $11.52$	12°56) 12°71}	10.43) $10.42$ )	12.29 $12.22$	:	:	11.71)	$10.93 \atop 10.95 $	$9.72 \ 9.67$	8.47) 8.48}	11.02 $11.00$	12·42) 12·47}	$10.76) \\ 10.82$	10.20 $10.20$	$10.81 \ 10.86$	12·59) 12·58}	11.73)
	8.78	8·21 8·16	8.28 8.28 8.28	9.57	:	:	8.63 8.62	6:83	7.12	6.04	7.82	9.11	7.73	7.95	7.87	9.63	7.56
	2.76	4.35 35	2.14	2.72	:		3.08	4.06	2.60 2.60	2.43 2.43	3.20	3.31	3.03	2.25	2 .94 2 93	2.96	4.17
-	88·46 88·48	87 · 44 87 · 29	89 · 57 89 · 58	87.71 87.78	:	:	88.20 88.31	89·07 89·05	90.28 90.33	91.53 91.52	86.88 86.88	87 · 58 87 · 53	89.24 89.18	08.68	89·19 89·14	87·41 87·42	88·27 88·29
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	:_	:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	ب	<u></u>		ب		<u> </u>
	Point	Sault au Re-					anville		:	:	:	rier St.,				:	:
_	et. Mr. Grace, Long		ni- Not known	op en	Self	ор	t. A. McCallum, D.	eet Not known	Mr. Davis	Not known	ne do	t. E. Bishop, 210 Currier St., Montreal.	t Not known.	a- do	op	nt Self	e. Not known
Montreal.	E. Brodeur, 609 Dorchester Street, Mr. Grace, Long Point	31½ St. Charles Mrs. Sutton, eet.	A. Fournier & Co., 25 St. Domi-Not known nique Street.	33 St. Dominique	Petite Côte		Antoine St	C. Godin, 527 Lagauchetière Street Not known	:	Louis Gagnier, 83 German St Not known	1878 St. Catherine	34 St. Catherine St. E.	T. Pouport, 1830 St. Catherine St Not known			François Deguire, Côte St. Laurent Self	Jean B. Leffamme, 519 Laval Ave. Not known
Montreal.	E. Brodeur, 609	St. Charles Mrs. Sutton, collet.	8807 A. Fournier & Co., 25 St. nique Street.	, 33 St. Dominique	:		8811 C. R. McLea, 155 St. Antoine St A. McCallum, D.	8812 C. Godin, 527 Lagauchetière Street Not known	8813 P. Pepin, 117 German Street Mr. Davis	8814 Louis Gagnier, 83 German St.	St. Catherine	34 St. Catherine St. E.	8817 T. Pouport, 1830 St. Catherine St Not known	8818 E, Beauchamp & Co., 112 St. Elizabeth St.		8820 François Deguire, Côte St. Laurent Self	8821 Jean B. Leflamme, 519 Laval Ave. Not known
MONTREAL		Charles Benoit, 31½ St. Charles Mrs. Sutton, Borommée Street.	A. Fournier & Co., 25 St. nique Street.	Joseph Edward, 33 St. Dominique Street.	Petite Côte		8811 C. R. McLea, 1		P. Pepin, 117 German Street	83 German St.	1878 St. Catherine	A. Lefaivre, 1834 St. Catherine St. E.	T. Pouport, 1830	E, Beauchamp & Co., 112 St. Elizabeth St.	O. Melançon, 480 Dorchester St	26 8820 François Deguire, Côte St. Laurent Self	do 26 8821 Jean B. Leffamme, 519 Laval Ave. Not known

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RESULTS of Analysis of Samples of Milk sold as Whole Milk—Continued.

		ı													
		Remarks.					Partly skimmed.			Below average.	ф				op
	rors'	Specific Gravity at 15° C.		1.0318	1.0338	1.0331	1.0332	1.0278	1.030	1.032	1.034	1.034	1.0342	1.0312	1.0326
	Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.		ලි ස	9.00 3.00	3.00	2.75	3.25	2.75	3.00	3.55	3.60	3.25	3.25	3.50
		Total Solids.	100		12.91 12.91	$12.90 \atop 12.87 \int$	$\frac{12.07}{12.07}\right\}$	13.08 13.08	12.79 $12.79$	12.00 $12.10$	$\frac{12\cdot30}{12\cdot27} \bigg\}$	$13 \cdot 24 \ ) \\ 13 \cdot 22 \ )$	$13.34 \\ 13.31 \Big\}$	12.78 $12.76$	12.31 $12.39$
T CION II		Other Solids.		06.0	9 55 50 50 55 50 55 50 55 50 55 50 50 50 br>50 50 50 50 50 50 50 50 50 50 50 50 50 50 5	9·18 9·17	9.33	8.17	8.70 8.71	8.80 8.92	9.02 9.03	9 18 9 17	9.53	8.96	8.86 8.86
an nina	ANALYSIS.	Butter Fat.		9	92.S 30.S	3.72	8.73	4·91 4·91	4.09	3·20 3·18	3.25 3.25	4.06 4.05	3.81	3.82 3.81	3.43
	A	Water.			87 · 10	87·10 87·13	87.93 87.93	26.98 86.92	87.21 87.21	87.91 87.90	87·70 87·73	92.98 92.98	69.98 99.98	87 : 24	87.69 87.71
Analysis of Samples of mine		By whom supplied to Vendor.		Self	ф	ор	W. Sinnemere, Longue Pointe.	Self	ор	ор	A. Robb, Huntingdon	M. Goodfellow	Self.	ор	66 Latour St Mr. Symington, Stanbridge, P.Q.
INESULTS OF AN		Name and Address of Vendor.	MONTBRAL—Continued.	8822 Louis Brochu, Longue Pointe	8823 Thomas Conroy, Côte St. Antoine.	8824 R. C. Muir, Côte St. Laurent	26 8825 E. A. Painchaud, 148 Vitré St	A. Laucaiux, Côte St. Paul	8864 Médéric Boivin, 100 Napoléon St	8865 R. Bennett, Lower Lachine Road.	8866 Angus McIntyre, 3508 Notre Dame A. Robb, Huntingdon.	do do	James E. O'Brian, 36 Grand St	8888 Archibald Drummond, Petit Côte.	25 8889 C. C. McMichael, 66 Latour St
	je.	No. of Samp					8825	8863		8865	9988		8988		8888
	etion.	Date of Colle	1889.	Mar. 26	do 26	do 26	்ஜ ஓ <b>40</b>	April 11	do 11	do 11	do 12.	do 11	do 11.	do 25	do 25.

do											Partly skimmed.	Below average.		Watered.			
1.0335	1.0314	1.0292		1.0342	1.0302	1.0322	1.0331		1.0296	1.0317	1.0312	1.0312		1.025	1.033	1.031	1.033
3.25	3.20	3.00		3.75	3.25	3.25	2.75		3.25	3.75	2.75	2.73		2.20	3.20	3.20	3.75
$\{12.11\}\$	12.77) 12.78}	12.65 $12.65$		13.33) 13.33)	12.02 $12.00$	13.21 $13.19$	$\begin{array}{c} 13.22 \\ 13.18 \end{array} \right\}$		12.39) $12.39$	$\begin{array}{c} 13 \cdot 42 \\ 13 \cdot 43 \end{array}$	11.38)	11.72			13.62)	13·15 ) 13·11 )	14.01
8.76	9.00	8.51		9.64	8.35 8.30	8.8 83.85	9.19		8.64 8.64	9.24	8:57	8.37		6.73	9.35	88.88	69.63 0.63
3.35	3.82	4.14		3.69 3.67	3.70	4.36	4.03		3.75	4.18	2.83 2.83	3.35		3.12	4.24	4.4 82.5 83.	4.32
87 · 89 87 · 93	87 · 23 87 · 22	87.35			86.28 88.00	86·79 86·81	86.78		87.61	86.58 86.59	88.62 88.67	88.28 88.25		90.14 90.16	86.98 98.98	86.85 86.89	86.99 86.01
<u> </u>	<u> </u>	<u> </u>		who and	<del></del>		<del></del>		<u> </u>	<u> </u>	<del></del>	<u> </u>		:	<u> </u>	<del></del>	<del></del>
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	Keog	xon,	St. J	onga	Béda	Mene	euye	_	<b>V</b>	Kerl	Kay.	avage	-	ľhiba reet.	Lab reet.	oqui	Guin
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25   8890 James Gown,	8891 Edward Keogh, Petite Côte	8892 W. B. Dixon, Longue Pointe.		. 8869 Joseph Tongas, Salaberry St	. 8870 François Bédard, Quinn St	15 8871 Antoine Meney, St. Joseph St.	. 8872 David Lecuy		8873 John Gray	8874 D. B. McKerley.	8875 William Kay	9288		8877 Joseph Thibaudeau, beth Street.		8879	do 18 8880 Magloire Guinard, Ste. Ann Road.
 	25.	35.		15.	15	15	15		15	16	16	17		17	17	17	18. 
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RESULTS of Analysis of Samples of Milk sold as Whole Milk-Continued.

	Remarks.	1.031 Partly skimmed.	Skimmed.		Below average.		-	1.0318 Below average.			1.026 Watered.
ORS' LTS.	Specific Gravity at 15° C.	1.031	1.0344	1.0318	1.032	1.031	1.032	1.0318	1.031	1.0318	1 · 026
Inspectors' Results.	Per cent. Butter Fat by Feser Lacto- scope.	3.25	2.25	3.00	3.00	3.25	3.25	9.80	3.00	4.20	90.51
	Total Solids.	11.64 )	10.71 $10.67$	12.60 $12.62$	$\frac{11\cdot 93}{11\cdot 87} \bigg\}$	12·59 (12·46)		12.22) 12.21	$12.57\ 12.60$	12·32) 13·33)	8.18)
	Other Solids.	8.60 8.60	9.31	8.93	89.8 12.8	8 8 8 83		8.94	8·73 8·76	89.8	6.72
ANALYSIS.	Butter Fat.	5.38 5.38	1.39	3.65	3.22	4.24		3.58 3.30	3.84	4.64	1.46
A	Water.	88.36 44.88	67.68 88.68	87 40 87 38	88·07 88·13	87 41 87 54		87·78 87·78	87·43 87·40	86.68 86.67	91.82 91.85
	By whom Supplied to Vendor.	ор	ор	ор	Seminary of St. Hyacinthe	Self	dodo	Self	Bourne Bros		R. Billings, Ottawa
	Name and Address of Vendor.	Sorel.—Continued.  Narcisse Paul, Ste. Anne	1 Toussaint Magnan, George Street.	8883 Pierre Salvaie, Ste. Anne	St. Hyacinthe. 8884 Lucien Marchesault	8885 Joseph Mathieu	8886 J. B. Planondon, 23 Monder Street. 8887 Charles Gervais, St. Simon	OTTAWA. 8158 William Scott	8159 Mrs. Nicholson, 104 Bank Street Bourne Bros.	Mrs. McEvey, 82 Bank Street	Mar. 13.   8161   Miss O'Brien, 78 Bank Street
.əle.	Imas to oX	8881	8883	8883			2888 9888			8160	8161
ection.	Date of Coll	1889. May 18	18	18.	23.	23	24	Mar. 13	13.	13.	r. 13.
1		J Ma;	op	ф	දි <b>42</b>	do	op do	Man	ф	do	Mai

Below average.	op	qo				op					Partly skimmed.	r q	Below average.				Partly skimmed.	1.0296 Below average.
1.0324	1.0336	1.0336	1.0329	1.532	1.0314	1.0329	1.031	1.0331	1.0329	1.0324	1.0331	0660.1	1.0332	1.0326	1.0298	1.026	1.031	1.0296
3.00	3.00	2.75	4.50	3.00	4.50	3.00	4.20	3.00	2.75	2.20	3.00	90.6	36.ss	3.00	2.20	5.00	2.75	3.00
11.77	12.52 $12.55$	12.41 $12.41$	:	$\frac{12.14}{12.11}$		11.96)	:	$12.51 \ 12.49$	$12.82\ 12.81\ $	$\frac{12.18}{12.18}$	11.54 $11.53$	12.17)	12.19 }	12.19 $12.19$ $12.19$	11.57 $11.55$ $11.55$	12.09 $12.09$ $12.09$	11.15)	$11.82 \ 11.82$
69.8	9.26	9.25	:	8.61	:	8.77		8.51 8.51	9.11	8.67	08. 8.8	96. &	88.6	8.54	8.02	8.65 8.58	8.39	8·41 8·40
3.08	3.23	3.16	<del>-</del> -	3.53 4.03	<u>-</u> -	3·19 3·19•		3.98 8.98	3.71 3.79	3.51 3.49	2.74	3.21	3.19	3.65 3.65	3.57 3.50	3·41 3·51	2.73	3.41 3.42
88.23 88.24	87·48 87·45	87 · 59 87 · 59	:	87.86 87.89	:	88.04 88.05		87·49 87·51	87·18 87·19	87 · 82 87 · 82	88 46 88 47	87.83	87.81	87.81 87.81	88.43 88.45	16. 28 87.91	28.88 88.87	88.18 88.18
O'Connor C. Boyle, Hurdman's Bdge.	Payne, Ottawa	Thos. White, Hintonburg.	Self	ор	do	E. Honeywell, Richmond	From Brothers, Billing's	Bridge. Self	ор		ор		ор	ор	ор	ор	ор	ор
do 13. 8162 G. & H. Boome, 30 O'Connor C. Street.	Bank Street	8164 E. Elliott	8165 George HurdmanS.		Robert Bayne	H. Bailey, 230 Wellington Street	8169 R. McGregor, 210 Spark Street E		do 18. 8171 Thomas Shillington	8172 Edward Clarke, Lapine Road	8173 Mrs. Knowles	WALL.	8174 W. G. Hollistec	8175 G. H. Bronson	8176 W. T. Edwards	C. H. Hassell	8178 Hugh McKay	8179 G. Ross
8162	8163	8164			16 8167	8168	8169	8170	8171							8177		
13	13.	13	16	16	16.		16.		18	18.	81		18.	18	18.	18.		
op	op	do	ф	qo	ф	qo	op	op	• ор .	op 43	ф		op	op	do	qo		9

RESULTS of Analysis of Sample of Milk sold as Whole Milk—Concluded.

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	Remarks								Below average.					Below average.	
ORS'	Specific Gravity at 15° C.		1.0326	1.0335	1.0316	1.0306	1.0328	1.0324	1.033	1.033	1.034	1.030	1.0332	1.032	1.0314
Inspectors' Results.	Per cent. Butter Fat. by Feser Lacto- scope.		3.00	3.00	3.00	3.20	2.75	2.75	3.00	2.75	2.50	3.20	2.75	2.75	3.20
	Total Solids.	9	13.32	12·47) 12·45)	12·87) 12·88	:	$12.57 \atop 12.58 \bigg\}$	12.60 $12.64$	12.18	12.62) $12.61$	12.91		13.19 $13.17$	11.77	:
	Other Solids.	Š	68 8 8	9.06	9.34	:	20.6	8.79 8.84	92.8 62.8	00.6 0.03	9.08	:	9.56	8·44 8·46	— <u>;</u>
Analysis.	Butter Fat.	,	4.43 84.43	3.41 3.35	3.53 3.66	:	3.50	3.80 3.80	3:39 3:41	3.62	3.83 3.83	:::::::::::::::::::::::::::::::::::::::	3.93	3.33	
A	Water.	9	92.98	87·53 87·55	87·13 87·12		87.43 87.42	87·40 87·36	87.82	87.38	87.09		18.98 86.83	88·23 88·17	
	By whom Supplied to Vendor.		Self	ор	ор	do	ор	ор	do	ор	ор	do	ор	ор	ор
	Name and Address of Vendor.	BROCKVILLE.	J. Brodigee	19 8181 D. Robertson	C. A. Thompson	H. Flanagan.	Е. Вом	8186 F. H. McRae	KINGSTON. 8187 H. Wilder.	8188 J. Kirkpatrick	8189 W. H. Pickering	8190 E. R. Rees	W. H. Naylor	8192 James Porter	8193 A. McCallum
·je	No. of Samp		8180	1818	8182	8184	8185						8191	8192	
ection.	Date of Colle	1889.	Mar. 19.	do 19	do 19	4 do 19.		do 19	do 19	do 20	do 20	do 20	do 20	do 20	do 20

1.0274 Watered.			Below average.			
1.0274		1.0342	1.0344	1.0286	1.0326	1 · 0318
5.20		3.00	2.75	3.00	3.00	3.00
10.75)		12.54 $12.52$	$12.22 \ 12.14$	11 51 }	13.18 $13.19$	12.21
7.58		8.73	9.08	26.2	90.6 80.04	8.49
3.17		3.76	3.14	3.23	4.15	3.72
89.25 83.31		87 · 46 87 · 48	87·78 87·86	88·49 88·53	86.82 86.81	62.28
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do 20. 8194 J. P. H. Ferris		do 20 8195 George Eccles	do 21 8196 M. Morrison	do 21 8197 A. H. Matthew	do 21 8199 M. J. Kennedy	do 21 8200 Belleville City
8		20.	21.	21.	21	21
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From the foregoing tables it will be seen that 267 samples were collected all that 71 of these were passed by the inspectors as genuine, and 196 subjected to analysis at Ottawa. Of the latter, 87, or 32.5 per cent. of the number collected, were found to be defective. This is almost exactly the same proportion as shown in August and September, 1887, for then 32.6 per cent. were found to be adulterated or "below average."

The following is a comparison of the percentage of defective samples found then

and this year in the different towns visited:-

	August and September, 1887.	March and April. 1889.
Halifax	$58 \cdot 3$	$20 \cdot 8$
Dartmouth		$7 \cdot 1$
Truro		18.1
Sydney		$\boldsymbol{22\cdot 2}$
Antigonish	•	$27 \cdot 3$
Pictou	All good	All good
New Glasgow		All good
St. John		47.3
Portland		50.0
Carleton		$66 \cdot 6$
Fredericton		$25 \cdot 0$
Moneton	•	$25 \cdot 0$
Three Rivers		$66 \cdot 6$
Sherbrooke		$33 \cdot 3$
Richmond		$33 \cdot 3$
Lévis		$60 \cdot 0$
Quebec	$35 \cdot 3$	$16 \cdot 6$
Montreal		$\boldsymbol{59\cdot 4}$
St. John's		All good
Granby		$50 \cdot 0$
Sorel		$42 \cdot 8$
St. Hyacinthe		$25 \cdot 0$
Ottawa		$37 \cdot 5$
Brockville		All good
Kingston	$60 \cdot 0$	$3\overline{7}\cdot 5$
Belleville		$20 \cdot 0$

From this it would appear that while an improvement has taken place in the quality of milk supplied to Halifax, St. John and Quebec, that of Montreal and Ottawa has become worse.

With regard to the average quality of unadulterated market milk, the analyses of such recorded in the above tables, excluding of course those marked as watered, skimmed and partly cream, but including those described as under average, show the following average percentages:—

	p. c. Total Solids.	p. c. Butterfat.
Halifax		3.68
Dartmouth	13.75	4.47
Truro	12·70	$4 \cdot 07$
Sydney	12 85	$3 \cdot 74$
Antigonish	12· <b>5</b> 8	$3 \cdot 54$
Pictou		3.92
New Glasgow		$4 \cdot 09$
St. John	12 · 16	3 · 16
Portland		$3 \cdot 28$
Carleton		$3 \cdot 50$
Fredericton		3.54

	p. c. Total Solids.	p. c. Butterfat.
Moneton		4.00
Three Rivers	12.71	$3 \cdot 62$
Sherbrooke	$. 12 \cdot 39$	4.08
Richmond		$3 \cdot 79$
Lévis	12.58	$3 \cdot 97$
Quebec		$3 \cdot 87$
Montreal		$3 \cdot 78$
St. John's		$3 \cdot 95$
Granby		$3 \cdot 75$
Sorel		$4\cdot 12$
St. Hyacinthe		$3 \cdot 72$
Ottawa		$4 \cdot 07$
Cornwall		$3 \cdot 45$
Brockville		$3 \cdot 74$
Kingston	. 12.54	$3 \cdot 62$
Belleville	$12 \cdot 31$	3.65

The general average is 12.58 per cent. of total solids and 3.79 per cent. of butterfat, which figures afford another proof that the lowest limits proposed in Bulletin No. 1, of 12 per cent. total solids and 3.5 per cent. butterfat, cannot be regarded as too high for milk of good standard quality.

