## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Coloured covers /
Couverture de couleur


Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée
Cover title missing /
Le titre de couverture manque
Coloured maps /
Cartes géographiques en couleur
Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire)
Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur
Bound with other material /
Relié avec d'autres documents
Only edition available /
Seule édition disponible
Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-étre uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

$\square$
Coloured pages / Pages de couleurPages damaged / Pages endommagées

$\square$
Pages restored and/or laminated / Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
Pages detached / Pages détachées

## Showthrough / Transparence

Quality of print varies /
Qualité inégale de l'impression

Includes supplementary materials / Comprend du matériel supplémentaire

Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

Additional comments /
Commentaires supplementaires:

Various pagings.
In Sessional paper No. 3, Part II ... page 38 is incorrectly numbered page 39.
In Sessional paper No. 4, Report, returns and statistics. $.30^{\text {th }}$ June, 1880, pages xxxv \& lvii are incorrectly numbered pages xxx \& I.

In Sessional paper No. 4, Financial returns, 1879-1880, pages 39, 44, 124, 138, $145 \& 185$ are incorrectly numbered pages $3,4,121,38,115 \& 15$.

In Sessional paper No. 4, Report on Adulteration of Food ... 1880, Appendix
A, page 29 is incorrectly numbered page 2.

## SESSIONAL PAPERS J 103 <br> 461 <br> 6.14 <br> -880-81 <br> No3 <br> VOLUME 3.

THIRD SESSION of the FOURTH PARLIAMENT

OF THE

## DOMINION OF CANADA.

SESSION 1880-81.

VOLUME XIV.

Printed by MacLean, Roger \& Co., Wellington Street, Ottawa.

# LIST OF SESSIONAL PAPERS. 

VOL, XIV.-SESSION 1880-81.

ARRANGED ALPHABETICALLY.

| A | No. | E | No. |
| :---: | :---: | :---: | :---: |
| Accounts, Pubiic ..................... ................ | 1 | Eagan, J. B.. | 108 |
| Advertizing, Government .. ......................... | 107 | Emigration, Ireland to N. W... .... ... ........... | 68 |
| Agents, London ....... ..................... ........ | 16 | do via Sarnis and Windsor............ | 67 |
| A gricultare, Report of Department of.. ........ | 12 | Esquimalt \& Nanaimo Railway .... ..... ........ | 139 |
| Appraisals of Goods, Customs..................... | 64 | Estimates, Public Service, ........................ | 1 |
| Auditor-General's Report...... ........ ... . ......... | 8 | do Department of Interior ........ ........ | 88 |
| B |  | F |  |
| Banks, Lists of Shareholders ............ ........ | 27 | Fishery Statistics.... ............... ...... ..... ...... | 54 |
| Baptisms, Marriages, \&c................ ..... ........ | 77 | Fishing Licenses ........ .......... .................... | 99 |
| Beauharnois Canal ...... .. .. ........ .............. | 91 | Fish-Breeding, Newcastle. | 134 |
| Better Administration of Justice Act, 1878 ..... | 141 | Food, Failure of, N.W | 85 |
| Bodwell, E. V. ... . ......... ... ......... .............. | 60 | French Translators.. | 78 |
| Bonds and Securities ................ ................ | 30 | French Shipping Bounties Bill.. ................... | 89 |
| Boston, Winter Port ........... ................. ..... | 133 |  |  |
| Boundaries, Ortario and Quebec................... | 73 |  |  |
| Bridge, Chaudière Railway ............. ..... ..... | 124 | G |  |
| Bridge Iron .......................... . ....... . ....... | 62 |  |  |
| British Canadian Investment Co.................. | 123 |  |  |
| British Columbian Lands, C. P. Railway ...... | $21 k$ | Geological Surv | 32 |
| Burlington Bay, Oanal Bridge..... ..... ........... | 131 | Graduates, Military College.. Grain: Rates, via Halifax. ........ ..................... |  |
| C |  | H |  |
| Canadian Pacific Railway........... .......... ..... | 23 |  |  |
| Oape Tormentine Railway .......................... | 102 |  |  |
| do Traverse Railway ................ ............. | 102 | Halifax ard Great Britain, Freight to. ..... | 61 |
| Cascumpec Harbor...... .... ................ ............ | 127 | do Commission ... ............ .... |  |
| Castle Garden, Quebec .. .............................. | 112 | Hamilton Colonization Company, N.-W... |  |
| Cattle Exported .............. ........... ..... ......... | 41 | Health Legislation ........... ........... | 88 |
| Census ... ..... ... .. ........ ................ 28 \& | 103 | Hudson Bay Company... ....... ........................... | 111 |
| Charybdis, Steam Corvette........... ..... ......... | 66 | do Navigation ....... .................. | 1116 |
| Chaudière Railway Bridge. ........................ | 124 |  |  |
|  | 118 | I |  |
| Co-operative Association, Customs Officers'... <br> Customs' A ppraisals....................................... | 69 |  |  |
|  |  | Immigrants, Manitobs ..... ....... .:. | 109 |
|  |  | Indian dffairs, Report of Department of........ | 14 |
| D |  | Indians, N.-W. Territories ..... .... ............... | 85 |
|  |  | Inlsnd Revenue, Report of Department of...... | 4 |
| Delegates' Expenses................. ..... ............ | 110 | Insurance ......... ..... ........ ........ ..... ...... .-...: | 13 |
| Dismissals, Public Service. .......................... | 17 | Intercolonial Railway-............. ................. | 36 3 |
| do Statutes ....... ..................... ........ | 35 | do Department of, Estimstes... ....... ...... | 88 |
| do Surveyors ...... ..................... ........... | 87 | Ireland, Relief of ...... ......... ....................... | 76 |
| Drawbacks on Goods ............. .................. | 135 | Iron and Gold Ore ...................................... | 40 |


| 5 | No. | R | No. |
| :---: | :---: | :---: | :---: |
| Judges' Retiring allowances <br> Judicial Work, Quebec.................................... | 55 | Railway Lands, B.C.. | 210 |
|  | 56 | Railways and Canuls, Report of Department of $\qquad$ | 5 |
|  |  | Railways, Constuction of Old Account......... <br> do Statistics........ ..... ........... ............. | $5 a$ $5 b$ |
| $\mathbf{L}$ |  | Receipts and Expenditure ........................... | 24 |
|  | 29 | do Payments............................. | 80 |
| Lake Erie Survey8......... ............................. | 130 | Reservations, Public Lands, N.W................. | $21 n$ |
| Land Guides, N.-W......... ........................... | 44 | Restigonche Ferry ..... ............................... | 93 |
| Laval Univeraity ......... ............................. | 47 | Rice and Powder, B.C. ............. ......... ........ | 117 |
| Leeds and Grenville Judgeship......... ..... ...... | 145 | Rondeau Harbor of Refuge. ........................ | 34 |
| EeSueur, Mr., Superannuation of ................... | 96 | Ryland, G. H............................................ | 94 |
|  | 15 |  |  |
| Librarian, Report of. ..................................... | 72 |  |  |
| Lislois, Joseph C ........................................ | 140 | $s$ |  |
|  | 51 |  |  |
| Locomotives Purchased $\qquad$ London A gents .... ... ............. .......... ...... ...... | 16 | Savings Banks...... ..................... .............. | 22 |
| Lower Lightship, Traverse............... ............. Loard, Major-General, Appointment of .......... <br> do do Complaints of | 81 | Secretary of State, Report of....................... | 10 |
|  | 57 | Selkirk Urossing, O.P.R .... .................. ..... | 21j |
|  | 82 | Settlement Belt, Manitoba ............... ........... | 20 |
| . $\mathbf{M}$ |  | Shelburue Fishery Officer ................... ......... | 53 |
|  |  | Shippegan, N.K., Breakwater........ ............. | 100 |
|  |  | Shipping Bounties, French Bill ..... ............. | 89 |
|  |  | Silver Oie .............. .... .................. ........... | 83 |
| Yanitoba Colonization Society ...... .... ........ | 211 | Smoked Herrings, Inspection Fee | 43 |
| do Lake....... .................. \&........ ......... | 119 | Souris, West, Breakwater. ......................... | 138 |
| do Land Patents.. ........... .................. | 20 | Special Warrants .... ............ ............. | 18. |
| do and N.-W. Territories .................. | 21 | St. Vincent de Prul Yenitentiary ................. | 121 |
| Marine and Fisheries, Report of... ......... ......... | 11 | Statutes, Dominion, Distribution of.. ....... ... | 35 |
|  | 144 | Squatters, Point Pelcée Reef......................... | 106 |
| Filitary Oollege Graduates ............................ Militia, Report of the Department of | 101 | St. Francis River ......................., ............. | 74 |
|  | 9 | Superannuation Allowan ces.......... .............. | 25 |
| Montreal Registry Office. | 94 | Supreme and Exchequer Courts.. ................. | 46 |
| Mounted Police Supplies $\qquad$ | 45 | Sugars, vıa Ealitax ........................... .......... | 26. |
| N |  | T |  |
| New Carlisle Harbor ................................. | 92 | Thames River Surveys....... ........................ | 18. |
| Nicolet River .......... ......... ..... ....... ........... | 137 | Timber Limits, N.-W. Territories ......... ....... | 86 |
| North Shore Mails ......... ........ ........... ......... | 95 | do Quebec...... .......................... | 42 |
| North-West Territories-New Names............ | 105 | Tobacco, Canadian ..... ............. ................. | 31 |
|  |  | Toronto Harbor..... ....................... ........... | 130 |
|  |  | Trade and Navigation Tables........ .............. | 2 |
|  |  | Travelling Expenses ................................. | 110 |
|  |  | Trent Valley Canal....... ............................ | 52 |
| Official Debates, House of Commons ............. | 120 | Tuck, S. P........... . ......... .............. ........... | 90 |
| $\mathbf{P}$ |  | U |  |
|  |  | Unforseen Expenses .................................. | 19 |
| Paris Exhibition............ ............... ........... | 75 | Union Suspension Bridge, Ottawa........ ........ | 146 |
| Penitentiaries, Report on ............................ | 65 |  |  |
| Pickled Fish, Shelburn ......... . .................... | 38 | v |  |
| Point St. Pierre, les Becquets...................... | 122 |  |  |
| Police Magistrates, Appointment of.............. | 79 | Vankleek Hill, Postmaster of ..................... | 128 |
| Port Hood Wharf .......................... ........... 1 | 143 |  |  |
| Posimaster-General, Report of .................... | 7 |  |  |
|  | 132 | We. W |  |
| Post-Office Orders ${ }_{\text {do }}$......... | 135 | Weights and Measures ..... ..... .................... | 39 |
| do Montreal...................... coso..... ...... | 115 | Wheat Grinding....................... ..... ...... . .... | 59 |
| do Parkhill......... ......... . ......... ........ | 37 | Wiarton Harbor...... ....................... .e.t..... | 116 |
| do Prescott | 126 | Williamsburgh Canal ................. ... .......... | 58 |
| do Sorel .................. .e.o.0. e............ | 114 | Wilson, Major C........................................ | 33 |
| Prince Edward Island Railwey Accident....... | 71 | Window Shade Cloth ...... . ................... ..... | 125 |
| Public Accountsa.o...... ...........c........ ........... | 1 | Winter Port, Boston..... ........ .................. | 133 |
| do. Works, Report of Department of........ |  | Wreckage, Canadian Waters $\qquad$ Wrecking and Towing, Inland Waters... ......... | 84 50 |
| 9 |  |  |  |
| Quebec \& Lake St. John Railway...... ............ | 70 | Y |  |
| Q., M., O. \& O. Railway Purchase ................ | 142 | Yamaska Rirer .. | 129 |

# LIST OF SESSIONAL PAPERS. <br> <br> ARRANGED NUMERICALLY AND IN VOLUMES. 

 <br> <br> ARRANGED NUMERICALLY AND IN VOLUMES.}

## CONTENTS OF VOLUME No. 1.

No. 1... Public Accounts :-The Public Accounts of Canada, for the fiscal year ended 30th June, 1880.
Estimates of Canada, for the fiscal year ending 30th June, 1882.
Supplementary Estimates of the amounts required for the service of Carada, for the year ending 30th June, 1881.

Further Supplementary Estimates of the amounts required for the service of Canada, for the year ending 30th June, 1881.

Supplementary Estimates of sums required for the service of the Dominion, for the year ending 30th June, 1832.

CONTENTS OF VOLUME No. 2.
No. 2... Tradr and Namation:-Tables of the Trade and Navigation of the Dominion of Canada, for the fiscal year ended 30 th June, 1880, compiled from official returns.

## CONTENTS OF VOLUME No. 3.

No. 3... INTERIOR :-Report of the Department of the Interior for the year ended 30th June, 1880.
No. 4... Inland Retenog:-Reports, Returas and Statistics of the Inland Revenues of the Dominion of Canada, for the fiscal year ended 30th June, 1880.

Supplement No, $1:-$ Canal Statistics for the close of Navigation of 1880.
Stppliment No. $2:-$ Weights and Measures, 1880.
Supplement No. 3:-Report on Adulteration of Food for 1880.

## CONTENTS OF VOLUME No. 4.

No. 5 .. Rallways and Canals:-Annual Report of the Minister of Railways and Canals for the fiscal year, 1st July, 18i9, to 30th June, 1880, on the works under his control.

No. 5 .

No. $53 .$.

Return to Order; Stating the names of the several persons to whom was
 Railways for the Year ending 30th June, 1880, as the total sum paid for "Construction of Railways, old accounts." (Not printed.)

Statistics ; Reports, Railway Statistics of Canada, and Capital, Traffic and Working Expenditure of the Railways of the Dominion, for the year ended 30th June, 1880.

No. 6... Public Works:-Annusl Report of the Minister of Public Works, for the fiscal year, 1st July, 1879, to the 30th June, 1830, on the works under his control.

No. 7... Postmastrr General:-Report of the Postmaster General, for the year ended 30th June, 1880.

CONTENTS OF VOLUME No. 5.
No. 8... Auditor-General :-Report of the Auditor-General on Appropriation Accounts, for the year ended 30th June, 1880.

No. 9... Militia:-Report on the state of the Militia of the Dominion of Canada, for the year 1880.
No. 10... Secretary of Smate :-Report of the Secretary of State of Canada, for the year ended 31st December, 1880.

## CONTENTS OF VOLUME No. 6.

No. 11... Marine and Fishrrims :-Thirteenth Annual Report of the Department of Marine and Fisheries, being for the fiscal year ended 30th June, 1880.

Supplement No. $1:-$ Report of the Board of Steamboat Inspection, \&c., for the year ended 3lst December, 1880.
Scpplement No. $2:$-Report of the Commissioner of Fisheries, for the year ended 31st December, 1880.

CONTENTS OF VOLUME No. 7.
No. 12... Agriculture, Report of Minister of:-Report of the Minister of Agriculture for the Dominion of Canada, for the calendar year 1880.

No. 13... Insurance, Abstract and Statiments of:-Abstract for 1880, and Report of the Superintendent of Insurance; for 1879.

CONTENTS OF VOLUME No. 8.
No. 14...|ndian Affairs:-Annual Report of the Department of Indian Affairs of the Dominion of Canada, for the year ended 31st December, 1880.

No. 15...|Librarian of Parliament:-Report of the Librarian of Parliament on the state of the Library of Parliament.

No. 16... Agents in London:-Return to Order, showing the amounts of Money in the hands of the Agents in London, on the first day of each month, in the years 1876, 187\%, 1878 and 1879, with a Statement of the rate of intereat allowed.
No. 17... Dismissals :-Return to Order; Names of persons whose services have been dispensed with, or who have been superannuated or transferred from one office to another, since 13th February, 1879 ; together with the reasons for such superannuation or transference.
No. 18... Sprcial Warrants :-Statement of Special Warrants issued by His Excellency the Governor General, in accordance with the provisions of the Act 41 Victoria, Chapter 7, Section 32.

No. 19... Unforgsemen Expenses :-Statements of payments charged to Unforeseen Expenses by Orders in Council, from the lat July, 1880 , to date, in accordance with the Aet 43 Victoria, Chapter 10, Schedule B.

No. 20... Settlembit Belt, Manitoba :-Return to Order; Applications for Patents in the Settlement Belt, part of the Parish of Saint Peter, in Manitoba; all evidence taken in reference to the title of the late Ohief Pegnis to lands in said Parish. (Not printed.)

| No. 21.... | Manitoba and North-West Trrbitorims:-Return to Order; Shewing the quantities of lands sold by the Government of Canada in the Province of Manitoba and the North-West Territories ; also, the quantity disposed of by free grant or otherwise. |
| :---: | :---: |
| No. 21a.. | Return to Order; Notices published since the accession to office of the Ministry on the subject of settlement or sale of the Public Lands in any part of Manitoba or the North-West. |
| No. 21b.. | Return to Address; Correspondence touching the sale of large blocks of land in the North-West to Mr. Brassey, or to any other individual, with a description of any such grant.-(Not printed.) |
| No. 21c. | Return to Order; Statemens of the total number of acres of land sold and taken up as homesteads and preemption rights from the acquisition of the North-Wast up to 3lst October last, and the total amount received in money therefrom. |
| No. $21 d$. | Return to Address; Copy of any Order in Council granting tracts of land in the North-West to any Railway Oompany other than the Manitoba South-Western Colonization Railway Company ; also, as to the route or termini of any such Railways.-(Not printed.) |
| No. 21 e.. | Return to Address; Copy of the Order in Council granting about $1,328,000$ acres of land in the North-West to the Manitoba South-Western Colonization Railway Company; also, as to the route or terminus of the Railway. |
| No. 21 f . | Return to Address ; Correspondence or papers, not already bronght down, touching any sale of land in the North-West to any Railway Company. |
| No. 219. | Return to Order; Shewing the amount appropriated each year on account of Dominion Lands, the sum expended in surveys and the amount expended in management. |
| No. 21h.. | Return to Order; Uf the quantity of lands actually surveyed in Manitoba and in the North-West Territory, the cost of such survey to the 30th of June and the lst November last, the number of surveyors employed and the average number of lots surveyed. |
| No. 21i.. | Return to Order; Statistics on which were based the plans and prices adopted in 1879 for the sales of Railway Lands and Pre-emptions, and now in force.-(Not printed.) |
| No. $21 j$ | Sklifiri Crossing, C. P. R.:-Retarn to Order; Correspondence in reference to the claims of persons whose lands have been expropriated for the Selkrk Crossing, of the Canadian Pacific Railway.-(Not printed). |
| , No. 21 k . | British Columbia Lands, C. P. R.-Return to Address; Orders in Council, and Correspondence with the Government of British Columbia, touching the lands appropriated for the construction of the Pacific Railway in that Province. |
| No. 2 | n Society, Manitoba :-Return to Order; Documents which have passed between the Department of the Interior at Ottawa and the Dominion Lands Office at Winnipeg, or the President of the Colonization Society of Manitoba, respecting the grant to or the exchange of the Reserve Lands of the said Society; and also respecting the difficulties which arose in 1878 in connection with the settlement of Taché Township.-(Not printed.) |
| No. 21 m. | Hamilton Colonization Co., N.W.:-Return to Address, respecting the claim of settlers on lands set apart for the Hamilton Colonization Company, in the Bird Tail Land District, to be allowed to take up their pre-emptions at one dollar per acre.-(Not printed.) |
| No. 21n. | Rebervations, Public Lands, N.-W.:-Return to Address; Orders in Council by which the Government have set apart reservations of the Public Lands of Manitoba for the benefit of the Half-breeds, or Indian population. Who were residents previous to the time the Dominion held control of the North-West Territory; also those which have been set apart for Steamship Oompanies, Mennonites, Icelanders, \&c. (Not printed.) |
| No. 210. | Railitay Lands, B.C.:-Return to Address ; Correspondence and telegrams between Mr. J.W. Trutch and the Government, respecting the Railway lands in British Columbia. (Not printed.) |

No. 22... Savings Banks:-Three approved Minutes of Council, relating to the administration of Savings Banks, and to the computation of the rates of interest allowed on Deposits in such Banks, \&c., \&c.
No. 23... Canadian Pacific Railway:-Memorandum of estimated cost of constructing certain sections of the Canadian Pacific Railway,-and also, a Statement of Expenditure on the Canadian Pacific Railway to 30th November, 1880.

No. $23 a$.

No. $23 b$.

No. $23 c$.

No. 23d.

No. $23 e$.

No. $23 f$.

No. $23 g$.

No. 23h.

No. 23j..

No $23 k$.

No. 23i..

No. $23 m$

Return to Order; Correspondence in connection with the Georgian Bay Branch (of the Pacific Railway) contract, since the 9th day of February, 1880 ; also particulars of settlement of the claims preferred by Smith, Ripley \& Co., or Heney, Charlebois and Flood, in connection with said contract.

Return to Order; Statement showing the various modifications and alterations made in location, design and otherwise whereby the estimated cost of the Sections of the Pacific Railway between Kamloops and Yale; between Yale and Port Moody; between Thunder Bay and Selkirk; between Selkirk and Jasper; between Jasper and Kamloops wers reduced in April, 1880, from the estimate of 1878, and a Statement of the amount of such estimates of 1878.

Return to Order; Return of all receipts from Government Railways in operation in the Province of Manitoba and the Territory of Kewaydin, during the months of September, October and November.
Return to Order; Copies of all offers made by the Government for the construction of a line of Railway from any part of the proposed Canadian Pacific Kailway line, to Sault St. Marie.

Return to Order; Copies of Contracts for the Canadian Pacific Railway, in terms of Section 19 of the Act 37 Vic., cap. 14. (Not printed.)

Return to Address; Copy of the Royal Commission issued to Messrs. Clarke, Keefer and Miall, to enquire into certain public matters.

Return to Order; Reports of Surveys made since last Session on the line from South-East Bay to Sault Ste. Marie, or on the line between SouthEast Bay aud Thunder Bay.
turn to Order; Showing any modifications made under the proviaions of any of the contracts for the construction of any part of the Canadian Pacific Railway, prior to the 21st October last, and of any estimates made as to the result of such modifications on the expense of the work.

Return to Order; Map shewing the proposed Railway grants, under the Canadian Pacific Railway Contract on the Table. (Not printed.) urn to Order ; Return of the surveys made in the Fall of 1879 and Winter of 1879-80, by the officers of the Pacific Railway Survey, of the Southern Route or Shore line between Red Rock, Nipigon Bay and the terminus of the Pacific Railway at Thunder Bay.

Return to Address; Correspondence louching the contracts for the two Sections of 100 miles each of the Canadian Pacific Railway, West of Red River, and touching the cancellation of either of the said contracts, the execution of the work thereon and the cost thereof.

Return to Order ; Statement showing the quantity of steel rails and fastenings bought by the Government in 1879, and the average price thereof; Statprnent of interest on such price from the date of payment at the rate at which part thereof are to be conveyed to the Canada Pacific Railway Company.
2nd. The quantity of such rails and fastenings already delivered.
3rd. The quantity of such rails and fastenings already used by the Government, and the quantity required for the completion of the Government part of the Railway.
4th. The quantity which will remain for conveyance to the Company, and the price thereof.
5th. The market value of such last mentioned quantity on the average prices for each of the months of September and October, A.D. 1880, and on the price of 21st October, 1880.
A new offer for the construction and operation of the Canadian Pacific Railway, submitted to the Honorable Sir Charles Tupper, K,O.M.G, M.P., Minister of Railways and Canals, for the Dominion of Canada, Ottawa.