It will be seen from the tables that 26.5 per cent. of the samples collected were passed by the inspectors as genuine after the preliminary testing. There can be no doubt that in this they were right, for no less than 55.6 per cent. of the number they regarded as doubtful were found to be good milks. This indicates that the inspectors erred very much on the safe side, but there is no doubt that with greater experience they will be able to discriminate more closely. It is quite possible that they may be assisted in doing so by the present comparison of their results with those obtained by analysis. The differences are in some cases considerable, and in most instances the percentage of butterfat found by the inspectors has been too low. The following is a statement of the average differences:—

Inspection District.	No. of samples tested.	Lactoscope	No. in which the Lactoscope results are too low.	Average difference in p.c. of Butterfat when too high.	Average difference in p.c. of Butterfat when too low.
Lower ProvincesQuebecOntario	79	36 15 2	38 64 33	0·30 0·35 0·28	0·45 0·64 0·68

These figures show that, in the hands of unpracticed persons, the lactoscope cannot be depended on for always indicating closely the percentage of butterfat in milk, or for alone furnishing adequate proof of the degree of adulteration. Nor has it been introduced for this purpose, but only for preliminary testing, and distinguishing genuine from doubtful milks. The above tables give abundant evidence that it is very useful in detecting the removal of cream, and also show that the specific gravity ascertained by the lactodensimeter readily indicates the addition of water.

I have the honor to be, Sir,

Your obedient servant,

THOMAS MACFARLANE,

## (BULLETIN No. 10-BAKING POWDERS.)

LABORATORY OF THE INLAND REVENUE,
319 SPARKS STREET,

OTTAWA, 22nd June, 1889.

Thos. Macfarlane, Esq., F.R.S.C., Chief Analyst of the Inland Revenue Department, &c., &c.

Sir,—I have the honor to transmit you, herewith, the report of my work upon samples of baking powder collected by the officers of this Department in the various cities and towns of the Dominion during the months of October and November of last year. If I have been a long time completing this examination it is to be accounted for by the fact that, with the exception of forty (40) estimations of carbonic acid gas and the microscopic examination of starches after separation, in which I received material help from my laboratory assistant, Mr. A. C. Maefarlane, the whole of the work of the analysis has been done by myself. I have also found it necessary to give a good deal of time and thought to the examination of methods employed in this work. Many of the separations effected, particularly in the cases of starches introduced into the powders without previous separation of gluten, cellular tissue, &c., and in the estimation of alumina introduced as alum, along with phosphate of lime, have necessitated more or less of investigation into the trustworthiness and accuracy of methods employed under the conditions imposed by the nature of the material operated upon. At the same time, I have had from time to time to lay aside this particular class of work, in order to take up such incidental work as demanded immediate attention.

Before entering upon a resumé of my conclusions, I would respectfully draw your attention to a few points in which, I think, the collectors of samples could materially improve the value of their work to the analyst. I find that, in many cases, the quantity purchased is stated as three packages, leaving me entirely at sea as to the weight of these packages. I am further at a loss to know whether the price stated is that of the three packages, or that of each package. It is, as a consequence, impossible for me to make a comparison of the money values of baking powders of the same class. This is a point of great importance, since it is evident that a given amount of tartaric acid and bi-carbonate of soda is worth pound for pound more or less to the purchaser, as it is mixed with 10, 20 or 50 per cent. of its

weight of starch or flour.

Again, I had hoped, particularly in the instances in which more than one sample of a brand was analysed, to arrive at some conclusion as to the keeping qualities of the different brands. For this purpose I made a special note of the date upon which the available gas was estimated. The results, however, go but a very little way in establishing any general principles. This I attribute chiefly to the fact that the time the samples were kept by me before analysis was very short as compared with the time which, in most instances, had elapsed since their manufacture. In the case of an article which, like baking powder, necessarily undergoes more or less deterioration after manufacture, it would be interesting, and possibly instructive, were the collector to ascertain, as accurately as possible, the length of time which the sample collected had been kept in stock by the retail dealer, at least, and if possible by the wholesale house from which procured by the retailer. The latter is just as much interested as the purchaser in knowing truly the character at least, in this respect, of the baking powder which he sells.

It is very desirable that the name of the manufacturer, as well as that of the vendor, should be obtained. I find that in several instances baking powders that are entirely different in composition bear the same name. It is, of course, possible that the manufacturer of a certain brand may change his formula without giving any intimation by making a corresponding change in name. It is, however, but fair that in the absence of information as to the maker of a given sample, any notable deviation from the ordinary composition of a brand whose name it bears should be specially mentioned. The following are cases in point:-

#### Victoria Brand.

7554 and 7499 are superphosphate powders. I have not the name of the manu-

7538 is a cream of tartar powder. Manufacturer's name not given.

#### Standard Brand.

8052 is an alum phosphate powder. It is manufactured by Lumsden Bros. Hamilton.

7495 is a tartaric acid powder; name of the manufacturer not given.

### James Brand.

8385 is an alum powder, manufactured by Christopher James & Co., London. 8059 is an alum phosphate powder; manufacturer not stated.

# Royal Brand.

Thirteen samples of the Royal, manufactured by the Royal Baking Powder Com pany of New York, show this to be a cream of tartar powder containing about 18 per cent. of maize starch, and about 1 per cent. carbonate of ammonia.

7490, manufactured by E. R. Durkee, of New York, bears the same name, but is essentially different in composition: containing wheat flour as a diluent (about 10 per cent.) cream of tartar, but no carbonate of ammonia.

In the above cases I have treated the different powders of same name as distinct brands.

In the following tables will be found the particulars of the origin of the baking powders analysed, and also the results of my examination of them.

List of Baking Powders Analysed. I.—CREAM OF TARTAR POWDERS.

Manufacturer.	Not given.  J. P. Clarke, Agent, Toronto. Cleveland Bros., Albany, N. Y. S. H. & E. S. Ewing, Moutreal. Cleveland Bros., Abany, N. Y. do do do Crystal Baking Powder Co., Toronto. W. D. McLaren & Co., Montreal. E. W. Gillett, Toronto. Go. Co. Mandford, Syracuse. Go. C. Handford, Syracuse. Go. C. Handford, Syracuse. Go. C. Handford, Syracuse. Go. C. Handford, Go. Co. C. do Go. Go. Go. Go. Go. Go. Go. Go. Go. Go
Name and Address of Vendor.	Wifred Arbour, St. Therese, Que.  L. W. St. George, St. Charles, Que. J. J. Dutton, Toronto. J. J. Dutton, Toronto. J. J. Dutton, Toronto. J. J. Dutton, Toronto. John Calvin, Hamilton. S. H. & E. S. Fwing, Montreal. Cameron & McDonald, Cornwall Geveland Bross, Albany, N.Y. S. H. & E. S. Fwing, Montreal. Geveland Bross, Albany, N.Y. S. H. & E. S. Fwing, Montreal. Geveland Bross, Albany, N.Y. Murdoh Bross, Cor. Anne and Gardener Sts., Montreal. M. K. McDonald & Cornwall Markin Flangara, Richiburto, N.B. M. K. McDonald & Co., Antigonish, N.S. Markin Flangara, Richiburto, N.B. M. K. McDonald & Co., Antigonish, N.S. Merkay & Ross, Truco, N.S. Markin Brockville. J. W. Gerreit, Hamilton. Shore, Lyons & Co., Cornwall J. W. Gerreit, Hamilton. Shore, Lyons & Co., Cornwall J. W. Gerreit, Hamilton. Shore, Lyons & Co., Cornwall J. W. Gerreit, Hamilton. Shore, Lyons & Co., Cornwall John McGragox, Robinston, N.B. McGragox, McHuptye, Ottate, Street, Toronto M. M. Milligan, Toronto. W. M. Milligan, Toronto. W. M. Milligan, Toronto. W. M. Milligan, Toronto. W. M. Milligan, Toronto. W. J. McLeod, Truro, N.S. Murdoch Bross, Richibucto, N.B. Murdoch Bross, Robinetto, N.B. Murdoch Bross, Bowmanville, Ont W. J. Hopgood, Spring Garden, Halifax, N.S. Murdoch Bross, Bowmanville, Ont W. J. McGragox, Predericton, N.B. Bate & Co. Go Go Scratton, Ottawa. Bate & Co. John Brisson, Foundry Street, Lacintte, Que George Hatt & Sons, Fredericton, N.B. W. Marson, Newcastle, N.B. W. Masson, Newcastle, N.B. W. M. Masson, Newcastle, N.B.
Cost.	0 ent
Quantity.	1 Package 3 do 3 do 3 do 4-b. 4-b. 3 do 3 do 3 do 3 do 3 do 4-b. 4-b. 3 do 4-b. 4-b. 3 do 4-b. 4-b. 4-b. 4-b. 4-b. 4-b. 4-b. 4
Description of Of Baking Powder.	Albani Albani Borwick Cleveland's Superior do do Durkee's Royal. Imperial. do do do do do do Herfection. Herfection. Herfection.  Royal Gold do d
No. of Sample.	75-75-75-75-75-75-75-75-75-75-75-75-75-7
Date of Collection	Oct. 29. Nov

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දිසිපිසිපිසිපිසිපිසි 	CID.  Brown & Hill, Halifax. W. D. McLaren, Montreal. do do do do do do do do do do do do do d	MONIA.  Royal Baking Powder C  do do do do do do do do do do do do do d
R. Craig & Son, Princes Street, Truro, N.S. A. J. McDonald, Antigonish, N.S. L. G. Harrington do do Guyeboro', N.S. Thomas Condon, Guyeboro', N.S. W. H. Wild, Port Mugrave. A. D. McDonald do Andrew Gillies do James Sutherland, Argyle Street, Halifax, N.S. W. H. Ruggles, Argyle do do H. R. Ruggles, Argyle do do R. Urquhart, Spring Garden Alex. Forsyth, Dattmouth, N.S.	11.—CREAM OF TARTAR POWDERS, CONTAINING ALSO TARTARIC ACID   3 Packages.	11.—CREAM OF TARTAR POWDERS, CONTAINING CARBONATE OF AMMONIA   2 Packages   75 G. C. Hossack, cor. Anne and Garden Sts., Montreal   86 M. Copping & Co., cor. St. Peter and Notre Dame Sts., Joliette, Que.   1-lb   54 W. A. Stewart, 16 St. Germain Street, St. John, N.B.   54 W. A. Stewart, 16 St. Germain Street, St. John, N.B.   54 A. W. Hicks   40 do   56 Humphrey & Trites, Petitcodiac, N.B.   56 Henry O'Leary, Richibucto, N.B.   60 Humphrey & Trites, Petitcodiac, N.B.   60 Humphrey & T
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do do do do do f-oz do 3 Packages. 3 do	3. Packages 3. Packages 3. do 4.1b. 40. 40. 40. 40. 53. do 3. do 3. do 3. do 3. do	BAM OF TA 3 Packages 1-1b 4-1b 4-1b 14-1bs 4-1b 60 60 60 60 60 7 8-1b 7 8-1b 7 8-1b 7 8-1b 8-1b 8-1b 8-1b 8-1b 9-1b 9-1b 9-1b 9-1b 9-1b 9-1b 9-1b 9
66868686666666666666666666666666666666	Bakewell Cook's Friend do do do do do do Cook Stoream do do Cook's Cream do do Cook's Friend do do Cook's Friend do do Cook's Friend Door Friedd Door Friend Door Friend Door Friedd Door	Royal  do do do do do do do do do do do do do d
8420 8423 8423 8423 8423 8423 8433 8433 8433	8431 7477 7476 8009 8009 8388 8413 8386 8413 8396 8117 7478 7478	7489 8388 8398 8401 8403 8419 8419 8419 8429 8429 8429 8429 8429 8429 8429 842
8 8 11 11 11 11 11 11 11 11 11 11 11 11		10. 11. 11. 11. 12. 88. 88. 13. 10.
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List of Baking Powders Analysed—Continued.

IV.—ALUM BAKING POWDERS.

1	1					
IV.—ALUM BARING LUMBA	Manufacturer.	Christopher James & Co., London. Chicago Baking Powder Co.	Christopher James & Co., London. Chicago Baking Powder Co.			Que Ont.  Beauce, Que. Que Acme Mills, Montreal.  Bourgeaut & Heron.  Lreet, Que.  Canadian Coffee and Spice Mills, W. G.  Dunn & Co.
	Name and Address of Vendor.	John Calvin, Hamilton, Ont.  Joseph Finley, 65 and 69 Dock Street, St. John, N.B  Edward Barras, 56 Wolf Street, Levis, Que  Arthur P. Tippett & Co., Levis, Que  P. E. Leblanc, St. Jacques L'Achigan, Que	V.—ACID PHOSPHATE BAKING POWDERS.	E. Browne, Ottawa. O. Goulet, St. Jacques L'Achigan, Que. F. Thériault & Fils, Rivière du Loup, Que. John Calvin, Hamilton.	VIALUM PHOSPHATE BAKING POWDERS.	Edward Reed, Bienville, Lévis, Que  Whaley & Co., Brockville, Ont. Damase A. Moran, Fraserville, Ont Diogene Morrissette, St. Joseph, Beauce, Que Ludger Audet, St. Anselne, Que Isaac Charbonea, St. Therese, Que E. W. Crease, Argyle Street, Halifax Jean B. A. Grenier, 75 Johns Street, Que W. W. Milligan, Troonto, Ont M. Rodriquet, Montreal  M. Rodriquet, Montreal  Johns & Co. Dunn & Co. Junn & Co. Junn & Co.  Junn & Co.
1	Cost.	Cents. 25 14 30 35 15	V.—AC	8 2 3	I.—AL	<b>455585888458</b> 85
	Quantity.	nd3 Packages 1-0%3 Packages 13-10s	F	Phose 3 Packages	Λ	3 Puckagess do do do do do do do do do do do do do
	Description of Baking Powder.	Cook's Best Friend James' Silver Cream Star		Horsford's Acid Phosphate Baking Powder Victoria  Wheat Baking Powder 3	Andrew Communication and the second s	American Gilt Edge
	No. of Samples.	8047 8385 7518 8389 7553		7554 7499 8053		7521 8108 7508 7508 7516 7541 8442 7478 8063 7540 7540
	Date of Collection	1888. ft. 31 o 110 o 12 ov. 6		. 6 16 31		19 9.09 1.17 1.17 1.15 1.19 1.10 1.10 1.10 1.10 1.10 1.10 1.10
	Collic	Oct. 18	5	Now.		Oct. Oct. Nov. Nov. Oct. do do do do do do do do do do do do do d
			_			

Messrs. Ewing, Montreal.  Crystal Baking Powder Co., Toronto.	Not known.  A. Lorenger & Co., Windsor, Ont.	John Davis & Co., Detroit, Mich., U.S. do do do	J. Davis & Co., Windsor, Ont.  do  do  do  do  do  do  do  do  do  Barbour, Thompson & Co., Toronto.	Hamilton plue Co.  J. Davis & Co., Windsor, Ont.  Todhunter, Mitchell & Co., Toronto.  Gold Seal Manufacturing Co.	Lumsden Bros., Hamilton. W. G. Dunn & Co., Hamilton.	Manufacturer not given.  Manufacturer not given.	e S. H. & A. S. Ewing, Montreal.  of do do do  Que
Cameron & McDonald, Cornwall, Ont. Napoléon Binet, 67 Buade Street, Que. George Lagneau, St. Joseph, Beance Co., Que. Moses Girouse, Foundry Street, Lachute, Que. Wosell & Fleming, Orangeville, Ont. W. Wall, Ottawa. Cochrane Bros., Petitcodiac, N.B.	Dillione Dies, St. Joseph, Beauce Co., Que Alphonse Constant, Ste. Therèse, Que J. J. Dutton, Toronto Cowan & Co., Ottawa	Joseph E. Pelletier, Ontario Street, Montreal.  Joseph E. Pelletier, Ontario Street, Montreal.  John Davis & Co., Detroit, Mich., U.S. do  do do do do  J. Davis & Co., Windsor, Ont.	W. Wall, Ottawa. Srroud Bross, Ottawa.  J. Davis & Co., Windsor, Ont.  do do do do W. H. McKoney, Brockville, Ont.  W. H. McKoney, Brockville, Ont.  do do do do do do do do do do do do do d	Medregor & Melntyre, Ottawa  Medregor & Melntyre, Ottawa  J. J. Dutton, Toronto.  B. Mitchell, Orangeville, Ont.  W. H. McComkey, Brockville, Ont.  Gold Seal Manufacturing Co., Toronto.  Gold Seal Manufacturing Co., Toronto.	Co. Ladorduic, J. late Dourget, "Otterber, vite."  T. Brown, Brockville.  Whaley & Co., Brockville.  John Colvin, Hamilton.	Marchand & Cagne  Nongree Turgeon, St. Anselme, Que  Louis H. Begen, Lévis, Que  Damase Cloutier, Ste. Therese, Que  Joseph Mageau, Ste. Thérèse, Que  Euclid Dugas, St. Jacquee, L'Achigan.	Jones B. Grenner, 78 St. John Street, Que Jas. W. Davidson, Newcastle, N.B. Cameron & McDonald, Cornwall Arthur Bourdon, 127 St. Lawrence Street, Montreal. Cloutier Fréres, St. Jacques L'Achigan, Que
84884648	328668	88848	#838E3		88888		
3 do   11b do   11b   3 Packages.   3 do   15 do   1	3 Packages.	1-lb	3 Packages		3 Packages 3 do 3 do	3 do	3 Packages. 14-1b 3 Packages. 3 do 1-1b 3 Packages.
do Choice Crystal do do do Crystal Crystal Crystal	: : : : :		do do do do Ocean Foam		Standard. Snowdrift do do	: : : : : :	
8095 7493 7505 7539 8071 8083 8405 8083	8062 8062 8062 8083	7486 7487 8046		8085 8081 8070 8103 7506	8052 8101 8109 8048	7550 7550 7550 7550 7550 7550	7497 8415 8092 7482 7548 8076
28.17 29 31							
Nov. Oct. Nov. Oct.	Ne Se	9 <mark>6</mark> 4999	N පිළිදි දිපිළිදිදි	53 53 54 55 55 55 55 55 55 55 55 55 55 55 55	St. Sc. Sc. Sc. Sc. Sc. Sc. Sc. Sc. Sc. Sc	Ned de de	Note: Sort

LIST of Baking Powders Analysed—Concluded.
VII.—BI-SULPHATE OF POTASH BAKING POWDERS.

	Manufacturer.		Breadmaker's Yeast Co , Toronto. Churchill & Co., Toronto. B. R. Seaton, Agent, Halifax. Not known. Breadmaker's Yeast Co., Toronto.
VII.—DI-SULFHAIE OF FULASH DANING FUNDENS.	Name and Address of Vendor.		R. Banford, Lachute, Que Mackay Bros., Georgetown, Ont Cowan & Co., Ottawa E. J. Corby, Halifax, N.S. F. Webster do F. W. Elliott, Dartmouth, N.S.
-DI-10-	Cost.	Cents.	55.55.55
~ 11. ~	Quantity. Cost.		3 Tins 3 Packages. 3 do 40 60 3 Packages. 3 do
	Description of Baking Powder		Breadmaker's.  do do do do do do do do
	No. of Sample.		7537 8078 8089 8384 8443 8444 8444 8453
	Date of Collection	1888.	Oct. 28. Nov. 3 do 6 Nov. 17 do 17 do 20

RESULT of Examinations of Baking Powders—Continued.  1.—CREAM OF TARTAR POWDERS.		Remarks.		139 The first sample contained an excess of 1.68 per cent. of bicarbonate of soda. The theoretical yield of gas from this powder is T 48 per cent. Considerable deterioration has taken along from keening. No free tartaric acid is pre-	earth The carbonate of ammonia.  The starch is present as wheat flour, and corresponds to over 50 per cent. of flour. An excess of 1'68 per cent. of bic carbonate soda is present. The theoretical yield of gas is	9.06 per cent.  Cleveland's Superior contains an excess of 1.52 per cent. bicarbonate soda; is an excellent powder, and is evidently made in a very careful and uniform manner. The theoretical yield of gas is 13.62 per cent. The quantity actually found shows that comparatively little deteriorations that comparatively little deteriora-	A deficiency of soda corresponding to 2.35 per cent. of bi- carbonate soda, causes a loss of gas producing power, amounting to 1.23 per cent. The theoretical yield should be 14 87 per cent. if excess of soda were present, or 13 64 per cent. under the conditions actually found. This is an excellent powder, showing great strength and compara- rively ittle deterioration, so far as the analysis of a single	[mp
owders 7DERS	TIME KEPT	BEFORE TESTING FOR GAS.	Мезп.			131		133
g Pe Pow	Тімя	TE FOR	Days.	144	6 142	140 133 8 131 121	3 158	135 135 141 162 102 120
akin TAR	S. A.	øe.	Cubic inches per ounce	54.85	96.89	121 5	126 43	9.72 94.02
s of B F TAR	AVAILABLE GAS.	Average.	Per cent per ounce	5.37	:	12.57 121.58	:	9.72
nation AM O	Avar	•	Percentag	5.07	7.13	10.53 13.27 13.27 13.20	13.07	11.00 9.87 8.20 10.27 9.53
xamil —CRF		M OF	Aver-		:	58.19	:	
of E		Свели он Тавтав.	Per- cent- age-	31.96	38 70	59.22	63 : 54	51.14
SULT		~ .	Aver-	15:5		15.00	:	24.4
R	And the second	сн. mately	Per- cent- age.	43.00	44.5		10.00	888 488 8 6 0 8 8 8
		Starch. (Approximately.)	Kind.	Maize and a 48 00 little wheat. 43 00	Wheat	Wheat flour. do do	Wheat	Potato do do do do do do do do do
		.ple.	use to .oN	7542	8028	8051 8093 8107 8120		8082 8008 8411 8418 8425 8121
		Description	of Baking Powder.	Albani	9 Borwick	Cleveland's Superior. do do do do do do	's Royal	Imperial do do do do do do do do do do do do do

RESULT of Examinations of Baking Powders—Continued.