| No. $23 n$ | Canadian Pacific Railway:-Return of Telegrams respecting deposits held on account of the new offer for the construction of the Canadian Pacific Railway. |
| :---: | :---: |
| No. 230.. | Return to Order; Information on which the Government based their judgment in accepting the Union Facific Railway, as the same was when first constructed, as the standard regulatieg the quality and character of the proposed Canadian Pacific Railway, its materials and equipment, and of any detailed estimate which has been made by ans Officer of the Government as to the cost of the works under progress and to be constructed by the Government, and of those to be constructed by the projected Com. pany, according to such standard. |
| No. $23 \rho$. | Return to Address; Copy of the Order in Council, passed in or before the year 1873, fixing Esquimalt as the Western Terminus of the Canadian Pacific Railway. (Not 2 rinted.) |
| No. $23 q$. | Return to Address; Correspondence between the Government and the proprietors of the Haggas Patent Water Elevator for Locomotives, which was furnished to the Government on the first Section of the Oanadian Pacific Railway, West of Thunder Bas, last year. (Not printed) |
| No. 23 | Return to Address; Memoranda and Orders in Council relating to the withdrawal of Sandford Fleming, from the position of Chief Engineer of the Canadian Pacific Railway. (Not printed.) |
| No. 23s... | Return to Order; Statement of the quantity and value of the iron for bridging on the Canadian Pacific Railway, from Selkirk to Kamloops, and information as to the number, length and character of the bridges. (Not printed.) |
| No. 234. | Return to Order; Correspondence respecting the claim of C. Horetzky, for nigher compensation than he has received for his services in exploring the region between the Skeena and Peace Rivers, in the jear 1879. (Not printed.) |
| No. 23u.. | Communication from Mr. C. Drinkwater, Secretary of the C. P. R. Co., dated Montreal, 25th February, 1881, transmitting an extract from the minates of the first meeting of the Directors, having reference to the proposed agreement betwees the Government and the Company, on the subject of running powers over a portion of the C. P. R. to Callander Station, etc. |
| No. $23 v^{\ldots}$ | Statement of amounts required for the Pembina Branch of the Canadian Pacific Railway. |
| No. 24... | Receipts amd Exprnditore :-In detail, of the Dominion of Canada, for the six months ending the 31st January, 1881. |
| No. 25... | Suprrannuaticn :-Statement of allowances and gratuities under the Act 33 Vic., cap. 4. |
| No. 26... | Sugars :-Return to Order; showing the quantities of Sugars sent over the Intercolonial Railroad from Halifax to all other places in the Dominion in the years ending December 31st, 1878, and in March 11th, 1880, and the rates of freight, \&c. |
| No. 27... | Banks :-List of shareholders of the several Banks of the Dominion of Canada. (Not printed.) |
| No. 28... | Census :-Report of work done and moneys expended on accouat of the forthcoming census. (Not printed.) |
| No. 29. | Laching $^{\text {Canal }}:-$ Return to Order ; Correspondence of Engineers, in rulation to the accident Which has recently occurred in Section No. 11 of the Lachine Cunal, now under contract. (Not printed.) |
| No | Bonds and Sgcurifirs :-Statement of all Bonds or Securities registered in the Department of the Secretary of State of Caaads. (Not printed.) |
| 31 | obacco, Caxadiam :-Return to Order, Statement showing the names and places of residence of all persons who, since 1st May, 1880, obtained licenses for the manufacture of :obacco cultivated in Canada. (Not printed.) |
| No. $31 a$. | Retarn to Order; showing the amount of Inland Revenue collected for Canadian grown tobacco, for the year ending 31st Decamber, 1880. (Not printed.) |


| No. 32... | Grological Survey :-Report of Progress of the Geological Survey of Canada, by Alfred R. C. Selwsn, F.R.S., F.G.S., Directur, for the year 1878-79. (Not re-printed for Sessicnal Papers.) |
| :---: | :---: |
| No. 33... | Wilson, Major C. :-Return to Order; Correspoudence between Major C. Wilson, and the Militia Department, in reference to a Return of certain Duties paid upon Rifles imported for the use of the Rifle Association of the 33rd Battalion. (Not printed.) |
| No. 34... | Rondead, Habbor of Refuga :-Return to Order; showing the names of parties who tendered to perform the work advertised during the present year in connection with the improvement of the Harbor of Refuge at Rondean. (Not printed.) |
| No. 35... | Dominion Statutes :-Official Retnra of the distribution of the Dominion Statutes of Canada, being 43rd Victoria, Second Session of the Fourth Parliament, 1880. (Not printed.) |
| No. 36... | Intercolonial Railway:-Return to Order; Correspondence relating to the claims of Mr. Patrick Ultican, of Beliedune, Restigouche, for damages to his farm occasioned by overflow of water, in connection with the Intercolonial Railway. (Not prirted.) |
| No. 36a..\| | Feturn to Order ; Correspondence relating to the selling of Hay through King's County, in the Province of New Brunswick, on the Intercolonial Railway. (Not printed.) |
| No. 36b... | Return to Order ; Correspondence and Award of - Simard, Esquire, Official Arbitrator in the case of Lucien Morin, Antille, and several others of the Patish of St. Roch-des-Aulnets, County of L'Islet, claiming damages from the Guvernment on account of borrowing pits for the use of the Intercolonial Railway. (Not printed.) |
| No. 36c.. | Return to Order; Copies of the notices respecting the sale of hay alongside the track of the lntercolonial Railway, and the names of the tenderers, \&c. (Not printed.) |
| No. 363.. | Return to Order ; Papers and accounts relating to a claim made by G. A. Girouard, for an alleged delivery of sleepers on the Intercolonial Railway, on which a payment of $\$ 2,640$ appears to have been made by Special Warrant. |
| No. 36e.. | Return to Order; Instructions given to Collingwood Schreiber, Esq., C.E., suce 10th October, 1878, on the subject of enquiries made or to be made by him, against certain persons employed on the Northern Division of the Intercolonial Railway; also, on the subject of resignations and dismissals of persons emploged on the same division of the Railway, \&c., (Not printed.) |
| No. 36f.. | Return (in part) to Order; Statement showing the names of the several persons employed on the Intercolonial Railway, in Quebec, New Brunswick and Nova Scotia; their ages, nationalities and religious faith; their residence and the present amount of their yearly salary, \&c.; and the names of those who have ceased to be employed on the railway since the 18th Uetober, 1878. (Not printe 1.) |
| No. 36g.. | Return to Order; Award of Dominion Arbitrators on a claim of one Alexander Forbes, for fencing on the Intercolonial Railway, on which a payment of $\$ 172.18$ appears to have been made by Special Warrant. (Not printed.) |
| No. 36h. | Return to Order; Contract between the Government and Denis Coholan, dated 18th January, 1877, with that part of the specification relating to the size and number of scows employed with the dredges operating at the Deep-water Terminus of the Intercolonial Railway, St. John, N.B (Not printed.) |
| No. 36i. | Retura to Order; Copy of the contract for fencing entered into by Thomas B. Smith, on the Intercoluaial Kailway, in 1871-1872, in which a payment has been made of $\$ 1,894.50$ by Special Warrant. (Not printed.) |
| No. 36j.. | Return to Order; Return of the contracts made since February, 1877, for dredging at the Deep-water Terminus of the Intercolonial Railway, St. Juhn, N.B. (A'ot printed.) |


| No. 36k.. | Intercolonial Railway:-Return to Order ; Report of the Survey made in 1880, with a view to the construction of a branch of the Intercolonial Railway to lead by way of St. Michael or St. Charles to the terminus at St. Joseph de Lévis. (Not printed.) |
| :---: | :---: |
| No. 36l. | Return to Order; Showing the claims of contractors and others, arising out of the construction of the Intercolonial Railroad, made or reported upon, since the Report dated November 27th, 1880, made by F. Shanly, Esq. |
| No. $36 m$. | Return to Address; Orders in Council respecting the claims of contractors on the Intercolonial Railway, since January lst, 1880 ; also, for all instructions issued to Mr. Shanly respecting the same. |
| No. $36 n$ | Return to Order; Statement showiag the amount and character of the various claims made by contractors on the Intercolonial Railway since its completion; the cases in which a settlement was obtained; also, the Report of Mr. Sandford Fleming, Mr. C. Schreiber and Mr. Brydges in each case. |
|  | CONTENTS OF VOLUME No. 9. |
| No. 37. | Pabkiml Post Office:-Return to Order; Evidence taken before the Post Office Inspector, in the course of the present year, with reference to the affairs of the Post Office at Parkhill. (Not printed.) |
| No. $38 .$. | Pigelimd Fish, Raturng of:-Return to Order; Returns furnished the Department of Inland Revenue for the present year by the Inspector or Deputy Inspectors of Pickled Fish, for the County of Shelburne, together with a Statement of the fees collected by the said officers. (Not printed.) |
| N0. 39... | Whights and Masoires, Appontments an:) Dismissals:-Return to Order; Appointments or dismissals made under the Weights and Measures Act, from the lst day of July, 1879, to date, and the canses of such dismiszals, if any; and the receipts and expenditures under the said Act. |
|  | Return to Order; Correspondence relating to the claim of Théotime Blanchard, late Inspector of Weights and Measures for the Counties of Gloucester and Restigouche, N.B, for the payment to him of the portion of his salary withheld as his contribution to the Superannuation Fund. (Not printed.) |
| No. 39b.. | Return to Order; Charges made against Horatio N. Tabb, formerly Deputy Inspector of Weights and Measures, of the evidence taken on the enquiry into such charges, and of the finding of the officer who made such enquiry. (Not printed.) |
|  | Return to Order; Showing the Revenue derived from the Weights and Measures Branch of the Inland Revenue Department, and the expenditure; also, accounts in detail of all Instruments purchased for the use of the Weights and Measures Department, and of the expenses, on two occasions, to England, of the Commissioner of Inland Revenue. (Not printed.) |
| No. | Iron amd Gold Ore :-Return to Order; Iron Ore and Gold Ore exported from Belleville or the County of Hastings, during the last year. (Not printed.) |
| No. | Catria Exported :-Return to Order; Comparative Statement of Cattle and Sheep exported from Canada to England, during the years 1879 and 1880. |
| No. 42. | Turbin Limis, Quebso :-Return to Address; Correspondence between the Government of Canada and the Government of Quebec, in reference to the Timber Limits north of the boundary of Quebec. (Not printed.) |
| No, | Shozad Higringas, Inspsotion Fen:-Return to Order; Correspondence between the Inland Revenue Department and the Chamber of Commerce of Halifax on the subject of the inspection fee on Smoked Herrings. (Not printed.) <br> Lamd Goides, N. W. Thrritoribs:-Return to Address ; Showing the names and nationality of all the Government Land Guides in the Province of Manitoba and the North-West Territories, the salary or allowance paid to each, and Statement of all costs and expenses connected with this branch of the Pablic Service. |


| No. 45. | Mounted Polica Supplies:-Return to Order; Advertisements for Tenders for Mounted Police and Indian Supplies, together with all Tenders made in response to said Advertisements. (Not printed.) |
| :---: | :---: |
| No. 46... | Supreme and Exchequer Courts:-Return to Addreas: Statements showing all Judgments rendered by the Supreme and Exchequer Courts since the 1st day of January last, the amount of claim and costs in each suit, and the amount of fees paid to the Registrar in each suit. |
| No. $47 . .$. No. $47{ }^{\text {a }}$. | Laval University :-Return to Address; Correspondence and Memorandum from tha Honorable the Minister of Justice to the Honorable Secretary for the Colonies, concerning the amendment to the Royal Charter granted to Laval University of Quebec, from ${ }^{\text {unnuary; }} 1879$, up to this date. <br> Supplementary Return; Showing,- <br> 1st. The Draft of a proposed new Charter for the Laval University, which Draft was sent to England with the Archbishop and Bishop's patition. <br> 2nd. The repiy of the Colonial Secretary to that Petition, and all other documents connected with the Laval University question. <br> 3rd. The petition and the "Expose de frits" of "l'Ecole de Médecine et de Chirurgie de Montréal," registered in the Honorable Secretary of State's Office during the present month. (Not printed for Sessional Papers.) |
| No. 48... | Thames River:-Return to Order; Reports of Surveys made since last Session of the River Thames, from Chatham to the City of London, with the view to the improvement of the Navigation of that River. (Not printed.) |
| No | Island Railway, B.C. :-Return to Address; Correspondence with the Government of British Golumbia, or with any persons in that Province, respecting the Island Railway. (Not printed.) |
| No. $50 .$. | Wreching, Inland Waters:--Returr to Address; Correspondence between Sir Edward Thornton and the Sec;etary of State for the United States, relative to wrecking and towing in Inland waters. |
| No. 5 | Locomotivgs Purchased:-Return to Order; Showing the number of Locomotives, or other Railway rolling stock, purchased by the Goverament under contract or otherwise during the jear; the places where they were manufactured and purchased, and the prices paid. |
| No. 5 | Trent Valley Canal:-Return to Order; Correspondence between parties in Ohicago and the Department of Publiz Works, or of Railways and Canals, respecting constructing the Trent Valles Canal. (Not printed.) |
| To. | Shrlburna Fisuery Ofyicer:-Return to Order; Return of all fines imposed by the Fishery Officer of the County of Shelburne, upon whom, and for what offence. (Not printed) |
|  | Figheries,'Statistics of :-Return to Order ; Instructions issued by the Department of Marine and Fisheries to their officers, as a guide in the collection of statistics as to the annual production of the Fisheries. (Not printed.) |
|  | Allowances:-Return to Address; Statement of the Number of Judgeships in each Province, at the time of the Union of such Province with Canada, the incumbents of which were eutitled in certain events to retiring allowances; and the number actually receiving such retiring allowances at such time; and a like statement for each year since Confederation. |
| No. 56... | arbrc :-Return to Address ; Correspondence on the subject of the dist:ibution of the judicial work of the Province of Quebec. |
|  | Luard, Major Gexeral :-Return to Address; Correspondence with the Imperial Government in relation to the appointment of Major General Luard as the officer in command of the Militia of Canada. (Not printed.) |
| No. 58. | an Canal :-Return to Order; Engineer's Report on the eost of increasing the water-power of the Williamsburgh Cansi. (Not printed.) |
| No. 59... | Werat, Grimping in Bond:-Return to Address; Oopies of all Orders in Oouncil and Departmental Regulations for the grinding of Wheat in bond in the Dominion of Canadh, since the 14th March, 1879. |
| o. 59a.. | Return to Order: Showing the names of all parties who have imported Wheat for the purpose of grinding in bond; also, Statement of the quantity of Flour exported by each party. |


| No. 60... | Bodwell, E. V.-Return to Address; Correspondence on which was based the Commission issued in the case of Mr. E. Y. Bodwell, then Superintendent of the Welland Canal ; also, for all papers in connection with Mr. Bodwell's transfer to British Columbia. (Not printed.) |
| :---: | :---: |
| No. 61. | Gran Rates viâ Halifax:-Return to Order; Correspondence relating to rates of freight for Grain to England viâ Halifax, or touching in any way the question of the transportation of Grain, etc, over the Iutercolonial Railway and by steamship from the Port of Halifax to Great Britain. |
| No. | Supplementary Return to Order; Correspondence between the Department of Railways and Canals and the owners of steamships, relating to rates of freight for Grain to England via Halifax. |
| No. 62. | Bridg Iron.-Return to Order; Shewing the quantity and value of Bridge Iron and Iron Bridges entered for duty from the United States, with the duty collected thereon from 1st day of January, 1875, to 15th December, 1880, and shewing all the cases in which any seizure had been made for under valuation. (Not printed.) |
| 63 | Drawbacks on Goods.-Return to Order; Of all claims presented for drawbacks on Goods manufactured for export since 14th March, 1879, showing the names of all applicants, etc., and the articles on which the drawback was claimed. (Not printed.) |
|  | Cobtoms Appraisals or Goods:-Return to Order ; Instructions as to the appraisement of goods sent to Otticera of the Customs, and all regulations made under Sec. 10, cap. 15, 42 Vic., in regard to appraisals. (Not +rinted.) |
| No. 65... | Penitentiariss :-Report of the Minister of Justice, as to Penitentiaries in Canada, for the year ending 30th June, 1880. |
| No. 66... | Chasybds: :-Message; Correspondence on the subject of the gratuitous transfer from the Imperial to the Canadian Government of Her Majesty's Steam Corvette Charybdis for training school purposes. |
|  | Sarmia and Windsor:-Return to Order ; Number of persons who have passed from Canada into the United States by way of Sarnia and Windsor since the 1st of January, 1880 ; also, Statement of the number of persons who have within the same period come into Canada from the United States by way of Windsor and Sarnia. (Not printed.) |
|  | and 10 North-Wrst :-Message; $\mathbf{O n}$ the subject of assisted Emigration from Ireland to Manitoba and the North-West, together with a cony of the Despatch from His Excellency the Governor-General transmitting the same. |
| No. $69 .$. | Co-opreative Association:-Return to Address; Correspondence between the Customs Department and the Collector of the Port of Montreal, relating to his connection with the Co-operative Association, together with all Orders and Regulations of the Department, relating to Customs Oflicers in such cases. (Not printed.) |
|  | St. John Railway:-Return to Order; Report of A. L. Light, Esq., Fngineer-in-Chief of the Province of Quebec, relating to the railway from Quebec to Lake St. John, and the Quebec and Laie St. John Railway Company. (Not printed, the Supplementary Return being a corrected copy.) |
|  | plementary Return to Order; Report of A. J. Light, Esq., Engineer-inChief of the Province of Quebec, relating to the railway from Quebec to Lake St. John, and the Quebec and Lake St. John Railway Company. |
|  | fay Acoidint :-Return to Address (Senate); Correspondence having reference to an accident which occurred during the month of August last, between the York and Suffulk Stations of the P. E. I. Railroad. Also, a Return of the number of new sleepers or ties used on the said railway eince the occurrence of the accident referred to, together with cost of same. (Not printed for Sessional Papers.) |
|  | na Stations:-Return to Order ; Correspondence upon the question of establishing life-saving stations upon the inland waters of the Dominion. (Not printed.) |


| No. 73... | Boundaries, Ontario and Qeebec:-Return to Address; Correspondence between the Government of the Uominion and the Imperial Government, on matters relating to the Boundaries of the Provinces of Ontario and Quebec. (Not printed.) |
| :---: | :---: |
| No. 74... | St. Francis River :-Return to Order; Report of the Engineer who, in 1880, conducted the exploratory surveys of the River St. Frances, in the County of Yamaska. (Not printed.) |
| No. 75... | Paris Exhibition:-Returu to Order; Report of the Canadian Commissioners appointed in conneation with the Paris Exhibition. |
| No. 75a.. | Return to Orier; Showing the namea \&c., of all persons appointed by the Dominion Government as Commissioners, \&c., in connection with the Canadian Exhibit at the Paris Exposition, held in the year 1878; also, Statement of all moneys paid for salary of each, and for expenses of living, \& c . |
| No. 76... | Lreland, Relief of :-Return to Address; Correspondence respecting the expenditure of the sum of One hundred thousand dollars, voted by the Canadian Parliament last Session, for the relief of those in Ireland who were threatened by famine. |

No. 77... Baptisms, Marmiages and Burials:-General Statement of, for certain Districts in the Province of Quebec, for the year 1880. (Not printed.)
No. 78.... French Translators :-Return showing the names of all persons employed as permanent and sessional French Translators of the House of Commons, from the 1st January, 1874, to the list February, instant, with the salary or wages to each of them respectively. (Not printed.)
No. 78 a.. Statement showing the names of all persons employed as additional Erench Translators of the House of Commons, translating by page, during the last Session of the Dominion Parliameat. (Not printed.)
No. $784 . . \quad$ Return to Order; Correspondence in relation to the sub-division of the Department or Office of French Translators, with a view to having a special office for the trauslation of the Laws of Canada. (Not printed.)

No. 79... Police Magistrates :-Return to Address; Correspondence relating to the rights of the Provincial Governments to appoint Police Magistrates, Justices of the Peace, and Inspectors of Licences. (Not printed )

No. 80... Receipts and Payuents:-Statement of receipts and payments from the lst to the 10th February, 1881, and from the lst July, 1880, to the 10th February, 1881. (Not printed.)
No. 81... Lower Lightship, Traverse:-Retarn to Order; Correspondence respecting the contract for all the wood furnished to the Department of Marine, for the use of the Lower Lightship in the Traverse, during the past summer, and the price paid for this wood, \&c. (Not printed.)

No. 83... Luard, Major-General:-Return to Address; Correspondence relating to the appointment of Major-General Luard ; together with copies of all complaints in regard to the administration of Militia affairs by the said Luard. (Not printed.)

No. 83... Silver Ore :-Retura to Order ; Return of the number of tons of Silver Ore expoited from Ontario during the past five financial years. (Not printed.)
No. 84... Wreckage in Canadian Waters :-Return to Address; Copies of all the evidence collected in regard to Wreckage in Canadian waters, particularly on the shores of Lakes Erie, Ontario and Huron, and Rivers St. Clair and Detroit, and of the money expended and to whom paid for collecting the same. (Not printed.)
No. 85... Indians, • N.W. Territobies:-Return to Order; Statement| shewing in what parts of the North-West Territories there has been a total failure of the usual supply of the food on which the Indians subsist, and how many Indians in consequence have been dependent upon the Indian Department for the means of subsistence. (Not printed.)
No. 85a.
Return to Order; Correspondence relating to the dismissal of any Indian A gent or other officer connected with the management of Indian affairs in the North-West Territories. (Not printed.)

| No. 856. | Return to Order; Statement showing what progress has been made in surveying Indian Reserves under the Indian Act cf 1880 . (Not printed.) |
| :---: | :---: |
| No. 85 c . | Return to Order; Showing the name and nationality of each of the instructors to the Indians in the Territories of Canada; the salary or allowance paid to each, and a Statement of all expenses connected with the instruction of said Iudians. (Not printed.) |
| No. 86... | Timber Limits, N.W. Teritories :-Return to Address; Return of the several Timber Limits granted to parties in the North-West Territories and Keewatin, and the names of those to whom they were granted. |
| No 87... | Dominion Surveyors:-Return to Order; Statement showing the names of the several Dominion Survevors employed between the year 1873 and the 15th December, 1880, on Surveys of Public Lands elsewhere than in their respective Provinces; their ages, \&c, the amount of their salaries, together with a summary showing, by Provinces and nationalities, the number of Surveyors now working in British Columbia, Manitoba andithe North-West. (Not printed.) |
| No. 88. | Estimates, Dept. Intrrior and Indian Appairs:-Estimate of amounts required for 1881-82 for the Department of the Interior,-and the same for the Department of Indian Affairs. |
| No. 89. | French Shipping Bountins Bill:-Return to Address; Correspondence relating to the French Shipping Bounties Bill, which has passed the Chamber of Deputies, and is now under the consideration of the French Senate. (Not printed.) |
| No. | ck, S. P.:-Correspondence in reference to the unpaid liabilities for labor and materials of S. P. Tuck as contractor for the enlargement of St. Peter's Canal, Cape Breton. (Not printed.) |
| No. 91. | Eeatharnois Canal :-Retura to Order; Statement shewing the date of the appointment of Thomas Brossoit, surnamed Bourguignon, as Paymaster and Collector on the Beauharnois Canal, and the amount of his contingent expenses. (Not printed.) |
| No. 91a. | Return to Order; Copies of all leases granted to any persons for the use of waterpowers, and for certain privileges in relation to the coustruction of wharves or warehouses on the Beauharnois Caual. (Not printed.) |
| No. 916. | Return to Order; Report of H. Parent, Engineer, relative to the change of bridge across the lock on the Beauharnois Canal, at Valleyfield. (Not printed.) |
| No. 91e. | Return to Order; Report of H. Parent, Engineer, relative to the lease of certain land on the north shore of the Beauharnois Canal, at Valleyfield. (Not printed.) |
| No. 91d. | Return to Order; Return of the tolls collected each year on the Beauharnois Canal, since i872, up to the present time. (Not printed.) |
| No. 91e. | Return to Order; Reports made by Antoine Dosithé Danis, as Collector and Paymaster upon the Beauhnrnois Canal, and submitted by him to the Departments of Inland Revenue, Public Works, and of Railways and Canals. (Not printed.) |
| No. 92... | New Carlisle Harbor:-Return to Order; Report of the Engineer who conducted the survey of the Harbor of New Carlisie in 1880. (Not printed.) |
| No. $93 .$. | Rebtigoccae Frary:-Return to Order; Correspondence in relation to the issue of a license to Mr. James Quinn, to keep the Ferry on the River Reatigouche, between Cross Poiut, in the Province of Quebec, and Campbellton, in the Province of New Brunswick. (Not printed.) |
| No. | Montafal Registry Office:-Correspondence since the lat January, 1875, relative to the division of the Montreal Registry Office, and the consequent claim of G. H. tiyland, Esquire, under the arrangement entered into with him by Her Majesty's Lord High Commissioner, on the part of the Imperial Government in the year 1841. (Not printed for Sessional Papers.) |
| No. | Supplementary Return to Address; Correspondence hetween the Imperial, the Dominion and Quebec Governmeats, respectively, since 1st January, 18i5, relative to the division of the Montreal Registry Office, and the consequent clain of G. H. Ryland, Esquire. (Not printed for Sessional Papers.) |

No. 95... | North Shore Mails :-Return to Order; Oorrespondence connected with the letting of the |
| ---: |
| last contract for carrying the North Shore Mails between Little Current |
| and Sault Ste. Marie. (Not printed.) |

No. 96... LeSuedr, Mr.-Return and Supplementary Return to Order; Reports relating to the superannuation of Mr. LeSueur, formerly of the Post Office Department. (Not printed)

No. 97... Doxinion Polioe;-Statement of Expenditure of the Dominion Police during the year 1880, in accordance with the Act 31 Vict., cap. 73, sec. 6. (Not printed.)

No. 98... Health Legislation :-Return to Address; Copies of all Resolutions from Medical Conventions asking for Health Legislation.
No. 99... Fibhing Licenses, Lakiss Huron and Superior:-Return to Order ; Licenses granted for fishing grounds on Lakes Huron and Superior within the past two years. (Not printed.)
No. 99a.. Return to Order ; Correspondence in relation to Licenses granted for fishing grounds, within the past four years, at and in the vicinity of Killarney, in the District of Algoma. (Not printed.)

No. 100.. Shippegan, ${ }_{\text {, N }}$ N.B., Bueakwater :-Return to Order ; Reports of Engineers, or others, respecting the repairs made on the Dam or Breakwater at Shippegan, N.B., in the year 1880. (Not printed.)

No. 101.. Military Colligi Gradtates:-Return to Order; Statement of the names of the Graduates of the Military College holding First and Second Class Certificates obtained in the last Annual Examination; those who have gone into the British Army; those who have been employed by the British Government, and those who have left Canada for the United States. (Not printed.)

Ne. 102.. Capi Tormgnting and Cape Traverge Railways:-Return to Order; Correspondence during the past two years in reference to building lines of Railway from the Intercoloniml Railway to Cape Tormentine, in Westmoreland County, and from Cape Traverse, in Prince Edward Island, to the Prince Edward Island Railway. (Nct printed.)
No. 103. Census :-Return to Order; Statement as to the number of persons counted during the last Census, though absent from the place in which they were counted; distinguishing by Provinces, and also between those said to be absent; a Statement of the means, if any, to be taken during the next Census, to secure the suggested information. (Not printed.)
No. $103 a \quad$ Return to Order; List of the names of persons appointed to take the next Census, giving the office held by each, and the District for which he is appointed. (Not printed.)

No. $103 b$
Return to Order; Copies of all written instructions and forms prepared for the use of any of the officers engaged in taking the Census of 1871, and the like information in connection With the Census for 1881. (Not printed.)
No, 104.. Halifax Commission :-Return to Address; Correspondence between His Excellency and Prof. Henry Y. Hind, in refereuce to alleged inaccurate Statistics, submitted to the "Halifax Commission," appointed under the Washington Trealy. (Not printed.)
No. $104 a$
Correspondence respecting the alleged falsification of some of the Statistics sabmitted, as part of the English case, to the Fishery Commission which sat at $\mathrm{H}_{\text {rlifux }}$ in 1877 ; also, Report by the Commissioner of Fisheries, with reference to such alleged falsification, (Not printed.)
No. $105 .{ }^{.}$N. W. Terbitobieg, Nrw Names :-Return to Order; Correspondence relating to the substitution of new names for anctent and historic ones, in the North-West Territories, more especially along the route of the Pacific Railway. (Not printed.)