		· · · · · · · · · · · · · · · · · · ·	Neilliatris.	The theoretical yield of gas is 3:39 per cent. This powder contains nothing injurious to health, but is of very low quality as a bread raiser, consisting, as it does, of nothing	None Such. A sample specially collected gave 11.3 per cent. gas 15 days after collection. 8096 contained an excess of soda corresponding to 2.62 per cent. bicarbonate. The theoretical yield of gas is 12.98 per cent. This powder shows commandively little deterioration. This is a first-	class powder, containing sufficient dry starch to ensure keeping qualities, yet no fradulent excess.  This is an excellent powder. The theoretical yield of gas is 13.19 per cent, and the deterioration is very slight, concidenting the small percentage of starch conjugate of starch can love the small percentage of starch can l	This is a perfectly neutral baking powder, i. e., it contains exactly equivalent proportions of bi-carbonate soda and cream of tartar. The theoretical yield of gas is about 13 per cent, and the average found shows a deterioration of about three-thirtwenths. This powder is a perfectly wholesome one, and of high and fairly uniform strength.	A duplicate sample obtained in Brockville and analyzed 15 days later gave 10·33 per cent. of gas. This powder (8110) showed a deficiency of 2·69 per cent. bi-carbonate soda, which reduces the yield of gas by about 1·25 per cent. The theoretical yield from the cream of tartar present is 11·35 per cent. The analysis shows a very slight deterioration, if any, to have taken place.
, T. T. T. T. T. T. T. T. T. T. T. T. T.	TIME KEPT BERORE	FOR GAS.	Меап.	:		: .	138	:
	TIME BE	FOR	Days.	135	132	139	145 166 177 170 170 188 183 183	123
7177	AAS.	ge.	Cubic inches per ounce	29 69 135	11.20 110.24 132	113.46 139	96	86 - 26
CIVILLY OF TEXALTRIC TO WITHOUT	Available Gas.	Average.	Per cent nches	:				:
1174761	Av	·e•	Percentag	3.07	11.33	11.73	11.00 11.00 11.00 10.57 10.57 10.57 11.55 11.55	10·13
	CREAM OF	KTAR.	Average.	<u>:</u>		:		
	CRE	¥ —	Per- cent- age.	14.48	55·46		26.21	48.5
	, .	у.)	Aver.	<u> </u>	14:8		15.7	<u>:</u>
	Starch.	approximately.)	Per- cent- age.	64.8	15.0	9.6		0. 82
	Srv	(Appro	Kind.	Wheat	Maize.	Maize	Maize.	Маіхе
	•	No. of Sample.		7558	8096	8056	8064 8086 8386 8387 8417 8445 8445 8445 8445 8445 8445 8445	8110
		Description	or Baking Powder.	'. La Reine de Patis-serie	None Such	Perfection	00 00 00 00 00 00 00 00 00 00 00 00 00	Royal Gold

Sheriff's Sovereign.—Maize and potato starches are present in practically equal amounts. The theoretical yield of gas is 12°54 per cent, and the analysis gives nearly this percentage. It is right to state that the samples collected were in envelopes for distribution to advertise the brand, and were doubtless freshly prepared. Is a first class	131 Victoria.—An excess of soda corresponding to 0.37 per cent. of bi-carbonate is present. The theoretical yield of gas is 8.45 per cent. This is a very fair powder, but contains a cool deal more starch than is necessary.	Woodill's German.—The wheat starch found indicates between 40 and 50 per cent of flour. The presence of so large an amount reduces the strength of the powder. This powder contains a much larger excess of soda than can be justified in some samples—thus 8414 and 8452 gave, respectively, 4.3 and 4.12 per cent. excess of bi-carbonate. John Samples have a more reasonable excess—thus 8446 gave 2.52 per cent., and 8455 gave 1.43 per cent. Considerable deterroration pield of gas for 38 '92 per cent. Considerable deterroration has therefore taken place in most of these samples. This is probably due to long keeping in most cases; but the figures given indicate a good deal of inequality of composition in this brand, due to careless—
	67 · 03 1	<u> </u>
12.29 118.9	<u> </u>	99
12.2		<u> </u>
2.10	6.93	66 62 64 64 67 67 68 67 67 67 67 67 67 67 67 67 67 67 67 67
53 58 12 10	:	
	<u>:</u>	
53.58	36.1	
	:	
and 30.5	20.2	1448848444488 10010011488 100100148 1001001488 1001001488 10010
and 50.	and 39 7	
Maize potat	Maize wheat.	Wheat
: :	7538	88395 88414 88420 88423 88426 88426 88436 88436 88430 88440 88440 88440 88446 88446 88446
: : g	:	::::::::::::::::::::::::::::::::::::::
Sheriff's Sovereign	Victoria	Woodill's German do do do do do do do do do do do do do d

II.—BAKING POWDERS CONTAINING CREAM OF TARTAR ALONG WITH FREE TARTARIC ACID, OR CONTAINING TARTARIC ACID RESULTS of Examinations of Baking Powders-Continued.

	Remarks.				present in the free state. If wholly present as free acid the yield of gas should be 13 '12 per cent. The starch is present as flour, of which over 50 per cent. is indicated. The starch is present as rice flour. The mean excess of soda in 7477, 8413 and 8366 is equivalent to 3.53 per cent. of bicarbonate. A sample specially collected and analyzed three days after collection gas as compared with the theoretical yield if all the tartaric acid were present in the free state (16 '4 per cent.), the greater part of the tartaric acid in this powder is present as bi-tartrate (cream of tartar).
	TIME KEIT BEFORE TESTING	GAS.	Mean.	99. An excess of soda equivalent to 5.63 per cent. of bi-carbonate is mesent. Most of the tartaric acid in this powder is	155
	TIME BEF TEST	FOR GAS.	Day's.	66	165 186 180 191 126 126
NE.		Average.	Cubic inches per ounce.	88.31	8 80.19
ALONE	Available Gas.		Per cent.		8 3 3
	Aval	.e.	Percentag	9.13	8.87 10.09 8.79 6.93 6.93 5.87
	TARTARICAC- ID EXPRESS'D IN TERMS OF	ASH.	Aver-	:	
	TARTA ID EXP IN TER	OF POTASH.	Per- cent- age.	27.8	34.97
	(.)		Aver-		
	Starch.	•	Per- cent- age.	44.0	824 24.0 24.0 64.0 64.0 75.0 75.0
	(A)		Kind.	8431 Wheat	Rice
			No. of Sar	8431	7477 7496 8099 8115 8383 8413 8396
	Description of Baking Powder.			Bakewell	9Cook's Friend 8 do do do do do do do do do do do

II.—BAKING POWDERS CONTAINING CREAM OF TARTAR ALONG WITH FREE TARTARIC ACID, OR CONTAINING TARTARIC ACID ACID ALONE—Continued. RESULTS of Examinations of Baking Powders-Continued.

		Starch	всн		TARTARIC AC- ID EXPRESS'D	CARTARIC AC- ID EXPRESS'D	Avai	Available Gas.		TIME KEPT BEFORE	KEPT	
Description	.ple.	(Approxi	pproximately.)	·	CREAM TARTAR.	K W OF	<del>-                                   </del>	Average.	age.	TESTING FOR GAS.	TNG GAS.	Demonstra
of Baking Powder.	No. of San	Kind.	Per- cent-	Aver-	Per- cent- age.	Aver-	Percentage	Рег септ.	Cubic inches per ounce.	Days.	Mean.	NCHIAI NS.
Price's Greamdo	8065 8111 7478	Maize {	21:2 20:2 20:7	20.1	-20.7 49.82		10.40 11.67 10.87	ني ا	10 .98 106 .21	133	122	A sample specially collected and analyzed one day after collection gave 11.47 per cent. of gas; an excess of soda equivalent to 3.02 per cent. bi-carbonate was found in 8111. The proportion of free tartaric acid in this powder is very small, since the theoretical yield for 49.82 per cent. of hi-tartare of potash is 11.66 per cent. This is an excellent rowder and scene to have good bearing onalities.
Standard	7495	Chiefly rice, with a little potato	8.24	:	21 · 75	:	9.4		90.93 147	147	:	The tartaric acid found corresponds to 17.35 per cent. of free acid, which is capable of yielding 10.19 per cent. of gas with bi-carbonate of soda. Very little, if any, cream of tartar is present in this rowder.
Unnamed	7512	7512 Rice	:	:	28:35	:	8.73		84.45 155	155	:	An excess of soda equal to 0.5 per cent, of bi-carbonate is present.

Results of Examinations of Baking Powders—Continued.

III.—CREAM OF TARTAR POWDERS CONTAINING CARBONATE OF AMMONIA.

Remarks.	The excess of soda was estimated in 7563, 8424 and 8429 and amounted respectively to 1'01, 1'01 and 0'84 per cent. bi-carbonate; an average of 0'95 per cent. The gases evolved in baking are carbon di-oxide and ammonia. The latter was estimated in 8388 and 7489, the mean result being 445'4 cc. per 100 grammes of powder, equivalent to 8'46 cubic inches per ounce. Adding this to the average carbon di-oxide evolved gives a total available gas for baking purposes of 118'25 cubic inches per ounce; equivalent to 12'23 per cent. by weight of carbon di-oxide gas. The bi-tartrate of potash present should yield (theoretically) 12'23 per cent. carbonic acid gas from bi-carbonate of soda. A deterioration amounting to 0'63 per cent. has occurred (in 8424) on the hypothesis that the bi-tartrate of potash reacts entirely with bi-carbonate of soda. This is a very slight loss, since the sample was kept in my office for 102 days and for a further unknown length of time by the retailer. This powder contains about 1 per cent. of carbonate of ammonia in a varying mixture of acid and neutral carbonates with ammonium carbamate. This is an excellent powder, of high strength and very uniform quality.
The Beys.   Days.   Da	159
Days. Por Por Por Por Por Por Por Por Por Por	195 195 195 195 175 175 175 175 175 184
das.  Cubic inches per ounce.	11:35:109:79
Tercentage. Average Gas. Per cent. Average Gas. New Mercentage. Per cent. Pe	11.35.109.79
Percentage.	94443866 94443868 94443868
Cream of Taktar.	
1 7 6 14 1	25
Aver-	
RCH. imately Per-cent-age.	7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00
Starch. (Approximately.)  Kind.  Secut- age.	Maize.
No. of Sample.	7483 77563 8888 88388 88388 8401 8410 8410 8423 8423 8423 8423 8423 8423 8423 8423
Description of Baking Powder.	සිදුල් දිදුල්
	60

In this brand an excess of alkalinity corresponding to 6.38 per cent. of bi-carbonate of soda is present. The powder has not kept well, owing, no doubt, to the absence of any starch or other indifferent ingredient. A fresh powder containing so high a percentage of cream of tartar with excess of soda should yield 14.87 per cent. of carbonic acid gas. The carbonate of ammonia present (calculated from ammonia found) is about 0.13 per cent. The total strength of the powder is, therefore, 84.92 cubic inches of gas per onnce; equal to 8.78 per cent. of carbonic acid gas. The package containing this sample was evidently shop-worn, and had probably been long in stock. The powder is a perfectly wholesome one and must have been of great strength when freshly made.		-		
in this brand an excess of per cent. of bi-carbonate is starch or other indifferent containing so high a per centaining so high a per carbonate of an amnonia found) is about of the powder is, therefor ounce; equal to 8.78 per package containing this sand had probably been lonfectly wholesome one and feetly wholesome one and when freshly made.				
83.86 113				
63.54 · · · · · 8.67 · · · · ·				
Princess 8102				
A	1	04		

RESULTS of Examinations of Baking Powders—Continued. IV.—ALUM BAKING POWDERS.

_							
		Romarks			quanty. The statch is present as wheat four. This is a neutral powder, i.e., contains no excess of soda. The alum used has been somewhat over-burnt.	These samples contain an excess of soda, amounting respectively to 1.13 and 3.19 per cent. of bi-carbonate. In point of perfectively to a good roader. The	contently are a good power. The greatly, over-burnt. This powder showed a deficiency of 4.37 per cent. bi-carbonate of soda.
	TIME KEPT BEFORE Tresming	FOR GAS.	Меап.				:
	TIM	ror I	Days.	175	137	126	122
	GAS.	age.	Cubic mches per ounce.	9.08	47.11	12.74 123.24	47.11
	AVAILABLE GAS.	Average.	Per cent.			12.74	
	Ava	.e.	Percentag	3.06	4.87	21.76 14.47	4.87
	as dry om al- l.	ted a alu ed fr onno	sts mulA inomms tsluolso t snimn	23.00	20.75	21.76	14.06
	·	(	.snimulA .O .lA)	5.00	4.50	4.72	3.05
		$^{\rm Sulphuric}_{(_R}{\rm O}^{}{\rm S})$	12.59	12.66	13.82	67 8	
		_	Aver-		:	{ 08.8†	
		ximately.	Per- centage.	35.7	54.5	44·6 53·00	28.00
	rS.	(Appro	Kind.	Wheat	8385 Rice and maize	7518 Rice and a little wheat. 8389 Maize	Wheat
	·s	ubje	No. of San		8385	7518 8389	7553
		Description	Or Baking Powders.	Cook's Best Friend 8047	James'	Silver Cream	Star

Norz.—The alum percentage is calculated from the alumina found, and is stated in terms of anhydrous ammonia alum [N H<sub>4</sub>)<sub>2</sub>  $\otimes$  O<sub>4</sub>+Al<sub>2</sub> ( $\otimes$  O<sub>4</sub>)<sub>3</sub>]. It will be seen that the amount of gas produced bears no constant relation to the percentage of alum present. This is due to one or more of the following conditions:—1. Deficiency of bi-carbonate of soda. 2. Deterioration from long keeping, or from access of moisture. 3. Over-roasting of the alum, and consequent loss of acidity by volatilization of sulphuric acid.

RESULTS of Examinations of Baking Powders—Continued. V.—ACID PHOSPHATE BAKING POWDERS.

	C A ci	Average.  Average.  Average.  Sulphuric (S O  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Sulphuric  Mean.	28.7 16.77 5.875 12.4 This powder contains 0.2 per cent. of chlorine in chlorides, and recommended by Liebig (Wagner's Chem. Tech.—conform to the formula proposed by Professor Horsford, and recommended by Liebig (Wagner's Chem. Tech.—Cooke's translation, p. 456), the percentage of chlorine being too low to correspond to the amount of chlorine being too low to correspond to the amount of chlorine being too low to correspond to the amount of chlorine being too low to correspond to the amount of chlorine being too low to correspond to the amount of chlorine amount of sulphate of line present is the most objection—able feature of this powder.  46.3 47.9 5.40 47.9 The sulphuric acid is combined with line, as gypsum (terra alba) a byproduct in the preparation of the super-phosphate.  75.40 76.3 44.88 195 176 A sample of this brand specially collected gave 5.33 per cent. gas after keeping two days. The sample 8653 had evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently been long kept in stock, and was lumpy and evidently indicates 4.22 per cent. gypsum. If the whole of	the phosphoric acid found were present as super-puos- phosphoric acid found correspond to about 49 per cort of that substance. Even allowing for deterioration from keeping, much of the phosphoric acid must be present
		Ачегаве.	47.9	
Starch. (Approximatel	-	Kind.	Maize and { 46.5 Wheat. (49.5 No starch	
•;	əĮdu	ns2 to .oV	7554	
	Description	of Baking Powder.	Horsford's Phosphate Baking Powder  Victoria  do do do Wheat Baking Pow-	

Results of Examinations of Baking Powders—Continued.

VI.—ALUM PHOSPHATE BAKING POWDERS.

	Bannanka	IVOIII INS.	A sample specially collected and analyzed five days later gave 11.2 per cent. gas; a minimum excess of 2.58 per cent, sulphuric	acid over that existing as alum is in combination with lime as 4.39 per cent. terra alba (grybum).  At least 1.76 per cent. of sulphuric acid is present in some other combiation than alum	presumably as gypsum (terra alba).  148 A sample, specially collected and examined	the same day, gave 7.19 per cent. gas.  No. 8442 contained no excess of soda.  About one-quarter of the starch present is		bined with lime as terra alba. The alum is overburnt, ammonium sulphate having been volatilized. This powder	seems to have kept very badly.  A sample specially collected, and examined seven days later, gave 10.0 per cent. gas.
TIME KEPT BEFORE	TESTING FOR GAS.	Mean.		<u>:</u>		<u> </u>	149	:	:
TIM	FOR	Days.		108	158 157	157 176 94	159	170	
AAS.	.ge.	Cubic inches per ounce.	103 21	81.25	: :	45.65	60.02	35.21	67 - 52
AVAILABLE GAS.	Average.	Per cent.	•		4.79		7.33		86.9
Ava	.es	Ретсепта	10.67	<del>7</del> .8	2·07 5·87	3.3.06 3.06 3.73 3.73	6.73	3.64	9.40 9.27 5.23 4.00
 as dry imand rom al- d.	ted iaalu ted fr found	sts mulA   nomms   isluolso   snimu	14.38	15.86	14 · 52		11.8	16.73	18.8
 1	( <sub>e</sub> O <sub>2</sub> IA) .snimuIA			3.44	3.15		2.56	3.63	4.08
.b	ioA (	oirundqlu& <sub>e</sub> O &)	12.27	12.42	88.8 8	9.5	88 : 8 :	9.16	10.57
.bic	Phosphoric Acid. (Page 10 of 1			28.8	3.73	3.9	4.704	5.52	5.17
-		Average	:	:	: : <u>.</u>		49.1	<u>.</u>	50.3
CH.	proximately.)	Percent- age.	39.4	39.0	52.6 50.4	20.0 20.0 20.0	50.0	52.0	20.03 4.00 6.00 8.00 8.00 9.00
	(Approxi	Kind.	Maize and rice	Maize with a little rice and wheat.	Potato.		Maize and wheat.	Rice	Maize.
••	əldm	se to .oV	7521	8108	7503 7508	7511 7546 8442	7498	7540 Rice.	7484 7501 7514 8095
	Description	Baking Powders.	American Gilt Edge. 7521 Maize and rice	Cook's Acme	Cook's Bestdo	ф ф ор	Cook's Choice	Cook's Finest	Cook's Favorite do do

The alumina (and consequently the alum by calculation) is the minimum amount present. The method employed is not sufficiently exact to fix the maximum amount of alumina with precision.	About 2.75 per cent. of sulphuric acid is combined with lime as gypsum (terra	augh.  The alum found corresponds to 11:9 per cent, of sulphuric acid. The excess of sulphuric acid is in combination with	lime. The alumina stated is a minimum. The method employed is not exact enough to fix the maximum amount with exactitude.	The alum present in this powder has been burnt to partial decomposition.  Alumina is present, but was not exactly	estimated. sample specially collected and analyzed three days later gave 11.0 per cent. of gas. The gas-producing power is high and fairly constant throughout the samules examin-	ed. At least 2.32 per cent, of sulphuric acid exists as terra alba (calcium sulphate) in number 8106.	The alum used has been over roasted.	At least 1.08 per cent. of sulphuric acid	casses activities and analysed twenty days later gave 8:53 per cent. gas. The sulphuric acid found is 2 T7 per cent. less than corresponds to the alumina estimation. The alum has therefore been greatly over-roasted.	Alumina is present, but was not exactly estimated in this sample.	Alumina was not exactly estimated in this sample.
The c 157 s c		Ē	E T	. 88 : Al_Ta	150 A		<u></u>	At	: A A B B B B B	A	All
	<u>:</u>	<u>:</u>	<u>:</u>	::				_:	:	:	_ :
159 142 138	134	114	7 138	8 154 137 7 136	165 144 161 181	. 139 170 137 108	136	139	126	133	132
85.32	38.35	6.02	94.77	36·08 78·64 54·17	2.26		83.19	109.6	76.71	99.34	95 · 47
	:	:	:	8·13	10.10		:		:	:	<del></del>
	<u>:</u>	:		: :	د		:		:	÷	i
8:00 8:73 8:93 9:00	8.93	7 · 33	8.6	3.73 9.60 9.87 5.6	10 20 11 20 10 00	$^{10.13}_{8.93}\\^{8.93}_{10.20}$	9.8	11.33	7.93	10.27	28.6
10.46	17.60	17.7		8.2 16.82 20.84	16.27	16.64	20.01	19.87	15 86	:	:
2.27	3.84	3.84	2.26	3.65 4.52	3.53	3.61	4.34	4.31	3.44	:	:
8 · 92	11.65	12.36	11.83	7.61 10.28 10.12 12.6	10.89	13.54	12.25	14 44	7.89	14.00	10 · 43
3.52	3.59	4.19	4.32	2.47 4.88 5.21 3.01	4.68	3.61	2.77	3.96	5.71	62.4	2.83
52.1	:		:	52.6			:	:	•	:	<del>-</del>
48.7 46.0 59.6 56.3	44.0	47.0	38.5	61.0 58.0 51.0 48.8 46.0	37.0 47.0 40.2 48.0	423.4 42.4 42.4 42.4	6.09	42.	51.1	53.5	48.1
Wheat and maize about 3 to 1.	Potato	Maize		Potato, with a little rice  Maize do and wheat.  Potato	Maize and	Wheat.	Maize	ор	Wheat	ор	8070 Maize
7493 7505 7539 8071	8083	8405		7544 8062 8088 8059	7486 7487 7492 8046	8080 8084 8105 8106	3075	8040	8082	8061	8070
Choice Crystaldo	Crystal.	Coral		Echpse Globe do do James'	New Era	0 do do do do do do do do do do do do do	Ocean Foam	Ocean Wave	Pride of Ottawa	Pride of Toronto	Purity
17	5										

RESULTS of Examinations of Baking Powders—Concluded.

VI.—ALUM PHOSPHATE BAKING POWDERS—Concluded.

	Domonda	INTIMURY.	The available gas is slightly more than corresponds to the percentage of alum present. The phosphoric acid is therefore an auxiliary agent in the decomposition of bi-carbonate of soda. About 0.85 per	cent. of P <sub>2</sub> O <sub>5</sub> is available for this purpose, being the amount in excess of that which enters into combination with alumina in case of the perfect solution of the powder. This powder contains a larger percentage of phosphate and a smaller percentage of phosphate and a smaller percentage of alum than the majority of powders of its class.		The alumina was not exactly estimated, but the relative percentages of sulphuric and phosphoric acids indicate the presence of al least 12 to 15 per cent. of dry alum; an excess of alkalinity, equivalent to 2.35 per cent.; bi-carbonate of soda, is present.	A check experiment upon a sample specially collected and examined six days after collection gave 7.1 per cent. of gas; No. 8048 showed an excess of soda equal to 4.48 per cent. of bi-carbonate.
TIME KEPT BEFORE	FOR GAS.	Мезп.	:		3 133	:	142
FIN	ĘĘ	Days.	Ξ		143 124	131	<u> </u>
	æe.	Cubic inches per ounce	66.16		24.27	96.05	9.11 126 8
AVAILABLE GAS.	Average.	Per Cent.			5.60		11.21
Avai	.e.	Percentag	8.6 8.		5.87	86.6	9.87 14.47 12.00
as dry un and om al. d.	bed of salu of tr of tr	sts mul.k. momms tsluolso tsnimu	17.00		16·14	:	15.86
		snimulA (O 2 IA)	3.69		3.50	;	
d.	ioA	Sulphuric (s O S)	8:85		88.6	11.2	10.77
.bia	ok əi	Phosphor (P <sub>2</sub> O <sub>5</sub> )	5.94		4.80	3.0	3.84
	_	Ауетаде	i i		46.9		: \$ ; : : : : : : : : : : : : : : : : :
KCH.	proximately.)	Ретсепt- яge.			44 · 9	51	41.3 46.6 43.0
	(Approxi	Kind.	Wheat		Potato Maizeand Potato	Wheat	Maize do do do do do do do do do do do do do
•	wbje	No. of Sar	8103		7506 7561	8052	8101 8109 8048
	Description	of Baking Powders.	Silver Queen	66	Silver Timble	Standard	Snowdrift do do do do

This is an alum phosphate powder of poor quality; it is remarkable, in that the character of the starch used varies from maize or wheat to a mixture of one or other or both of these, with potato starch.  This powder seems to vary much in efficiency, and a good deal in composition, especially with reference to the character of the filling.  At least 1.23 per cent, of sulphuric acid exists in some other combination than alum, probably as sulphate of lime.
146 1150 1179 1179 1179 1179 1179 1179 1179 117
3.94 38.11 180 1174 1174 1175 1172 1173 1173 1173 1173 1173 1173 1173
3.94 38.11
99.7
######################################
2.5.4.73 2.5.61
11.62 5.00 17.52 7.67 17.52 7.67 17.52 7.67 19.04 10.25 17.52 9.47
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
\$ 13 :
61 w 41 w
6·69 2·52 11·62 10·48 3·80 17·52 13·76 4·13 19·04 13·07 3·80 17·52
3.66     6.69     2.52     11.62       5.09     10.48     3.80     17.52       4.73     9.76     4.13     19.04       2.81     13.07     3.80     17.52
8 6 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
60-2 3 66 6 69 2 52 11 62 5 00 4 07 5 09 10 48 3 80 17 52 5 67 4 6 7 5 09 10 48 3 80 17 52 7 67 4 6 7 5 9 10 48 3 80 17 52 7 67 4 6 7 5 9 16 4 13 19 04 10 27 2 8 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
57.0 63.3 63.3 63.3 65.2 65.2 65.6 64.5 65.6 65.6 65.8 65.8 65.8 65.8 65.8 65
Wheat 57.0  and 63.3  Potato, Wheat, potato and maize. 55.4  Maize and potato. 58.6  Tato. Fotato 45.6  and maize. 53.0  Potato 45.0  Potato 45.0  Maize. 46.0  And maize. 48.5  Maize. 48.5
7504 7515 7515 7520 7547 7550 7497 8415 8092 7482 7482 7482 8076
Superior German
Su V

RESULTS of Examinations of Baking Powders.

(Table omitted in Bulletin No. 10.)	etin No	0. 10.)			VIII	-BI-SU.	VII.—BI-SULPHATE OF POTASH POWDERS.	E OF	POTASI	н Рол	VDER	S.
			Втаксн.				Avai	AVAILABLE GAS.	AAS.	Тиме Керт Веропе	KRPT	
Description	mbje	ldw)	(Approximately.)	eiy.)	bio <b>A</b>	( <sub>‡</sub> O		Average.		Testing for Gas.	G FOR	F
or Baking Powders.	se to .oV	Kind.	Per- Ave-	Ave- rage.	oirmAqInB (gO B)	Equivalen (K H S	Per- centage.	Per- cent- age.	Cubic inches per ounce.	Days. Mean.	Mean.	генаткв.
Breadmakers'	7537	Maize	34.0	:	:		9.13	:	:	122	:	A sample procured from Bate & Co. and analyzed the
	8078	ob	0.28	:	21.95	37.31	10.50	:	:	116	:	(-98'66 cub, inches per cunce). The active ingredient
	808	ob	9.98	:	:	:	0.93	:		149	:	in this powder is of suphrate of potasin. In 60/18 the the mixed sulphates of sodium and potassium (extracted
	8384	: op	38.3	2.98	:	:	09.0	3.35	32.4	137	111	by water) amounted to 43 3 per cent. Calculating this to bi-sulphate of potash yields 37 2 per cent, a result
68	8443	: op	37.0	:	:	:	08.0	<u>-</u> :	:	25.	:	As a mean of results obtained with five (5) of these
	8444	ob	96.0	<u>:</u>	:	:	28.0	:	:	86	:	samples, the excess of any amounts to 1 12 let cent. bi-carbonate of soda per 100 grammes. From the
	8453	op	38.0		24.67	41.9	06.0	<u> </u>		<b>%</b>		inean amount of a surpline of potasti present (about 39.6 per cent.) the theoretical yield of gus with excess of br-carbonate of soda is 12.8 per cent.
				_								The state of the s

The following conclusions are the results of the more or less complete analysis of 148 samples of baking powders, in addition to which I have estimated the available gas in 19 samples collected by myself from city dealers as a check upon other work. The total number of samples is therefore 167, and these represent 54 different brands, which, upon the result of analysis, have been classified as follows:—

	Brands.	Samples.
1. Cream of tartar powders	13	<b>46</b>
2 Tartaric acid (with cream tartar in some cases)	. 5	. 13
3 Cream of tartar with carbonate of ammonia	<b>2</b>	14
4 Alum powders	4	5
5 Phosphate powders	3	4
6 Alum phosphate powders	26	<b>5</b> 9
7. Bi-sulphate of potash	1	7
•		
Total	54	148

As far as my information goes, the following are imported brands:-

	Brands.
Cream of tartar powdersdo and carbonate of ammonia	4
do and carbonate of ammonia	1
do and tartaric acid	1
Alum powders	2
Alum powders  Phosphate powders  Alum phosphate powders	$\dots 2$
Alum phosphate powders	$\dots$ 2
Total	. 12

All of which are imported from the United States, with the exception of an alum powder (James'), which is made in London, England. From the above data,

57 per cent. of the Canadian made brands are alum phosphate powders.

In the estimation of cream of tartar I have stated the total tartaric acid in terms of potassium bi-tartrate. In all commercial cream of tartar a portion of the tartaric acid is present as neutral tartrate of calcium. This varies with the quality of the commercial article, or, more correctly, the quality of the commercial cream of tartar is higher as the percentage of calcium tartrate is lower. The quality of the tartar used in the baking powders analysed is fairly well indicated by comparing the available gas with the percentage of potassium bi-tartrate obtained. Thus in Table I the available gas increases with the percentage of potassium bi-tartrate found—the exceptions to this rule being explained as above. At the same time, it must not be forgotten that deterioration from long keeping, or from access of moisture, as well as a deficiency in the proportion of bi-carbonate of soda present, would have the effect of decreasing the available gas. Durkee's Royal and Royal Gold are the only cream of tartar powders in which any deficiency of bi-carbonate of soda occurs.

In discussing the relative values of the different kinds of baking powders it is well to bear in mind some standard by which to judge the others. There can be no doubt that the mixture in equivalent proportions of cream of tartar and bi-carbonate of soda is the ideal baking powder. Not only was this mixture in popular use before the prepared mixture was in the market, but many persons now make the mixture for themselves, instead of trusting to the baking powders offered for sale by grocers. Hence we find cream of tartar and bi-carbonate of soda (or baking soda) ordinary articles of sale by retail grocers, as well as at the drug stores. The maximum gas producing power which can be given to such a powder is that indicated by the

formula:-

$$\begin{array}{c} \text{K H C}_4 \text{ H}_4 \text{ O}_6 + \text{Na H C O}_3 = \text{K Na C}_4 \text{ H}_4 \text{ O}_6 + \text{H}_2 \text{ O} + \text{C O}_2 \\ 188 \\ \hline 69 \\ \end{array}$$

which shows a mixture of 188 parts of bi-tartrate of potash with 84 parts bi-carbonate of soda to yield 44 parts carbonic acid gas, 18 parts water vapor and 210 parts Rochelle salt; or in percentages:—

Carbonic acid gas	16.18 per cent.
Water vapor	6 · 62 do
Rochelle salt	77·20 do
	$100 \cdot 00$

Since, however, the purest commercial cream of tartar contains 4 or 5 per cent. tartrate of lime and less notable quantities of sulphate, it will be fair to consider 94 per cent. of bi-tartrate of potash as an average standard for genuine cream of tartar. If we further allow a maximum of 20 per cent. of starch as a legitimate addition to the mixture of cream of tartar and bi-carbonate of soda, in view of the fact that without some such admixture of a neutral substance a gradual deterioration of the baking powder results from long keeping, due to the slow interaction of the constituents as they become affected by atmospheric moisture; then the composition of our ideal powder will be as follows:—

Starch		
Bi-carbonate soda	$23 \cdot 7$	do
Cream of tartar (94 per cent, pure)	56.3	do
1	00.00	

and the gas-producing power of such a powder is 12.38 per cent. Reference to Table I. will show that this limit is reached by the following brands of genuine

cream of tartar powders:—

Cleveland's Superior, which slightly exceeds the limit owing to less than 20 per cent. starch being present, and a correspondingly larger percentage of the active ingredients. Durkee's Royal, where the same remark holds good. Sherriff's Sovereign, where the cream of tartar is of better quality than the standard which I have fixed above, and the starch estimation is probably a little too high. Perfection has practically reached the limit, and None Such does not fall far short of it. It is proper also to state, that although the average results upon ten samples of Pure Gold fall short of the limit, the results with three of the samples come very close to it. One of the six samples of Imperial comes reasonably close to the standard, since this baking powder contains more than 20 per cent. of starch.

The residue left in the bread when such a powder is used is Rochelle salt, a double tartrate of potash and soda, having mildly purgative properties in doses of about half an ounce to an ounce. "Given in small and repeated doses it does not purge, but is absorbed, and renders the urine alkaline,"—(Journ. de Pharmacie, VI.,

222).

I find that the best baking powders recommend the use of about two heaping teaspoonfuls to the pound of flour, practically 20 grammes to the pound. This would correspond to a residue of about 12 grammes (about 0.38 ounce) Rochelle salt per

pound of flour used.

In the case of tartaric acid powders the residue left in the bread is sodium tartrate, a salt which is not mentioned in the pharmacopæias, and whose physiological properties I am not acquainted with. It is presumably a more powerful purgative than the Rochelle salt. In order, however, to produce the same amount of gas with a tartaric acid powder but 0.46, or less than half, the weight of residue remains in the bread as compared with that remaining when a bi-tartrate powder is used.

In Table II. it will be seen that *Price's Cream* is the only brand approaching the limit fixed for an ideal baking powder. This powder contains but a small percentage of the free tartaric acid, and is fairly comparable with the best cream of tartar powders. Although the average value of gas found in *Cook's Friend* is 8.29 per cent., one sample gave 10.09 per cent., and another 9.27 per cent. Rapid

deterioration is characteristic of tartaric acid powder; and this tendency is usually sought to be counteracted by the addition of a comparatively large amount of "filling," i.e., starch of some kind. It will be seen that with the exception of *Price's Cream* the percentage of starch is markedly higher in these than in the better class

of cream tartar powders.

The two brands tabulated in Table III. contain carbonate of ammonia (sal volatile) in addition to cream of tartar and bi-carbonate of soda. This salt is entirely volatile at the temperature of the oven, and, if pure, forms per se an efficient and entirely unobjectionable substitute for yeast. The practical difficulties in the way of its extensive employment are, I believe, the cost of the pure article and the popular prejudice against ammonia—the gas evolved in this case being a mixture of two volumes of ammonia gas with one volume each of carbonic acid gas and water vapor. Nevertheless, carbonate of ammonia finds a place in the bakery of the pastry cook, and even in many private kitchens. Omitting water vapor from calculation, 32 parts of it go as far 188 parts of bi-tartrate of potash, so that little more than 9 parts carbonate of ammonia would go as far in producing gas for baking purposes as 100 parts of the Ideal baking powder suggested on a previous page.

In the case of the *Princess'* brand the amount of carbonate of ammonia is very small, owing either to its original introduction in minute quantity, or to volatiliza-

tion due to keeping.

The Royal brand is fairly comparable with the best cream of tartar powders, and has one advantage over most of them in the very regular results obtained with the thirteen samples worked on, both as regards the percentage of starch present and the amount of gas obtained.

Alum Powders.—Only one brand of those examined reaches the limit indicated by a perfect cream of tartar powder. This is not because there is any difficulty in making a "strong" powder from alum and bi-carbonate of soda. Ammonia alum I find to be generally used, and this has been roasted to get rid of the large percentage of water naturally present in the crystals (over 47.5 per cent). The roasting is often carried to such an extent as to volatilize more or less of the sulphate of ammonia present, and even to decompose the sulphate of alumina, with loss of sulphuric acid, thus reducing the value of the alum as a component of baking powder. Assuming the alum to be perfectly roasted, and the sulphate of ammonia to take no part in the baking process, the following equation shows the highest value as a leavening agent attainable by an alum baking powder.  $(NH_4)_2 SO_4 + Al_2 (SO_4)_3 + 6 NaHOO_3 = (NH_4)_2 SO_4 + Al_2 O_3 + 3 Na_2 SO_4 + 3 H_2 O_4 + 6 CO_2$ . From which we infer that a baking powder of the following composition:—

100.0

should yield nearly 27 per cent. of carbonic acid gas.

Such a mixture could, therefore, be reduced by addition of starchy matter fully 50 per cent. in strength, and still compare in leavening power with the best cream of tartar powder. It will be seen that a very high percentage of starch is always present in these powders; and this addition is probably required to correct the tendency to deterioration on keeping for any length of time.

The residues left in the bread after use of an alum powder are sulphate of ammonia, sulphate of soda, and alumina. The last named is an earthy substance,

quite insoluble and therefore indigestible.

It is, moreover, capable of entering into combination with, and thus rendering unavailable for nutrition, any otherwise available phosphates which food may contain. This is probably the worst office served by the alumina introduced into the digestive system as alum powder. The sulphate of soda is a powerful drastic purgative in doses of half an ounce, calculated upon the crystallized salt, and corresponding to 0.22 ounce of the anhydrous salt. In the case of Silver Cream brand, which

has a strength closely approximating that of a genuine cream of tartar powder, and which contains 21.76 per cent. of alum, the sulphate of soda (Glauber's salt) resulting from the use of 20 grammes of the powder (the quantity supposed to be required for one pound of flour) is 3.9 grammes, or 0.125 ounce, corresponding to five-sixteenths of an ounce of the crystallized salt, a distinctly purgative dose. In order to obtain the same leavening effects with Cook's Best Friend or James' brands, which contain practically the same alum percentages, but give only about one-fourth and one-third the amounts of gas respectively—it does not follow that the resulting sulphate of soda will be respectively four and three times asmuch as in the case of Silver Cream, since much of the alum added may have been rendered ineffective by overburning in the first instance. But, where the low quality of an alum powder is the result of gradual deterioration through keeping, the by-product, Glauber's salt, is present just in proportion to the deterioration which the powder has undergone.

Superphosphate Powders.—The only one examined which has given a good account of itself is Horsford's. The low result in the case of Victoria brand is partly due to large admixture of starchy matter. In the case of Wheat baking powder, there is present so large an amount of neutral calcium phosphate that this takes the place of starch as a "filling." The product (phosphate of soda) which remains in the bread where a genuine superphosate powder is used, is as nearly harmless as any mineral salt can be; but, unfortunately, it is rare to find the sulphate of lime (which results from the treatment of tri-calcic phosphate to convert into superphosphate) removed from the superphosphate; and in the case of Horsford's powder nearly 10 per cent. of sulphate of lime is present. This is an inert powder (terra alba, gypsum) and must be injurious when ingested in any large amount. Neutral phosphate of lime (e.g., bone ash) is equally inert, insoluble and indigestible, and is very largely present in Wheat baking powder, so that I cannot think the use of this brand to be safe.