No. 106. Squattrrs, Pont Prles Reef:-Return to Order; Correspondence respecting the rights of Squatters on the Naval Reserve on Puint Pelee Reef, in the County of Essex. (Not printed.)
No. 107. Advertibimg and Subscriptions:-Return to Order ; Monthly Statement of the amount expended during the years 1878 and 1879, in advertising on behalf of the Governmeut. (Not printel.)

| No. 108. | Eager, J. B :-Return to Order ; Statement of the amounts which have been paid to J. B. Eager, late Clerk in the Hamilton Post Office, since the date of his superannuation; also, correspondence in reference to the cause of the said Superannuation. (Not printed.) |
| :---: | :---: |
| No. 109. | Immigrants, Manitoba :-Return to Order ; Statement of the number of immigrants who have gone into Manitoba and the North-West Territuries for the year ending October 31st, 1880 ; the number who have purchased lands; the number who have taken homesteads and pre-emption rights, and the number of acres sold. (Not printed.) |
| No. 110. | Travelling Expenses:-Return to Order ; Showing the expenses incurred by the several Members of the Government, and other persons sent to England, or elsewhere, on behalf of the Government, from the 1st day of November, 1878, to date. |
| No. 110a | Return to Order; Return of expenses incurred by Members of the Government, and other persons sent to England, or elsewhere, on behalf of the Government, from the lst January, 1874, to lst Uctober, 1878. |
| No. 111. | Hddson's Bay Co., Sums Paid To:-Return to Order; Statement of all amounts paid the Hudson's Bay Company by the rarious Departments, since the transfer of their Territory to Canada. (Not printed.) |
| No.111a | Return to Address; Correspondence with the Hudson's Bay Company with reference to the South-east quarter and the North half of Section 7, Township 17, Range 20, West of the 1st principal Meridian, and for all Papers, \&c., respecting the granting of the said land to the Company. (Not printed.) |
| No. 1116 | Return to Address; Communications to the Government since the last Session of Parliament, on the subject of the navigation of Hudson Bay. (Not printed.) |
|  | Cabtle $G_{\text {arden, }}$ Qubbec:-Return to Order; Papers in support of the claim of Henry A. P. Holland, to the Castle Garden property, Quebec. (Not printed.) |
|  | CONTENTS |
| No. 113. | Cifil Servior Comarbsion:-Report of the Civil Service Commission, and Appendix, with the Evidence in full. |
| No. 114 |  |
| No. 115. | $\begin{aligned} & \text { Post Offics, Montraal, Boxss :-Return to Order; Statement showing the number of Boxes, } \\ & \text { Drawers and Pigeon-holes in the Montreal Post office; the number let } \\ & \text { before the rent was raised, and the number of those not let, since the } \\ & \text { rent was so raised. (Not printed.) } \end{aligned}$ |
| No. 116. | Wiartoa Harbor :-Return to Order ; Report of the Engineer who made a survey of Wiarton Harbor. (Not printed.) |
| No. 117. | Ricr and Powder, b.C.:-Return to Order; Return of all duties coliected on Rice and Powder imported into ihe Province of British Columbia during the last fiscal year. (Not printed.) |
| No. 118. | Ooal Imported:-Return to Order; Return showing the quantity of Coal imported into the Dominion from 30th June last, and the duty collected thereon. (Not printed.) |
| No. 119. | A, Lake of:-Return to Order; Reports made since last Session upon the present water level of Lake Manitoba, and the estimated cost of lowering the same. (Not printed.) |
| $N$ | Opyidal Debatrs, Hodss of Commons:-Statement of the actual cost in each year, for the last four years, of the Official Debates, with a Statement of the moneys paid in each year for this service. (Not printed.) |

No. 121.. St. Vincent de Padl Penitentiary:-Return to Address; Correspondence respecting the management and administration of the St. Vincent de Paul Penitentiary, since the lst January, 1880. (Not printed.)

No. 122..|Point St. Pierre les Becquets :-Return to Order; Documents relating to improvements to be made on the Shoals of the St. Lawrence, off Point St. Pierre les Becquets, and of the Reports of the Government Engineers in relation to the said Works. (Not printed.)
No. 123.. Britigh Canadian Intestment Company:-Statement of Affairs, and List of Shareholders of the British Canadian Loan and Inrestment Company (Limited), on the 31st December, 1879, in compliance with the Act 43 Vict, cap. 43. (Not printed.)

No. 124.. Chaudiere Railifay Bridge:-Return to Order; Statement showing the value for Duty at which the Iron for the construction of the Chaudiere Railway Bridge was entered, the addition made to said value by the Appraiser or Collector at the Port of Ottawa, the names of the Merchant Appraisers appointed under Sec. 45, cap. 10, 40th Vict., to whom the final appraisement was referred. (This return also covers the Return to Order of 20th December last; for correspondence relative to the seizure or appraisement of the Bridge Iron for the Chaudière Raitway Bridge, and the results of such appraisements, if any.)

No. 125. Window Shade Cloth:-Return to Order; showing the number of yards of Oll-finished Window Shade Cloth imported into Canada daring the last twelve months, and the total value of the same. (Not printed.)

No. 126. Post Offics, Prescott :-Return to Address; Correspondence connected with the remoral of the l'ost Office in Prescott to the Town Hall. (Not printed.)

No. 127. Cascompec Harbour:-Return to Order; Engineer's Report of Survey made at Cascumpec Harbour, Prince County, Prince Edward Island, during the summer of 1880, with a view to improving said Harbour.

No. 228. Vanklek Hill, Postmaster:-Return to Order; Correspondence in relation to the dismissal of Duncan McDonell, late Postmaster of Vankleek Hiil, in the County of Prescott; and correspondence with one McLaurin, the present Postmaster of Vankleek Hill, respecting his appointment to the said office. (Not printed.)
No. 129.. Yamaska River :-Return to Order; Report of the Engineer who, in 1880, conducted the Exploratory Surveys of the River Famaska, from its mouth up to La Belle Pointe, in the Counties of Bagot and St. Hyacinthe. (Not printed.)
No. 130.. Laks Erie, Surreys:-Keturn to Order; Reports of Surveys for Harbors made by the late John Lindsay, Esq., C.E., on the North Shore of Lake Erie, between Point Pelée Reef aud the mouth of the Detroit River. (Not printed.)

No. 131.. Burlington Bay Canal Swing Bridge:-Return to Address; Order in Council regulating the working of the Railway Swing Bridge crossing Jurlington Bay Canal. (Not printed)

No. 132.. Post Office Ordrrs:-Return to Order; Showing the amount of money sent by Post Office Orders to Great Britain and Ireland and the United States, during the past year 1880, and the cost of the same. (Not printed.)

No. 133.. Boston, Winter Port:-Return to Order; Correspondence between the Postmaster General and the owners or agents of the Allan Line of Steamers relative to the selection by them of the Port of Boston, as their terminal Winter Port, or in any way connected therewith. (Not printed.)

No. 134.. Fish-Brefding, Newcastle:-Return to Order; Showing the cost of maintaining the FishBreeding establishment, at, or near Newcastle, Ontario, for the year 1876, and for each year since, including the year 1880. (Not printed)

No. 135.. Post Office, Dominion City:-Return to Order; Evidence taken before the Deputy Postmaster of Winnipeg in the course of the present year, with reference to the grave complaints made against the management of the Post Office at Dominion City; also copy of the Report of the said officer. (This Retarn contains the information required by a similar Order of The House of the 21st February, last.) (Not printed.)

No. 136.. Toronto Harbor :-Return to Order; Report made by Government Enginerrs respecting works in the Harbor of Toronto, since 1st Jakuary, 1880. (Not printed.)

No. 137..Nicolet River:--Return to Order; Correspondence in relation to the deepening of the River Nicolet, and a Garbor Refuge at the entrance of that river. (Not printed).
No. 138..Souris, West, Breakwater :-Return to Order; Correspondence and Report of Engineers in
relation to the construction of a Breakwater and Breastwork at Souris,
West, in King's County, Prince Edward Island. (Not printed.)
No. 139..Esquimalt and Nanatmo Railway:-Return to Order; Reports made by Mr. J. W. Trutch respecting a Railway between Esquimalt and Nanaimo, and between Emory and Burrard Inlet. (Not printed.)
No. 140..Lislois, Joseph C. :-Return to Add ress; Correspondence between the Government and Mr. Joseph Charles Lislois, in relation to the claim made by the latter for the destruction of one of his buildings by fire, and of the Report of the Official Arbitrator. (Not printed.)
No. 141. Better Adminstration of Jostick Act, 1878 :-Return to Address; Correspondence between the Dominion Government and the Provincial Government of British Columbia, and between the Supreme Court Judge of British Columbia and the Local and Dominion Governments, on the "Better Administration of Justice Act, 1878," and the Judicature Act, 1879," both passed by the Local Legislature, together with the official protest of the said Judges against the allowance of those Acts. (Not printed.)
No, 142..Q. M. U. \& O. R., Purchast of:-Return to Address; Correspondence between the Government and the Provincial Government of Quebec, concerning the purchase by the Dominion of Canada, of the Quebec, Montreal, Ottawa and Occidental Railway, or the subsidizing of the same. (Not printed.)
No. 143. Port Hood Wharf:-Return to Order; Corresponderce between the Government and the party in charge of the expenditure and repairs made on the public Wharf at Port Hood, during the last Summer and Fall. (Not printed.)
No. 144..Meaford Harbor:-Return to Order; Statement showing expenditures on Meaford Harbor in years 1879 and 1880, with Reports of Engineers relating thereto, since January, 1879. (Not printed.)
No. 145..Leeds and Grenville, Judgeship :-Return to Address; Oorrespondence on the subject of the County Court Judgeship and Junior Judgeship of Leeds and Grenville. (Not printed.)
No. 146..Union Sosprnsion Bridge, Ottawa River: -Return to Order; Statement showing the Revenue and Expenditare in connection with the Union Suspension Bridge, on the Ottawa River, from 1867, up to 1st January, 1881. (Not printed.)

## ANNUAL REPORT

## OF THE

## DEPARTNENT OF THE INTERIOR

FOR THE

YEAR ENDED 3IST DECEMBER,

## 1880.

fininted by corder of fatiament.


> OTTAWA:

PRINTED BY MACLEAN, ROGEE \& Co., WELLILTGTON STRERIT, 1881.

## TABLE OF CONTENTS.

Pacs
Beport of the Minister of the Interior
PART I.-DOMINION LANDS.
Report of the Surveyor-General. ..... 1
Statement of the Total Number of Acres sold and taken up, from the acquisition of the North- West Territories, \&c., to the 31st October, 1880 ..... 1
Extract from a Report of Exploration, by Prof. John Macoun, M.A., F.L.S. ..... 8
do from Report of W. Ogilvie, D.L.S ..... 40
do do E. Deville, D.L.S ..... 42
do do A. L. Rassell, D.L.S ..... 43
do do J. C. Nelson ..... 44
do do Wm. Pearce, D.L.S ..... 46
do do G. C. Rainboth, D.L.S ..... 48
do do W. F. King, D.T.S ..... 49
do do A. C. Webb, D.L.S ..... 60
do . do M. Aldons, D.L.S ..... 51
do do G. U. Ryley, D.L.S ..... 68
do do W. F, Thompson, D.T.S ..... 58
do do C. J. Miles, D.L.S ..... 69
do do E. Bray, D.L.S ..... 68
Report of Orown Timber Agent ..... 60
Statement showing number of Saw Mills, their Size, Situation, Sawing Oapacity, \&e., in Manitoba, Keewatin and the North-West Territories ..... 68
Ordnance Lands-Statement of Sales during the year. ..... 61
do Statement showing Localities from which Moneys were received ..... 62
do Abstract fron Returns of Monthly Receipts ..... 63
do Showing Unpaid Dues
Examples of Latitude Observations at Station No. 12, by W. F. King, D.T.S ..... 65
Schedule showing the Dominion Land Surveyors employed during the year endiag 31st December, 1880 ..... 72
Apparent Places of Stars for 1881 ..... 74
PART II.-NORTH-WFST MOUNTED POLIOR.
Commissioners Report ..... 3
do Supplementary. ..... 21
APPENDIOES TO THE ABOVE.

1. Report of Superintendent W. D. Jarvis ..... 23
2. do do W. Winder ..... 24
3. do do J. M. Walsh ..... 25
4. do do L. N. F. Crozier ..... 30
5. do do J. Walker ..... 36
6. do W. M. Herchmer ..... 37
7. do Inspector T. B. Steele ..... 42
8. do Surgeon G. A. Kennedy ..... 44
9. do do R. Miller ..... 50

## REPORT

OF TEE

## DEPARTMENT OF THE INTERIOR,

FOR THE

YEAR ENDED 30th JUNE, 1880.

## To His Excellency the Right Honourable Sir John Douglas Sutherland Caypbrle, Marquis of Lorne, Governor General of Canada, \&c., \&cc.

## May if Please Your Excellency, -

I have the honour to submit to Your Excellency the Report of the Department of the Interior, for the year ended 30th June, 1880.

It has been the custom in the past fow years, although this Report is nominally confined to the operations of the statutory fiscal year, that it should include an account of the general business of the Department and its various branches down to a period four months later, and in regard to matters of importance to the close of the calendar year; and that custom has not been departed from in this instance. But so large a proportion of the transactions connected with the survey and settlement of $D_{\text {ominion }}$ Lands, which now form the principal administrative feature of the Department, take place between the first of July and the end of Octeber, that there appears to be neither utility nor convenience in perpetuating the practice; and it may be found expedient that the Report should, in future, be nominally, as it is now in reality, a record of what has been done within the year beginning with the first of November and ending with the 31st of October.

In submitting to Your Excellency the Report of last year, attention was directed to the importance of late years attained by the affairs of the aboriginal population of the Dominion, and the great increase of labour and responsibility devolving upon the permanent officer administering the Department, consequent upon the acceptance by the Aumerous tribes west of Lake Superior of the guardianship and protection of the $G_{\text {overnment, and the almost complete disappearance of their natural sources of food }}$ ${ }^{\text {suppply} \text {. The impossibility was also pointed out of one deputy head exercising over }}$ the Department of the Interior as then constituted the necessary supervision and control. The measure by which it was proposed to overcome this difficulty, and which Was then under the consideration of the House of Commons, received in due time 3- $\mathrm{A}_{\frac{1}{2}}$
the sanction of both branches of the Legislature, and was formally assented to by Your Excellency on the 7th May, 1880, from and after which date the Indian Branch became an independent Sub-Department, and the Deputy Superintendent-General had conferred upon him the standing and authority of a Deputy Minister. The Report of the Indian Department, therefore, appears this year in separate form. With this exception, the branches through which the business of the Department of the Interior is now transacted remain the same as last year, and are as follows:-

Government of the North-West Territories.
Government of the District of Keewatin.
DominioniLands.
GeologicalfiSurvey.
North-West Mounted Polico.
School Lands of Manitoba and the North-West Territory.
The population of Manitoba and the North-West Territories grows apace, as does the area of the public domain taken up by homestead settlers and by that desirable class of purchasers who reside upon and cultivate their lands. The Pembina Mountain, Turtle Mountain, Souris, Little Saskatchewan, Bird Tail Creek, and Prince Albort sections continue to attract the most of the immigration, and so large was the influx in the early portion of last scason that it was found necessary to open new land offices in three of the districts named, that is to say, Turtle Mountain, Bird Tail, and Souris.

The inconvenienco connected with transactions in real property in those portions of the North-West immediately west of the present boundary of Manitoba, and in the neighbourhood of Prince Albert, arising from the necessity of recording the same in the office of the Registrar for the North-West Territories at Battleford, has been the subject of repeated protests to the Department by those affected. The complaints arising out of this condition of things were well founded, and in order to obviate further difficulty it was considered expedient to give effect to the 64th section of the North-West Territories Act, 1880. Accordingly, on the 25th November last, an Order-in-Council was passed erecting the Turtle Mountain, Little Saskatchewan, 'Touchwood Hills, and Prince Albert sections into Registration Districts, and since that time gentlemen have been appointed to act as Registrars therein, as follows, that is to say: For the Turtle Mountain District, Mr. Martin McDonald; for the Little Saskatchewan District, Mr. E. A. Brisebois; and for the Prince Albert District, Mr. A. Sproat.

Urgent representations have been made by the Legislature of Manitoba to the effect that the area of the Province is too circumscribed, and that it would be in the public interest that the same should be extended. The residents of the popalous
settlements adjoining the Province on the west, have also on various occasions expressed a desire for annexation. It has, therefore, been considered expedient to take steps to enlarge the boundaries, and a BIll desifned to give effect to this proposal is at present before Parliament. The new boundaries, as contemplated by the provisions of that measure, will extend westerly of Winnipeg 189 miles, including the settlements referred to, northerly $26 \pm$ miles from the International boundary, and easterly to the western limit of the Province of Ontario, w'erever that may be.

## NORTH-WEST TERRITORIES.

At the suggestion of His Honour the Lieutenant-Governor of the North-West, an Order in Council was passed on the 7th April last, authorizing the erection, in accordance with the provisions in that behalf of the North-West Territories Act, of three Electoral Districts-one consisting of what is known as the Prince Albert Settlement, and two in the section of the territories adjoining the Province of Manitoba on the west-with a view to the election of three gentlemen to represent the same in the North-West Council. On the 13th November, His Honour issued a proclamation setting apart the several districts, defining their boundaries, and ordering elections to be held. The portions of the proclamation having reference to the districts adjoining Manitoba will of course be inoperative when the proposed extension of the limits of that Province comes into force.

His Honour reports that he did not summon the usual meeting of his Council last. autumn, on account of some doubts he entertained as to the legislative powers whioh that bedy might possess by virtue of the Order in Council of the 11th May, 1877, passed under an Act which was superseded last year by that now in force.

Your Excellency will be pleased to learn that the White and Half-breed population. of the Territories have throughout the past season enjoyed complete immunity from contagious and epidemic diseases, that their crops have been good, that commerce has been brisk, and that altogether they have experienced during the year the inestimable advantages of peace, confidence and prosperity.

On the urgent representations of His Honour the Lieutenant-Governor an Order in Council was passed on the 4th November last, granting a sum not exceeding $\$ 4,000$, out of the appropriation for the current year for the Government of the North-West, as aid in behalf of schools in the Territories. , So far the expense of paying teachers, building school-houses, etc., had been borne entirely by the settlers, Who had established schools at various points from the Manitoba boundary as far West as Edmonton. The request for aid to the struggling settlements was reasonable; and until sales of school lands can be made to advantage, assistance can only be rendered from the appropriation voted annually by Parliament. The principle on which it was decided to distribute the amount set aside for the purpose
in this instance was this: That in the case of any and every school in the Territories in which the minimum daily attendance is not less than fifteen pupils, one half of the teacher's salary is to be paid by the Government; and a small amount is set aside in each case, in the discretion of the Lieutenant-Governor and Council, to aid in the construction and furnishing of suhool-houses.

## REFUGEE SIOUX.

Of the United States Indians who took refuge in Canada from United States troops some fonr years ago, a large proportion have surrendered themselves to the authorities of their own country ; and of the remnant-said not to exceed one hundred lodges... who still remain under the leadership of Sitting Bull, and frequent more or less the portion of our territory, in the vicinity of Wood Mountain, there is reason to believe that all, or nearly all, will have done likewise before the close of the present season.

## DOMINION I_ANDS.

As will be obselved, the Surveyor-General reports a seeming diminution in the transactions in Dominion Lands during the past twelve months, as compared with the previous corresponding period. There does not appear, however, to have been any actual falling off, and there has certainly been a practical increase in the number of settlers over any year in the history of the country. An unusally extensive area of lands not yet surveyed, or, if surveyed, not set out for settlement as required by law, has been squatted upon. This practice has always been discountenanced by the Department, as being attended by obrious inconvenience in administration, and with the risk to the settlers that they may ultimately be found to have taken up School Lands or those which by the operation of the Dominion Lands Act fall to the Hudson's Bay Company. Those squatters, however, are not as a rule speculators, but in the majority of instances prove industrious and valuable cultivators of the soil, and as such are entitled to receive every protection consistent with the public interest, when the lands on which they have squatted come into the market.

This tendency to settle in adsance of survey is not new, but was developed in an unusual degree last year in consequence of the rapid progress westward of the Canadian Pacific Railway, and the prospect of the early construction of the Manitoba South-Western, in the neughbourhood of the assumed line of both of which the bulk of the squatters are to be found. The fact of the existence of deposits of lignite in the valley of the Souris River, the extent and value of which were, to some extent, established by the Director of the Geological Survey during the past season, has also had a powerful attractive influence upon the direction of the stream of immigration.

The title in the lands in proximity to the district offices situated at Emerson, Winnipeg, and Portage la Prairie, having to a large extent passed from the Crown,
some changes were thereby rendered necessary. The Emerson office was entirely closed up, the remaining business connected with it transferred to the Winnipeg agency, and the Portage office removed to Gladstone, nearer the centre of the section of country to be served by it. It was further thought desirable to establish more direct and rapid communication between the various local agencies and the Depart ment, and the office of chief agent at Winnipeg, through whom the correspondence and general business with the district offices was previously conducted, has accordingly been abolished. The district agents now report to the Department direct, and the disadvantages which might arise from their great distance from the controlling power have been overcome by the appointment of an Inspector, who, in addition to exercising general supervision over the land business of the Department, is empowered to represent the head of the branch in the conduct of investigations and settlements Which might otherwise demand the presence of that officer in person. The system has been found so far, I am informed, to work advantageously.

In consequence of the changes referred te, the Department has been placed in a position to make considerable reductions in the staff of the Winnipeg office, and to send to the new local agencies a set of officers trained for the duties they are called upon to perform in their new positions.

The Winnipeg agency is now, therefore, charged with the business of a local character remaining to be done in the older settlements of the Red River, and also forms a sort of central bureau to which new arrivals naturally gravitate for information and advice. Acting in accordance with the dictates of experience, steps were taken early in the past season to go further than merely supplying immigrants with information and advice, and a number of persons were selected, on account of their knowledge of the country and their experience of the trails and modes of travelling, to act as land guides. The duties of those guides were to assist the intending settlers in reaching their various destinations, to facilitate the selection of lands suitable to their requirements and circumstances, and to aid and direct them in entering into possession of their homesteads. The experiment has been successful, and it is proposed to continue it.

In the course of the summer, Professor John Macoun, of Belleville, under instruc$\mathrm{ti}_{\mathrm{on}}$ from this Department, proceeded to make an exploration of the seetion of country embracing the great Souris Plain and the territory between it and the Cypress Hills, also between the latter and the South Saskatchewan, with a view to ascertain the capacities of those districts for agricultural and pastoral purposes. The result of his enquiries, briefly stated, is to show that what has hitherto been regarded as an arid plain contains much productive land, that the rainfall is sufficient, and that the extreme winter froste, instead of being a drawback to the cultivation of ${ }^{\text {crops, are calculated to contribute to the success of farming operations, the very }}$ gradual evaporation resulting from the thawing of the strong clay subsoil furnishing
a source of constant moisture to the roots of plants all through the early part of the summer. In fact, the portion of the so-called American Desert which extends northerly into Canadian territory, is proved to have no existence as such, for in the very worst parts of the country many tracts of good soil were found, and almost invariably the grass was rich and nutritive, offering excellent facilities for stockraising. There is but one drawback to which Professor Macoun calls attention : the want of wood, for long distances. Lignite, however, underlies all this part of the territories, the outcrops of which will furnish fuel ; and the introduction of railways will enable settlers to obtain lumber supplies. Streams are not plentiful, but there is an abundant supply of water to be found everywhere by digging wells, and at no great depth.

The advantages offered by the North-West for stock-raising are now receiving that attention from capitalists and experienced cattle breeders which they deserve. Already numerous applications, backed up by the most substantial proofs of the bona fides of the applicants, are before the Department, for leases of grazing lands in various sections of the Territories, and the purchase of the property on which to erect the necessary buildings. On the faith of a promise that his enterprise would receive every legitimate encouragement from the Government, one experienced Canadian agriculturist and stock breeder of large capital, the Hon. Senator Cochrane, has gone to Great Britain, with a view to an extensive purchase there of thoroughbred stock as the foundation of a ranch which he proposes establishing in the Bow River region. It is hardly necessary to say how important it is to the future of that country, how intimately connected with the development of its best interests, that this and kindred schemes should be successful, and how much it will contribute to the convenience, profit and prosperity of the settlers in this new land that they should find at once at their very doors the best breeds of cattle from which to stock their farms. To the pioneer farmers of Canada, and to ali who have had any experience of the difficulty of procuring well-bred animals in new settlements, this is a point which will suggest itself as of the utmost possible consequence.

Although it is, of course, an admitted fact that there are large prairie aroas which are but indifferently provided with wood, yet the more the Territories are explored, the more apparent does it become that the timber supply is not so limited as was at one time supposed, that properly husbanded it is sufficient for all practical requirements, that within a reasonable distance of the treeless plains there is plenty of building and fencing timber which can be procured at no very great cost when the means of internal communication have been improved, and that on the north slope of the valley of the Saskatchewan River there are, easily accessible to the lumberer, continuous forests of fir timber, for the manufacture and transportation of the products of which that river and its tributaries afford facilities.

The demand for manufactured timber has increased very greatly in Manitoba and the settled portions of the Territories, and within the past two years a sub-branch of the Dominion Lands Office has been organized, under the supervision of which the forests on the public domain have been protected from the systematic plunder from which they previously suffered, and have become the source of a large and rapidly growing revenue.

## GEOLOGICAL SURVEY.

The premises in Ottawa purchased for the accommodation of the Geological Branch have been placed in a statejof thorough repair, and are ready for the reception of the staff and effects of the Survey and Museum. The work of removal is now in progress, and is expected to be completed about the beginning of May.

The Annual Report of the Director of the Survey will as usual be printed in a separate volume. In the meantime, I have the honour to submit to Your Excellency the following summary of the operations of the Geological Corps in the field during the year. Those operations were prosecated in-

## 1. The North-West Territories.

2. Manitoba-(Hudson's Bay Basin).
3. Quebec, on both sides of the St. Lawrence.
4. New Brunswick.
5. Nova Scotia-(Cape Breton Island).

An examination was also made of the Magdalen Islands by Mr. Richardson.

## THE NORTH-WEST TERRITORIES.

In March it was decided to make an investigation by boring to obtain more precise information respecting the tertiary lignite coal soams of the Souris River Valley, more especially as regards their eastern extension from the known outcrops in the vicinity of the Roche Percee. With this object in view, a contract was entered into with Messrs. McGarvey \& Highman, of Petrolia, Ontario, to make two or more borings in the valley of the Souris River, the aggregate depth not to exceed 800 feet, for the sum of six thousand "dollars, the sites, not more than 25 miles apart, to be selected after careful examination of the ground. This examination was undertaken by the Director, and occupied him from the 13th May to the 30th August. Expenses, \$1,204.30. The boring commenced about seven miles east of the Roche Percee on the 12th July, and finished on Turtle Mountain on the 6th October. Four bores were made as under :-
1 Souris River 295 feet.
2 Moose Mountain Creek ..... 155 '
3 South Antler Creek ..... 150
4 Turtle Mountain ..... 200 '
800 feet.

In No. 1 bore a bed of lignite coal, six feet thick, of good quality, was struck at 273 feat. None was found in the other bores, though it is quite possible it may exist at greater depths.

## british colembia.

No field work was done during the past season in British Columbia, Dr. G. M. Dawson being occupied during the early part of the year in working up the results of his Peace River expedition of 1879, and during the Director's absence in the North-West in May, June and July, in attending to correspondence and to the printing of the Annual Report. In August he received leave of absence to attend the meeting of the British Association and to visit the Continent. Returning early in November, he has since been occupied with the printing of his Report on the Peace River explorations, and the preparation of the map to accompany it. This map will embrace all the available information regarding a region of about 130,000 square miles in extent, from the Pacific Ocean to the 112th meridian, and from the 54th to the 57th degree of north latitude. Considerable time has also been devoted to arranging specimens from British Columbia previous to packing them for removal to Ottawa.