Alum phosphate powders constitute the great bulk of Canadian powders, and some are imported. There is, it seems to me, no raison d'etre for this class of powders. They are evidently intended to appease the popular suspicion regarding alum powders by the introduction of a phosphate. If, however, the phosphate of lime used in their preparation were a true superphosphate no addition of alum would be needed to make the powder effective. In fact, the addition of alum would, in that case, be great folly and waste, since the free phosphoric acid would combine with the alumina and form the inert phosphate of alumina. That sulphuric acid (in alum) and not phosphoric acid is the real agent in the liberation of gas in these powders is abundantly evident from the proportions in which phosphoric acid and alumina are present. Phosphoric acid and alumina enter into combination in the

ratio 142,103. A glance at the following numbers will show that alumina is invariably present in sufficiently large amounts to neutralize all the available phosphoric acid, even if the total amount present had existed as acid calcium phosphate—a supposition, however, which cannot reasonably be made:—

Brand.	$\begin{array}{c} { m Total} \\ { m P}_2 { m O}_5 \\ { m found.} \end{array}$	$\begin{array}{c} {\rm Maximum} \\ {\rm Available~as} \\ {\rm H_4~Ca~P_2~O_8}. \end{array}$	Corresponding $Al_2 O_3$ to neutralize.	$Al_2 O_3$ found.	Excess of Alumina.
American Gilt Edge	$4 \cdot 42$	$2 \cdot 94$	$2 \cdot 12$	$3 \cdot 11$	0.99
Cook's Acme	3.87	$2 \cdot 58$	1.86	$3 \cdot 44$	1.78
do Best	$3 \cdot 90$	$2 \cdot 60$	1.88	$3 \cdot 15$	$1 \cdot 27$
do Choice	-4.70	$3 \cdot 13$	$2\cdot 26$	$\mathbf{2\cdot 56}$	0.30
do Finest	$5 \cdot 52$	3.68	$2 \cdot 66$	$3 \cdot 63$	$0 \cdot 97$
do Favorite	$5 \cdot 17$	$3 \cdot 44$	$2 \cdot 49$	4.08	$1 \cdot 59$
Choice Crystal	$3 \cdot 52$	$2 \cdot 34$	$1 \cdot 69$	$2 \cdot 27$	0.58
Crystal	$3 \cdot 59$	$^{\cdot} 2 \cdot 39$	$1 \cdot 73$	$3 \cdot 84$	$2 \cdot 11$
Challenge	$4 \cdot 19$	$2 \cdot 79$	$2 \cdot 02$	3.84	1.82
Eclipse	$2 \cdot 47$	1.65	$1 \cdot 19$	1.78	0.59
Globe	$5 \cdot 04$	$3 \cdot 36$	$2 \cdot 43$	4.08	1.65
		70			

72

Brand.	$\begin{array}{c} {\rm Total} \\ {\rm P}_2 \; {\rm O}_5 \\ {\rm found.} \end{array}$	$\begin{array}{c} \text{Maximum} \\ \text{Available as} \\ \text{H}_4 \text{ Ca P}_2 \text{ O}_8. \end{array}$	Corresponding $Al_2 O_3$ to neutralize.	$Al_2 O_3$ found.	Excess of Alumina.
New Era	$4 \cdot 24$	2.83	$2 \cdot 04$	$3 \cdot 57$	1.53
Ocean Foam	$2\cdot 77$	1.85	$1 \cdot 34$	$4 \cdot 34$	3.00
do Wave	$3 \cdot 96$	$2 \cdot 64$	$1 \cdot 91$	4.31	$2 \cdot 40$
Pride of Ottawa	5.71	3.80	$2 \cdot 75$	$3 \cdot 44$	0.69
Silver Queen	$5 \cdot 94$	$3 \cdot 96$	$2 \cdot 86$	$3 \cdot 69$	0.83
do Thimble	4.80	$3 \cdot 20$	$2 \cdot 31$	$3 \cdot 50$	$1 \cdot 19$
Snowdrift	4.74	$3 \cdot 16$	$2 \cdot 28$	$3 \cdot 44$	$1 \cdot 16$
Sup. German	3.66	$2 \cdot 44$	1.81	$2 \cdot 52$	0.71
Vienna	$4 \cdot 91$	$3 \cdot 28$	$2 \cdot 39$	$3 \cdot 64$	$1 \cdot 25$
Unnamed	2.81	1.87	$1 \cdot 35$	$3 \cdot 80$	$2 \cdot 45$

In no single instance, therefore, would phosphoric acid, even if present as acid phosphate of lime, be available for the decomposition of carbonate of soda. This decomposition is always effected just as in a bona fide alum powder, by the sulphuric acid of the sulphate of alumina, and the phosphoric acid is present merely as a blind. What I have said regarding the objectionable character of the residues in true alum powders holds good of the residues in the case of these pseudo-phosphate powders. and does so with increased force, since not only is sulphate of soda present in proportion to the percentage of bi-carbonate of soda decomposed, but neutral phosphate of lime, an earthy, insoluble substance, quite incapable of being assimilated, is ingested at the same time.

Bi-sulphate of Potash Powder.—Only one brand examined contains bi-sulphate of potash as a substitute for cream of tartar. In this powder (Breadmaker's) it is evident that a very rapid deterioration occurs on keeping. One sample gave 10.2 per cent. of gas after 116 days keeping; another, analyzed immediately after collection, gave the same percentage of gas, but six other samples gave less amounts, five of them giving less than 1 per cent., and hence being practically valueless as leavening agents. Although these samples were kept by me only about 100 days, they may have lain, and probably did lie, in the hands of dealers for a much longer time. Apart from the rapid deterioration exhibited by this powder, it has the same objectionable feature as alum powders, in that the residue left in the bread is a salt having very strong purgative properties. The reaction which takes place in using this powder is represented by the following equation:—

which shows that to obtain the same amount of gas which would be liberated by 20 grammes of a good cream of tartar powder (say 2.4 grammes) it is necessary to use 12 grammes of the active ingredients of this powder (or 19 grammes of a powder containing 37 per cent. of "filling" as Breadmaker's does) and a residue amounting to nearly 9 grammes of alkaline sulphate remains in the bread. If, however, we take into account the average deterioration which has occurred in these samples, and accept  $3\frac{1}{3}$  per cent. as the available percentage of gas, then nearly six times the above quantities must be used, and the resulting bread becomes a very efficient

In conclusion, I would respectfully ask your attention to the following concise

summary of my own opinions regarding the subject in general:-

1. The best and safest baking powder is a mixture of good cream of tartar with a proper proportion of bi-carbonate of soda, and about 15 to 20 per cent. of pure starch.

2. Carbonate of ammonia, if pure, and consequently entirely volatile at the

temperature of the oven, is a perfectly admissable substitute for the above.

3. Tartaric acid, with the proper proportion of bi-carbonate of soda, and somewhat more starch than is required in the case of cream of tartar, is probably a harmless mixture, and may have good leavening qualities if not too long kept. I offer this opinion with some hesitation, since I am uncertain as to the physiological properties of di-sodium tartrate.

4. Superphosphate of lime when practically purified from the sulphate of lime which is a by-product in its manufacture, and when also practically free from neutral calcium phosphate (bone ash, &c.), the raw material used in its manufacture is probably a harmless substitute for cream of tartar in baking powders. The sodium phosphate resulting is quite harmless, and the tri-calcic phosphate formed is probably

in too small quantity to be injurious.

5. Alum is entirly objectionable as a substitute for cream of tartar, and ought not to be allowed a place in any well-appointed bakery. Not only is the resulting sulphate of soda a powerful purgative, and certain to interfere with normal digestive processes when habitually taken into the system, but the alumina, set free by the re-action of the powder, is capable of rendering insoluble and unavailable the phosphoric acid and phosphates naturally present in food.

6. Alum phosphate powders are more objectionable still than the foregoing, for

reasons given in the body of the report.

7. Bi-sulphate of potash is objectionable as a substitute for cream of tartar on account of the purgative character of the residue left after its action in baking.

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

> A. McGILL, Assistant to Chief Analyst.

## BULLETIN No. 11.-SUMMER MILK.

LABORATORY OF THE INLAND REVENUE DEPARTMENT, 30th October, 1889.

To the Commmissioner of Inland Revenue, Ottawa.

SIR,-In your report on the inspection of Food addressed to the Hon, the Minister of Inland Revenue and dated the 2nd March, 1889, you made the announcement that further tests would be made over a wide extent of territory, with a view to Departmental action as regards determining a standard for milk, or the lowest limits for its contents in total solids and butter fat. Since then, in accordance with your instructions, the extensive series of samples of winter milk described in Bulletin No. 9 was taken. Subsequently, at the meeting of the Dominion Dairymen's Association, held at Ottawa, in April, doubts were expressed as to the advisability of fixing a standard at once, and some of those present were of opinion that the lowest limits proposed, of 3½ per cent. butter fat and 12 per cent. total solids, could not be generally attained in the months of May and June, In order to decide this point, a series of samples was, with your sanction, collected in these months, and in so doing the assistance of the health and dairy inspectors obtained in some districts. The collectors were instructed to see the cows milked themselves, but in some cases this was not done; in others, the samples collected were of morning or evening milk only, and could not be supposed to represent the average yield of the herd. Such unreliable samples are excluded from the following tables, and only those are inserted of whose genuineness there is complete certainty.

, J	Specine Gravity, at 15° C.	p. c.	1.033	1.034	1.034	1.0337	1.034	1 · 0337	1.0338	1.034	1.033	1.034	1.034
	Total Solids.	p. c.	$\begin{array}{c} 13.01 \\ 13.13 \\ 13.05 \\ \end{array}$	12.18 $12.07$ $12.09$	12.66 12.77 12.78	12.19 $12.13$ $12.09$	13.03 $13.13$ $13.23$	12.73 12.71 12.77	15.69 12.69 12.69 12.69	12:33 12:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 13:43 14:43 16:43	223 223 233 243 253 253 253 253 253 253 253 253 253 25	12:26 12:26 13:28 13:28	12.38
	Average per cent. of Butter Fat.	p. c.	37.6	***	9		73.6		9.6	3.49	50.0		
ANALYSIS.	Other Solids.	p. c.	01.6 0.10 0.06	20.0 %	86.68 8.66	8 6 5 8 8 8 8 8 8 8 8 8		86.5 66.5 60.5	285 285 285		 0.0.0 1136	0 0 0 0 0 0 0 0 0	9. c
Ana	Butter Fat.	p. c.	3.90 4.03	3 00 3 00 3 00 3 00 5 00	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	86.69 88.99	3.72				3 3 3 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
	Water.	p. c.	86.98 86.87 86.98	87.82 87.93 87.91	87.34 87.23 87.22	87.81 87.87 87.91	86.97	87.28 87.28 87.38 87.38	87:39 87:31 87:24	87.72 87.73 87.67.13	87.67 87.52 87.57	87:74 87:74 87:72	87.62 24.63
, ,	Morning or Evening Milk.	-	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	
	Fodder, if given, in addition to Pasture.		Pasture only	ор	ор	ф	ор	ор	Grain night and morning. Morning	op	Pasture only	ор	
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2	Name and Address of Proprietor of Herd.	Вествунтв	June 10 101 Jas. Blanchard, Sydney Tp	qo	10 102 James Knox	op	10 103 Chas. R. Ostrom	op	104 Dr. Coleman	op	105 R. J. Graham	do ,	4. 10 100 Const. D D. co.
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I.—Table showing Results of Analysis of Samples of Genuine Whole Milk, &c.—Continued.

:	Specific Gravity, at 15°C.	p. c.	1 0324	1.0334	1.0324	1.0342	1.0332	1.0332	1.0332	1.0345	1.0332		1.0342		1.0248	1.0332	1.0334	1.0344
	Total Solids.	p. c.	12.65) 12.61)	13.01)	20.01 22.02 22.03 23.03	14.63	12.36) 12.38)	12 73 12 69	12.60 12.68	12.20 $12.20$	12.73		12.68 $12.62$		13.56)	12:40	66.51 17.00	12.42 12.43
	Average per cent. of Butter Fat.	p. c.	3.63			#	9.50	) m: )	27.67			3.64			4.46		9.0%	
Analysis.	Other Solids.	: :	8 8 8 8 8	6 6 6 6	88 <del>4</del> 9	8 8 8 8	8.63 6.63 6.63	6 6 6 6	8.6.8 8.6.4	6.8 6.8 6.8			9.30		8:31	8.73 8.61	₩ ₩ ₩ ₩	9.11 9.03
ANA	Butter Fat.	p. c.	3.65 3.58	3.72	6.03	5.01 5.02	3. 3. 3. 3.7	3.64 3.66	3.76	3.20	8 5 8 6 8 6		3.38		5.25	3.67 3.68	3·16 3·16	3.31 3.40
	Water.	ن د	87.35	96 98 98 98							::					:::		
	Morning or Evening Milk.		Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening		Morning		Evening	Morning	of Evening	Morning
	Fodder, if given, in addition to Pasture.		Pasture only	op		morning. do	Pasture only	ор	common and Ensilage night and morn-Evening 2 Holstein.			oat bran, wheat bran, with buckwheat mixed, oats and vetches after-	wards.		About 21bs. of shorts each Evening.	angne and morning.	ntity	chopped oats.
	What Breed.		Common	ф	Pure Jersey	op	Common	op	5 common and 2 Holstein.		Mixed		op		Common	ор	op	ор
• 9	No. of Cows		G 	6	4	4	ာ	9	<b>L</b> ~	:	42		42		40	9	83	83
	Name and Address of Proprietor of Herd.	TORONTO—Concluded.	119 Phillip McKenzie, York Tp	·· op	120 David Duncan, York (E) Tp	·· op	17 121 Henry Duncan, York (E) Tp.	ор	123 Major E. H. Foster, "Erlescourt Stock Farm," Daven-	port. do	18 129 Alex. Bryce, "Pines Farm"		·· op	BURLINGTON.	136 John Fothergill	ор	20 140 John Ireland, Nelson Tp	
.əle.	No. of Samp			119	120	120	121	121	123	123	129		129		136	136	140	140
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If the average be taken of the milks from the twenty-four herds above described (excluding the one marked as pure Jersey) it is found to amount to 12.62 per cent. total solids, and 3.66 per cent. butter fat. The latter figure is lower than the average of the samples described in Bulletin No. 1 which was 3.86 per cent., although the total solids show no diminution. Still the difference in the butter fat is not such as to call for any change in the recommendation already made of 12 per cent. total solids and 3.5 per cent. butter fat as the lowest limits for milk of good standard quality.

While the above samples were being collected the following were also taken of

average milk delivered to certain cheese factories:-

1889.	Name of Cheese Factory.	Total Solids.	Butter Fat.
June 10	Front of Sydney	12.74	3.66
	White Globe near Metcalfe		3.34
" 26	Osgood No. 10 near Metcalfe	a. 12·87	4.07
	f Average	12.65	3.69

When it is considered that the possibility of adulteration is not excluded in these samples the average shown goes also to prove that the proposed lowest limits are not

too high, even for the months of May and June.

It has frequently been suggested that by sampling the milk delivered in large quantity to our cheese factories, more reliable general averages might be obtained. This would, of course, be the case provided always adulteration could be guarded against. In order to ascertain what results could be obtained in this way, Professor Robertson, of Guelph, had the kindness to instruct certain of the dairy inspectors under his charge to collect samples from some of the cheese factories in the neighborhood of London, which were analysed by me in the Inland Revenue Office of that city in September last, thus avoiding the necessity of sending them to Ottawa. The inspectors were instructed to obtain average samples of the milk delivered at the cheese factory on the day of their visit, and, at the same time, samples of what were held to be the best qualities of milk received at the factory as well as samples of the poorest. The following table shows the results obtained in examining those samples which, unless when otherwise stated, represent mixtures of evening and morning milk.

			1			A. 1090
Sesults of examining Samples of Milk supplied to certain Cheese Factories near London, Ont., in September, 1889.	Remarks.	The null from patron No. 4 has evidently been skimmed. Considering the high vat average, the most of the null deliverate to this factory must have been pure. The difference in butter fat percentage betwixt the best and the poorest of the genuine milks delivered amounts to 0.43 per cent	In the case of this factory there is evidence in two cases of adultoration, which probably prevails to a considerable extent, since the other high-grade milks which were delivered are brought down in the vat to an average of 3.64 per cent, butter fat,	Here, in the case of patron No. 1, the milk has been watered. The analyses made of the patron's milk probably represent the bulk of the milk delivered, since their average corresponds closely with the vat sample.	The milk of patron No. 3 has probably been slightly skimmed. Here, again, the average of the patron and var samples correspond. The difference betwirt it the highest and lowest milk, 1.21 per cent. butter fat, is very considerable.	Here there is no adulteration to be observed, and the average of the patrons' milk is slightly lower than the result from the vat sample.
to certa	Per cent. Total Solids.	12 .66 12 .54 12 .54 10 .92 10 .92 12 .81	12.32 14.64 12.86 12.80 12.94	11.05.53 12.53.88 11.83.88	12:49 11:76 13:43	12.75 12.46 12.74 12.47 12.62 12.62
pplied 1 389.	Per cent. other Solids.	\$\infty\$ \infty\$  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	\$ 2.7.2 \$ 2.7.2 \$ 2.0 \$ 2.0 \$ 3.0 \$ 4.0 \$ 4.0 \$ 4.0 \$ 5.0 \$ 4.0 \$ 5.0 \$ 4.0 \$ 5.0 \$	x x x x 35 35 35 36 35 35 36 35 35	8 250 8 250 8 250 8 260	
les of Milk suppli September, 1889.	Per cent. Butter Fat.	4 8 4 8 8 8 8 4 4 4 8 8 8 8 8 8 8 8 8 8	25.54.55.55.55.55.55.55.55.55.55.55.55.55	3 4 8 3 8 3 4 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3 45 4 63 4 63	3.70 3.70 3.88 3.85 4.19
ples of Septer	Specific Gravity at 15° C.	P. c. 1 .0316 1 .0316 1 .0306 1 .0306 1 .0306 1 .0306 1 .0306 1 .0306		1 0304 1 0284 1 0324 1 0294 1 0294	1.0309 1.0317 1.0306 1.0317	1 .0320 1 .0317 1 .0306 1 .0306 1 .0306 1 .0309
of examining Sam	Source of Sample.	Vat No. 1.  do 2.  Patron No. 1.  do 2.  do 4.  do 4.	Var No. 1 do 2 do 9 do 15 do 15 do 22	Vat sample. Patron No. 1 do 4 do 5.	Vat No. 1 do 2 Patron No. 3 do 4.	Vat sample Patron No. 8 do 27 do 27 do 43
11.—Table showing the Results of	Name of Cheese Factory.	ord Tp., re- of about 350	do 14. Gladstone Factory, Dorchester Vet No. 1  Tp., supplied by about 70 do 2  letrons, 2  do 19  do 12  do 12  do 15	do 16 Culloden Factory, Durham Tp Vat sample.  Patron No. 1  do 3  do 4	er Tp.,	do 17 Belmont, Westminster Tp V
11.—1	Date of Collection.	1889. Sept. 14	do 145	do 16 C	do 17T	do 17 E

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Date of Collection.	Name of Cheese Factory.	Source of Sample.	Specific Gravity at 15° C.	Per cent. Butter Fat.	Per cent. other Solids.	Per cent. Total Solids.	. Remarks.	
1889. Sept. 17	Harrietsville, Dorchester Ty	Sample of 3 vats Patron No. 11 do 14 do 24 do 40 do 75	P. C. 1 · 0330 1 · 0330 1 · 0320 1 · 0320 1 · 0320	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	13.65 13.96 11.86 12.46 12.34 12.83 12.83	None of the patrons' samples can be complained of here, excepting, perhaps, No. 14.	
	Pond Mills, Westminster Ty	Vat sample. Patron No. 3, night do 4, night do 4, night do 7 do 7 do 23 do 37	1 · 0309 1 · 0317 1 · 0317 1 · 0317 1 · 0317 1 · 0320 1 · 0330 1 · 0337 1 · 0337	4 8 4 8 8 8 4 8 4 8 8 8 8 8 8 8 8 8 8 8	88888888888888888888888888888888888888	122-31 122-31 122-31 122-38 123-38 12	Here, in the case of No. 3, the evening milk is prorer than that of the next morning, but that constitutes no evidence of adulteration. The average of the patrons milk is 4.02 per cent, butter fat, which corresponds closely with the vat sample. The difference betweet the richest and the prorest milk amounts to 0.82 per cent, butter fat, whereby the person delivering the latter has manifestly an undue advantage.	
do 14	Iona Station Factory, receiving Vat sample the milk of 275 cows. do 2. do 3. do 4.	Vat sample Patron No. 1 do 2 do 3 do 4 do 5	1.0310 1.0310 1.0330 Sour & thick. do 1.0282	88.65 89.53 89.53 89.53 89.53 89.53	8.59 8.78 8.78 9.10	12.32 12.63 12.66 12.66 11.96	In this case the milk of patron No. 4 shows skimming; that of patron No. 5 watering. But the proportion of adulterated milk is too strongly represented in the patrons' samples, since their average is 3.57 per cent, butter fat, while the vat sample shows 3.73.	
:	do 18 Thames, Dorchester Ty., 2nd sampling.	2nd Vat No. 1.  do 2.  Patron No. 4.  do 24.  do 24.  do 39.	1.0327 1.0327 1.0322 1.0324 1.0324 1.0234	2 4 9 8 8 9 7 8 8 9 7 9 7 9 7 9 7 9 8 7 9 9 9 9 9 9	8888887 447 8888887 447	12.35 11.63 12.52 12.75 8.04	This is an extraordinary case, since the vat samples show a difference of 0.61 per cent, butter fat. The average corresponds to that previously obtained at this factory. The milk of patron 4 has been skimmed, that of patron 30 strongly watered; but the had samples are in undue propartion, considering the high average of the vats.	

53 Victoria	a. 	Sessional	Papers (No.	1B.)	A. 1890
Here the milk of patron 3 shows skimming, and Nos. 5 and 6 are below average. The patrons' samples probably represent correctly the quality of the milk delivered. The difference between the richest and the prorest milk amounts to 1.77 per cent. butter fat, and even when genuine milks only are considered, it amounts to 1.12 per cent.	The milk from patrons 6 and 5 are below average, and indicate slight skimming.	Here the milk from patron No. 38 has been watered, and the others, though genuine, are of low quality.	The vat samples at this factory show a difference of 0.5 per cent. butter fat, and average 3.96 per cent., which corresponds to the average of the patrons' samples taken. There does not seem to be any adulteration here.	In the case of patron No. 35 the evening milk gives evidence of watering. The average of the samples of patrons' milk taken is 3.92, consequently slightly below that of the vats.	Here the milk of patron No. 2 has been watered, but it is evident that adulteration is not prevalent, since the patron samples show an average of 3.76 per cent. and the vat samples 3.84.
12:40 10:87 13:50 12:24 46:46	12.51 12.47 12.93 12.14 12.18	12:56 12:68 12:38 12:23 11:07	12.70 13.13 12.84 12.82 12.74 13.13	12.72 12.83 12.63 13.01 13.03 11.30 12.74 12.74	12.47 12.64 12.86 12.92 11.87 10.88 12.56
88.88 8.88 9.97 1.59 1.50	8.89 8.89 8.80 8.80 8.80 8.80 8.80 8.80	8.87 9.01 8.67 7.73	88.88 88.88 88.11 88.21 64.87 64.87 64.87	88888888888888888888888888888888888888	8.72 8.93 8.93 9.06 8.15 7.76 8.71
23.25 25.66 25.66 3.34 3.34 3.34 3.34	3.68 3.67 3.28 3.38	3.34 3.34	2.577.77.77.8.8.8.9.9.9.9.9.9.9.9.9.9.9.9.9	29.00 20.00	3.76 3.92 3.93 3.86 3.72 3.12 4.07
1.0330 1.0328 1.0238 1.0328 1.0328	$\begin{array}{c} 1 \cdot 0322 \\ 1 \cdot 0320 \\ 1 \cdot 0328 \\ 1 \cdot 0328 \\ 1 \cdot 0328 \\ 1 \cdot 0330 \\ \end{array}$	1 · 0317 1 · 0317 1 · 0317 1 · 0317 1 · 0317 1 · 0266	1.0327 1.0327 1.0327 1.0324 1.0314 1.0317	1.0317 1.0317 1.0317 1.0327 1.0324 1.0294 1.0317	1.0327 1.0317 1.0317 1.0327 1.0306 1.0284 1.0314
Vat sample  Patron No. 2.  do 3.  do 6.  do 6.	Vat No. 1. do 2. Patron No. 7. do 6.	rg the Vat No. 1  Ado 2  Patron No. 39.  do 40.  do 37.	Vat No. 1.  do 2.  do 3.  Patron No. 16.  do 28.  do 6.	of Vat No. 1.  do 2.  do 2.  Patron No. 56.  do 17.  do 35 might.  do 35 morning  do 40.	Vat No. 1  do 2  Patron No. 6  do 4  do 3  do 2  do 5  do 2  do 2  do 2
do 18 Geary s, near London	18 Silver Corner, near Newry	do 19 Dorchester Station, receiving the milk of 600 cows.	do 19 Maple Leaf; receiving the milk of Vat No. 1 850 cows.  do 3 Acron No. 16 do 2 Patron No. 16 do 28 do 28 do 28 do 28 do 28 do 28 do 29 do 29 do 29 do 20	do 19 Burnside, receiving the milk of G00 cows.	do 19 Dereham and West Oxford, Treceiving the milk of 750 cows.
do 18.	0 18.	do 19	do 19.	do 19.	do 19.

II.—Table showing the Results of examining Samples of Milk, &c.—Concluded.

Date   Name of Cheese Factory.   Source of Sample.   Specific   Per   Per   Cent.   Other   Total   15° C.   Fat.   Solids.								
P. c.  Vat sample	Date of Collection.	Name of Cheese Factory.	Source of Sample.	Specific Gravity at 15° C.	Per cent. Butter Fat.	Per cent. other Solids.	Per cent. Total Solids.	Remarks.
bept. 19. Harris Street Vat sample 1.0314 3.40 8.93 12.33 do 45. 1.0316 4.04 8.87 12.91 do 45. 1.0306 4.08 8.86 12.88 do 17. 1.0306 3.72 8.87 12.99 do 21. Gladstone, Dorchester Township; Vat No. 1. 1.0336 3.72 8.87 12.09 do 22. 1.0335 3.63 8.87 12.89 do 14. 1.0335 3.63 8.87 12.89 do 14. 1.0335 3.64 9.08 13.69 do 74. 1.0336 3.64 9.08 13.69 do 74. 1.0336 3.64 9.08 13.69 do 24. 1.0336 3.64 9.08 13.69 do 24. 1.0336 3.64 9.08 13.69 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.13 do 25.66 9.47 13.09	1889.			p. c.			( ) .	
do 21 (Gladstone, Dorchester Township);       Vat No. 1       1.6338       3.66.       8.81.       12.47         2nd sampling       Patron No. 3       1.6335       3.97       9.01       12.98         4nd 14       1.0356       3.76       9.03       13.09         4nd 14       1.0356       3.76       9.06       13.33         4nd 22       1.0356       3.94       9.08       12.72         9nt. 10       1.0326       3.98       9.08       13.06         9nt. 10       1.0330       3.98       9.90       11.66         4nd 2       1.0340       3.66       9.47       13.13         4nd 3       4.39       9.35       13.74         4nd 3       4.39       9.35       13.74         4nd 4       4.39       9.35       13.74         4nd 4       4.39       9.35       13.74         4nd 4       4       4.39       9.21       13.00	Sept. 19		Vat sample	1.0314 1.0317 1.0306 1.0306 1.0306	3.40 4.04 4.08 4.80 3.72	88.87 8.35 8.35 8.35	12.88 12.88 13.36 12.09	Here it is plain that the patron samples taken do not properly represent the milk delivered at this factory. They are all good, averaging 4.16 per cent., while the vat sample is only 3.40.
Vat sample       1 0330       3 98       9 08       13 06       Her         Patron No. 1       1 0340       3 66       9 10       11 66         do 3       1 0340       3 66       9 47       13 13         do 4       1 0340       3 89       9 25       13 74         do 4       1 0340       3 89       9 21       13 00		Gladstone, Dorchester Township; 2nd sampling	Vat No. 1 do 2 Patron No. 3 do 14 do 74 do 80	1.0338 1.0335 1.0335 1.0350 1.0350 1.0336	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	12.23.33 12.33.33 12.33.33 13.33	In this case the foregoing remark applies. The patron samples average 3.91 per cent. butter fat and the vats 3.64. The latter figure corresponds with the forner sample taken here.
	Oct. 10		Vat sample Patron No. 1 do 2 do 3 do 4	1.0330 1.0332 1.0340 1.0340 1.0340	88888	9.08 9.10 9.47 9.35	13.06 11.66 13.13 13.74 13.00	Here the milk from patron No. 1 has been partly skimmed, but probably this does not often happen, since the average of the patrons' samples is 3'62 per cent.  butter fat against 3'98 in the vat sample.

Although in the foregoing table only one assay is given for each sample, it is to be understood that two were always made, which on the whole agreed closely. Taking the vat samples or their averages the milk supplied to the cheese factories mentioned contained as follows:—

, will out the same of the sam	Per cent.	Per cent.
Name of Factory.	Butter Fat.	Total Solids.
Name of Factory. Belmont	4.03	12.75
Thames		$12 \cdot 69$
Pond Mills	4.01	$12 \cdot 79$
Appin		$12 \cdot 60$
Bluevale		$13 \cdot 06$
Maple Leaf		$12 \cdot 89$
Burnside		$12 \cdot 78$
Dereham and West Oxford		$12 \cdot 56$
Harrietsville	3.80	$12 \cdot 63$
Iona Station		$12 \cdot 32$
Dorchester Station	3.68	$12 \cdot 62$
Silver Corners		$12 \cdot 49$
Gladstone		$12 \cdot 42$
Culloden	3.64	11.88
Gearys	3.54	$12 \cdot 40$
Harris Street		$12 \cdot 33$
Arronageo	${3\cdot80}$	10.59
Average	3.90	$\frac{12\cdot 58}{}$

In view of the fact that adulterated milk is delivered at some of these factories the average of the whole is quite satisfactory, since the percentage of butter fat is only slightly below 3.86 per cent., the average of the genuine whole milks described in Bulletin No. 1. The average contents of these samples of milk for cheese factories affords besides another proof that the proposed lowest limits are not too high. The remarks concerning each factory in the foregoing table ought to have some interest for the manufacturers of cheese. It will be seen also that the analyses of the vat samples show considerable variation in the quality of milk supplied to the different factories. The difference between the best and the poorest samples amounts to 0.63 per cent.

If the samples which have been tampered with are eliminated from those of the patrons milk above recorded, and those which remain are regarded as representative of the genuine milk delivered to each factory then the average of the latter will be

as follows:-

Name of Factory	Per cent.	Per cent.
Name of Factory. Harris Street	Butter Fat.	Total Solids. 12·81
Appin	$\frac{4.10}{4.04}$	$\begin{array}{c} 12.51 \\ 12.74 \end{array}$
Gladstone	4.04	13.03
Thames		$13 \cdot 03$ $12 \cdot 90$
Pond Mills	4.02	
Burnside	4.02	12.99
Burnside		12.87
Silver Corners	4.	12.93
Bluevale	3.98	13.29
Iona Station	. 3.97	$12 \cdot 64$
Maple Leaf	3.94	$12 \cdot 71$
Dereham and West Oxford	3.93	$12 \cdot 60$
Belmont	3.93	$12\cdot 55$
Culloden	3.89	$12 \cdot 27$
Harrietsville	3.75	$12 \cdot 50$
Gearys	3.72	$12\cdot 72$
Dorchester Station	3.57	$12\!\cdot\!26$
Average	$3 \cdot 93$	$\frac{12\cdot74}{}$

These figures will serve to show the average quality of the genuine milk delivered to cheese factories in the neighborhood of London, and to indicate the extent to which the quality of cheese there produced could be improved by the suppression of adulteration.

In conclusion, I beg to submit these results for your consideration, and to recommend that steps be taken to extend the provisions of the Adulteration Act to the milk supplied to cheese, butter and condensedmilk factories. I trust also that the data above given will enable you to recommend, under Section 19 of the Act, the establishment of the minimum limits above mentioned for milk of good standard quality.

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

THOMAS MACFARLANE,

Chief Analyst.

## BULLETIN No. 12-CREAM OF TARTAR.

LABORATORY OF THE INLAND REVENUE, 21st November, 1889.

To the Commissioner of Inland Revenue, Ottawa.

SIR,—In accordance with your desire, the report made by Mr. A. McGill, B.A., &c., on baking powders, was published in No. 10 of this series of bulletins. There is no doubt that the information it contained was highly acceptable to and appreciated by a very numerous public. In some quarters exception was taken to one or two of the conclusions drawn by Mr. McGill, but the actual facts stated by him regarding the composition of the various baking powders now sold in Canadian markets were not impugned in any single case. Of course, interested parties assert that the use of alum as a component of these should not be condemned, but this would be entirely contrary to the practice of those who have been entrusted officially with the chemical examination of foods in other countries. It is not proposed to discuss the "alum question" here, or to refer to recent scientific work on its physiological aspect. It is enough at present to state that the use of alum in bread-making is prohibited in most countries where food adulteration laws have been enacted, and that alumina is not to be found in any species of food or drink used by man, nor does it occur in any part of the system. Nature has entirely excluded it from every form of animal or vegetable life, and no doubt for good and sufficient reasons, although we are not able at present precisely to define them. These facts alone amply justify the conclusion that the use of alum in compounding baking powders is quite inadmissible.

On page 25 of Mr. McGill's report, above referred to, he mentioned that many persons now prepare their own baking powder, and he also gave the proper composition of one with cream of tartar for its acid constituent. It has long been known, however, that much of this article has been sold in an adulterated condition, and the necessity for ascertaining to what extent the public are imposed upon in this way is very apparent. In compliance with your instructions, orders were therefore issued for the collection of samples of cream of tartar. These were tested by the various district analysts, whose results will be made public in due course. They were also subjected to a more minute examination by Mr. McGill, whose report is attached hereto, and bears evidence of the care and skill with which he has carried out the

investigation.

I have the honor to be, Sir,
Your obedient servant,
THOMAS MACFARLANE,
Chief Analyst.

Samples.

LABORATORY OF THE INLAND REVENUE DEPARTMENT, 319 SPARKS St., OTTAWA, 8th Nov., 1889.

Thos. Macfarlane, Esq., F.R.S.C., Chief Analyst Inland Revenue.

SIR, -I have the honor to submit to you a report of my work upon 108 samples of commercial cream of tartar, and substitutes therefor, as found in the retail trade of the Provinces where the samples were collected. In Table III. I have, for a or the Frontier of analysis of twenty-two genuine tartars, worked special reason, recorded the results of analysis of twenty-two genuine tartars, worked special reason, recorded the lessels of analysis of twenty-two genuine tartars, worked over in September and October, 1887. These twenty-two samples were part of a lot (36 samples altogether) the balance of which proved to be adulterated or substitutes. The remaining samples, eighty-six in number, were collected in May or June of this year, and details as to their collection will be found in Table I. Particulars as to the source of the 22 pure samples are given in Table II.

The following is a synoposis of the results of the analysis of the 86 samples of Table I:-

Genuine cream of tartar       52         Adulterated       13         Acid phosphate substitutes       18         Alum substitutes       3
Total
Or, in percentages—  Cream of tartar
The results of analysis by Provinces are seen in the following synopsis:—  Nova Scotia.
Genuine cream of tartar.       \$\frac{16}{16}\$         Adulterated
New Brunswick.
Genuine cream of tartar.       11         Adulterated.       3         Acid phosphate substitutes.       0         Alum substitutes.       1         15       15
Quebec.         Genuine cream of tartar.       16         Adulterated.       2         Acid phosphate substitutes.       16         Alum substitutes.       1         35       35

Ontario.	
Genuine cream of tartar	9
Adulterated	4
Acid phosphate substitutes	2
Alum substitutes	1
	16
	==

Or, expressed in percentages for each Province, as follows:-

Provinces.	Cream c	of Tartar.	Substi- for Cream o	
r rovinces.	Genuine.	Adulterated	Acid Phosphate.	Alum.
Nova Scotia.	80:0	20:0	0.0	0.0
New Brunswick	73.3	20.0	0.0	6.7
Quebec	45:7	5.7	45.7	2.9
Outario	56.2	25.0	12.5	6.3

From these numbers it would appear that the Maritime Provinces are least afflicted with either sophistication of the genuine article or the substitution of other substances for cream of tartar; but it is necessary to remember that these generalizations are based upon a comparatively small number of samples collected in each Province, and they must therefore receive a very guarded assent. So far as they furnish a guide to the matter, the greatest amount of actual adulteration of tartar is found in Ontario, though Nova Scotia and New Brunswick are not very far behind. In this respect Quebec is very fortunate; and it is noteworthy that in proportion as the adulteration of cream of tartar decreases the sale of substitutes for it increases. In the sale of substitutes for cream of tartar Quebec easily takes first place, while substitutes seem to be particularly unknown in Nova Scotia and New Brunswick, only one (alum) substitute from the latter Province having come under my notice.

A full share of the actual work of analysis has been done by Mr. Lefebvre. Most of the work on genuine tartars was done by him. In the remaining samples our work so overlaps that I have found it impracticable to distinguish in reference to each separate estimation between his work and my own. To do this would require transcription of our laboratory note books; but I must acknowledge my complete satisfaction as to the carefulness and accuracy which have characterized all his work.

Table IV. shows the actual numbers obtained in analysis. The remaining tables, numbered V. to IX., consist of my interpretation of these numbers; and my object in publishing Table IV. is that the means may be available to anyone for giving an intelligent acquiescence in or an intelligible dissent from the meaning which I have understood these numbers to justify. I may say here that with scarcely an exception all the work has been done in duplicate, and where the analytical numbers so obtained have failed to agree within reasonable limits, a third estimation has been undertaken.

The available acidity has been determined by treating 5 grammes of the sample with normal soda, phenolphthalein as indicator, the sample being boiled for some time with nearly the required amount of soda, and the point of exact neutralization then ascertained in hot solution; an excess of nominal sulphuric acid has then been added (in most cases), and after prolonged boiling the neutral point again ascertained by addition of soda.

In genuine tartars this process gives very constant results, and duplicate estimations seldom differ by more than 1 or 2 cubic centimetres per 100 grammes. In

presence of starch and terra alba (sulphate of lime) there is greater difficulty in obtaining concordant results, although the extreme variation is not unusually more than 5 or 6 cubic centimetres per 100 grammes; a variation introducing an error of about one per cent., in the percentage of potassum bitartrate calculated from the experimental numbers. In presence of acid phosphate of calcium, and particularly in presence of alum, a variation of 10 cubic centimetres or even more may occur in duplicate samples, a great deal depending upon the length of time given to boiling in presence of soda. As, however, I propose discussing this subject at some length

elsewhere, I shall leave it for the present.

The acidity of genuine cream of tartar is entirely due to tartaric acid, in combination as potassium bi-tartrate. An absolutely pure tartar, containing 100 per cent. of bi-tartrate of potassium, requires 532 cubic centimetres of normal soda (or potash) for exact neutralization, One sample (6705) came practically up to this standard; but tartar of such a degree of purity is rarely met with in commerce. The mean amount of bi-tartrate found in 52 genuine cream of tartars collected in May and June of this year, is 89.64 per cent. In 22 genuine samples examined in September and October, 1887, the mean amount is 86.47 per cent. This gives for the whole number (74) of genuine samples an average of 88.6 per cent. bi-tartrate. The presence of so high an average of neutral tartrate of lime (over 10 per cent.) found in these samples seems to indicate a low grade in the article imported, and certainly implies a great waste of tartaric acid.

While, in genuine tartars, calcium tartrate constitutes the chief impurity, a certain quantity of calcium sulphate is usually present. In amount this may vary from traces to 3 or 4 per cent.—and I have even included one or two cases (see Table III.) in which the sulphate of lime may reach 5 per cent. I have done this because the addition, for purposes of sophistication of so small a quantity of terra alba, seems unlikely; and because in plastered lees the presence of a considerable

proportion of sulphate of lime is not unusual.

Accepting 89 per cent. of bi-tartrate of potassium as an average acidity for genuine cream of tartar as found in the Canadian market, this would be represented by the number 473 in cubic centimetres of normal alkali per hundred grammes of the sample. Of such a tartar 211 grammes would be required to decompose (as a baking powder) 84 grammes bi-carbonate of soda, i.e., two and a half times the weight of the soda used. Since the purchaser as a rule, does not know when he gets a substitute for cream of tartar instead of the genuine article, and certainly has no guarantee as to the efficiency of the article he buys, it should be the first principle guiding the manufacturer of any substitute to see that his product possesses an acidity identical with the average acidity of cream of tartar. To what an extent thir principle is violated will be evident on an inspection of the numbers in column

3 of Table IX. In order to emphasize this important point I have calculated, upon the basis of 50 cents per pound for pure cream of tartar, containing 100 per cent. of bi-tartrate of potassium, the money value of each of the 108 samples analysed considered simply with reference to their efficiency as liberating carbonic acid gas from bi-carbonate of soda. It is not to be understood that the values given in column 5 of Table 1X. are absolute; still less is it to be understood that in affixing a value to a given sample I thereby express an opinion as to its fitness or wholesomeness as a constituent of a baking powder. I have elsewhere (see Bulletin 10) expressed my opinion as to the objectionable nature of alum in baking powders, and the same objections hold good in the case of alum in a cream of tartar substitute. The presence of any considerable proportion of neutral calcium salts (tartrate, sulphate or phosphate) is likewise to be condemned. The differences between the numbers in columns 4 and 5 of this table indicate the extent to which the purchaser is defrauded in pocket by receiving an adulterated sample or a substitute for cream of tarter instead of the article for which he asks and is made to pay. Further, to elucidate this I have, in column 6 of the table, entered the number of spoonfuls (or other measure) which would be required for 100 spoonfuls of bi-carbonate of soda, on the assumption that 200 spoonfuls of a pure

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cream of tartar would be used in such a case. The numbers in this column are published simply as a means of enabling ordinary readers to appreciate the meaning of the results of analysis. To take an example: it will be evident that numbers 76, 85 and 86, requiring respectively the use of 851, 1,064 and 1,182 spoonfuls where 200 spoonfuls should suffice, would be very unprofitable articles at the prices for which they are sold, since genuine cream of tartar can be purchased at just about the same price per pound. It will also appear that, in addition to the palpable fraud perpetrated in selling such mixtures, there is the additional objection of requiring to introduce into the food prepared with them a very large amount of innutritious, if not positively hurtful, matter, in order to prevent the yellow color and nauseous taste which excees of undecomposed carbonate of soda gives to bread.