## Hudson's bay.

Dr. Robert Bell, with Mr. Cochrane as assistant, and and Messrs Molson and Langford, volunteers, left Montreal early in June, with instructions to continue his exploration of previous seasons in the Hudson's Bay basin, and if practicable to return to Canada by proceeding in the Hudson's Bay Company's ship from Churchill or York factory to London, with a view of making observations on the navigation of the Hudson's Bay and Straits. This, through the kind assistance and facilities afforded by the officers of the Company, Dr. Bell has accomplished. The passager owing fto calms in the straits and head winds on the Atlantic, occupied from the 10th Soptember to the 17th November, or nearly three times the average duration. The three weeks during which the vessel was passing through the Straits afforded good opportunities for observing both shores in many places, as well as the islands. Dr. Bell returned to Montreal on the 14th February, and his report now being prepared will contain full particulars of the season's explorations.
quebec.
In the Province of Quebec, on the north side of the St. Lawrence, explorations were continued by Mr. Vennor in the Counties of Argenteuil, Terrebonne, Montcalm and Joliette, embracing about 900 square miles. A number of details of interest and importance in connection with the distribution of the bands of crystalline lime. stone and the labradorite rocks were ascertained, and in association with the latter, promising deposits of iron ore were discovered at a number of new points, at one of which, near St. Jerome Village, a considerable amount of work has since been done by an American company with a view to its development. Mr. Vennor's exploration occupied from the 2nd June to 27th November ; expenses, \$909.43.

To the east, in the Counties of Berthier, Maskinonge and St. Maurice, a large area, 1,600 to 1,700 square miles, was examined by Mr. Ord and Mr. McConnell; 350 miles of road, not shown on any existing plans, were measured by pacing. The Matawin River was examined in canoe from the Township of Brassard to the St. Maurice, also its tributaries from the north and north-east, Rivers des Milien, au Lac Claire and à la Chieme, as woll as some of the lakes forming the head waters of Rivière du Loup. The greater portion of this area is occupied by almost flat-lying laurentian gneiss, forming a summit of an anticlinal axis. One bund of limestone, supposed to represent the lowest on the west side of the anticlinal, was found on the St. Maurice with an easterly dip, and it seems probable that the higher bands which occur to the westward may jet be discovered east of the St. Maurico River, together with some of the valuable mineral deposits with which they are usually associated. The explorations of Messrs. Ord and McConnell occupied from the 6 th June to the 26th September; expenses, \$728.35.

On the south side of the St. Lawrence, Mr. Webster has made explorations over a large area, about 3,000 square miles, extending from Lake Memphremagog northward and northeastward along the New Hampshire and Maine boundarios. The whole of this region is auriferous, and no examination had hitherto been made of a large part of it. It seemed very desirable to ascertain more definitely the probable econornic value of these aurifurous deposits, also to determine the extent of the grani:ic areas, their relation to the adjacent strata, and the influence of the granitic intrusions on the auriferous character of the surrounding formations, which correspond in all respects with those of some of the richest of the Australian gold fields.

NEW BRUNSWICK.
The work in New Brunswick was continued in the north-east, in the Counties of Northumberland, Gloucester and Restigouche, by Mr. Ells, and south of the River St. John, in the Counties of York and Carleton, by Mr. Broal, who also connected bis work with that of Mr. Ells by a surrey of the road, about 100 miles, trom Frodericton
to Newcastle. Altogether more than 400 miles of roads were surveyed during the season by odometer and chain; about 950 miles of the courses of the south-west Miramichi, the Nipsigust, the [Jpsalquitch and the Restigeuche Rivers and their tributaries, by canoe; and numerous traverses made through the woods to examine and define the limits of the several geological formations. Mr. Ells' exploration occupied from the 3rd May to the 13th November, including journey to New Brunswick and return; expenses, $\$ 926.74$. Mr. Broad's exploration occupied from the 3rd May to the 25 th November ; expenses, $\mathbf{1 5 1 7 . 9 4 .}$

## nova scotia.

In Nova Scotia, Cape Breton Island, the work of the survey under Mr. H. Fletcher comprised further explorations and measurements in the Richmond and Port Hood coal fields, also surveys of roads and brooks between Whycocomagh and Mabou River, and between Cheticamp and St. Amis Harbour. The courses of the Margaree, Middle and St. Amis Rivers were also surveyed. The gold mines of Middle River occur in a series of schistose rocks, which extends far to the northward, and is probably the source of the gold previously discovered by Mr. Campbell in the sands of the Cheticamp River, Jumping Brook and other streams. This formation should therefore be carefully examined and its limits accurately defined, and of even greater importance is the accurate determination of the lines of contact of the carboniferous and pre-canibrian formations, as along these lines all the valuable deposits of iron manganese ores occur, such as those recently discovered at Forks' Lake, on the flank of the Coxheath Hills and at the head of Loch Limond. The season's exploration in Cape Breton occupied from the 4th May to the 25th December; expensen, $\$ 1,259.31$.

## The Annual Report.

Of all the explorations detailed reports will be prepared for publication in the Annual Report of Progress of the Survey. The volume for 1878-79, 375 pages, 8vo., with 29 illustrations and seven maps, has recently been distributed. It is, as usual, published in English and in French. The English edition-3,500 copiescosts $\$ 1.15$ per copy, and the French edition-500 copies-cost $\$ 3.90$ per copy. In connection with the above, the Director desires to call attention to the fact that while the cost of publishing the results of the labours of the Geological Corps and the salaries of the staff are annually increasing, no corresponding increase has been made in the annual appropriation for the work. This not only makes it impossible to respond to the constant appeals from the various Provinces for the services of the Geological Corps, but will soon render a very considerable restriction of the ares of operations necessary.

## PALGEONTOLOGY AND NATURAL HISTORY.

The examination, commenced in 1879, of the fossil plants of the carboniferous formation of Canada in the collection of the survey, has been completed. The species not hithorto determined have been kindly identified by Principal Dawson, and the whole series is now properly named and labelled.

Collections as follows have been examined during the year :-

1. A small series of fluriatile mollusca from the lignite tertiary of the Souris River, collected by the Director.
2. 79 specimens of Cambro-Silurian and Devonian fossils from Red River, Manitoba, and the valleys of the Nelson and Churchill Rivers, collected by Dr. R. Bell, in 1879; a report on these has been prepared and published as a supplement to Dr. Bell's account of his explorations. (See Progress Report, Geological Survey of Canada, 1879-80.)
3. Fifty specimens of fossil fishes, collected by Messrs. R. W. Eils and F. C. Weston, from the Devonian rocks of Scammerac Bay, on the north shore of Baie des Chaleurs.

A paper describing the species in this collection has been published in number 116 of the American Journal of Science, August, 1880. During the months of July, August and part of September, Mr. A. N. Foord made a careful examination of these fish-bearing beds and secured a further collection of 282 specimens. A preliminary examination has been made of these, and some notes on the specimens were read at a meeting of the Natural History Society of Montreal, on the 25th October. Though the actual number of species in the collection is not very large, most of the specimens are of great interest. Since the commencement of October, a great portion of Mr. Whiteaves and Mr. Foord's time has been occupied in sorting and labelling specimens and superintending the packing of the collections, preparatory to their removal to Ottawa.

One hundred and fifty-ive fossils from the Silurian rocks, Clinton and Aragra groups in the vicinity of Hamilton, Ontario, have been presented by Colonel Grant.

Besides those already mentioned, large collections have been made by the exploring parties in the North-West Territories, in Manitoba, in New Brunswick, and in the Province of Quebec. The whole of these, about 1,500 specimens, have been carefully labelled, and most of them have received a preliminary examination.

## THE LABORATORY.

The work carried out in the laboratory of the survey during the past year - comprises :-

1. Analyses of lignite, or browa coals, from the North-West Territories and British Columbia.
2. Analyses of iron, copper and manganese ores.
3. Analysis of a graphitic rock.
4. Gold and silver assays.
5. Miscellaneous examinations, embracing the qualitative analysis of a mineral water, the estimation of micket and cobalt in phyrotite from various localities, \&c., \&c. There are also several analyses and examinations now in hand, but which, it is anticipated, will be shortly completed, and the results there, conjointly with those of the work above referred to, be given in detail in the forthcoming Report of Progress. In addition to the foregoing work a great many miscellaneous examinations have been made of mineral specimens either sent to or left at the Museum for that purpose; a very appreciable amount of time has also been devoted to visitors having minerals for identification, or desirous of acquiring information in regard to the economic importance of others.

## the museum.

The work of Messrs. Weston and Willimott, in the Museum, has consisted largely in preparations for removal, including the packing and cataloguing the contents of upwards of 900 boxes and barrels; 326 of which were removed to Ottawa before the close of navigation in November last.

## THE LIBRARY.

Twenty volumes have been added to the library by purchase, and 152 books, pamphlets and maps have been presented during the year, in return for the publications of the survey, 745 copies of which have been so distributed.

VISITORS.
1,183 names were registered in the visitors' book during the year, being 447 fewer than during the corresponding period in 1879. This falling off is probably dueto the very general impression which has prevailed for some time, that the Museum was already removed to Ottawa.

The staff of the survey is now classified under the Civil Service Act, and consists of :-

1 Chief Officer.
4 First Class.
8 Senior Second Class.
5 Junior Second Class.
2 Third Class.
Mr. James Richardson and Mr. Robert Barlow have retired under the superannuation provisions of the Civil Service Act.

## NORTH-WEST MOUNTED POLICE.

Lieut.-Col. J. F. Macleod. C.M.G., formerly Commissioner of this force, bas been re-appointed a Stipendiary Magistrate for the North-West, and on the 1st November last resumed the duties connected with that position, the district assigned to him being the southern and soath-western section of the Territories, with residence at Fort Macleod. Lieut.Col. A. G. Irvine, an officer of ability and experience, who has for several years been Assistant-Commissioner, has been promoted to the command of the force.

Complaints continue to be made regarding the condition of the police buildings, and the character of the accommodation they afford in their present state of repair. It is most desirable that the barracks should be as comfortable as possible, but it is not deemed expedient to incur any considerabie expenditure upon them at present, nor until the line of the Pacific Railway has been finally determined, as upon that determination will depend the situation of the permanent head-quarters; and it may there be found convenient to abandon a number of the existing posts and construct others elsewhere.

The measures contemplated last year with a view to reduce the cost of maintaining the force have been gradually brought into operation, and a large saving in expenditure will be effected during the present season. The pay of the men has been reduced from 50 cents per diem, for the first year of service, and 75 cents for each of the subsequent four years, to 40 cents and 50 cents respectively; and a corresponding reduction has been made in the pay of the non-commissioned officers. In accordance with the provisions of the Act 42 Vic., chap. 46, the system of granting bounty land warrants at the close of the term of service has been discontinued, in so far as concerns all enlistments subsequent to the 30th June, 1879. It is proposed, however, to establish a scale of long service and good conduct remuneration in addition to the ordinary pay, which will constitute an inducement to desirable men to remain in the force.

There were obvious disadvantages attaching, to the custom of permitting detachments to remain throughout the entire length of service at one post, and during last spring the system was inaugurated of moving them to new stations at least once in two years. It is, of course, understood that the headquarters staff do not come under the operation of this rule.

The most amicable relations continue to exist between the police and the Indians, and manifestations increase of growing confidence and good feeling on the part of the latter. Although partially relieved of the responsibility of making treaty payments since the appointment of agents to take charge of the whole of the bands, the force aill render important services to the Indian Department in the way of furnishing escorts to persons charged with the conveyance of the treaty money, and in assisting the agents during its disbursement.

Every effort is being made to render the life of the members of the force, separated as they are by long distances from the comforts and social advantages of civilization, as enjoyable as may be. Quite a large sum of money has accumulated to the credit of the fines fund, which it is proposed to expend in purchasing books for the men, and furnishing them with the means of recreation and amusement.

The buildings at Fort Macleod are constructed upon an island, which is gradually being washed away, in consequence of which it has been decided to remove the post to the police farm, some thirty miles distant. By this change it is reported a considerable economy will also be effected, particularly in the supply of fuel.

The discovery in the neighborbood of Wood Mountain of a considerable quantity of hard timber, suitable for the manufacture of wagon wheels and other useful purposes, reported last year by Superintendent Walsh, has been fully confirmed.

The sanitary condition of the force continues to be satisfactory.

## SCHOOL LANDS.

So far, no sales of school lands have been made, and the operations of this branch of the Department have been confined to preparatory organization. A large quantity of those lands in the Province of Manitoba and the adjoining territory to the west have now attained a fair average value, and it is proposed during the ensuing season to put them up for sale at public auction in the City of Winnipeg.

> Respectfulls submittod, $$
\text { JOHN A. MACDONALD, }
$$ Minister of the Interior.

Ottawa, 1st March, 1881.

## PART I

## REPORT OF DEPARTMENT OF INTERIOR.

Department of the Interior, Dominion Lands Office, Ottawa, 31st December, 1880.

To the Right Honorable
Sir John a. Macdonald, K.C.B., Minister of the Interior.
Sir,-I have the honor to submit the following Report upon the operations of this Branch of your Department during the twelve months onded the 31st October last; also, where the information might be useful or of interest, upon those of its outside service, to the end of the calendar year.

## DOMINION LANDS.

The following is a summary of the returns from the Agencies in Manitoba and the North-West Territories:-

|  | Entries. | Acres. |
| :---: | :---: | :---: |
| Homesteads.. | 2,074 | 331,840 |
| Preemptions. | 1,004 | 160,640 |
| Sales. | 1,132 | 236,534 |
|  | 4,219 | 779,014 |
| A comparative statement for the last six years would | stand a | follows :- |
| 1875 | Eatries. | Acr |
| 1876. | 807 | 153,535 |
| 1877.................................................. | 2,283 | 400,423 |
| 1878. | 4,065 | 682,591 |
| 1879. | 6,782 | 1,154,072 |
| 1880..... | 4,210 | 779,014 |

It is to be observed that the figures for 1880 do not correctly represent the amount of settlement that has taken place during the year. By far the largest proportion of the immigrants went to the outlying districts, and settled on lands the ${ }^{\text {surveys of which were but in progress. Even where a township is fully surveyed, }}$ until the returns of survey have been made, checked and approved in the Department, and copies of the plans sent out to the local Agent, the latter is not in a position to accord to settlers homestead and preemption entries for which they may have ${ }^{\text {applied. }}$

The diminution in the number of entries is further caused by the suspension of sale of lands in the outlying or new Agencies. This was done principally to protect settlers who had gone out in advance of surveys, and also that it was not deemed ${ }^{2} d$ dvisable to $^{2}$ dispose largely of the Railway lands in advance of the pending arrangements for the construction of the Canadian Pacific Railway.

The number of sales, therefore, represents those traneactions only which took place in the older Agencies where the lands had already been to a great extent setuled upon or sold.


I regret to have to report that, even at this early date, at what is the mere initiation of a system of time sales of Railway lands, there is already experienced difficulty of obtaining punctual payment of instalments due.

The experience of the Department of the steady accumulation of arrears of payment, in the case of similar salos of Ordnance lands, would lead to the inference that, unless the extreme measure is resorted to of prompt cancellation of sale on default of payment of any instalment, this evil is likely to increase.

## GRANT OF LANDS TO HALF-BREED CHILDREN.

In the year, the allotment of these lands for the following parishes was made, thus completing the allotment of the $1,400,000$ acres granted by the Manitoba Act.

St. Boniface.
St. Norbert.
St. Viial.
St. Fraṇçois Xavier.
Baie St. Paul.

## CORRESPONDENCE.

The correspondence for the year embraces:

|  | Letters <br> Received. | Letters Sent. |
| :---: | :---: | :---: |
| Dominion Lands | 7,591 | 9,286 |
| Ordnance Lands. | 631 | 654 |
| ietters patent, leases, assignments, \&c. |  |  |
| Letters Patent and Leases issued, for Dominion " <br> " <br> Ordnance | Lands. Lands. | 1,084 63 |
| Assignments registered, Dominion Lands.. |  | 324 |
| " " Ordnance Lands.. |  | 53 |
| Timber Leases and Licenses, Dominion Lands |  | 1. |
| Timber and Mill returns checked.. |  | 86 |
| Scrip issues. |  | 380 |
| Halt-Breed allotment claims checked |  | 2,731 |
| Scrip claims examined. |  | 529 |
| Claims under Manitola Act examined. |  | 715 |
| Survey returns examined |  | 86 |
| Plans drawn .............. |  | 162 |
| Maps and pamphlets distributed |  | 10,845 |

In this year three new Agencies were established in the North-West Territory, one at each of the following places:

Birtle, in charge of Mr. A. J. Belch, formerly Assiztant Agent at Winnipeg.
The Junction of the Souris and Assinniboine Rivers, in charge of Mr. George Newcomb, formerly Agent at Emerson.

North.West part of Turtle Mountain, in charge of Mr. Gearge F. Newcomb, formerly Timber Inspector and Clerk in the Dominion Lands Oftice at Wimmipeg.

The Lands Office at Emerton was closed early in the spring of 1880, the most of the land in that district having been taken up, and it having been considered more profitable to have the few transactions for the remainder incladed in the business of the Winnipeg Office.

The office at Portage la Prairie was removed to Gladstone, and placed in charge of Mr. Joseph Graham, formerly a clerk in the Winnipes Oftice, there being more land to be disposed of in that part of the land district in question, than in the vicinity of the Portage.

## MANITOBA ACT CLAIMS.

It was deemed important to obtain, by inspection on the ground, such information as circumstances might render possible, respecting the nature of the present occupancy or that affirmed to have existed in the cases of many of the lots in the Settlement Belt claimed under the Manitoba Act or otherwise.

Mr. Lang of this office, and Mr. Goulet of the Winniperg Office, were sent on this service, and examined, during their inspection, 715 land claims in tho parishes of Ste. Agathe and St. Norbert, and in the settlements of the River Sale and Rat River.
'Total issues of scrip up to the 31 st Octobor, 1880 :-

> No. of Claims. Amount.

To Half-br eed heads of families....................... 3,023 . $\$ 483.68000$
$\begin{array}{llll}\text { In commutation of hay and common right......... } & 7.0 & 123,200 & 00 \\ 104,869 & 20\end{array}$
do
grants of land
8
Totals
4,435
\$713,840 20
Amount redeemed, to date, by having been accepted in payment for land.

573,791 55
Balance outstanding.
$\$ 140,04865$

## TIMBER AND MINING LANDS.

During the year, sixty-five applications for timber berths and twenty-three for mineral locations were received.

A twenty-one years' lease and ten yearly licenses, for timijer berths, were granted.

Public attention having been drawn by the reports of the Geological Section of the Boundary Commission Survey, and of other explorers, to the lignite deposits on the River Souris and its branches, several private surveys were made of mining
locationer souris and its branches, several private surveys were made or mining
struat river, and applications, based on these, filed; but under your in-
${ }^{\text {structions, }}$ no action was taken, pending the result of an examination by the Geological Survey, which examination hav, I understand, heen ordered.

Applications for mining rights have also been received for various locations in the Applications for mining rights have also been receivect for various locations in the $\mathrm{D}_{\text {ominion }}$ and the Province of Ontario.

## LAND DRAINAGE.

The Local Government of the Province of Manitaba having applied to the $\mathrm{D}_{\text {ationinion }}$ Government for its co-operation or assistance in a scheme for the reclamation of large areas of Dominion lands in that Province, renderel more or less unfit
for cultivat Cor cultivation by their wetness, au arrangement was made, raitied by Order in preanciousl the 5 th July last, under which, on the effectual drainage of any given area previously unfit for settlement, the Province was to receive a free grant of all the omestead sections included in the drained area.

Schedules were submitted by the Honorable the Minister of Public Works for Manitoba, setting forth the numbers of the sections and townships proposed to be drained. These were sent to the local agents for verification as to the condition of the land, and also as to how it stood in the Dominion Lands books, to ensure that any of the sections that might be found to have been otherwise disposed of, should be excluded.

The Provincial Government at the same time submitted, for the approval of the Government, plans, from actual survey by an Engineer, setting forth the scheme of drainage proposed in each case. These, with the amended schedules of the lands involved, now await the final approval of the Dominion Government.

## LAND GUIDES.

By an Order in Council of the 14th April last, authority was given for the appointment of land guides (not exceeding thirteen) to facilitate settlement of perisons in the Province of Manitoba and the North-West during the season.

These were accordingly appointed into two classes, the first consisting of officers who remained at Winnipeg, or on the frontier at Emerson, to meet immigrants and to aid them in getting to the land district in which they might desire to settle.

This class was placed in charge of Mr. Hayter Reed, as chief guide.
The other class consisted of one or two local guides attached to each of the outlying land offices, who were placed under the direction of the Agent.

The wholo number appointed, of both classes, was ten, including the chief guide.

Both classes rendered valuable sorvice to the incoming settlers, the first by advising them as to what they needed to establish themselves in their prairie homes, and by directing and helping those unaccustomed to transport in a new country in loading and getting onward in their journey; the second by accompanying them to the land districts, and aiding them in the choice and location of their lands, and in obtaining entrics therefor.

It would appear, from the experience of the past season, that the number of these guides could beneficially be increased. I would, at the same time, respectfully represent that those in the first class, i.e., Mr. Reed, and the guides immediately under him are, in reality, immigration officers, and might, therefore, more correctly be placed under the supervision of the Department of Agriculture and Inmigration. It is nut until the immigrant reaches the local guide at the Agency in which he intends to settle that he can be said to have anything to do with Dominion Lands. Furthermore, the local guides being responsible to and under the orders of the land agent, and available to assist him in any work within their capacity in connection with his office, properly belong to the Dominion Lands staff.

Were they retained during the winter, they could render valuable assistance as wood rangers, and enable the office to keep a close check upon irregular cutting and depredation of timber on Dominion lards. The timber in the western prairie region is of special value, and should, therefore, have special protection.

## ORDNANCE LANDS.

The appended schedules, prepared by Mr. Mills, the Accountant, are similar to those which have usually been submitted in previous years. They include :-
A. Statement of sales made during the fiscal year ending the 30th June, 1880.
B. Statement of receipts arranged according to localityd in which the lands are situate.
C. The same statement as the last above, but in more detail, and separated into capital, rental or interest and fees, and indicating where the sums were paid.
D. Statement shewing amounts due remaining unpaid on the 30th June, 1880 ; and also the amounts remaining to be paid to complete the several sales on which they are due.

The amounts for this statement stand as follows:-
Payments in arrear............................................. 8118,973 12
Balances of purchase money not yet due................... 54,982 65
Total payments yet to be made by purchasers or
lessees .................................................. $\$ 173,955 \quad 77$
On this last schedule I would remark that, although the amount of arrears is not diminished as compared with the previous year, the office is being a little more successful in making collections, the receipts for the six months from the lst July to the date of this report being about $\$ 26,000$ as, against about $\$ 18,000$ for the same period last year.

The principal lands remaining to be sold are situated at Kingston and Prescott, in the Province of Ontario; at Montreal, Quebec, St. John, South River, Blairfindie and Sorel, in the Province of Quebec, with some other small quantities, here and there, in both Provinces.

There were no sales made during the year of land appertaining to the estate of the Bank of Upper Canada, which are under the administration of this branch of your Department.

## SURVEYS.

As hitherto usual, the surveys of the year have consisted of the two classes, outline, or governing ones performed under the system ot daily pay and allowance of actual expenditure incurred, and the subdivision surveys, under contract, at rates of so much per mile for certain kinds of work; the rates for the latter having been fixed by competitive tender.

The amount of work done includes 3,418 miles of Standard Meridians and Parallels and township outlines, and 11,220 miles of township subdivision, or, in all, a total of 14,038 miles of line surveyed during the season.

The area completely surveyed into townships, and ready for settlement and sale, Was 4,472,000 acres; whilst an area of about four and a half millions of acres was partially surveyed-that is to say, had the block outlines and a portion of the township outlines laid out in readiness to begin the subdivision work of another year.

Of the area for which subdivision contracts were given, but three-fourths has, so far, been completed. This was partly due to unfavorable woather and bad condition of roads for transport, the season having been an unusually wet one. Another cause was that, through the urgent representation on the part of many of the contractors of their desire and ability to do a large amount of work, they were allottod contracts of an extent that afterwards proved to bo more than they could accomplish in the comparatively short period at their disposal.

Those who had townships partially wooded were enabled to remain during winter, and thus complete their surveys; but where contracts consisted wholly of open prairie it was next to impossible for the contractors to carry on work without pecuniary loss and much risk of inaccuracy. Men exposed on a treeless plain to the rigor of a north-western winter could not be expected to effect surveying operations with either precision or despatch.

A schedule is appended shewing the surveyors employed during the season, and the natare of their survey.

As in every former year, the past season's surveys have afforded information of large additional areas to the known quantity of tirst-class land for purposes of settlement.

Of the townships surveyed in the Souris and Turtle Mountain districts, the reports received are favourable in the extreme. It would appear from these reports and from information received from the engineers exploring for railway lines westWard, that the whole of this country south of the Assinniboine and Qu'Appelle Rivers,
as far west as the so called Missouri Coteau, in longitude $105^{\circ} \mathrm{W}$., may be considered as affording first-class land fur settlement. It is not so well wooded as the districts on the north side of the rivers uentioned, but it is by no means anything like a treeless prairie. More or less wood is met with on the banks of every creek or streamlet, and on the range of hills called Moose Mountains quite a large quantity of timber is found.

Extremely favourable reports of the country traversed have also been received from the townehip outline surveyors in the district north of the Qu'Appelle River, and betweon the Assiuniboine River on the east and the Touchwood Hills on the west. In this latter region more wood and of better quality and dimension than was anticipated, was encountered.

In connection with the fuel supply for this part of tho country, it may be of interest to menion that several barge-loads of lignite from the valuable deposits of that material on the upper waters of the Souris were floated down that stream and the Assinniboine to market at Winnipeg, by parties who had embarked in the enterprise under permission from the Department.

That portion of the special survey which consisted of the establishing of the Sixth Principal Meridian, that of $114^{\circ}$ west longitude from Greenwich. was carried from Edmonton southward to the boundary line at a point about south of Fort Macleod, a distance of 350 miles.

The returns of the survey indicate, along the castern slope of the Rocky Mountains, between tho Bow River and Edmonton, and lying principally on the upper waters of that river, and of the Red Deer River, a beautiful tract of country both for cultivation and for grazing purposes, one in which good rich soil is prevalent, where there is abundance of wood for all purposes of fuel and building, and peculiarly adapted by the richness of its grasses and by the shelter afforded in the river bottoms or in the openings among the mixed wood and prairie glades, for stock-raising farms.