I have not found any other organic acid than tartaric acid present in any of these samples. The total tartaric acid has been estimated by incinerating the sample (after exact neutralization with soda), thus converting the tartrates into carbonates. The ash is extracted with excess of normal sulphuric acid, and after boiling off carbonic acid, the solution is titrated back to neutralization with normal soda. The number of cubic centimetres of sulphuric acid used to decompose the carbonates, multiplied by 0.075, gives the total tartaric acid. From the available acidity the amount of tartaric acid (if free acid be present) or of bi-tartrate of potassium is calculated, and the corresponding amount of acid is deducted from the total tartaric acid. The difference expresses the amount of tartaric acid existing in neutral tartrate, and I have stated it (column 4 of Tables V. and III., and column 5 of Table VI.) in terms of calcium tartrate—Ca C<sub>4</sub> H<sub>4</sub> O<sub>6</sub>. + 4 H<sub>2</sub> O.

Experiments to be described elsewhere have convinced me of the accuracy of this method within narrow limits where genuine tartars, or tartars adulterated with starch or terra alba, are operated upon. With acid phosphate, and particularly with alum substitutes, the method by incineration of the neutralized substance does not give such reliable results; and I present the numbers in columns 6 and 7 of Table VII., and columns 7 and 8 of Table VIII., as approximations, and not as absolute values. The terra alba has been calculated from the sulphuric acid found in cases where no alum is present. The estimation has occasionally been checked by estimation of the lime, and where this has been done the results have been satisfactory.

The alum has been calculated from the alumina found, and excess of sulphuric acid has been expressed as sulphate of lime. (Ca S O<sub>4</sub>, 2 H<sub>2</sub> O).

Phosphoric acid in absence of alumina has been estimated by titration with uranium acetate after suitable preparation; and in presence of alumina by precipitation of phosphate of alumina, in presence of excess of phosphoric acid, by ammonia, and subsequent estimation of the excess of phosphoric acid by the uranium process. The phosphate of alumina is dried and weighed after strong ignition, and from the weight is calculated alumina and phosphoric acid. This process, devised by me for use with baking powders, has been checked by molybdate precipitation, and will be more fully described elsewhere.

Finally, the starch has been approximately estimated in 10 grammes of the sample by dissolving out the bi-tartrate of potassium, or substitute therefor, by an appropriate solvent, and weighing the air-dried starch upon a tared filter. In most cases dilute hydrochloric acid answers excellently well, but where gluten is present, as in flour, dilute acetic acid is better, followed by hydrochloric acid when sulphate of lime or phosphate of alumina is present. The separated starch has been in every case submitted to microscopic examination, both for its specific identification and to ascertain its freedom from crystalline or other foreign matter. Where foreign matter in more than traces has been found the sample has either been re-submitted to treatment by solvents, or an aliquot part has been incinerated, the weight of the residual ash being deducted from the original weighing.

A large number of experiments upon starch mixtures of known composition convince me that where air-dry prepared starch is used in the mixture the amount present can be safely ascertained to within 2 or 3 per cent.; and where wheat flour

is used its amount can be found to within 5 or 6 per cent.; if flour be taken to contain 80 per cent. of starch, cellulose, etc., insoluble in dilute acetic acid.

Chiefly on account of the possibility of working upon larger quantities, I have

found the method more trustworthy than that of conversion and titration of the

sugar produced. In the manufacture of acid phosphate of lime from the neutral phosphate the proportion of sulphate of lime formed is about 1.16 times the amount of acid phosphore the phate produced—as shewn by the following equation:—

$${
m Ca}_3 \, {
m P}_2 \, {
m O}_8 + 2 \, {
m H}_2 \, {
m SO}_4 = 2 \, {
m Ca} \, {
m SO}_4 + {
m H}_4 \, {
m Ca} \, {
m P}_2 \, {
m O}_8 + {
m Ca}_4 \, {
m Ca}_4 \, {
m P}_4 \, {
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Writing this as hydrated sulphate of lime for purposes of comparison with the numbers in column 4 of Table VII., the sulphate becomes practically  $1\frac{1}{2}$  times the weight of the acid phosphate. This proportion of sulphate to phosphate is greatly exceeded by most of the samples in Table VII., indicating addition of terra alba for exceeded by most of the sumption of the sumption of the sum at the sum of the inert and insoluble ingredient than ought to be introduced into human food.

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

> A. McGILL, Assistant to Chief Analyst.

TABLE I.—List of Cream of Tartars Analysed.

Remarks.		do do T. Adulterated. See Table VI. Genuine. See Table V.	op		පි පි පි		Adulterated. See Table VI. do do	Genuine. See Table V. do do
Manufacturer.	W. M. D. Pearman, Halifax	Brown & Webb, Halifax John P. Mott & Co., Halifax W. H. Schwartz & Son do W. M. D. Pearman do	W. H. Schwartz & Son do		Street Brown & Webb, Halifax		et	Dearborn & Co., St. John, N.B. John P. Mott & Co., Halifax Brown & Webb
Name and Address of Vendor.	Halifax, N.S. H. W. Brown, 40 George Street W. M. D. Pearman, Halifax Genuine.	J. K. Siteman, 117 Upper Water Brown & Webb, Halifax Street. Nisbet & Drake, 131 Hollis Street John P. Mott & Co., Halifax Phos. S. Lownds, 57 Grafton Street. W. H. Schwartz & Son do W. B. Mumford & Sons, 40 Argyle W. M. D. Pearman do	Dursel. T. F. Courtney, cor. Jacob and W. H. Schwartz & Son do Brunswick Streets.	Liverpool, N.S.	52 J. C. Innes & Co., Main Street 44 W. F. West, Main Street 46 J. N. Freeman do	Shelburne, N.S.	John Bowers, Water Street McGill Brost, Main Street Arthur Hood do	Yarmouth, N.S.  48 J. B. Wynnan, Main Street Dearborn & Co., St. John, N.B. Genuine. 40 Goffrey Boss. doJohn P. Mott & Co., Halifax 40 John A. Horton doBrown & Webb do
Price per lb.		2 999	22		52 44 6		& & &	8 9 9
Cost	₹ <b>₹</b>	888	86		888		***	***
Quantity Purchased.	:- ::-	£ 888	9		운용용		දි දි දි	දි දි දි
Name under which Sold.	Greem of Tartar	de de de de de de de de de de de de de d	ф		ep ep ep ep ep ep ep ep ep ep ep ep ep e		g g g g g g g g g g g g g g g g g g g	gb do do
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Date of Collection.	1889.	do do do Jume	ફ 9 <b>2</b>		999		දි දි දි	දි ද දි

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	<del>၀</del> ၀ ၀၀ ၀၀	op	Adulterated. See Table VI Genuine. See Table V. do	do Adulterated. See Table VI.	Genuine. See Table V.	Adulterated. See Table VI Genuine. See Table V.	ල ල	do Alum. See Table VIII.	Genuine. See Table V.
	Dearborn & Co., St. John, N.B. J. P. Mott & Co., Halifax Brown & Webb, Halifax	Dearborn & Co., St. John, N.B Jardine & Co., St. John, N.B	Dearborn & Co., St. John IW. A. Porter, St. John	. Stephens & Figgures, St. John., A. Lordly & Co., Paradise Row, Portland.	. Hall & Fairweather, St. John Stephens & Figgures do	<del>d</del> o	Dearborn & Co. do J. R. Woodburn do	Jardine & Co. Pure Gold Manufacturing Toronto	Dearborn & Co. St. John T. B. Barker & Son, St. John
Weymouth, N.S.	Geo. J. Hoyt, Weymouth Bridge Dearborn & Co., St. John, N.B. Chas. Burrill & Co., Main Street J. P. Mott & Co., Halifax G. D. Campbell & Co. do Brown & Webb, Halifax	Digby, N.S. G. J. Letteney & Brother, Main St Dearborn & Co., St. John, N.B. Guptill & Young, Water Street Jardine & Co., St. John, N.B	P. Nase & Son, Main St., Portland, Dearborn & Co., St. John Adulterated. See Table R. McConnell, 455 do do Thos. Gorman, St. John Genuine. See Table V. W. A. Porter, cor. Mill and Pond W. A. Porter, St. John do do	<ul> <li>J. N. Rogers, 49 Sewell Street Stephens &amp; Figgures, St. John.</li> <li>A. Lordly &amp; Co., Paradise Row, A. Lordly &amp; Co., Paradise Row, Adulterated. See Table VI. Portland.</li> </ul>	Hampton, N.B.  T. G. Barnes & Son, Main Road Hall & Fairweather, St. John Genuine. John Shevelling & Son, Post Road Stephens & Figgures do	Susser, N.B. Isaac DeBoo, Station Street Joseph Finlay, W. B. N. Kay & Co., King Street Baird & Peters	Petiteodiue, N.B.  Cochran Bros., Main Street J. R. Woodburn W. B. Keith, Main Street J. R. Woodburn	Salisbury, N.B. H. C. Barnes, Post Road David Eagles, Post Road	I. D. McKinnen, 316 Main Street Dearborn & Co. St. John Genuine A. Girvan, 299 Main Street T. B. Barker & Son, St. John
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TABLE I.—List of Cream of Tartars Analysed—Continued.

Remarks.		Acid Phos. See Table VII. Genuine. See Table V. do Acid Phos. See Table VII. do do		Genuine. See Table V. Alum. See Table VIII.	Gennine See Table V			do do		Genuine. See Table V. Acid Phos. See Table VII.		Acid Phos. See Table VII.
Manufacturer.		Asselin, 271 St. Joseph Street. Not known.  S. Riviren, 45 Crown Street.  Moisan, 313 St. John Street.  Cofé, 322 St. John Street.  do  Acid Phos.		do D. C. Brouseau, Montreal	Lyman & Sons Montreal	Not known Acid Phos		M. Lefebvre & Co., Montreal D. C. Brosseau, Montreal		Not knownGenuine.		Bourgeon & Heron, Montreal. Acid Phos. Not known.
Price per Ib.	cts. cts. Quebec.	J. B. Chas. J. A. J. A. J. B. A. T. Y	Arthabaska, P.Q.	D. O. Bourdon, Station Street do do Genuine. See Table V. H. Thibaudeau, Station Street D. C. Brouseau, Montreal Alum. See Table VIII.	Danville, P.Q.	M. Hannan	Drummondville, P.Q.	J. N. Turcotte E. A. Piche	Sorel, P.Q.	J. O. Faquan, Market Street Not known	Berthier, P. Q.	A. L. Caisse. L. Tellier.
Cost.	cts	**************************************		36		<del></del>		 4 <del>6</del>		84		<del>2</del> <del>2</del>
Quantity Purchased.		1 lb. do do do do		တိုင	ç	9		op do		do do		1.19. do
Name under which Sold.		artar		Compound.		Compound.		do do				Cream of Tartar Compound
Name un		Gream of Tartar do do do do		op op	ę	ခွဲခွဲ		op op		op op		Cream of T
No. of Sample.		8913 8914 8915 8916 8916		8918 8919	08680	8921		8922		8924 8925		8926 8927
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Date of Collection.	1889.	දි දි දි ද	94	qo qo	ç	පි		op op		<del>d</del> o do		June do

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	do do Genuine. See Table V.  Adulterated. See Table VI.  Acid Phos. See Table VII.	eal Genuine. See Table V.	do do Acid Phos. See Table VII.	do de Genuine. See Table V.	Ion. Adulterated. See Table VI.	do do	Genuine. See Table V.	Acid Phos. See Table VII.	Adulterated. See Table VI. o Genuine. See Table V. o Adulterated. See Table V.
	G. T. Duffy & Co., Montreal Not known Lyman & Sons, Montreal A. Wills & Co., Montreal. Duffy & Co., Montreal Laporte, Martin & Co., Montrea.	S. H. & A. S. Ewing, Montreal Genuine.	Not known	do	A. Wills & Co., Montreal Adulterated.  Kenneth Campbell, & Co., Montreal Genuine. See	Not known. Pure Gold Company, Toronto	do do Not known.	do	Mayalls, London, Superior Adulterated. See Table Perkins, Ince & Co., Toronto Genuine. See Table V Hamilton Coffee and Spice Co Adulterated. See Table
Montreal.	A. F. Lennat, 696 Dorchester St. Not known.  E. Cunningham, 653 Lagaucheterer. Lyman & Sons, Montreal.  G. MacMillan, 92 Blaury Street.  M. NecMillan, 92 Blaury Street.  M. Scanlan, 117 Vitré Street.  Duffy & Co., Montreal.  Acid Phos. 8  Duffy & Co., Montreal.  Acid Phos. 6  Duffy & Co., Montreal.  Duffy & Co., Montreal.  Acid Phos. 6  Duffy & Co., Montreal.  Acid Phos. 6  Duffy & Co., Montreal.  Duffy & Co., Montreal.	M. Kilkerry, 701 Craig Street W. Reynolds, 72 Jurors Street	Chambly Basin, P. Q. H. Riendeau Joseph Ostigny	Cowansville, P. Q. C. A. Schoolcraft & Son. E. E. Lawrence	Sweetsburg, P. Q. W. E. J. Goodman	Sutton, P. Q. Greely Bros. & Thompson H. A. Olmstead & Co Knowton. P. O.	:::	Acton, P. Q. C. & F. Rasconi V. H. Dubois.	Stratford, Ont.  Josh. Berry O'Flaherty & Quirk.  52 Wm. Maxwell
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,	<b>38333</b> 3	48	88		<del></del>	<del>5</del> 5	<del>4</del> <del>4</del>	<del>2</del> <del>2</del>	<b>428</b>
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Attended	Substitute			Compound.	Compound.		Compound		
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***	8893 8895 8895 8897 8898	6688	8901 8902	8903 8904	8905 8906	8908 8908	8900	8911 8212	6701 6702 6703
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TABLE I.—LIST of Cream of Tartars Analysed—Continued.

Remarks.		oronto Genuine. See Table VIII.  Adulterated. See Table VI.		cid phos. See Table VII. enume. See Table V.	Acid phos. See Table VII.		nuine. See Table V.	dulterated. See Table VI.		do do do do do do	. ob
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Manufacturer.		Not known See Table VIII  Pure Gold Manuf. Co., Toronto Genuine. See Table V Not known	,	Hamilton Coffee and Spice Co. Acid phos. Snow Drift Baking Powder Co., Genuine.	Israntford. do do		Pure Gold Manufacturing Co., Genuine.	JORDHO, Table V. Table V. Townsto, Adulterated. See Table V. Snow Drift Baking Powder Co., Genuine. See Table V. Brantford.		J. Winer & Co., Hamilton W. G. Dunn & Co., Hamilton do do	
Name and Address of Vendor.	London, Ont.	George Rowntree A. McCornick & Son A. Lytler	Brantford, Ont	Winter & Elliott.	ф	Guelph, Ont.	J. E. McElderry	D. Scroggie & Son. Robt. Mitchell.	Hamilton.	John J. Watt. F. L. Cherrier J. W. Gerrie.	London, Ont.
Price per lb.	cts.				:	*		:::			
Cost.	cts.	889		<del>\$</del> <b>3</b>	\$		8	88 88		888	
Quantity Purchased.		3 pkgs. do 1 lb.		မှ မှ	op		ရာ	<del>ဝှစ</del>		op op op	
Name under which Sold.	•	Cream of Tartar Substitute do Compound		do	Compound			Compound			
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Zo. of Sample.		6704 6705 6706		6707 6708	6029		6710	6711 6712		6713 6719 6721	
		100		5 5 5	13		14	77		<u>\$</u> \$\$	
Date of Collection.	1889.	June do do		දිදි 96	op		op	do do		do do	

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	Remarks.	Genuine. See Table III. do do	do do	ව පි ව	op	go op	op
Cream of Tartars Analysed.	Manufacturer.	Davidson, Bros., Halifax Genuine. Brown & Weber, Halifax	Evans, Sons & Mason, Montreal Brown & Weber, Halifax	Dearborn & Co., St., John J. Fenley Woodburn & Co. do	J. A. Máthewson, Montreal	Not known	Messrs. Ewing, Montreal
II.—List of Genuine Cream of Tan	Name and Address of Vendor.	Halifax, N.S.  M. Flinn, 95 Grafton Street W. Forsyth, 36 do Willion Bros., 80 Sackville Street.	John Munro, Front Street Evans, Sons & Mason, Montreal G. J. Hamilton & Sons, Water St. Brown & Weber, Halifax	Sharp & Dunfield, Lis Princess St., Dearborn & Co., St., John E. V. Hunt, 40 Sidney Street J. Fenley W. A. Porter, corner Union and Woodburn & Co., do	Waterville, Que. C. O. Paterson	Montreal.  Willison Bros., 538 St. Lawrence St., Not known Loughman & O'Flaherty, 75 Wel-Messrs. Ewing, Montreal lington Street.  Ottawa.	C. Stratton, cor. Sparks & Lyon Sts. Messrs. Ewing, Montreal
-List	Price per lb.	& cts.	::			:	:
	Cost.	cts. 40 48 48			20	50	20
TABLE	. beserver Purchased.	1.1b. do do	ор <b>д</b> о		do	ор Ф	ဝ
	Name under which Sold.	Cream of Tartar do do	0 0		:		
	Name	Cream o	op op	පිලි	op	ф	qo
	No. of Sample.	5373 5374 5375	3315 3319	6149 6151 6155	3230	4982	9839
	Date of Collection.	1887. 18. 26 10. 26 10. 26	22	13	6	13	10
ŧ,	11. 7	18. Aug. do	გმ <b>97</b>	о <del>р</del> О <del>р</del>	Sept.	Aug.	<b>o</b>

	Remarks,		enuine. See Table III.		do do		op	ф		op Op		do do		op
Analysed—Concluded.	Manufacturer.		F. Smith & Co., Toronto Genuine.		- Paterson, Prescott, Ont J. Winer & Co., King Street, Hamilton.		J. A. Mathewson, Montreal	Caverhill, Hughes & Co., Montreal.		Dominion MillsTodhunter, Mitchell & Co		Not known Lees, Wilson & Co		
II.—List of Genuine Cream of Tartars A	Name and Address of Vendor.	Belleville, Ont.	Harvey & Sons	Kingston, Ont.	G. Robertson & Son	Port Hope, Out.	C. Clewes & Son	Perth, Ont. A. Robertson, Gore Street	Toronto.	R. W. Boyd & Co., Queen Street Dominion Mills	Winnipeg, Man.	A. Moncton & Co., 518 Main Street Not known H. Hodges & Co., 533 do Lees, Wilson & Co	Ottawa, Out.	W. J. Lloyd
of Ge	Price per lb.	& cts.	:		0 20 20 30							-\		
List	Cost.	cts.	26		17		50	. 20		88		8		
11.	Ouantity Purchased.		qo		3 lb.		1 lb.	ор		do do		දිදි		:
TABLE ]	Name under which Sold.		Cream of Tartar		do do		ор	ф ор		op op		op		ор
	No. of Sample.		2419		2523 2931		2833	3008		7008 7009		5729 5734		
	.Date of Collection.	1887.	do 12		do 10 do 11	•	do 20	do 11		do 30		do 13 do 17		
		•			98	3								

Table III.—Samples consisting essentially of Bi-tartrate of Potassium and Tartrate of Calcium. (Analyses made September and October, 1887.)