Meetings of the Board of Examiners wero held at Ottawa in November, 1879, and at Ottawa and Winnipeg in May, 1880. The following Provincial Land Surveyors passed, at these, the requisite examinations in the law of Dominion Surveys, and were granted commissions as Dominion Land Surveyors:-

| R. J. Jephson, Ont. | Thos. Kains, Man. |
| :--- | :--- |
| C. G. Sheppard, Que. | C. A. Lett, Ont. |
| J. A. Kirk, Ont. | R. B. Rogers, Ont. |
| A. T. Michaud, Que. | J. F. Garden, Ont. |
| J. H. Ogilvie, Ont. | J. A. Carbert, Ont. |
| John Stewart, Ont. | C. E. Fitton, Ont. |
| J. F. Snow, Ont. | M. J. Butler, Ont. |
| R. B. Miller, Ont. | V. Sankey, Ont. |
| A. F. Cotton, Ont. | G. U. Ryley, Ont. |
| W. N. Small, Ont. | P. W. Jendrum, Ont. |
| J. H. Reiffenstein, Ont. | C. Gosselin, Que. |
| A. C. Talbot, Que. | L. Gosselin, Que. Que. |
| P. C. Talbot, Que. | E. Fafard, Que. |
| R. C. McPhilliju. Man. | P. R. A. Belanger, Que. |

There was one preliminary certificate granted, that to Willis Chipman.
The descriptive reports so far received from block and township outline surveyors are appended; also an interesting report from Professor John Macoun, M.A., F.L.S., of his explorations during the summer of that portion of the Souris River valley within British territory, and of the adjoining region to the west and north.

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



EXTRACT FROM A REPORT OF EXPLORATION BY PROFESSOR JOHN MACOUN, M.A., F.L.S.

## GRAND VALley and west to moose mountain.

The traveller ascending the Assiniboine, finds that after he passes the mouth of the Souris the eroding power of the river ceases; its width sensibly diminishes and its tortuousness increases, while the banks have become so low that from the hurricane deck an extensive view, especially to the south and south-west, can be obtained. Owing to the crookedness of the river the ascent is slowly made, and an intelligent observer does not fail to notice that this is the reason that boats can ascend the river at all, for were the river less crooked, and its waters not thus backed up, no boat could ascend the stream.

The rapid situated about eight miles above the month of the Souris is caused by a ridge of boulders which here croases the river, and which can be seen as a gravel and boulder ridge extending back from the river on both sides. On the south side of the river this line of boulders seems to extend in the direction of the "Hills of Brandon."

The point on the Assiniboine which is now called "The Grand Valley" is well named, as the river banks at this point are low; but some distance back from the river, on both sides, the country rises gradually until the general level of the prairie is attained. The valley lying between these elevations well deserves the name of "Grand," and is certainly destined to be a place of some importance, both as regards its farming capabilities and its prospective railway and actual steamboat traffic. The soil, however, on the south side cannot be called first-class, as it contains much sandand gravel in the ridges back from the river and numerous boulders on its surface. There is none of it, however, that will not be taken up; and wherever the soil is cultivated good crops will be obtained.

The Hills of Brandon lie about eight miles south and contain some wood, the principal of which is poplar of small size. A visit to the hills showed that a series of ridges running east and west lay between them and the valley. A deep but narrow creek ran along the base of the hills and emptied into the Souris. Along this creok were numerous settlers, and all scemed pleased with the location. Soil either a light or dark-colored sandy loam.

Proceeding westward on the trail leading to Fort Ellice the soil is light sandy loam for about three miles, after which a low marshy tract is passed and the soil immediately improves, and for 11 miles the country generally is first-class and comparatively level, but altogether without wood. A patch of sand hills of ahout a square mile in extent is passed on the left containing some wood, consisting of oaks and poplars of small size but fit for fuel. These hills-as all sand hills are-are flanked by marshes, and hence protected from fire by water. From the top of the highest mound an extensive view of the whole region was obtained, which was seen to be nearly level, and at this season quite wet. From this point to Boss Hill Creek, a distance of 15 miles, was through a low marshy plain on the westorn side of which the stream moandered in a bed of grass and sodges. That this was the character of the: country for some distance in the direction of Oak Lake, was evident from the sand hills which lie along the western side of the marishes. Palliser, in speaking of the country on the Souris to the east and south of Oak Lake, refers to sand hills and large marshes through which Snake Creek (the lower part of the Pipestone Creek) flows, and it is quite evident that these sand hills and marshes extend from. the southern bend of the Assiniboine far to the south.

The tract lying between Boss Hill Creek on the south and Siffieur Creek on the north, is generally low and marshy or consists of sand hills, altogether unfit for farming, but eminently suitod for grazing purposes, as in the marshes around the hills immense quantities of hay can be cut, and there is good pasture, wood, and shelter in the hills themselves. Permanent water abounds.

After crossing the last-mentioned creek the land rises gradually and its characterat once changes, and an excellent farming country is entered upon which extedswith very little change to Moose Mountain, a distance of nearly 60 miles. For the whole distance the soil is rich and furtile, having a black sandy or clay loam surfice soil, with th, sub soil varying from gravel, coated with carbonate of lime, in theridges to a light ash-colored clay in the more level parts. All the water seen was good, and no plants indicated alkaline soil or water. It was only after we crossed the 102 nd meridian that the country became marshy, and this continued up to the base of Moose Mountain. Boulders in some abundance were occasionally seen, but never in sufficient quantity to prevent farming.

Pipestone Creek, flowing in a narrow, flat-bottomed jvalley about 190 foct deep, is (June 26 th) a rapid stream about 21 feet wide and 30 inches deep. About five miles to the east of it, bluffs of wood begin to appear and these continuo to the creek, but do not exist beyond it, as the constant fires have swept them all off. Above our crossing the creek valley was filled with very fine wood suited for all purposes, but only poplar of two species, balsam and aspen. Although scarcely a bush of any size is seen on the prairie, yet small poplars of this season's growth are frequently seen where clumps stood in past jears.

## MOOSE MOUNTAIN.

Moose Mountain, as se3n from the prairie, rises with a gentle slope and is flanked by marshes extending some miles to the east. Towards the south two or three rounded points were seen rising to a considerable elevation, but when we reached its base nothing to be called a high hill was seen. Curiously enough, before we reached it we crossed a creek flowing south, and in about a mile another flowing north, the lattor being the smaller. The first was evidently a branch of Moose Mountain Creek, while the other was either the same stream or a branch of Pipestone Creek. On a westerly course we travelled 21 miles along the hills about three miles from the grean timber, and having penetrated the timber noarly four miles, I am safe in stating that there are at least 100 square miles of good timber on these hills; but this, it may be remarked, is nearly all balsam and aspen poplar. Occasionally a few small ash and ash-leaved maple are seen, but these are of no value. There is abundance of water in the hills, nearly one-fourth of the surface being covered by it, but the greater part of it is bad, being in isolated ponds like those seen in the Touchwood Hills. Wherever the ponds are connected and have an outflow they are invariably good, hut no others. could be called so, unless fed directly by springs. The whole country to the north of the continuons wood consists of ridges, ponds, lakelets, and hay marshes, with very little level land, but the soil is always good even on the tops of the ridges which show gravel lying on the surface. Pits were frequently dug and the black loam was never found less than nine inches deep. Often with pabbles on the surface, good soil was found for a depth of 18 inches.

From the top of the highest hill to the north of our camp a very extensive view was obtained of the whole country to the west and north. To the west the viow was bounded only by want of vision, while to the north, numerous bluffs and ridges showed that some of the timber still remained which had been seen by Palliser and Hind 20 years before.
gOURIS PLAIN.
This immense treeless expanse, extending from the Souris River, on the 101st meridian, stretching north-westerly to Moose Jaw Creek in nearly the 106th meridian, was crossed diagonally from Moose Mountain to the confluence of Moose Jaw and Thunder Creeks. For the first few miles the ccuntry was rather broken by occasional ponds of brackish water and ridges containing a large percentage of gravel. As we proceeded westward the country became more level and the soil better, but water scarcer, until we passed on to a perfectly level plain withont bush or mound to break its uniformity. About 6 miles east of the trail leading from Qu'Appelle to Wood Moun-
tains the roil changed to clay, but the level character continued to within a few miles of Moose Jaw Creek.

Numerous pits wore dug into the soil each day, as we proceeded, and its character noted. As we passed west from Moose Mountain, the country became drier, the grass shorter, and the surface soil more difficult to penetrate. We never failed to find tirst-c!ass soil, but about 8 inches of it was almost entirely roots and often very hard and dry, but bencath this at a depth of 2 feet it was quite soft. Roots penetrated to much beyond this depth. Fire passes over the country every year, and last season in many places burned the life se completely out of the roots of the various grasses which have a tendency to grow in clumps, that this year scarcely a blade was soen. Although the grass is short the rainfall is quite sufficient, as there is abundance of good water in ponds, and yet not a shrub exists in the country over six inches bigh. I speak of the region east of the Qu'Appelle trail, which we crossed in lat. $50^{\circ} 08^{\prime}$.

Before crossing the Qu'Appelle trail, the character of the soil changed, and now instead of a black loam surfuce soil of varying dopth, with a light colored clay subsoil it became more homogeneous, and was generally a strong friable clay with scarcely any water on the surface but covered with a crop of tall, richlooking grass, which was romarkably green and fresh. The soil was precisely the same as that I had noted on the great plain south of Battleford last year. For 45 miles we passed over a region which was almost a dead level, and yet so rough, throughout the greater part of it, that our carts wcre nearly shaken to pieces, and patches ot skin were jerked off the necks of the horses by the twisting caused by the hummocks and hollows. By digging pits into the soil we were enabled to find the cause of this roughness. We tound that although the ground appeared hard and dry it was not so, but in reality about 18 inches of the surface was quite soft, and so easily penetrated that almost without an effort a spade could be thrust into it up to the head. Beneath this, however, the clay was very hard and dry. All the spring and summer rain enters the soil quite easily by means of the craoks surrounding each hummock, which are well described by Dr. Robert Bell when speaking of another part of this region-" The clayey ground in this part of the country is rendered 'bummocky' and difficult to travel over by carts, owing to tho fissures produced by drying in former years. These fissures divide the ground into spaces, usually five sided, from one to two yards in width. Tho edyes of the fissures by falling in have gradually converted the intervening spaces into dome-shaped mounds, which are hard and ungielding. These principal hummocks are again divided by minor fissures of more recent date. This kind of surface extends alike over the flat-bottomed hollows and low-swelling hills." The moisture descends almost at once into the soil, by means of these cracks, and owing to the imperviousness of the clay is retained near the surface, or just below where the soil is friable. The winter's frosts expand this moist soil, and instead of these cracks being caused by the sun, they are frost cracks caused by the heaving of the soil. Clay taken out at a depth of 2 feet was generally in little cubes, and it was between the crevices of these that roots penetrated to an unknown depth. With all our exertions, water was only obtained four times in crossing this 45 miles, and yet the whole air was odorous with roses which grow on bushes only a few inches in height. The prevailing grass of the region was a species of wheat grass (Triticum) closely related to the Quick, Quack or Couch grass of Ontario, a grass known to be swoet and nutritious.

To the south-west of this tract bluc hills began to show themselves, but instead of water becoming more plentiful it became scarcer, and with our utmost exertions we could not obtain a drop, so that it was ultimately necessary to deviate from my instructions and procoed to the north. Before I was compelled to do this, however, I left the party encamped at a water pool and went 30 miles to tho south to locate the blue hills seen in that direction. Ten miles over such a country as I have been describing brought us to a croek flowing to the north-west, with banks about ten feet in height, and breadth about twelve feet. The water was very muddy. After crossing it we came upon another creek of pure sparkling water which came from the Coteau and emptied into the fist, a little to the west of our crossing place. Nearly 20 miles
over a perfectly level plain which in places was covered with a profusion of cactus brought us to the base of the Coteau at a point considerably north of tbe Cactus hills. The plain between the creek and the hills was principally Cretaceous clay, and occasional patches of it would he without any vegetation, except that peculiar to arid soil. The ravines along the Coteau were filled with wood of small size. Ash, elm, maple and poplar were the prominent species, but numerous shrubs were likewise sean. Along the creeks willow clumps were common but no trees.

The lift from the plain to the top of the hills was aboul 400 feot, and seemed to be the "ruins of an escarpment," as the whole face consisted of a series of slides with thestrata tilted at various angles. The phain crossed south of the creek, appeared to be juincipally composed of the washiugs of the escarpment, and was nearly level with a very slight dip towards the cleek.

## Moose Jaw Crefk to Old Wives Lakes.

Moose Jaw Creek was reachod about eight miles east of its confluence with Thunder Creek, and here it takes a great bend to the east. An examination of the country to the south showed that the creck seen near the base of the Coteau was none other than the Mooso Jaw. Where we reached the creek the sides of the valley were 140 fect high, the upper 40 feet on bo $h$ sides being thickly strewn with boulders. Its breadth was only 16 feet, with about four inches of flowing water. Small clamps of maple and ash were obsorved in the valley but no poplar.

For the last 20 miles east of the creek the country was very dry, and showed signs of drought, but the soil was rich and the grass tall. At our crossing place the creek flowed from the south east, but a sbort distance lower down it turned almost due east and then north until it emptied in to the Qu'Appelle.

West of the creek the country changed at once, and four miles south of our crossing passed into sand hills which extonded as low mounds from that point westward and northward.

For 30 iniles west from the creck the country was cery dry, and frequently sand and gravel hills were seen, with occonional patches of cactus where the soil was sandy, but much good soil covered with rich grass was alvo passed. To the south of our line of travel the country was more billy than to the north of us.

As we ncared the base of the Coteau alkaline plants became common. and small brackish lakes frequent, these being the usual appearances of the approach to the third prairie stepne, or Coteau. At every point where I have touched the Coteau I have noticed saline soil which bas evidently been furmed from tho wasting away of the face of the hills.

A journey of 28 miles through a broken, hilly country brought us to the head of Old Wis es Lakes which lie in a depression between the hills. The head of the northern lake is a scries of detached alkaline ponds with white mud margins and very brackish water. The waters of the lake are quite clear but very salt, yet, strange to say, environed by the before-mentioned salc pools, a spring of excellent water was found not 100 yards from the bead of the lake. The lake itself is quite shallow tor a long distance out, and the eastern side for many miles is much indented by points and bays. The western side is less broken, and is backed by higher hills than thoze which rise to the east. The 28 miles of broken country passed through before reaching the lako is well suited for pasturage as there is abundance of water both fresh and brackish in the hills, and the soil is of varying character, sand or gravel presailing.

## Old Wifes Lakes to Cfpress Hills.

Passing wost from Old Wives Lakes the hills change their character and run in parallel ranges from north-east to south-west, with abundance of good, pure water in ponds, and occasional stream valleys direharging southward botween the hills. Clay plains, with occasional swampy lakes, variod the ecenery, but for absut 21 wiles wist
of the lakes very little of the land could be claimed as agricultural, but all is excellent pasture.

In the 50 miles describsd above the leading grasses were all of the most valuable kinds for pasture. They were noted for their value in the following order, Stipa Spartea (wild oats as called in Manitoba) took the lead, as indeed it does on all fairly dry and rich soils from Fort Ellice to the Rucky Mountaing. This grass is preferred at all seasons by horses when travelling on the prairies, except late in July and August, when its seeds are ripe. Aiter the frosts come, horses always seek for this grass, and it is this species that constitutes the principal baffalo grass of the great plains. The other or more southern Buffalo grass (Bouteloux oligostachya), easily known by its curling leaves and peculiar panicles of flowers, was seen in some abundance on the drier knolls, but it is only found in quantity where the soil is inclined to be arid or much further to the south-west. Triticum repens (Couch or Quick grass) is always found where the soil is a strong clay, and wherever it is abundant sand is not to be found. Koeleria cristata and Poa coesia, grasses which have a tendency to grow in bunches, and are hence often classed as "bunch grasses," were comparatively common on the dry hills. These five species may be said to constitute the bulk of the western pastures, 'but more especially the three first mentioned. Artemisia cana (Canadian sage brush) was met with in some abundance on the clay plain, 20 miles west of Old Wives Lakes, and is the same plant as that found by Palliser, nearly in the same longitude, at the Elbow of the South Saskatchewan, and called by him Aretmisia tridentata, or the true American sage brush, which in reality never crosses our boundary east of the Rocky Mountains. This plant is no proof of aridity of climate as it is only found on Cretaceous clay, and wherever that crops out it is sure to be seen. At the prosent time it is growing at the base of the hill on the lett bank of the Assiniboine just opposite the mouth of the Qu'Appelle at Fort Ellice, and as a proof that even the presence of the cactus does not always indicate aridity of climate. I may state that anyone may find cactus growing in the Qu'Appelle Valley just south of where the Carlton road ascends out of it. Here then are the two plants, which former writers cited as proofs of the aridity of the climate of our western plains, found growing in the neighborhood of Fort Ellice, where the rainfall is known to be abundant, because here they find a suitable soil, the first mentioned clay, the latter clay and sand with the suitable amount of alkaline matter.

Twenty-five miles west of Old Wives Lakes is a tine large fresh wator lake, called Bullrush Lako, which is at least eight miles long and five broad. Throe creeks enter it from the north and west, and another discharges its surplus waters from the south end. Clay cliffs over 60 feet high were along the eastern side, and its waters were found to be very deep, even at less than a rod from the shore they were in some places over 16 feet in depth. At the north end of tho lake the trail from the Elbow joins the other comin from Qu'Appelle. Four miles east of the lake good agricultural land was entercd upon which extended all around it. As we rounded the uorth end of the lake a sluggish stream was crossed, and beyond it another with water in it standing in deep pools. These streams come from the north, but about two mile, to the south another and larger stream was found coming from the hills and emptying into the head of the lake. Crossing the plain and a narrow range of hills with a rich, sandy loam surfaco soil, we descended into another valley and here found Surong Current Ureek flowing to the east, but within a short distance turning to the north and entering a range of hills which shuts in the valley on that side. The creek flowed down a ralley from the west and meandered through it, having banks about 10 feet high. Its bed was about 30 yards wide, but there was flowing water over only a part of it. A few willows were seen in its bed, and these were the only bi ush neen in 76 miles, as not a bush exists around any of the lakes spoken of.
'Iurning to the south we ascended hills of considerable altitude, and in the next four days travelled 70 miles by the odometer, 56 of which wore to the south by la itude. We kept on this line until we had gone about four miles south of the trail leading from Old Wives Lakes to East End Post. Changing our course to the northwest we reached the eastern end of the Cypross Hills in about 25 miles. By adopting
this plan, I was enabled to see more of the country and learn more of its characteristics.

Nearly the whole of this tract lying betweon the Cypross Hills and Old Wives Lakes, is covered with an excellent soil, and at times spreads out into wide, slightly undulating plains, covered with tall, rich grass; while at otherx, high rolling hills with deep valleys, having a north-west and south-east direction, are met with. Old Wives Creek receives the drainage of all these hills, but it is only in spring that any flow of water passes over its stony bed. The highest land is always to the north and west, and some of the ridges or narrow plateaux passed over were found even higher than the eastorn end of the Cypress Hills. Occasionally brackish lakes were seen, but water of any description was not abundant, although we never suffered from the want of it. The last $\approx 0$ miles was over a gently undulating plain, with fair soil and but little water. As we approached the Cypross Hills they rose before us bodily from the plain to the height of 400 feet, with the various ravines which penctrated the eastern face of the oscarpment filled with wood. Along their base were the usual alkaline ponds and poor soil, but these were much restricted as Strong Current Creek was found flowing south along the bace of the hills, and after pasring three miles south of our camp it turns boldly to the north, so that before reaching the hills we were compelled to cross it twice in less than two miles. Blue hills shat in the horizon to the north, 25 miles to the south-east lay the high ridges we had left the preceding day, and an interminable plain stretched away to the south, while in our front wero the Cypress Hills themselves.

We pitched our camp on a little meadow. Before us gurgled a small brook, behind us were thick groves of poplar and berry-bearing bushes, and high above us on a bare clay bluff was the burial-place of an Assinniboine. As night settled down on the scene we crowded round our camp fire, and reviewed the route of the last four weeks since we left Moose Mountain, and one and all agreed that none of the land seen was poor pasture and much of it had a good fertile soil well suited for agriculture. Nearly all the water seen was good, but the whole land was literally without wood of any kind. With the exception of a little in the valley of Moose Jaw Creek, not an acre of wood had been scen for a month on our line of travel.

CYPRESS HILLS.
The Cypress Hills may be described as a plateau, or a series of plateaux, extending about 100 miles from east to west. At the castern end they rise abruptly from the plain to the height of 400 feet, but at the north-western extremity they were found 2,000 feet above the plain north of Fort Walsh. At the "Head of the Mountain," the western end of the hills, they are at least 1,500 feet higher than at the castern end. By the readings of my aneroid they fall off from 1,500 to 2,000 feet in less than ten miles, by going north from any point of the western half of the hills. They are at most 25 miles wide at the eastern end, and beyond Fort Walsh get so narrow that often the plateau is little over a mile in width. On the south, instead of abruptly falling off towards the plain, they gradually merge into it, so that it was only by sending a man 15 miles to the nouth that 1 was sure we were on the southern edge of the hills, 30 miles east of Fort Walsh. The aneroid reading over Sunday showing an elevation at their base of 50 feet more than the altitude of their eastern end.

The top of the hills may be characterized as a series of plateaux, gradually becoming more elevated as you proceed westward, and the coulees, or narrow valleys separating these plateaux becoming correspondingly deeper. These latter are the sources of the streams which flow into the Saskatchewan on the one hand, or into the Missouri on the other. It was no uncommon occurrence to find the water flowing in opposite directions less than 100 yards apart in these coulees.

Wood is abundant in all the coulees penetrating the hills on the east, north and west sides, but it was only west of Fort Walsh that it was ever found inside the margin of the plateau itself. On the south, as far as my observation extonded, wood is scarce and it is only in the deeper recesses of the hills that any was to be seen.

Along the castern and northern slopes no wood was met with, except poplar of two species, small birch and a few ash-leaved maple. On the south-eant side, near East End Post, a few couleesi' were seen filled with fine groves of spruce, and amongst theso the usual plunts of the cedar-swamp were abundant. Twelve miles west of the eastern end, we came on a deep coulce with many ramifying oranches in which we found groves of spruce and poplar, and two fine crecks issuing from the western side of the valley, on each side of a marshy tract, less than 100 yards in extent, and flowing in opposite directions. Every few miles transverse valleys are met with, sending their waters in both directions, and these constantly get deeper antil the last one is reached at Fort Walsh, where the depression is 600 feet below the level of the plateau and the stream heads to the north of the central or highest land, and therefore, drains the whole of the higher plateau. Cottonwood, or Six Mile Coulee, further east, and Medicine Couleo, or Creek, the most northern tributary of the Missouri, do the same. Strong Current Croek drains the north-eastern part, and the drainage of the north-western is carried to the Saskatchowan by Maple Creek, a to:rent which carries off the spring floods, but which was wholly without flowing water in August, when we were on it. Twenty-five miles east of Fort Walsh spruce and pine (Pinus contorta) become prominent features, the latter always being found along the upper margin of the valley. West of Fort Walsh and near the "Head of the Mountain" this pine forms groves of many acres in extent and ranging from 4 to 24 inches in diameter, trees from 6 to 12 inches being the most abundant. This is the pine known in British Columbia as black or sugar pine, and is of little value for timber, although it is tall and straight.

Water, issuing from the hill sides, in the form of brooks or springs, is very abundant and of the best quality, but ponds are scarcely over met with on the platean itself. Fish were seen in all the small brooks, but no trout were observed anywhere in the hills. Numerous bones of large fish were seen along the margin of a lake which extends many miles aiong the southern side of the hills, and which is the head of Whito Mud River, a tribulary of the Milk River.

A caretul examination of the flora causes me to conclude that the climate of the Cypress Hills is nowhere suited for tho growth of cerculs, except that of the eastern end for about 20 miles. The best кoil was usually a black or reddish sandy loam, with a mixture of sand or quartzite gravel. Quartzito gravel is a very marked feature in the hills and on the plains extending south from them, and occurs very frequently both to the south and north of Fort Walsh, and also along the secondary slopes on the north side of the hills. All the land where it predominates is useless for agriculture and makes poor pasture as regards quantity, but of excellent quality. The southern plain extending from the hills as fur as seen was very inferior in every sense, but being very much parched at this time (August 8th), may have appeared worse than it really is. This observation only applies to that baving good soil, as that covered with gravel is useless.

The plateau west of Fort Walsh is almost a dead level, with generally a very fine soil, but is so elevated and exposed to cold winds trom every quarter that tho majority of the plants found there were identical with those of the Rocky Mountains, near Morleyville, over 4,000 fect above the sea.

The grasses and other forage plants of the hills were those peculiar to coclness and altitude, but were all highly nutritious and almost identical with those found on the higher plateaux at Morleyville. In all the valleys and on the rich soils of the higher grounds, the grass was tall enough for bay. No bettor summer pasture is to be found in all the wide North-West than exists in these hills, as the grass is always green, water of the best quality always abundant, and shelter from autumnal and winter storms always at hand. Wood in abundance for both house building and fuel, and immense quantities of coal, near East End Post and on Medicine Coulée, at the western end, show that its fature in this respect is provided for. The only drawoack is the fact that owing to the greenness of the grass, when the frost comes, it becomes useless for winter pasture, esen if the snow were not too deop, and no person intending to keep cattle should leave out of his calculations the necessity of procuring
hay for the winter. In the past, buffalo constantly wintered between the Cypress Hills and the South Saskatchewan, but never on the hills themselves, and from this fact, and my own observations while crossing that region, I am under the impression that cattle can winter out here without food being provided for them. There will be no difficulty as regards storms, as many ravines and coulées, with high, expored hills, extend throughout the plains. No wood, however, can be obtained uorth of the base of the hills. The pasturage of this region is identical with that on Bow River, and the climate seems just as dry, and I was informed that it felt the influence of the winter Chinooks to some extent likewise.

While the horses were resting at Fort Walsh, Mr. Jukes and I rode over to Setter's, 30 miles to the north-east, for the purpose of examining that location and seeing the country between it and the Fort.