No.	Departmental Number.			Sulphate of Lime, Moisture, Loss, &c.	
53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74	2419 2523 2833 2931 3008 3230 3315 3319 4982 4985 5373 5374 5375 5729 5734 6149 6151 6155 : 6836 : 7009 Lloyd's. Mean	85·70 88·70 86·90 86·70 88·36 85·36 85·35 86·10 84·20 88·00 84·98 84·98 84·98 83·47 88·70 88·70 88·70 88·70 88·70 88·70 88·70 88·70 88·70	10·38 9·34 11·07 10·62 10·40 12·59 11·89 8·30 14·51 7·70 11·89 15·00 12·14 12·63 8·02 10·40 9·86 10·21 11·59 13·15 11·07 5·19	3·92 1·96 2·03 2·68 1·24 2·01 1·29 4·30 3·13 0·02 4·39 2·02 3·28 0·90 6·64 1·39 0·55 0·93 7·81	

- Table IV.—Giving the experimental numbers from which the probable composition of the samples, as given in preceding tables, has been obtained by calculation.
- Column A.—Available Acidity.—Number of cubic centimetres of normal soda (40 grammes Na OH per litre) required to neutralize 100 grammes of the sample; phenolphthalein being used as indicator.
- Column B.—Number of cubic centimetres of normal sulphuric acid (49 grammes  $H_2$  SO<sub>4</sub> per litre) required to replace the carbonic acid resulting from ignition of the tartrates (organic salts) contained in 100 grammes of the sample, after exact neutralization by soda.
- Column C.—Weight of SO<sub>3</sub> (sulphuric acid obtained and weighed as Ba SO<sub>4</sub>) per 100 grammes of the sample.
- Column D.—Weight of lime (Ca O) obtained per 100 grammes of the sample.
- Column E.—Weight of alumina (Al  $_2$  O  $_3$ ) per 100 grammes of the sample.
- Column F.—Weight of phosphoric acid (P $_2$  O $_5$ ) per 100 grammes of the sample.

Note.—Numbers in columns "A" and "B" marked thus: "a," are the mean values obtained in two estimations differing by less than 3 cc's normal. All of the  $P_2$   $O_5$  estimations (column F), the Al $_2$   $O_3$  estimations (column E), and most of the  $SO_3$  estimations (column C), are the means of two closely agreeing results.

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## TABLE IV—Continued.

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6       6713       475a       1027a       1028a       1 25 p. c         8       6721       490a       1036a       1 25 p. c         9       8638       462a       1023a       1031a         0       8639       468a       1023a       1031a         1       8640       483a       1031a       1027a         3       8643       470a       1026a       4         4       8644       479a       1031a       1024a         5       8645       465a       1021a       0 544         6       8646       481a       1024a       0 544         7       8650       483a       1021a       0 544         8       8651       486a       1034a       0 693         9       8652       480a       1031a       0 693         10       8653       494a       1024a       0 693         21       8654       460a       1018a       0 693         22       8655       486a       1034a       0 693         23       8654       462a       1021a       0 693         24       8657       458a       1016a       0 693 <td></td>	
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13	
44 8908 437 <i>a</i> 1004 <i>a</i>	
45 8909 456a 1015a	
46 8910 465a 1025a	
18     8915     479a     1027a       19     8918     464a     1010a	
$50 \mid 8920 \mid 510a \mid 1043a \mid \dots $	
51 8924 467a 1023a	
52   Callard's.   484a   1052a	
53   2419   456   394	
55   2833   462   1008	
56 2931 461 1006	
57   3008   470   1022	
9 3315 454 1002	
30 3319 458 982	
31   4982   448   1010	
32     4985     468     908	
54 5374 452 1022	
55   5375   444   984	
36     5729     454     1008       37     5734     472     1008	
37     5734     472     1008       38     6149     472     1028	
39 6151 444 966	
70   6155   470   1022	

100

#### Table IV—Concluded.

No.	Depart- mental Number.	A.	В.	С.	D.	E.	F.	Remarks.
71	6836	466	1024					
$7\overline{2}$	7008	459	1022					
$\tilde{73}$	7009	468	1024					
74	Lloyd's	464, 462	968					
$7\tilde{5}$	6703	450	970a	11				
76	6706	120, 122, 126	203a	38.76	28:50			
77	6711	298, 302, 300, 297	490a					
78	8641	446, 453	984					
79	8647	324, 330	712a			· · · · · · · ·		
80	8648	334, 335	698					
81	8649	266, 263	524a	8:44	7:75			
82	8658	350, 344	766a	2:88	3.90			
83	8662	398, 405	844, 890, 934	5.86	7:05			
84	8665	450, 444	908a	4 52	3.50			
85	8896	100, 100	120, 103, 120	41.97	29 00			
86	8905	88, 88, 86	116, 116	41 37 34 81	24 . 40			
87	6701	186, 184, 184	299	23.01	24 40	• • • • • • •	9.00	
88	6707	282, 273	344, 334	23 01			3:20	
89	6709	568, 566	272, 330	29.63			14 · 90 20 · 90	
90	8893	590, 584, 584	84, 104 142, 134, 134	9.60		• • • • • • •	7.10	
91	8897	224, 226, 220	66, 105, 85	16.53			5.50	
92	8898	170, 167	90, 98, 94	5 24			7.20	
93	8902	198, 196, 206	83, 129, 104	13.72		• • • • • • • •	10.20	
94	8903	326, 330 212, 210	126, 124, 110	4 67			5 40	
95	8911		96, 112, 87	17.90		• • • • • • •	5.60	
96	8912	226, 210, 215 238, 216	120, 100	6.76			5.25	
97	8913	163, 162, 166	100, 102	4 02			4.80	
98	8916	530, 534, 530	88	28.94			20.00	
99	8917	164, 164	68, 78	13 14			5.80	
100	8921 8922	194, 192	186, 208	15.30			3.40	
$\begin{array}{c} 101 \\ 102 \end{array}$	8922 8923	194, 210, 188	112, 115, 114	17.82			6.00	
	8925	182, 180	163, 142, 162	18.85			4.30	
$\begin{array}{c} 103 \\ 104 \end{array}$	8926	290, 280	64, 95	20.64			9.00	
$\frac{104}{105}$	8927	165, 162	194, 224	13.51			3.60	
106	6704	156, 159, 155	34, 48	38.90		2 40		
107	8670	460, 461	106	4.80		2.06	21.50	
108	8919	302, 288	117	29 11		2.50	6.94	

TABLE V.—Samples containing only Bi-tartrate of Potassium and Tartrate of Calcium with less than five (5) per cent. of Sulphate of Lime.

No.	Departmental Number.	Bi-tartrate of Potassium KHC <sub>4</sub> H <sub>4</sub> O <sub>6</sub> .	$\begin{array}{c} \text{Tartrate} \\ \text{of} \\ \text{Calcium.} \\ \hline \text{Ca } C_4 \overset{\frown}{\text{H}}_4 \overset{\bigcirc}{\text{O}}_6, \\ 4 \overset{\frown}{\text{H}}_2 \overset{\bigcirc}{\text{O}}. \end{array}$	Sulphate of Calcium.  CaSO <sub>4</sub> ,2 H <sub>2</sub> O.	Total.	Remarks.
1	6702	87 98	10.66	Traces.	98:64	
2	6705	100.00	10 00	Traces.	100.00	
2	6708	89.11	9.87	Traces.	98.98	1
4 5	6710	85.73	13.52	"	$99 \cdot 25$	
5	6712	88 17	11.05	"	$99 \cdot 22$	
6 7 8	6713	89:30	10.01	"	99.31	
7	6719	83.47	15.60	"	99:07	Contains traces o
8	6721	92.12	7.28		99:40	starch and carbonates
9	8638	86.83	12.87		99:70	
10	8639	87:98	11:31		99 · 29 99 · 25	1
$\frac{11}{12}$	8640	90.80	8:45		99 45	
13	8642 8643	88·92 88·36	10·53 11·18		99.54	
14	8644	90.05	9.49	4.6	99.54	
15	8645	87 42	11.82		99.22	1
16	8646	90.42	8.06		98 48	
17	8650	90.80	7.15	1.17	99.12	
18	8651	91 37	8.06	Traces.	$99 \cdot 43$	i
19	8652	90.24	$9 \cdot 23$	"	$99 \cdot 47$	
20	8653	92.87	4.68	1.49	99:04	
21	8654	86.48	12.74	Traces.	$99 \cdot 22$	
22	8655	91:36	8.06	"	99.42	
23	8656	86.85	12.61	"	99:46	
24	8657	86 10	13:00		99·10 99·15	
25 26	8659	95.12	4:03	1	99.09 99.19	
20 27	8660	94.18	2·60 12·74	2:31	99.59	1
28	8661 8663	86 · 85 85 · 35	14.17	Traces.	99·52	
29	8664	84.97	14.56	"	99.53	
30	8666	98.13	0.91	"	99.04	
31	8667	90.61	7.54		98:15	-
32	8668	89.49	10.40	"	99:89	
33	8669	87:98	11.18	"	99:16	
34	8671	97 20	Traces.	3.24	101 74	
35	8672	82.72	16.25	Traces.	98:97	
36	8894	84.97	14.56	"	99 53	1
37	8895	98.13	Traces.	1.06	99:19	
38	8899	95:69	3:35	Traces.	99:04	
39	8900	89:49	10.13	"	$\frac{99.62}{99.02}$	1
40 41	8901 8904	88·36 87·98	10.66 12.22		100.50	
42	8906	88.54	11.16		99:70	
43	8907	97.76	Traces.	1.21	98 97	
44	8908	82:15	16:90	Traces.	99.05	
45	8909	85.72	13.40	"	99.12	
46	8910	87 42	12.35	"	99.77	
47	8914	87 60	12.22	"	99:82	
48	8915	90.05	8.96	"	99.01	
49	8918	87 · 23	10.66	"	97 89	
50	8920	95.88	2.99	"	98.87	
51	8924	87 79	11.57	"	99:36	
52	Callard's.	90.99	10.90	"	101 · 89	
	Mean.	89:64				

Table VI.—Samples containing Bi-tartrate of Potassium with Tartaric Acid (or Tartaric Acid alone) and Calcium Tartrate, Calcium Sulphate, Starch or other adulterant.

No.	Depart- mental Number.	Bi-tartrate of Potassium. KHC <sub>4</sub> H <sub>4</sub> O <sub>6</sub> .	Free Tartaric Acid. $H_2 C_4 H_4 O_6$ .		Calcium Sulphate. CaSO <sub>4</sub> 2H <sub>2</sub> O.	Starch.  Approximate.	Remarks.
75 76 77 78 79 80 81 82 83	6703 6706 6711 8641 8647 8648 8649 8658 8662	84·60 None. 36·00 83·85 60·90 62·79 50·01 65·80 74·83	None. 15·23 7·95 None. do do do do	9·10 None. Traces. 11·95 8·30 3·90 Traces. 8·58 12·20	Traces. 84 '70 36 '68 Traces. do do 18 '15 6 '19 13 '00	3·1 30·0 31·0 29·0 21·0	
84 85 86 87	8665 8896 8905 6701	84·60 None. 5·25 21·55	do 7·50 4·50 5·23	Traces. 2·60 Traces. do	9·72 Traces. 89·07 74·90	5·5 88·5 None. do	alumina and iron. Maize. Potato starch.

TABLE VII.—Substitutes for Cream of Tartar containing Acid Phosphate of Lime, with not more than traces of Alumina.

6707 6709	5.28	40.40		1		
6709		49.48	19		25.5	Maize starch.
	24 59	48.84	Traces.	28.20		do
8893	34 49	63 34	None.	8 46		
8897	11.72	20.72	56	12.69		Potato and maize.
8898	9.08	35.77	47	7.99		Maize.
8902	11.88	11.28	71	8.93		do
8903	17.99	29.54	49	9.40		do
8911	8 91	10.02	70	• • • • • • • • • • • • •	9:38	do
8912	9.24	38 50	50		7.50	do
8913	8.66	15.01	63	0.40	8.25	Maize and potato.
8916						Maize.
						do
						do
						do
						do
						do
						do do
		8916     7.92       8917     33.00       8921     9.57       8922     5.61       8923     9.90       8925     7.10       8926     14.85	8916         7.92         8.64           8917         33.00         62.24           8921         9.57         28.47           8922         5.61         32.92           8923         9.90         38.34           8925         7.10         40.64           8926         14.85         44.40	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Table VIII.—Cream of Tartar substitutes containing more than traces of Alumina.

No.	rtme	phate of Lime.  H <sub>4</sub> Ca P <sub>2</sub> O <sub>8</sub>	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +	Lime. ————————————————————————————————————	Starch.  Approximate.	Bi-tartrate of Potassium KHC <sub>4</sub> H <sub>4</sub> O <sub>6</sub> Calculated i acids	Free Tartaric Acid. $H_2C_4H_4O_6$ from organic found.	Remarks.
106 107 108	6704 8670 8919	Traces. 35 48 11 45	11.06 9.50 11.53	67·60 45·88	24 44 20	10·34 11·28	3 0	Maize.   do   do

103

#### TABLE IX.

Under the heading "Available Acidity" are given the number of cubic centimetres of normal soda required to neutralize the acidity of 100 grammes of the

sample. This number is 532 for a perfectly pure cream of tartar.

The column headed "Calculated Value" gives, to the nearest cent, the value in cents per pound of the sample, upon the assumption that genuine cream of tartar, containing 100 per cent. of bi-tartrate of potassium, is worth fifty cents per pound. I may here state that pure bi-tartrate of potassium is quoted in the catalogues of first class chemical re-agent dealers in New York (Eimer & Amend, Richards & Co., and others) at 40 cents per pound, retail. It is not intended, therefore, that these numbers should indicate other than relative values. They are calculated by the following formula, where "x" stands for the required value, and "a" for the number in the "Available Acidity" column:

x = 0.094a.

Under the heading "Relative Volume Required" I have given approximately the number of spoonfuls (or other unit volume) which a cook would require to use along with 100 spoonfuls of bi-carbonate of soda (baking soda, or bread-soda), on the assumption that 2 spoonfuls of genuine cream of tartar would be required for 1 spoonful of bi-carbonate. The numbers in this column form but a very rough approximation to the truth; since, while stated as volumes, they are calculated from experimental numbers obtained by working upon definite weights of the samples, which have, along with variety of composition, very different densities. Since, however, the domestic cook works for the most part by measuring her materials (instead of by the only correct method, viz., weighing them), the introduction of this column may serve to explain the difficulty found in obtaining uniform results by the use of the cream of tartar and substitutes for it which are found in the shops. These num-

bers are calculated from the formula  $x = \frac{106400}{a}$  where "a" is the available acidity of the sample in question.

The remaining columns of the table explain themselves.

## TABLE IX—Continued.

		١			D 1 4		
	Depart-	Avail-	Cost	Calcu-	Relative Volume		
No.	mental	able Acid-	_ per .	lated	Re-	To what Acidity is Due.	How Diluted.
	No.	ity.	Pound.	Value.	quired.		1
					200		la i
1	6702	470	50	44	226	Bi-tartrate of potassium.	Calcium tartrate.
2	6705	532	50 ? 60	50 45	200 224	٠	Calcium tartrate.
3 4	6708 6710	475 455	50	43	234	do	do do
5	6712	470	50	44	226	do	do
6	6713	475	50	45	224	do	do
7	6719	440	50	41	242	do	
8	6721	490	50	46	217	do	1 -
9	8638	460 470	50 52	43 44	231 226	do do	
10 11	8639 8640	485	49	46	219	do	1 .
12	8642	475	46	45	224	do	1 -
13	8643	470	52	44	226	do	
14	8644	480	52	45	222	do	
15	8645	465	44	43	229	do	do do
16	8646 8650	480 485	46 48	45 46	222 219	do	1
17 18	8651	485	40	46	219	do	1 -
19	8652	480	.40	45	222	do	
20	8653	495	48	47	215	do	do
21	8654	460	40	43	231	do	1 -
22	8655	485	48	46 43	219 231	do	1 •
$\frac{23}{24}$	8656	460 460	41 48	43	231	do	do do
2 <del>5</del>	8657 8659	505	40	48	211	do	•
26	8660	500	40	47	213	do	do and sulphate
27	8661	460	48	43	231	do	Calcium tartrate.
28	8663	455	46	43	234	do	
29	8664	450	40	42 49	236 205	do	1 1.
$\frac{30}{31}$	8666	520 480	40 40	45	222	do	1 •
$\frac{31}{32}$	8667 8668	475	40	45	224	do	do
33	8669	470	40	44	226	do	do
34	8671	520	40	49	205	do	Sulphate of lime.
35	8672	440	40	41	240	do	Calcium tartrate.
36	8894	450	50	42 49	236 205	do	do
37	8895	520 510	45 45	48	209		Calcium sulphate.
38 39	8899 8900	475	44	45	224	do	do dartrate.
40	8901	470	40	44	226	do	do
41	8904	470	50	44	226	do	do
42	8906	470	48	44	226	do	do .
43	8907	520	40 45	49 41	205 240	do	Calcium sulphate.
44 45	8908 8909	440 455	40	43	234	40	do tartrate.
46	8910	465	40	44	229	do	do
47	8914	465	40	44	229	do	do ·
48	8915	480	40	45	222	do	
49	8918	465	50	43 48	229 209	do	
50 51	8920 8924	510 470	50 50	48 44	209	٠. ١	1 -
52	Callard's		50	46	219	do	1 -
53	2419	456	50	43	234	do	1 •
54	2523	472	50	44	226	do	
55	2833	462	50	43	230	do	do
56	2931	461	50	43	229 226	do do	do
57	3008	470 460	50 50	44 43	231	40	do do
58 59	3230 3315	454	50	43	234	do	do
60	3319	458	48	43	232	do	do
61	4982	448		42	237	do	do
62	4985	468	45	44	227	do	do
63	5373	452	40	43	235	do	do
64	5374	452	40	43 42	235 238	do do	do do
65 66	5375	444 454	48 60	43	234	do	
67	5729 5734	472	60	45	225	do	1 .
68	6149	472	48	45	225	do	do
69	6151	444	48	42	238	do	do and sulphate.
						105	

# Sessional Papers (No. 1B.)

## TABLE IX—Concluded.

_							
No.	Depart- mental	Avail- able Acid-	Cost	Calcu- lated	Relative Volume Re-	To what Acidity is Due.	How Diluted.
	No.	ity.	Pound.	Value.	quired.		
70	6155	470	40	45	226	do	Calcium tartrate.
71	6836	466	50	44	228	do	do
72	7008	459	50	43	231	do	do
73	7009	468	50	44	227	do	do
74	Lloyd's	463		43	228	do	do and sulphate.
75	6703	450	49	42	236	do	do and wheat flour.
76	6706	125	40	12	851	Free tartaric acid	Sulphate of lime.
77	6711	300	30	28	355	Bi-tartrate of potassium	Sulphate of lime and corn starch.
	0044	450	مه	40	000	and free tartaric acid	Calaires tantata and aire form
78	8641	450	40	42 31	236	do	Calcium tartrate and rice flour.
79	8647	325	48		327 318	do	Rice flour.
80	8648	335 265	48 48	32 25	401	do	Corn starch.
81	8649	350	40	33	304	do	Sulphate and tartrate of lime and
82	8658	300	40	35	304	uo	potato starch.
83	8662	400	28	38	266	do	Tartrate and sulphate of lime.
84	8665	450	40	42	236		Sulphate of lime and corn starch
85	8896	100	40	9		Free tartaric acid	
86	8905	90	40	8	1182	Bi-tartrate of potassium	Sulphate of lime
00	3303		1	"	1102	and free tartaric acid.	Surphus of Marci
87	6701	185	40	17	575	do	do
88	6707	280	40	26	380		Sulphate of lime and corn starch
•	1 0,0,		1 -	]		and free tartaric acid.	_
89	6709	560	40	53	190	Acid phosphate and bi	Sulphate of lime.
00	0.00	000	1			tartrate of potassium.	
90	8893	585	40	56	182	do	do
91	8897	225	40	21	473	do	Sulphate of lime and potato and
	1	1	1	İ	1	ì	corn starches.
92	8898	170	40	16	626	do	Sulphate of lime and corn starch
93	8902	200	35	19	532	do	do
94	8903	325	50	31	327	do	.] do
95	8911	210	40	20	507	Acid phosphate and free	do
	i		1	l		tartaric acid.	_
96	8912	215	40	20	495	do .	do
97	8913	220	35	,21	484	do	do
98	8916	165	40	16	645	Acid phosphate and bi-tar	- do
					207	trate of potassium.	G 1 1 4 CV
99	8917	530	40	50	201	do	Sulphate of lime.
100	8921	165	40	16	645	do	
101	8922	190	40	18	560	do	
102	8923	195	40	18	546	do .	<b>1</b>
103		180	40	27	591 393	1 4	3.
104		285	40	16	645	do .	do do
105		165	45 40?	15	665	Alum and free tartarie	
106	6704	160	40 !	15	000	acid.	ao
107	8670	460	40	43	231	Acid phos., alum and bi	- Corn starch.
400	0010	000	40	90	955	tartrate of potassium.	Gulmhata of lime and some stansh
108	8919	300	40	28	355	do .	. Sulphate of lime and corn starch