An ascent of 600 feet trom the Fort brought us to the level of the platcau, and a ride of less than two miles, to the top of "The Gap," a narrow and steep ravine that leads to the plain on the north side of the hills. Down this "Gap" the road to Battleford leads over a tract so thickly covered with quartzite gravel and so narrow, that it was with difficulty our horses were kept on the trail. This descent led to the valley of Six Mile Coulée, where there was a rapid stream flowing to the south through the hills. For a number of miles after crossing the creek, the country was very rough and covered more or less with quartzite gravel. After crossing a branch of Maple Creek, we came more out on the plain, and the laud became more level. Looking back on the hills we had left, they seemed more like the foothills of the Rocky Mountains than the outlines of an isolated group. As we recoded from the hills the country improved, and for the last ten miles the land, though much broken, was not bad. We crossed two branches of Maple Creek on our way. Setter is on a third one, and we were informed that there was another 10 miles further on to the east. The creeks crossed were more spring torrents, as there was no flowing water in any of them, but only occasional pools.

The creek upon which the farm is located has some willow and maple in the bottom, the former being the largest I hase seen in the North-West, a few of them being three feet in diameter. There is no poplar on the creek, and all fence poles have to be brought from the hills. All the land broken up was in the flats along the creek and consisted almost wholly of soil which in my former reports I had pronounced worthless. Had I passed through here last year I would have said that the hills were composed of light or dark-colored sandy loam with numerous boulders and some gravel on the bill tops, and the flats along the creeks of Cretaceous clay and so arid that grass could not form a sward. The flats being covered with Sage brush (Artemisia cana) and Cactus (Opuntia Missouriensis) and everything betokening aridity I would have said that both soil and climate were arid. This was how the country looked when I was there on August 13th, except that part under cultivation.

Setter located the farm in April; set to work and broke up the artemisia and cactus flats, but only got a little sown before a drought set in, which continucd all through June and caused some of the seed to lio in the ground over three weeks, yet I gathered ears of ripe wheat on August 14th, and have been informed since that the greater jart of the crop ripened. When I was there everything was growirg finely but was generally very late, but the problem was solved that the apparently arid lands were only so in appeasance, and that all the land where not covered with sand or gravel would yet "blossom like the rose."

The soil had been broken only to a depth of from two to four inches and the cbange was astonishing. Close to where he had ploughed I could not penetrate the sin-baked clay, but not a yard away where he had done so I could dig to any depth, and on the one hand was luxuriance and life, while on the other the grass, artemisia and cactus gave evidence of, if not death, profound slumber, as vegetation was dried up by the great beat of the last month.

The grain could have been sown any time after the 20 th A pril had the ground been ready, so that next season a better crop is assured. The difference in altitude between Setter's farm and the level of the plateau above Fort Walsh is about 1,700 feet
or very little over 2,000 feet abore the sea. The whole plain lying to the north of this has about the same general elevati n, decreasing to the eastward.

On the 17th August I examined English's farm at the "Head of the Mountain," 21 miles west of Fort Walsh. Here the soil was fur supcrior to that of the other farm, but the altitude was in the neighborhood of 4,000 feet and exposed to chilling winds, although it was well protected by a thick forest of pine on the north and west. I believe that farming at this point will always be a failure, as many of the plants found in this vicinity are sub-alpine and indicate a cool and moist atmospbere. From the progress made by the crop up to the time I saw it I believe that none of it would ripen, and continued farming here would be a waste of time and money. Both the gentlemen referred to seemed to take great interest in their work and were well suited to deal with the Indian character, both being genial and kind-hearted.

Fort Walsh is situated on the left bank of Battle Creek, a small stream which issues from springs and a small lake near the western end of the Cypress Hills. A profound dcpression at least 600 feet deep runs from north-west to south-east through the hills a down this the creek flows. The bottom and sides of the valley are well wooded, except on exposed points where fire has cleared it off. Poplar and the spruce observed at the eistern end till the valley and cover the lower slopes, but the upper parts and the margin of the plateau are covered with more or less pine (Pinus contorta).

A few patches are under cultivation in the valley, and about two miles above the fort the police have a small farm on which they raise various kinds of garden vegetables. Owing to the altitude and exposure, raising cereals will seldom be successful in any part of the valley.

All the hills on both sides of the valley are capped with a heavy coating of quartzite gravel, and beneath this, clay, or in some exposures soft sandstone. Looking into the valley from the highest point on the west side it had more the appearance of a "Notch" in the White or Green Mountains than a simple valley in an isolated group of hills.

Four miles south from the "Head of the Mountain," I examined an exposure of coal which varied from 6 to 15 feet in depth (see Sce. 1.) The same coal was observed on the north side in Medicine Coulee, and was of the same character. Drift coal was likewise found in Battle Creek, near Fort Walsh, and it is reported from the eastern end near East End Post. Varions exposures of sandstone were noted, which will be spoken of in their proper connection.

## COUNTRY NORTH ${ }^{\text {O}}$ OF CYPRESS HILLS.

Desiring to fully carry out my instructions, although warned that I was likely to lose my horses, I pushed north-westward from the "Head of the Monntain," and for a number of days struggled through a very difficult country. A descent of over 1,000 feet in less than two miles brought us into the valley of Medicine Creek, up which we took the carts with difficulty. The hills rose on either hand fully 1,000 feet, and often we had to descend into deep coulees, and as often climb over high hills, but having attained the most western point laid down in my instructions, we cheerfully turned our faces to the east, and in nineteen days after leaving Fort Walsh reached Strong Current Creek, a few miles south of its confluence with the Saskatchewan.

The great plain lying north of the Cypress Hills and south of the Saskatchewan and between the two "Elbows" of that river, has a breadth at its widest part of about 80 miles, and from east to west of 140 miles. West of the trail leading from Fort Walsh to Battleford the country is very broken, rising into high hills either separated by coulees, in which there are dry water-courses, or regular stream valleys, which connect with the main ope that extends east and west. All the streams coming from the hills to the west, send their waters to the Staskatchewan by Maple Creek, a stream at this season with a wide bed but containing very little water. The streams entering the eastern end of the valley collect together and flow north into

Island Lake, through a valley about three miles wide, covered with cactus, artemisia and various saline plants. The soil of the hills and slopes west of the trail is excellent, but occasionally covered with quartzite gravel. That of the valleys is generally a whitish clay which becomes the stickiest of mud when wet. Although the soil is good, owing to the uneven surface little of this land could be called agricultural. All the valleys were covered with good hay grass, but much of that on the bills was very short and stunted.

After crossing the Battleford trail and the cactus plain the character of the soil and country changed at once. The former now contained much sand and at times passed into isolated patches of blown sand without any vegetation whatever upon them. In this sandy country water was very scarce, and one salt lake was met with where the water stank so that the horses would not drink it, although they had been nearly 14 hours without any. This lake was over 10 miles in length, and lay in a depression which connected at its northern end with Island Lake, and seemed to extend out to the base of the Cypress Hills at the south. Around the northern end we passed, and for about 30 miles, travelled over a very dry region with scarcely any good water, and very little of any kind. The soil was unvarying sandy loam-never pure sand-with boulders often on the hill-tops.

As we crossed this tract we had generally a splendid view of the Cypress Hills far to the south, and the land seemed to dip in that direction; many deep coulees and occasionally wide valleys, were passed, all opening to the south, while to the north the land rose higher and became quite hilly, with correspondingly deep valleys, as we approached Gull Lake, a large sheet of water, seemingly at least 12 miles long by 6 in breadth, and evidently the abode of numerous water-towl. The water of this lake was not very good, but more particularly on account of a green confervoid growth than because it contained salt. Skeletons of fish were observed, and one or two dead suckers were picked up on the beach.

Three miles north-east of the lake a group of sand hills were examined which extended for 20 miles to the east of the lake, and which consisted principally of high hills of pure sand, that were constantly changing both shape and position by the action of the winds. Having seen what were apparently a few bushes from a hill-top near the lake, I made an excursion in that direction, and found after walking fire miles that the wood seen was a group of very large Cottonwood (Populus monilifera), surounded by blown sand on every side, and not a blade of grass within half a mile of them. One clump examined contained 23 large trees, all over two feet in diameter, and over 50 feet high. A further examination showed numerous small groves, and in one place a perfect oasis of nearly 700 acres, covered with large trees, brushwood, ponds, and fine meadows. Being completely surrounded by sand hills, no fire ever reached it, and it remains as a testimony against the assertion that this country is too dry to support trees. Not a particle of wood, not a willow bush was found near the lake, while here in the sand was abundance. Numerous ponds of fresh water lay along the base of the sand hills, but not a drop of any description was found on the plain to the south. The northern limit of the hills was not ascertained, but they extended into the northern horizon for at least 20 miles to the east of the lake.

The whole of the country passed through from the Battleford road to 20 miles east of Gull Lake, distance of 40 miles or more, was sandy loam varying from almost pure sand to a rich loam passing into clay, but the grass was generally short, and indicated a dry, warm soil, though not necessarily an arid climate.

After passing the sand hills the country improved and 'vegetation became more luxuriant, and a greater number of eastern species showed in the flora. Proceeding eastward the surface became more level and extensive views to the north were obtained, water became abundant, and the soil contained less sand. Although the country for the next 25 miles was generally componed of rolling hills with their accompanying valleys much of it was well suited for farming purposes as the soil was generally a rich clay loam with a little gravel in both surface and subsoil. Hay grass was very abundant in the hollows, water was plentiful and good, but not a twig was seen in any part between the sand hills and Strong Current Creek, a distance
of 55 miles. This extensive tract may bo classed as first-class pasture or agricultural land, and seemed to extend from the Cypress Hills to the Saskatchewan in a northeasterly direction.

## from strong current creek ${ }^{\text {g }}$ TO the qu'appelle.

As we approached Strong Current Creek the country became more rolling, with many high and steep hills covered with a loamy soil and long rich grass. Three miles from the creek we had an excellent view of the Saskatchewan, about six miles off. The banks were very high and steep, and the creek itself showed precipitous clay banks of the same kind. Many cliffis rose almost perpendicularly to a height of from 100 to 150 feet, but they were invariably clay, as no rock was observed at any point on the creek. We were surprised to find a fine stream from 20 to 30 yards wide with about a foot of water flowing swiftly over a pebbly; bed. Both above and below our crossing for miles the water as a general thing was rapid except where it ran under a clitf, here there was always a pool. All the cliffs were not of the same height, as the creek seemed to be gradually excavating a deeper channel, the valley being irregularly terraced. Years ago considerable wood filled the narrow coulees entering the sides of the valley, but now there is little else except brush and dead trees which will disappear after a few more fires.

For 23 miles after crossing the creek we passed through a rich agricultural region covered with tall grass and having a fine fertile soil. In every direction the surface was gently undulating and extended to the south into the distant horizon, and northward at least to the Saskatchewan. After crossing the plain we entered the low hills of the Coteau and travelled by trail 14 miles through these, but owing to its windings probably not more than 10 in a direct line. The Coteau at this point was just as described near Old Wives Lakes, except that the soil seemed richer and the grass taller.

Descending about 250 feet in less than half a mile we entered on an extensive plain which extended from the margin of the Coteau northward and eastward beyond the bounds of vision. To the south a low range of hills shut in the view but an opening in it showed a plain beyond. The coulées extending into the Coteau from the plain and the upper part of the river bank corresponding in height to the base of the Coteau were filled with wood, but none was found close to the river bed. No change in level was apparent beyond the river, and the broken front of ihe escarpment forming the face of the Coteau was seen to extend to the north with a boundless plain lying at its base. The Saskatchewan could be distinguished only by the "cut banks" seen at intervals where it was eroding the sides of its valley as it wound from side to side and disappeared in the smoky haze far to the north.

After travelling about ten miles to the north we turned east, purposing to keep in that direction until we reached the Qu'Appelle. For at least 35 miles we travelled steadily eastward with a slight tendency to the south before we reached that river, and in the whole distance scarcely ever saw a hill and not once bad soil. As we receded from the Coteau, the land seemed to rise gradually to the north, but there was scarcely any change of level. Camped about 20 miles from the Coteau on a slight elevation-about six feet above the general level-and could see no hills in any direction, except a low mound to the south about five miles off. To this, I went in the morning, and from its top had a very extensive view. In every direction the land was either level or slightly undulating, and to the South, about 10 miles off, the Coteau, was seen stretching to the north-west, until it was lost in the haze. Northward, on the line of the horizon, could be seen the "cut banks" of the Qu'Appelle Valley, and about 15 miles to the east low rounded hills. After reaching the hills spoken of, I ascended the highest, and still the same monotonous plain extended out to the horizon on every side except to the south, where the Coteau was still visible. Before reaching the mounds, we crossed two small streams, which were probably the source of Eye Brow Hill Creek. Still proceeding eastward we reached the Qu'Appelle in another 15 miles, and found that the country, on both sides of the river, maintained the same general level.

Though we travelled over 40 miles from the base of the Coteau, we did uot see a mile of surface unfit for cultivation. The soil, throughout, was generally a good loam with a small intermixture of gravel, but it was never sandy. In ordinary years water must be very scarce on nearly every part of it, but this year there was abundance of rain water in the shallow pools owing to the rainy weather we had experienced for some weeks. Not a shrub more than a foot high was seen from the Coteau until we reached the Qu'Appelle Valley, and only on the west side of it could we obtain any wood.

It is quite evident that the sand hills known to exist at the head of the Qu'Appelle, are very local and extend only a short distance south, as none were discovered by us in that direction; as we turned north out of the valley we did not see those on the east side of it either, so that although there are sand hills on both sides we did not see them.

At the point where we entered the valley, the level of the country is about 200 feet above it, and the valley itself is about a mile in width. The Qu'Appelle here is only a little creek about 10 feet wide with about 8 inches of flowing water. The sides of the valley are fissured by numerous coulées which extend into the plain on both sides, $\mathrm{bn}^{4} \mathrm{it}$ is only on the west that they contain any wood. Ash was the principal wood and only fit for fuel ; scarcely a living tree was seen in the whole valley.

Our course was now due north for 80 miles so as to traverse, the great plain extending northward from the Qu'Appelle, in its greatest length. The soil of this plain was thought to be generally sandy so I resolved to exarnine it every mile for the whole distance. We did not expect to find any wood and but very little water on the journey, so after filling our kegs and piling a week's wood on our carts we started north.

As we ascended out of the valley we found that the upper part of the slope and the outer margin of the plateau were covered with boulders just as we had found them on the southern side. Receding from the river the plain we crossed on Sept. 11th began to assume the appearance of a range of hills, but we knew it was only the undulations rising slightly one over the other and that no hills existed in that direction. This is the Eye Brow Hill Range of Hind's Report. For 16 miles from the river the plateau was almost level with a slight rise to the north. The soil near the river was a light sandy loam with short grass, but this soon changed for the better and the grass became taller.

From the crest of the plateau spoken of above we could see an immense distance to the west and north over a boundless plain. Apparently about 40 miles off Last Mountain rose from the plain standing alone and being a very prominent object on the horizon in the north east. Our course led us along the edge of the plateau and occasionally "cat banks" could be seen in the distance showing the course of Little Arm Creek. All day we travelled over a level prairie covered with good grass and having an excellent soil, but not a drop of water except at the creek. Another day over the same level prairie with Little Arm Creek flowing through it brought us to the margin of a broken hilly country which extended east and west as far as we could see and which we found was 22 miles wide from south to north.

As we proceeded north the soil constantly improved, the grass was always tall, water abundant and good, and this tract, just crossed although rough and much broken by lakelets, ponds, hay-marshes and hills, had a rich soil and was well suited for pasture every where. Near the head of Little Arm Creek clumps of bushes were observed nestling along the margin of some lakelets and showing that if fires could only be stopped, but a few jears would intervene before bushes suitable to shelter stock would grow up.

A descent of 100 feet brought us to a plain which extended far to the north while the hills we had jast left ran almost due east and west. Fifteen miles over the plain brought us to our most northern limit Lat. 52.02. From here our intention was to turn east.

In travelling the 80 miles just described I never observed bad soil. No sandy soil was seen except close to the Qu'Appelle. The greater part of the surface was level or gently rolling, and where it did rise into hills the soil was always good. I
constantly dug into the dry knolls and found excellent soil although pebbles were on the surface and boulders were frequently to be seen. For the first 35 miles water was scarce, but after that it was always plentiful. Brackish water was never seen except once until we descended from the line of hills. After that occasional pools were seen in circular depressions or narrow valleys. For the last 15 miles boulders on the knolls were of constant occurrence and occasionally the country became more rolling and a few willows and small poplars about two years old were seen around the hollows but not large enough to use as fuel.

Turning eastward we travelled for 25 miles over either a level or undulating prairie with aclay loam surface soil having numerous boulders at times scattered over it. The high ground left on Saturday Sept. 11th was seen in the south, but to the north a high undulating country alone was visible with occasional patches of small wood.

We now crossed a stoney tract about 5 miles wide which extended north and south, and afterwards entered on a level sandy plain which extended to Wolverine Creek a distance of 6 miles. This plain showed signs of alkali and was the poorest land we had seen since leaving Strong Current Creek. After getting a supply of wood and communicating with Humbolt so as to fix our longitude. I turned south for the purpose of traversing what is known as the Great Salt Plain. Had the country in the vicinity of Humbolt continued as good as farther south no wood would be found here either but the stoney tract referred to with numerous marshes, ponds and long narrow lakes lying south of the woods stop the fires and save the wood. The soil near the margin of the woods was a dark colored sandy loam containing a very large percentage of silica.

The sandy and alkaline soil vanished as soon as we crossed Wolverine Creek which is here notbing but a series of pools connected by sloughs. Proceeding South we entered upon a very level plain which continued without change except for the better for 30 miles. Many clumps of small poplars of from one to six years growth were passed and occasionally a narrow ridge or roll in the prairie, but nothing like a hill was seen for many miles. Near the centre of this tract we crossed a fine creek 20 feet wide with two feet of flowing water in it, which is probably the discharge of Quill Lakes and is the middle creek that enters the head of Long Lake. The creek merely runs in a slight depression with banks nowhere more that four feet high, margin always quite dry and no signs of alkali. For many miles a higher tract could be ceen to the west with many prominences covered with trees or brushwood, but this disappeared or merged into the high country which lies to the south west and is a continuation of the elevated region described as extending east and west from the head of Little Arm Creek. In the direction of the Touchwood Hills high rolling land could be seen but only occasional patches of wood.

On this whole plain the greater part of the grass was tall enough for hay, water was abundant and always good, the soil invariably a rich sandy or clay loam and no gravel except in the subsoil. The only poor land observed was a narrow strip on each side of Wolverine Creek.

Crossing a small stream flowing nearly west we passed for 6 miles through a very fine country with rich soil, butall the depressions were alkaline and the marsh water generally brackish. The country at this point seemed to be covered on the higher ground with a thin coating of drift, but this in the lower places gave place to Cretaceous clay which here took the form of white mud swamps instead of the hard baked clay flats of the southern prairies where the rainfall was light. Having reached a small creek flowing to the west and seeing Last Mountain lying south-east of us, we changed our course to the south-east before crossing the creek and very soon entered on another part of the plain spoken of above which was much more difficult to cross owing to numerous white mud swamps that lay in our course. Reaching the creek again now flowing in a valley about half a mile wide and crossing it with extreme difficulty, we entered on a fine undulating country of great extent.

The tract described above is the only alkaline soil we saw on the "Great Salt Plain" which certainly is a misnomer as I stated in my report of last year. That an extensive treeless and in some parts waterless plain oxtends west and north-west
from the Touchwood Hills I admit; but I do not admit and am prepared to disprove that an alkaline plain 30 miles wide extends either on the Carlton trail or on any other line west or north-west from the Touchwood Hills. There is undoubtedly a saline depression extending from Quill Lakes to Long Lake, the worst parts of which are largely made up of white mud swamps or brackish marshes, but there are no data to show that it covers 20 per cent. of the area assigned to it.

The country around the flanks of the Touchwood Hills is much broken or undulating and has a good rich soil varying from dark colered clay loam to sandy loam. It is always covered with a certain amount of dark earth and frequently when gravel is seen on the surface none is found by digging. The subsoil is usually a light colored clay loam containing more or less grave land which is generally covered with carbonate of lime. A line of broken country connects the Little Touchwood Hills and Last Mountain and is more or less covered with small poplar copse. Were the country level, no wood could grow, as fires constantly sweep over the level ground without obstruction and destroy all the young wood.

Extendiug from Long Lake on the west to the File Hills and from the Qu'Appelle on the south up into the Touchwood Hills in the north, is a vast undulating plain containing an area of about $\rightleftharpoons, 350$ square miles. This plain has a gentle slope tot the south, is comparatively level, though generally undulating, and contains both wood and good water, though the former principally consists of small poles. The only hills are the group called Last Mountain or Egg Hills to the west near Long Lake. The soil is generally a fine warm loam of first class quality though condemned by the casual observer on account of the gravel seen scattered over its surface.

Long Lake lying to the west is the resort of multitudes of feathered game including ducks, geese, teal, pelican, snipe and plover, all of which breed on islands in the lake or along its borders. White fish in immense quantities are caught every year by the people from the Touchwood Hills Mission, and Mr. Settie the Missionary in charge told me the supply was only limited by their wants.

I left my party when we reached the trail leading from Qu'Appelle to the Mission and found the Missionary getting in his potatoes and other roots. His crops this year were very fine and frost had done them no harm. He showed me over 400 busbels of as fine potatoes as I ever saw, and told me all the Indians had abundance of them. Owing to the broken nature of the surface, farming by white men at this point, would not be profitable, but it seems just the place for Indians. Patches of good arable land interspersed with little lakes and hay marshes were seen everywhere, and from the abundance of feathered game at this time (Oct. 1st) it might be called the huntor's paradise. In three or four days any man with a breechloading shot gun could have supplied himself with bis winter's meat, as all lakes and ponds time were alive with ducks of many species. Indeed, from the middle of August, until the lakes and ponds freeze up for the winter, waten fowl are very plentiful everywhere. Multitudes breed in the country, and about the middle of September, the sea ducks begin to arrive and myriads of them crowd every pond.

A ride of fifteen miles over a very rough trail brought me to Touchwood Post, on the Carlton I'rail. The country betwoen these two points-especially the western part-is very rough and much broken by ponds and lakelets with intervening ridges, but except on the western side near the Mission, nothing to be called a hill was seen. What is generally denominatel the Touchwood Hills by travellers is merely the broken country lying between the Little and Big Touchwood Hills, the one lying to the right of the trail, the other to the left. In the vicinity of the Mission on the Indian Reserve are fine groves of large sized poplar well suited for house building, but excepting this very little but second growth aspen and brush was seen.

I may as well state in this connection that the Touchwood Hills and File Hills as regards altitude can scarcely be regarded as hills at all. They are merely elevated plateaux or more strictly speaking watersheds protected from fire by innumerable ponds and marshes which are scattered every where over their surface and in my estimation can never be first class farming lands though well suited for hay and stock farms. The Big Touchwood Hills extend eastward and merge into the

Beaver Hills and both are merely an elevated tract from which the small streams flowing to the Qu'Appelle on the south or the White Sand River on the north receive their waters. Experience has taught me that wherever trees and brushwood are fousd there to look for a broken country and one that contains too much water, while the open treeless prairie generally condemned to sterility is by far the best farming land.

The land for miles on both sides of the trail between Qu'Appelle and Touchwood Post is well suited for farming, but wood for fuel or rails is scarce and no house timber is to be found anywhere. Approaching the File Hills from the west, about their centre, the land becomes broken into ridges with ponds and hay marshes, and these pass into the File Hills without any change of level ; the only change in the surface is from grass to brush or small trees. The whole distance across the hills is about 8 miles and this consists of sloughs, ponds, lakelets and second growth poplar groves and only in the last half mile on the eastern side was timberof any size seen. The only difference in level between the " hills" and their eastern base is about 40 feet and that is all within a few hundred yards.

The tract between the "hills" and the Qu'Appelle road leading to Pelly is more or less gravelly, but the soil is rich and fertile and crossed by numerous small brooks. Five miles through a rich but mostly undulating country brought us to the Carlton trail, and three miles further east a branch of Cut Arm Creek about 12 feet wide and over a toot in depth. Crossing a small creck twice in less than two miles we reached the main branch of Big Cut Arm Creek flowing to the south. The point where we reached it was a little south of its confluence with the above stream, here it was 18 feet wide with 18 inches of swiftly running water. About 8 miles east we again crossed the steam now considerably larger, and this time flowing north. The stream at our various crossing places was without banks and flowed very little below the general level of the country. 'Tu the north east heavily timbered hills were seen which I presume lie north of Leach Lake.

For 27 miles after we left the File Hills on a course due east no timber fit for any purpose was seen and scarcely any firewood, but to the north, at never more than four miles distance, bluffs of wood were constantly visible. The general slope of the country was southward and in that direction we could generally see to a great distance. We travelled over the northern end of the Great Pheasant Plain and found it much wetter than farther south but easily drained as there was a natural outflow from pond to pond, and as a consequence all the water was good. The country was not very rough but quite moist and almost half covered with meadow and hay marshes. The general character of the soil is a black sandy loam on the surface containing silica, with a light clay subsoil having more or less gravel. From the character of the grasses and herbaceous plants I am led to believe that this region is always quite moist and contains a larger percentage of sand than the prairies west of File Hills.

Owing to the thick brush and marshy ground we were compelled to bear more south and skirting the wood which constantly showed close on our left we proceeded over a rich but wet country until we came within three miles of Big Cut Arm Creek now flowing to the south in a deep narrow valley or coulée. The three miles west of the creek were quite dry and sandy and covered with scattered trees, the remains of the former forest. The sides of the creek valley were at least 100 feet deep and presented quite a contrast to what they were 36 miles to the north west. We had descended however in this distance over 200 feet and had left the plateau where we first saw the creek. Future examination will in all probability show that Leach Lake lies in the head of the creek valley, and there will be no difficulty in carrying the railroad line south along Leach Lake and so on the plateau beyond.

The country to the east of Big Cut Arm Creek was generally a fine undulating plain covered with rich grass, but having a great deal of water on its surface. Two and a half miles after crossing Big Cut Arm Creek we crossed the 102nd meridian, and five miles east of this turned south east and then south, and after crossing Red Deer Creek a number of times reached Spy Hill. After turning to the south ea-t the country became drier and for 8 miles the soil was a sandy loam of considerable depth.

Whole country a fine open plain with little or no brash and absolutely without wood.

As we approached Spy Hill the surface became undulating and interspersed with ponds and marshes that continued until we entered the marshy flat which is the head of Antelope Creek. Red Deer Creek which here turns to the east separates the sandy country lying between the Assiniboine and the Qu'Appelle from the rich country lying farther to the north.

In conclusion, I may state that the appearance of the country passed 1 hrough was altogether different from what I expected, having been led to believe that much of it was little else than desert. Having crossed that part of it north of the Qu'Appelle in the summer of 1879 , I can speak with certainty of the fertility of the immense plain sloping towards that river on both sides.

Taking the Qu'Appelle at its mouth, as a centre and projecting a lino nearly due west to the South Saskatchewan, a distance of over 250 miles, and starting at the meridian of Fort Ellice and including only the land south of the Touchwood Hills a belt with an average breadth of 100 miles extends right up that river. Here, we have 25,000 square miles, or $16,000,000$ acres of land lying in one block that to my own knowledge has over 90 per cent of it fit for agricultural or pastoral purposes. The only poor soil in this extensive tract is that portion between Spy Hill and Fort Ellice and two small groups of sand hills, lying at the sources of the Qu'Appelle. No alkaline soil is known on any part of it, except a narrow tract extending from the head of Long Lake toward Quill Lakes. Numerous small brooks are found on both sides of the river, and where these are not seen, ponds of good water are seldom wanting. There will be no difficulty in obtaining first clase wheat crops throughout the greater part of it, as the soil is generally a rich blark loam, mixed with silica and at times containing more or less gravel. The subsoil in nearly every case is a light colored clay or clay, and gravel coated with carbonate of lime. Nearly the whole of the surface is a gently undulating plain easily drained, and over three fourths of it sloping to the south. The crops at the Qu'Appelle Missien, about the centre of the area ripen earlier than in any other part of the North West; barley having been cut both in 1879 and 1880, during the last week in July. No summer frost has ever been reported from this region, and authentic reports say that the spring is two weeks earlier than at Winnipeg. Forty miles west of the File Hills, wood is no longer found and from that to the Saskatchewan not a bush of any description is seen.

The great plain lying between the Coteau and the Qu'Appelle has been described on another page, but I may state that although water is scarce and wood altogether wanting, the soil of the greater part is very rich.

Tbe Coteau is really the eastern face of the Third Prairie Steppe and has the same characteristics in every part from longitude $103^{\circ} 40^{\prime}$ to Battleford, a distance north westerly of 330 miles. Dr. G. M. Dawson well describes it on page 293 of his report. No better general description can be given, but as it is seen at various points further to the north water and hay grass are more abundant, the soil is richer and contains less stone, and when it passes into the Eagle Hills abundance of wood is met with.

Along the base of the Coteau in every part more or less alkaline ponds are found, and a narrow strip of arid hard baked clay, upon which Cactus and Artemisia predominate stretches out from it.

## Ornithological Notes.

As some attention was paid to the distribution of birds in the section traversed by us it may not be out of place to record our observations.

While encamped at Grand Valley on the Assiniboine numerous birds common in Ontario were observed, such as Meadow Larks, Robins, Blackbirds, Cow Birds, Bob-olinks, Bitterus and numerous finches which were breeding either on the prairie or in the brush along the river. On the prairie the Kill Deer Plover (※gialitis vociferus) was noticed and on the drier upland the "Prairie Plover" or Bartram's

Tatler (Actiturus Bartramius) was occasionally seen. Farther west these birds were quite common, the latter on the prairie and the former along the lakes or ponds throughout the country. One evening in July we pitched our camp close to the nest of a Kill Deer Plover, at this time one little bird was hatched out and the other emerging from the shell. In our presence she assisted the chick out of the shell and as soon as both were able to stand she coaxed them away from the nest and before dark had them safely hidden away in the sedges bordering the pond from which we obtained our water.

On the sand hills at Boss Hill Creek, two fine specimens of the Long Billed Curlew (Nurmenius longirostris) were obtained. One or two others were shot near the Cypress Hills, but it was a very rare bird and seldom seen. In the marshes east of Moose Mountain both the Sand Hill Crane (Grus Canadensis) and the White Crane (Grus Americana) were breeding, together with the Phalaropes (Phalaropus, Wilsoni and hyperboreus). These beautiful and interesting birds were quite numerous near Moose Mountain. The Shoveller or Spoonbill Duck (Spatula ciypeata) the Amorican Widgeon (Mareca Americana) the Green Winged Deal (Nettion Carolinensis) the Blue Winged Deal (Querquedula discors), and the Mallard (Anas Boschas), were breeding in or near the marshes and their eggs occasionally obtained. Skimming over these eastern marshes and occasionally darting down to their surface was beautiful Black Tern (Hydrochelidon plumbea.)

On the great plain west of Moose Mountain few birds were met with, but on the eastern side flocks of the Yellow Headed Blackbird (Xanthocephalus icterocephalus) were seen around ponds, and on the western part near Moose Jaw Creek the rare and interesting White Winged Blackbird (Calamospiza bicolor) was met with. The commonest bird on this prairie was the Chestnut Collared Bunting (Plectrophanes ornatus) although never recognized after this.

In the vicinity of the Coteau we reached a few salt water ponds and here obtained numerous specimens of the beautiful Avocet (Recurvirostra Americana) which was very plentiful around all the salt lakes on the western plains and so fearless that we had no difficulty in shooting all the specimens we desired. On the same pools were the Marbled Godwit (Limesa fedoa) and the Willet or Stone Snipe (Totanus semipalmatus) both large and beautiful birds. Numerous sandpipers and many of the smaller snipe were abundant, and during the months of August and September could have been shot by the hundred as they waded or swam in the various pools or lakes we passed.

After the middle of Aagust we began to shoot ducks, and besides the species mentioned above the Gadwell or Grey Duck (Chaulelasmus streperus) and Red Breasted Merganser (Mergus serriator) bred in numbers on the plains. Coots or Mud Hens (Fulica Americana) and Pied Billed Grebe (Podilymbus podiceps) were in great numbers and afforded fine sport as we had to wade almost up to our neck to obtain our specimens, as they were very difficult to kill owing to their diving power.

After the middle of September, the sea ducks began to arrive and it is no figure of speech to say that the ponds and lakelets were alive with them. For the following six weeks feathered game of every kind were so abundant that any person in a week could have shot enough ducks and geese to have lasted a family all winter. The abundance of water fowl in the interior is of such importance at this time when Indians are being fed by the Government that they should be compelled to lay in a stock of food for themselves during the winter. To see hunters perishing of hunger or living on supplies furnished by the Government, and at the same time surrounded by millions of birds is a paradox, but these men carry rifles and bird shooting to them is a small business after buffalo hunting. Within a day's journey of the Cree Reserve on the north side of the Cypress Hills, is a large lake, named by me Gull Lake, that during the last days of August was literally alive with birds, and when one shot was enough to supply six of us with a dinner yet these Indians were largely depending on the Government rations at this time, and Col. McDonatd could scarcely persuade a few young men to go and kill a few ducks, by liberal offers of powder and shot At the Assiniboine Reserve it was just the same plenty of birds in the neigh-
borhood, but scarcely any attempt made to shoot them as the men proferred Government rations to independence. Rifles to-day are of little value to the plain Indians and they should be required to exchange these for shot guns at an early day.

Geese, ducks and prairie chickens are taking to the stubble fields in the fall so that no difficulty will be found by incoming settiers to lay up a supply of fat fowl for the winter. About forty species of game birds were either shot or seen on the prairie, and it is very probable that many species were not obserred as we were far east of the main migrating lines. All birds shot were fat and soup made from the various species of snipe and plover was considered a great dainty. The value of the bird crop after the railroad is built will be enormous, but the destruction of eggs in the spring by Indian must cease. None but those who reside in the interior or have been there in the autumn can realize the number of birds living or passing through it at that season.

Hawks were numerous and various species were shot both on the prairie and in the river valleys. The sparrow-hawk (Falco sparvarius) was always found in the vicinity of wood and frequented all the stream valleys throughout the country. Along the prairie and over ponds and marshes the Marsh Harrier (Circus Hudsonius) was constantly gliding and frequently paid the death penalty for his inquisitiveness. Many fine specimens of Swainson's Hawk (Buteo Swainsoni) were shot and it was only by obtaining the skins that we were able to decide on the species owing to the dark color of the plumage. This hawk delighted to sail close along the top of the cliffs bordering a stream and pick up any living thing observed. Occasional specimens of the Rough Legged Hawk (Archibuteo lagopus) were obtained, but it was very wary and always soared at a great height. Other species were in more or less abundance, and one young specimen of the Bald Headed Eagle (Haliaetus leucocephalus) was obtained where it was evidently catching snakes at the margin of a lake.

Owls were not common on the prairie and only one species the Short Eared or Marsh Owl (Otus brachyotus) was seen with any degree of frequency. Along the margin of the woods the Greater Horned Owl (Bubo Virginianus) and the Lesser Horned Owl (Scops asio) were occasionally noticed but were apparently rare.

Of the Gull family many fine specimens were obtained at some of the larger lakes. On the 28th August five species were shot on Gull Lake, a large sheet of water north of the Cypress Hills. Franklin's Rosy Gull (Larus Franklinii) was secured in fine plumage and many of the others in various states and different ages, so that in twenty specimens one would be led to believe there were at least ten species.

In the following list the families of the smaller bids especially the Finches, the Wood Warblers, and the Fly Catchers are poorly represented, as many small birds were seen in the early summer of which no specimens were kept as our shot was too heavy and their skins too much torn to be of any use except for identitication.

List of birds shot during the summer of 1880 :-

1. Turdus fuscescens. Stephans. Wilson's Thrush. Ansiniboine to Moose Mountain.
2. Turdus Swainsoni, Cab. Olive Backed Thrush. Moose Mountain, Strong Curent Creek.
3. Turdus migratorius, Linn. American Robin. Common wherever there was wood.
4. Harporhynchus rufus, Cab. Brown Thrush. Strong Current Creek, Rare.
5. Mimus Carolinensis, Gray Cat Bird. Common wherever there were bushes.
6. Sialia arctica, Swains. Rocky Mountain Blue Bird. Eastern end of Cypress Hills.
7. Regulus satrapa, Licht. Golden Crested Wren. Thickets in the Cypress Hills. Rare.
8. Parus septentrionalis, Harris. Long-tailed Chichadee. One specimen shot at the Elbow of South Saskatchewan.
9. Troglodytes Parkmanni, Aud. Western House Wren. Brush, Gyprest Hills.
10. Eremophila alpestris, Boie. Horned Lark. Cypress Hills near Fort Walsh.
11. Helminthophaga celata, Baird. Orange Crowned Warbler, Bushy thickets.
12. Dendroica striata, Baird. Black Poll Warbler, Strong Current Creek.
13. Dendroica aestiva, Baird, Yellow Warbler. Fort Walsh.
14. Hirundo lunifrons, Say Cliff Swallow. Clay cliffs, Bull-rush Lake.
15. Hirundo bicolor, Vieil. White Bellied Swallow. Frequent, in river valleys.
16. Cotyle riparia, Boie. Bank Swallow. Strong Current Creek.
17. Collurio borealis, Vieil. Great Northern Sbrike. Touchwood Hills.
18. Collurio excubitoroides, Baird. White Rumped Shrike. On the open prairie near the Elbow of South Saskatchewan. One specimen.
19. Coturniculus passerinus, Bonap. Yellow Winged Sparrow. Strong current Creek.
20. Zontrichia leucophrys, Swsins. White Crowned Sparrow. Cypress.Hills.
21. Poocœtes gramineus, Baird. Grass Finch. Common on the prairie.
22. Passerculus savanna, Bonap. Savannah Sparrow. Cypress Hills.
23. Plectrophanes nivalis, Meyer. Snow Bunting. Fort Ellice and eastward. October.
24. Plectrophanes ornatus, Towns. Chestnut Collared Bunting. Souris Plain west of Moose Mountain. July.
25. Melospiza melodia, Baird. Song Sparrow. Common near woods or brush.
26. Calamospiza bicolor, Bonap. White Winged Blackbird. From western part of Souris Plain to the Cypress Hills. Rare.
27. Pipilo arcticus, Swains. Ground Robin. Strong Current Creek, Sep. 4th.
28. Dolichonyx oryzivorus, Swains. Bobolink. From Grand Valley to Cypress Hills.
29. Molothrus pecorus, Swains. Cow Bird. Very common and quite tame.

30 Agelœus phœniceus, Vieil. Red Winged Blackbird. Abundant east of Moose Mountain.
31. Xanthocephalus icterocephalus, Baird. Yellow Headed Blackbird. Moose Mountain and eastward.
32. Sturnella magna, Swains. Meadow Lark. Grand Valley and north of Lat. $51^{\circ}$.
33. Sturnella neglecta, Aud. Western Lark. North of Cypress Hills.
34. Icterus Baltimore, Daudin. Baltimore Oriole. Moose Mountain and eastward.
35. Scolecophagus ferrugineus, Swains. Rusty Blackbird. Grand Valley.
36. Scolecophagus cyanocephalus, Cab. Brewer's Blackbird. Moose Mountains.
37. Quiscalus versicolor, Vieil. Crow Blackbird. Very abundant around marshes.
38. Corvus corax, Linn. Barking Crow. Cypress Hills and woods generally.
39. Corvus Americanus, Aud. Common Crow. Woods along the Coteau, July 14th 1880.
40. Pica Hudsonica, Bonap. Magpie. From Strong Current Creek northward to Touchwood Hills.
41. Tyrannus Carolinensis, Baird. King Bird. From Grand Valley westward.
42. Sayornis Sayus, Baird. Say's Fly-catcher. North of Cypress Mills.
43. Empidonax pusillus, Cab. Lesser Fly catcher. Elbow of South Saskatchewan.
44. Myiarchus crinitus, Cab. Great Crested Fly-catcher. Cypress Hills.
45. Ceryle Alcyon, Boic. King-fisher. Observed at Grand Valley.
46. Antrostornus vociferus, Bonap. Whip-poor-will. Grand Valley to Moose Mountain.
47. Chordeiles Virginianus, Bon. Night Hawk. Grand Valley westward.
47. Picus villosus, Linn. Hairy Woodpecker. Pines, Cypress Hills and Touchwood Hills, rare.
49. Colaptes auratus, Swains. High-holder. Abundant wherever there are trees.
50. Bubo Virginianus, Bonap. Great Horned Owl. Touchwood Hills and eastward.
51. Scops asio, Bonap. Mottled Owl. One shot at Birtle.
52. Brachyotus palustris, Bonap. Marsh Owl. Frequent from the Cypress Hills eastward. Often rose from the grass during the day.
53. Circus Hudsonius, Vieil. Marsh Hawk. Very common around ponds everywhere.
54. Accipiter fuscus. Sharp-Shinned Hawk. StrongCurrent Creek. Apparently rare.
55. Falco columbarius, Linn. Pigeon Hawk. Elbow of South Saskatchewan. Rare.
56. Falco Richardsoni, Coues. Richardson's Merlin. Moose Jaw Creek. July 16th.
57. Falco sparvarius, Linn. Sparrow Hawk. Common wherever there are trees.
58. Buteo Swainsoni, Bonap. Swainson's Buzzard. Moose Mountains westward:
59. Buteo borealis, Vieil. Red Tailed Hawk. North of Cypress Hills.
60. Archibuteo lagopus, Gmelin. Rough Legged Hawk. Strong Current Creek.
61. Haliætus leurocephalus, Sav. Bald Eagle. Bull Rush Lake. Only specimen seen. Other hawks were seen but not procured so that the species is doubtful.
62. Ectopistes migratoria, Swains. Wild Pigeon. Elbow of South Saskatchewan. Rare.
63. Pediœcetes phasianellus, Baird. Sharp Tailed Grouse. This is the "Prairie Chicken" of our western plains. The true Prairie Chicken was not observed neither was the Sage Cock, a more southern species.
64. Bonasa umbellus, Linn. Ruffed Grouse. Fort Ellice. Rare.
65. Grus Americana, O;d. Whooping Crane. Breeding in the marshes east of Moose Mountain. July 1st 1880. Often seen in flocks of a dozen or more later in the season.
66. Grus Canadensis, Termm. Sand Hill Crane. Breeding east and wost of Moose Mountain. A young one caught July 5th nearly as large as a turkey but almost without feathers.
67. Botaurus minor, Bonap. Little Bittern. Common throughout the country.
68. Charadrius Virginicus, Berk. Golden Plover. Breeds in the north; first seen September 15th.
69. Egialitis vociferus, Cass. Killdeer Plover. Abundant around brackish and other ponds.
70. Recurvirostra Americana,'Gmel. Avocet. Abundant around brackish ponds and marshes. A most beautiful bird.
71. Phalaropus Wilsonii, Lab. Wilson's Phalarope. Breeding in the marshes east of Moose Mountain.
72. Phalaropus hyperboreus,Temn. Northern Phalarope. Gull Lake, August 28th. also Long Lake 1879.
73. Macrorchamphus griseus, Leach. Gray Snipe. Very abundant at Gull Lake and northward.
74. Tringa Wilsonii, Nutt. Least Sandpiper. Common on brackish marshes.
75. Tringa maculata, Vieill. Jack Snipe. Frequent north of Cypress Hills.
76. Tringa canutus, Linn. Gray Back Snipe. Borders of salt marshes frequent.
77. Eveunetes petrifictus, Ill. Semipalmated Sandpiper. Borders of lakelets.
78. Symphemia semipalmata, Havt. Willet. Frequent on the borders of salt lakes and ponds.
79. Gambetta melanoleuca, Bon. Stone Snipe. Touchwood Hills Post. October 1st.
80. Gambetta flavipes, Bon. Yellow Legs. Extremely abundant in August and September.
81. Gambetta solitarius, Wils. Solitary Sandpiper. Frequent throughout the plains.
82. Tringoides macularius, Gray. Spotted Sandpiper. Wet places on the prairie.
83. Actitarus Bartramius, Bon. " Prairie Plovor." Grand Valley and westward on the prairie.
84. Limosa fedoa, Ord. Marbled Godwit. In large flocks feeding along the salt marshes at Old Wives Lakes and other points.
85. Limosa Hudsonica Swains. Hudsonian Godwit. Less abundant and more to the north.
86. Numenius longirostris, Wil. Long Billed Curlew. Boss Hill Creek and Cypress Hills. Rare. Bill seven inches long in one specimen.
87. Rallus Virginianus, Linn. Virginia Rail. A Rail was occasionally seen but never shot which I take to be this species.
\&8. Fulica Americana, Gmelin. Coot, Mud Hen. Abundant in all pools of fresh water.
89. Cygnus Americana, Sharp. American Swan. Were seen flying south but none shot.
90. Anser hyperboreus, Pallis. Common White Wavy, shot south of Battleford, October 1879.
91. Anser Canadensis, Linn. Canada ${ }_{\mathrm{c}}^{\mathrm{c}}$ Goose. Breeds along the Assiniboine and all the larger interior lakes. Feeds on wheat stubble in October. Breeds in the whole country.
92. Anas Boschas, Linn. Mallard, Green Head. Abundant in all grassy ponds. Lies very close in the grass and is always hard to shoot.
93. Nettion Carolinensis, Baird. Green Winged Teal. Common in September. Breeds on the prairies.
94. Querquedula discors, Stephens. Blue Winged Ieal. Extremely abundant. Breeds in great numbers.
45. Spatula clypeata, Boie. Shoveller, Spoonbill. Very abundant on small creeks and open pools in September and October. Breeds in the country.
96. Chaulelasmus streperus, Gray. Gadwell, Grey Duck. Abundant throughout the interior.
97. Mereca Americana, Stephens. American Widgeon. Not common. Breeds in the interior.
98. Aythya Americana, Bonap. Red Head. Touchwood Hills, October 1st, migrating.
99. Fulix affinis, Baird. Little Black Head, Blue Bill. Little Arin River and northward, migrating. Sep 16th 1880.
100. Bucephala albeola, Baird. Butler Ball, Dipper. Shot at the head of Little Arm River Sep 16th 18*0. Rare. Migrating.
101. Erismatura rubida, Bonap. Ruddy Duck. A few shot west of Touchwood Hills.
102. Mergus serrator, Bonap. Hooded Merganser. Breeds sparingly throughout the interior. Other ducks were observed and shot but these were the only ones determined. The skins of three species are still undetermined.
103. Larus argentatus, Brunn. The Silvery or Herring Gull. Very variable in size:and color. Gull Lake abundant.
104. Larus Delawarensis, Ord. The Ring Billod Gull. Gull Lake, north of .Cypress Hills.
105. Chroicocephalus Franklinii, Bruch. Franklin's Rosy Gull. Abundant around Gull Lake in various stages of plumage.
106. Chroicocephalus Philadelphia, Law. Bonaparte's Gull. Bullrush Lake and Gull Lake.
107. Hydrochelidon plumbea, Wilson. The Short Tailed Tern. Frequent east and west of Moose Mountain.
108. Pelecanus erythrorhyncaus, Gmelin. Rough Billed Pelican. Breeds on islands in Old Wives, Gull and Long Lakes.
109. Podilymbus podiceps, Law. Pied-bill Grebe. Abundant on all the deep pools south of the Touchwood Hills.

Almost all the birds of this list with the exception of those mentioned breed in the country and many other small birds. of which no note was taken.

## Botanical Notes.

A voyager on the Assiniboine in the ascent from Winnipeg to the Grand Valley cannot but remark the paucity of species in the river valley as regards trees. It is true he sees familiar forms but many Eastern species are wanting, and he looks in vain for beech, maple or pine and only occasionally does he see oak or ash. Poplar and elm with willows which sometimes attain to the size of trees make up the bulk of the wood, while roses (Rosa blanda) and Pembina berries (Viburnum Lentago) form almost impassible thickets. The Ostrich fern (Struthiopteris Germanica) is occasionally very abundant and attains a great height, and all herbaceous vegetation is astonishingly luxuriant. Climbers too are not wanting and wild hops (Humulus Lupulus) Wild Balsam Apple (Echinocystis lobata), Hedge Bindweed (Calystegia sepium), Wild Grapes (Vitis riparia), and Virginia Creeper (Ampelopsis quinque, folia) are either quite common or occasionally seen. Berry bearing shrubs are not rare as thickets of Wild Plum (Prunus Americana), Raspberry (Rubus strigosus), Service berry (Amelanchier alnifolia), High Bush Cranberry (Viburnum Opulus and pauciflorum), Wild Cherry (Prunus Virginiana) and White Thorn (Cratægus coccinea) are very common and all bear abundance of well-flavored fruit; Gooseberries (Ribes oxycanthoides), Wild Black Currants (Ribes floridum) and Red Currants (Ribes rubrum) are abundant in the valley, the two latter where the soil is wet, the former on the drier slopes. A beautiful western shrub the Buffalo Berry (Shepherdia argentea) is occasionally met with on the Assiniboine, but it is only on the Saskatchewan that it is seen in its beauty. A near congener the Silver Berry (Elaegnus argentea) is abundant on the drier slopes and throughout Manitoba is said to indicate good soil, in reality it is only an indicator of a dry one. These two shrubs are well worthy of cultivation, being perfectly hardy and having beautiful silvery leaves and sweet acented flowers-i he blossoms of the latter about the middle of June actually loading the air with their fragrance. Later in the season, the former is loaded down with its close clusters of bright red acid berries, which we found to be an excellent corrective to salt pork when made into jelly and sweetened. The berries of the latter are of the same color as the leares, are quite mealy and these with rose hips constituted the principal food of our so-called Prairie Chicken though in reality the Sharp-tailed Grouse (Pedioecetes phasianellus) during the fall and winter.

On the more elevated country and along the banks of 'the river Strawberries (Fragaria Virginiana), are very abundant of large size and fine flavor. While the steamer was wooding up on June 10th 1879, myself and other passengers climbed the hills and obtained abundance of ripe berries at that early date. In many parts of the country strawberries are in such great quantities that it is no unusual thing to find the cart wheels streaming with their juice.

Besides the shrubs mentioned above, there are still a few that should not be passed without notice on account of their beauty. Foremost amongst these are the Lead Plant (Amorpha canescens) which was abundant at Portage La Prairie in 1872, and a smaller species, Amorpha microphylla, which is in some abundance at the Rapids on the Assiniboine. Both these species are worthy of a prominent place in any of our gardens. Wild Honeysuckle (Lonicera parviflora) and two species of Snow Berry (Symphoricarpus racemosus and occidentalis) with Wild Cornel (Cornus stolonifera) and Downy Arrow-wood (Viburnum pubescens) are found in more or less abundance in the river valley. The Wild Cornel or Western Kinnikinik is very abundant in the valleys of all streams, and it is from the inner bark of this shrub mixed with tobacco, that ali the Indians of the plains and the half breeds make the "Harouge" which they prefer to pure tobacco. The Kinnikinik of the East (Arctostaphylos Uva-ursi,) and the Creeping Juniper (Juniperus Sabina var. procumbens) are abundant on all sandy soil, and furm the chiof covering of the sand dunes and hills throughout the country.

In the Grand Valley and west to Moose Mountain, on the 102 nd meridian, 452 species of plants were noticed during the latter part of June, the majority of which
were common in Ontario; a few seemed to have a sovthern origin, while others were exclusively western, and others again, extended far to the north.

The following tables will serve to illustrate this distribution and show the general nature of the flora of the Second Prairie Steppe to the 102nd Meridian.

In the following arrangement all the species known to occur in Ontario are restricted to the first division (a). The second division (b) includes all other species which extend to the south or south west into the United States.
'Those marked with a (w) extend west of the Rocky Mountains into British Columbia, and those marked with an ( $n$ ) range far to the north.

Clematis verticillaris.
Anemone multifida.

| " | cylindrica. |
| :--- | :--- |
| " |  |
| Pennsylvanica. |  |
| nemorosa. |  |

Thalictrum dioicum.
" Cornuti.
Ranunculus aquatilis var. " abortivus. " Flammula var. " multifidus var. " Cymbalaria. " rhomboideus. " Pennsylvanicus.
" sceleratus.
" repens var.
Myosurus minimus.
Caltha palustris.
Aquilegia Canadensis.
Actea spicata var.
Menispermum Canadense.
Nuphar advena.
Corydalis aurea.
Nasturtium palustre.
Cardamine hirsata.
Arabis hirsuta.
" perfoliata.
" Drummondii.
" retrofracta.
Erysimum cheiranthoides.
Sisymbrium canescens.
Brassica campestre.
" Sinapistrum.
Draba nemorosa.
Camelina sativa.
Capsella Bursa-pastoris.
Thalspi arvense.
Lepidium intermediam.
Viola blanda.
" cucullata.
" canina var.
" Canadensis.
" pedata.
" pubescens.
Arenaria stricta.

Arenaria lateriflora.
Stellaria longifolia.
" longipes.
Cerastium arvense.
" nutans.
Tilia Americana.
Geranium Carolinianum.
Oxalis stricta.
Rhus Toxicodendon.
Vitis riparia.
Ampelopsis quinquefolia.
Rhamnus alnifolius.
Celastrus scandens.
Negundo aceroides.
Polygala Senega.
Astragalus Canadensis.
Glycyrrhiza lepidota.
Vicia Americana.
Lathyrus venosus.
" ochroleucus.
" palustris.
Prunus pumila.
" Virginiana.
" Pennsylvanica.
Spirea salicifolia.
Agrimonia Eupatoria.
Geum strictum.
" rivale.
" triflorum.
Fragaria Virginica.
Potentilla Norvegica.
" arguta.
" Anserina.
" paradoxa.
". palustris.
Rubus triflorus.
" strigosus.
Rosa blanda.
Cratrogus tomentosa. coccines.
Amelanchier alnifolia.
Ribes floridum.
" rubrum.
Parnassia palustris.

Hippurus vulgaris.
Myriophyllum spicatum.
Epilobium angustifolium.

| $"$ | palustre var. |
| :--- | :--- |
| $"$ | paniculatum. |
| " | coloratum. |

Cnothera biennis.
Sanicula Marilandica.
Heracleum lanatum
Thaspium trifoliatum.
Sium lineare.
Osmorrhiza longistylis. " brevistylis.
Aralia nudicaulis.
Cornus Canadensis. " stolonifera.
Linnæa borealis.
Symphoricarpus racemosus.
Lonicera parviflora.
Sambucus pubens.
Viburnum pauciflorum.
" Lentago.
" Opulus.
" pubescens.
Galium tritidum.
" triflorum.
" boreale.
Houstonia purpurea var.
Nardosmia palmata.
Aster lævis.
" multiflorus.
" ptarmicoides.
" simplex.
" paniceus.
" cordifolius.
Erigeron Philadelphicum.
Solidago lanceolata Canadensis. nemoralis. gigantea. arguta.
Xanthium strumarium var
Heliopsis lævis.
Rudbeckia laciniata. " hirta.
Helianthus giganteus: " rigidus.
Heleniam autumnale.
Accillæa Millefolium.
Artemisia Canadensis.
" biennis.
Antennaria plantaginifolia.
Senecio aureus var.
Hieracium Canadenso.
" venosum.
Nabalus racemosus.
" albus.

Eupatorium purpureum.
Lobelia spicata.
Campanula rotundifolia.
Vaccinium Canadense.
Arctostaphylos Uva-ursi.
Pyrola rotundifolia.
" secunda.
" elliptica.
Moneses uniflora.
Plantago major.
Primula farinosa.
Glaux maritima.
Lysimachia ciliata. " thyrsiflora.
Utricularia vulgaris.
Penstemon pubescens.
Gratiola Virginiana.
Veronica Americana.
" Anagallis.
" serpyllifolia.
" scutellata.
" peregrina.
Castilleia coccinea.
Pedicularis lanceolata.
Mentha Canadensis.
Hedeorna hispida.
Monarda fistulosa var.
Dracocephalum parviflorum.
Physostegia Virginiana.
Scutellaria lateriflora.
Stachys palustris var.
Lithospermum canescens.
Calystegia sepium.
" spithamæa.
Cuscuta Gronovii.
Gentiana detonsa.
Apocynam androssemifolium. cannabinum.
Asclepias verticillata.
Fraxinus viridis.
Chenopodium album. " hybridum. " glaucum.
Polygonum aviculare. (: tenue.
" amphibium var.
" dumetoruin var.
Bumex salicifolius.
" maritimus.
Shepherdia Canadensis.
Comandra umbellata.
Callitriche verna.
Euphorbia glyptosperma.
Ulmus Americans.
Parietaria Pennsylvanica.
Hamulus Lapulus.
Urtica gracilis.

Quercus macrocarpa var.
Corylus Americana.
Betula pumila.
" glandulosa.
Alnus incana.
Salix candida.
" cordata.
" discolor.
" livida var.
" longifolia.
" nigra.
Populus tremuloides.
" monilifera.
" balsamea.
Abies alba.
Larix Americana.
Juniperus Sabina var.
Juniperus Communis.
Lemua minor.
" trisulca.
Sparganium simplex.
Typha latifolia.
Zannichellia palustris.
Patamogeton gramineus var. " perfoliatus. " pectinatus.
Alisma Plantago var.
Triglochin maritimum. " palustre.
Sagittaria variabilis.
Habenaria viridis var.
Spiranthes Romanzoviana.
Corallorhiza innata.
Cypripedium pubescens.
Hypoxys erecta.
Sisyrinchium Bermudianum
Smilax herbacea.
Zygadenus glauca.
Smilacina bifolia.
" stellata.
Lilium Philadelphicum
Juncus tenuis.
" Batticus.
" nodosus.
": Canadensis var.
" bufonius.
Eleocharis palustris. " acicularis.
Scirpus atrovirens.
" validus.
" microcarpus.
" pungens.
" maritimus.
Eriophorum polystachyon.
Carex aquatilis.
" aristata.

Carex aurea.
" Backii.
" Crawei.
" Deweyana.
" disticha.
" lanuginosa.
" longirostris.
" Nova-Angliæ.
" Ederi.
" Pennsylvanica.
" polytrichoides.
" prairiea.
" Richardsonii.
" scirpoidea.
" scoparia.
" siccata.
" stellulata.
" stipata.
" straminea.
" sychnocephala.
" tenella.
" teretiuscula.
" aperta.
" granularis.
Alopecurus aristulatus.
Phleum pratense.
Sporobulus heterolepis.
Cinna arundinacea.
Muhlenbergia glomerata.
Calamagrostis stricta.
" Canadensis.
Oryzopsis asperifolia.
Eatonia obtusata.
Spartina cynosuroides.
Glyceria aquatica.
" nervata.
" fluitans.
Poa pratensis.
" serotina.
" casia.
Festuca ovina.
Bromus Kalmii.
" ciliatus.
Phragmites communis.
Triticum caninom. " repens.
Hordeum jubatum.
Elymus Canadensis.
" Virginicus.
Aira caespitosa.
Avena striata.
Hierochloa borealis.
Phalaris arundinacea.
Panicum xanthophysum.
Andropogon furcatus. scoparius.
Agrostis scabra.

Panicum dichotomum.
Equisetum sylvaticum.

| " | pratense. |
| :--- | :--- |
| " | arvense. |
| " | hyernale. |
| " | variegatum. |
| scirpoides. |  |

Asplenium Filix-foemia.

Clematis 'ligusticifolia (w.)
Anemone patens var. Ranunculus affinis (w.)
Delphinium azureum (w.)
Myosurus? aristatus (w.)
Erysimum asperum. " parviflorum.
Sisymbrium incisum.
Vesicaria Ludoviciana (n.)
Cleome integrifolia.
Viola Nuttallii (w.)
Lychnis Drummondii.
Malvastrum coccineum.
Linum perenne.
" rigidum.
Psorlea argophylla.
" esculenta.
" lanceolata (w.)
Petalostemon candidum.
" violaceum.
Amorpha canescens. microphylla.
Astragalus caryocarpus.
hypoglottis (n.)
pectinatas adsurgens (w.)
" aboriginum ( $n$.)
" triphyllus.
" flexuosus.
" bisculcatis.
" multifiorus (n.)
Oxytropis campestris (n.)
" splendens ( $n$.)
" Lamberti.
" Jeflexa.
Hedysarum boreale (n.)
Thermopsis rhombifolia.
Chamœrodus erecta.
Potentilla millegrana.
" Pennsylvanica.
" Hippiana.
" flabelliformis.
" gracilis.
" concinna.
" Plattensis.
Ribes oxycanthoides (n.)

Aspidium spinulosum var.
Struthiopteris Germanica.
Cystopteris fragilis.
Botrychium Lunaria.
" Virginicum.
" ternatum var.
Selaginella rupestris.

Heuchera hispida (n.)
Gaura coccinea.
Epilobium tetragonum (n.)
Enothera albicaulis (w.)
" serrulata.
Opuntia Missouriensis.
Mamillaria vivipara.
Cicuta virosa.
Musineum divaricatum.
Peucedanum macrocarpum.
Symphoricarpus occidentalis.
Liatris scariosa.
" punctata.
Nardosmia sagittata (n.)
Aster conspicus.
Erigeron glabellum (w.)
" pumillum.
" cæspitosum.
Gutierrezia Euthamiæ (w.)
Solidago Missouriensis.
Grindelia squarrosa ( $n$.)
Chrysopsis villosa (w.)
Helianthus petiolaris.
Lepachys columnaris.
Gaillardia aristata.
Achillæa multiflora.
Artemisia dracunculoides
" caudata.
" Ludoviciana.
" cana.
" frigida. (w.)
Antennaria dioica (n.)
Senecio palustris ( $n$.)
" canus.
" integerrima.
Arnica angustifolia ( $n$.)
Cirsium undulatam.
Lygodesmia juncea.
Taraxacum palustre (n.)
Crepis rununcinata.
" glauca.
Troximon glaucum.
M.. "c cuspidatum.

Plantago eriopoda ( $n$.)
Androsace septentrionalis (n.)

Dodecatheon Meadia var (w.)
Aphyllon fasciculatum.
Penstemon confertus var (w.)
" acuminatus.
" gracilis.
Castilleia miniata (w.)
" sessiliflora.
Orthocarpus luteus (w.)
Lrycopus lucidus var (w.)
Lophanthus anisatus ( $n$.)
Lithospermum angustifolium.
Eritrichum glomeratum.
Collomia linearis (w.)
Phlox Hoodii.
Cuscuta arvensis (w.)
Solanum triflorum.
Physalis Pennsylvanica var.
Gentiana Amarella var.
" affinis ( $w$.)
Asclepias ovalifolia.
Acerates viridiflora.
Oxybaphus hirsutus.
Monolepis chenopodioides.
Chenopodium leptophyllum.
Rumex occidentalis.
Polygonum lapathifolium.
Erigonum flavum.
Elæagnus argentea.
Shepherdia argentea.
Prosartes trachycarpa (w.)
Polygonatum giganteum.
Allium cernuum.


At the time we crossed the extensive plain lying between the Grand Valley and Moose Mountain, (the latter part of June) the whole country was gay with beautiful flowers. The air was loaded with the perfume of roses and the Elægnus, and every little mound was bright with the tall purple spikes of Oxytropus splendens and Lamberti, while the level prairie was dotted with patches of Arnica angustifolia looking like the Marigolds of our gardens. Even the marshes were beautiful with the nodding plumes of the Cotton Grass (Eriophorum polystachyon) and their borders lined with Dodecatheon and the little yellow star grass (Sisyrinchium Bermudiana.)

The Sand Hills at Boss Hill Creek were covered in spets with a beautiful Cactus (Mamillaria vivipara) which grew in small compact clusters often not larger than a small apple with a beautiful pink flower rising from the centre. A lovely fern (Botrychium Lunaria) was growing amongst the grass and Lathryus venosus $\rightarrow$ the western pea-formed thickets in the hollows between the hills. Around these hills were numerous marshes filled with various grasses and sedges, while the hills themselves produced vetches, peas and horse tails (Equisetum.)

At Pipestone Creek the vegetation (June 27th) was wonderfully luxuriant and the pasture excellent. The leading grasses were Phleum pratensis, Sporobulus heterolepis Poa caesia and serotina, Stipa spartea Vilfa cuspidata, Calamagrostis stricta and Canadensis, and Phalaris arundinacea. The ponds contain Carex aristata in the centre where the water is deep and permanent, outside this line Carex lanuginosa and Carex marcida. These three species are found in this order all over the country and wherever they are found water is abundant. When Carex aristata disappeared from the ponds, water was either bad or merely rain water and we had to be on the alert.

The prominent flowers were three species of Penstemon (P. gracilis, pubescens and confertus var.) Hedysarum boreale, Thermopsis rhombifolia, Gaura coccinea Galium boreale, Sisyrinchium Bermudiana, Arnica angustifolia and four species of Astragalus (A. pectinatus, flexuosus, caryocarpus and bisulcatus). All of these would have been ornaments to any garden and grew in such profusion that they gave a marked character to the landscape.

Passing westward toward Moose Mountain, Hedysarum boreale covered square miles of the plain, and being tall over two feet high its spikes of lovely pink flowers were exquisitely beautiful as they nodded to the pleasant summer breeze. A handsome Primula (P. farinosa) was very conspicuous, and together with its congener the Dodecatheon made the margin of many a marsh a floral paradise with the profusion of their lovely and bright tinted flowers.

The flora of Moose Mountain was in no respect different from that of many parts of Ontario, except in the absence of forest trees of which there were but few spocies.

After passing out on to the "Souris Plain" a marked change took place in the flora, and the soil bocame much drier. Hedysarum Mackenzii was occasionally seen in great patches, and being of rich velvety purple charmed the eyo with its beauty. At this date (July 7th) many beautiful flowers were in their prime and their peculiar habitats were worthy of more than a passing notice. Every species has its own habitat, and at one time in going through a rich hollow lilies (L. Philadelphicum) will cover acres with orange red flowers. Leaving there and ascending a slope we will have to cross a carpet of the richest purple, for here Astragalus flexuosus is extremely abundant and fills the air with its perfume. On yonder knoll Oxytropis splendens and Castilleia sessiliflora dispute possession with Astragalus pectinatus and Erigonum flavum, We pass the ridge and now there is more water and a new series of plants come into view and Zagadents glaucus, Potentilla gracilis, Anemene Pennsylvanica and Lysimachia ciliata mixed with various species of Astragali are noted and as hours pass into days this ever changing panorama glides past filling our hearts with delight as we contemplate this garden of nature.

Days pass, and these lovely gardens are left behind, and now stretched out on every side, is a vast clay plain with an extremely rough surface. Tie flora has changed, birds have almost disappeared, and even the hills have gone out of sight, yet beauty is still around us on every hand. Roses (Rosa blanda) scarcely 6 inches high, load the air with perfume. Lepachys columnaris enhances the beauty of the landscape with its yellow flowers, and the rich green of the grass is pleasing to the eye, yet over all this vast expanse not a bird wings its flight, and our utmost exertions could hardly obtain water for ourselves and horses. One hundred miles and upwards is crossed, and the only shrubs seen are the two snowberrics (Symphoricarpus racemosus and occidentalis), and the rose bushes, while Aster multiflorus, Lepachys and Triticum repens, with various Potentillæ, make up the bulk of the flora.

Moose Jaw Creek, like all other streams throughout the country, had essentially an Eastern flora, and it was only on the gravel ridges and clay slopes bordering its valley, that the western forms were seen. Here the species were characteristic of the arid plains to the south, and partook largely of an alkaline character.

Those species in the following lists were added to the collection between the 102 nd and $10{ }^{\circ}$ th Meridians, and are principally southern or south western, only three range to the eastward into Ontario, while the greater number marked (s) extend into Utah and New Mexico, others marked (w) into British Columbia, and one or two trees ( $n$ ) far to the north.

A.

Boisduvallia glabella.
Erigeron compositum, (w.)
" nanus, (s.w.)
Linosyrus graveolens, (w.)
Aplopappus spinulosus.
$\underset{\text { Aplopappus }}{\text { Nuttallii, (s.) }}$
Iva axillaris, $w$.
Ambrosia psilostachya, (w.)
Coreopsis tinctoria, (s.e.)
Actinella Richardsonii, (s.)
Hymenopappus tenuifolius.
Amida glomerata.
Plantago major var., (w.)
Onosmodium molle, (s.)
Eritrichum Californicum, $w$.
Echinospernum Redowskii, n.
floribundum, $w$.
Ellisia nyctelea, s.e.

Gillia intertexta, $w$.
Atriplex Nuttallii, s.
Corispermum hyssopifolium, $n$.
Salicornia herbacea, $n$.
Eurotia lanata, s.
Suæda depressa, s.
Endolepsis Suckleyana.
Polygonum ramosissimum. " imbricatum.
Juncus xiphioides var, $w$.
Spartina glabra.
Triticum dasystachyum.
Poa Andina.
" laxa.

## B.

Bidens frondosa.
Stellaria: borealis.
Anemone Virginiana.
The flora of the district lying between Moose Jaw Creek and the Coteau is different from that further east, as we pass from clay to sand or sandy loam and the vegetation changes accordingly. Cactus (Opuntia Missouriensis) was quite frequent on the dry slopes and the tops of the gravel hills. Paronychia sessilifiora was also quite abundant. Rumex venosus and Cyperus Schwienitzii were detected amongst sand at the base of the Cotcau and along the margin of saline pools. Scirpus mari(imus, Spergularia media and other saline plants were picked up. The Wild Oat (Stipa spartea) was very abundant and covers the greater part of the soil, but Kœleria cristata, Bouteoula oligostycha and Calamagrostis longifolia where gravel or sand prevailed.

Old Wives Lakes lying in a depression which has no outlet are necessarily very salt and along their margins are the plants peculiar to salt water or alkaline soil. In the Northern Lake I obtained fine specimens of two new Charas named respectively Chara Macounii and Canadensis by D. F. Allen, M. D., of New York, and I had the good fortune to obtain a quantity of a water plant hitherto unknown, which seems to have been overlooked by all the later explorers. The alkaline plants found in convection with the brackish water and salt lakes or ponds of the country may be taken in this connoction, as they have generally a wide distribution and are found throughout the prairie country where the soil is alkaline or derived trom Cretaceous clay in connection with water. Those marked (e,) are sea coast species, all the others are peculiar to the interior.

ALKALINE PLANTS.

Spergularia media (e.)
Aplopappus lanceolatus.
Heliotropium Curassavicum (e.)
Blitum polymorphum.
Monolepis chenopodioides.
Suæda depressa.
Salicornia herbacea.
Obione argentea.
Sarcobatus vermiculatus.

Endolepis Suckleyana.
Triglochin maritimum (e.)
palustre (e.)
Scirpus maritimus (e.)
Spartina gracilis.
Glyceria distans.
" airioides.
" tenuiflora.
Brizopyrum spicatum.

After ascending the hills to the west of Old Wives Lake, (Long. 107 west), the flora again changed and many eastern forms were noticed that had not been seen for some time, and western species became more abundant. Of peculiarly western species now seen were Danthonia Californica, Aster canescens, Iva zanthiifolia,

Ambrosia trifida, Astragalus Missouriensis, Myosurus aristatus, Sarcobatus, Endolepis, a Juncus and a Marsilia, and many others. These plants were the eastern outliers of the Tertiary plateau which extends south into Montana and may be said to culminate in the Cypress Hills. Carum Gairdneri a species of Caraway was particularly abundant on Old Wives Creek and constitutes an article of food for the Californian Indians.

Throughout the whole country extending from Ola, Wives Lakes to the Cypress Hills, a distance of 100 miles due west, the pasture was always good and the grass of species noted for their nutritive qualities.

Carices were abundant in and around the pools and much of the country was covered with fine tall grass of the following genera. Four species of Poa, three of Stipa, two of Bromus, Danthonia, Triticum, Elymus and Glyceria, aud one of Kæleria, Botuteloua, Calamagrostis, Vilfa, Catabrosa, Lepturus, Festuca, Hordeum, Beckmannia, Panicum and Andropogon were more or less abundant with other herbaceous plants. The soll being principally drift and varying much in its component parts, accounted for the multiplicity of species.

While crossing the three degrees of longitude extending from Moose Jaw Creek to the eastern end of the Cypress Hills, the following species were noticed as occurring for the first time in the flora. The lists are arranged as the preceding, and it will be seen that the species have a more decided south western extension and do not indicate aridity but a more southorn clime. The greater number of the species are found in the neighborhood of water and only those marked (a) denote aridity either of soil or climate.

## A.

Nasturtium thysanocarpum. S. W.
Spergularia media. N.
Stellaria crassifolia. S. W.
Paronychia sessiliflora.
Oxalis corniculata.
Astragalus Missouriensis. S.
Carum Gairdneri. S. W.
Lupinus Kingii. S. W.
Aster angustus. N.
" adscendens.
" pauciflorus.
" canescens. S. W. (a)
Solidago Mirsouriensis. S. E.
Aplopappus larceolatus. W.
Iva xanthiifolia. S.
Ambrosia trifida. S. E.
Artemisia longifolia. S. (a)
Gnaphalium palustre. S. W.
Mulgedium pulchellum.
Cirsium Drummondii. N.

Polanisia graveoleus.
Potentilla fruticosa.
Lycopus Virginiana.

Palntago Platagonica, var. S. W. " pusilla. S. E.
Centunculus minimus. S. E.
Limosella aquatica. N.
Verbena bractcata. S. E.
Asclepias speciosa. S. W.
Blitum polymorphum. S. W.
Obione argentea. S. W. (a)
Sarcobatus vermiculatus. S. W. (a)
Rumex venosus. S. W. (a)
Juncus patens.
Carex vesicaria.
Mulhenbergia diffusa.
Catabrosa aquatica. N. E.
Lepturus paniculatur. S. E.
Bromus brevi-aristatus. W.
Danthonia Californica. S. W.
Glyceria distans. N. E.
Marsilia uncinata.
B.

Lobelia Kalmii.
Potamogetnn pusillus.
Cyperus Schweinitzii.

The flora of the Cypress Hills is very remarkable and differs in many respects from that of the p'ains. In the coulees which extend into the hills on the north and east sides the vegetation is almost exclusively eastern and contains numerous forest species, while that of the plateau above and the upper slopes of the bills have the prairie features of the Rocky Mountain flora and both Alpine and boreal species here find a home.

In the upper part of the coulées amongst the spruce at the eastern end were Spirea betulefolia, Geranium Richardsonii, Habenaria rotundifolia, Phleum alpinum Arenaria nardifolia and verna, Delphiniam Menziesii and on the exposed gravel points and ridges that rose almost perpendicularly were Astragalus pauciforus, Sedum stenopetalum, Cetraria nivalis, aculeata, and Islandica, Polygonum, Paronychia and Lepidium. In the deep couléesa round springs of purest water were large patches of Mimulus Lewisii covered with a profision of yellow flowers, and amongst the common sedges were Carex festiva and capillaris. These, all mountain species and numerous others known to dwell there told a tale that the botanist alone could understand. Whether the Cypress Hills were an outlier of the Rocky Mountains or not their flora indicated that their climate was that of the foot hills above Morleyville and necessarily unfit to regularly mature cereals although in sheltered valleys barley and potatoes could possibly be raised.

The grasses of the plateau were of the real pasturage species and produced abandance of leaves, and were so tall, that for miles at a time, we had great difficulty in forcing our way through them. The chief were species of Festuca, Danthonia, Poa, Avena pratensis, Bromus and Phleum alpinum, and although their seeds were all ripe (August 4th), their leaves were quite green.

As we procecded westward over the plateau, it became more elevated, and other species began to take prominence, notably Lupinus argentea and Potentilla fruticosa covered miles of country to the exclusion of other species, and as both grew about eighteen inches in height and had a bushy habit, the whole country, for a day's travel, was either blue or yellow or both, as either species prevailed or were intermixed. In all my wanderings I never saw any spot equal in beauty to the central plate.u of the Cypress Hills.

Very few additions to the flora were made in the vicinity of Fort Walsh, but these were extremely interesting, as they indicated a still more alpine flora than that farther eastward, although other species with a western range were detected. In the neighborhond of the tort were Geranium Fremontii, Ribes Hudsonianum, Pinus contorta, Stipa Richardsonii, Erigeron acre, Silene Menziesii, Astragalus Drummondii, Meuchera parviflora and Artemisia Carpathica. Proceeding westward to the "Head of the Mountain," a few other species were detected in the forest of Pinus contorta that here covered the plateau, which had not been seen before, and these too, indicated coolness and altitude. These were Rhinanthus Crista-galli, Calamagrostis sylvatica and an unknown grass. .Taking the whole flora of the hills and their ramifying coulées, there are very few species which could be classed with the prairie flora proper, but the bulk of the species belong to the Rocky Mountains, although many of them grow in the east, yet they extend through the wooded country north of the prairie to the Rocky Mountaius, and in some cases, to the Cascades, if not to the Pacific coast itself.

On descending from the Cypress Hills at their western end, Pinus contorta descended 500 feet and then ceased altogether. Below that the shrubs and poplar descend for another 500 feet and then cease likewise. Cretaceous clay begins to crop out where the pine ceasts, and its accompanying plants at once appear. The leading forms are Artemisia cana, and longifolia Linoeyris graveolens, Grindelia squarrosa, Phelipæa Ludoviciana and Atriplex Argentia. A further descent and the usual species of the plain are the ouly ones to be found, although the pine in the distance is seen clinging to the almost perpendicular side of the escarpment that forms the outer line of the plateau.

In the following list the Rocky Mountain species are in the first section (a) and the eastern in (b). In (c) are a few introduced species. I only mention those species not before tabu!ated.

> Delphinium Menzesesi.
> Lepidium montanam.
> Hypericum Scouleri.

Silene Menziesii.
Arenaria verna.
" nardifolia.

Geranium Richardsonii. " Fremontii.
Lupinus argentea.
Astragalus Drummondii.
"" pauciflorus.
Oxytropis podocarpa.
Spiræa betiulæfolia.
Heuchera parviflora.
Sedum stenopetalum.
Ribes Hudsonianum.
Aster precox.
" carneus.
" Novi-Belgiæ.

Impatiens fu!va.
Aster æstivus. R. M.
Hieracium Canadense. R. M.
Vaccinium cæspitosum. R. M.
Rhinanthus Crista-galli. R. M.
Habenaria: ${ }^{\text {Lhy }}$ perborea. R. M.

Antennaria Carpathica.
Arnica foliosa.
Mimulus Lewisii.
Polygonam.——?
Salix.- ?
Pinus contorta.
Abies Engel mannii.
Zygadenus.
Carex Hoodii.
Phleum alpinum.
Stipa.-—?
Calamagrostis sylvatica.
Elymus condensatus.
" ——?

## B.

Habenaria rotundifolia. ${ }^{〔}$ R. M.
" obtusata. R. M.
Listera convallaroides. R. M.
Smilacina racemosa. R. M. Carex capillaris. R. M.
Stipa Richardsonii. R._M.
C.

Polygonum convolvalus.

Vaccaria vulgaris,
Amarantus albus.

Geranium Fremontii is very common all over the hills west of Fort Walsh and in that vicinity, but not east of that point. Lupinus argentea accompanied us to the edge of the hills and then ceased altogether. As we pass out from the hills the vegetation assumes the usual prairie character and Composite became very numerous. Nearly all the flowers are yellow, and it is only two species of Liatus ( L . scariosa and punctata) that relieve the eye with the intense purple of their lovely flowers. The landscape is yellow with Solidagos, Grindelia, Gutierrezia, Lepachys and Aplopappus spinulosus, which are all in their prime at this time (Aug. 19th). Scipa and Festuca were the principal grasses, the latter increasing in quantity as the soil became more sandy. Stipa spartea in every section of the country is indicative of good fertile soil well suited for the growth of wheat.

In the broken country to the north of the hills the Cretaceous flats were covered with Iva axillaris, Hordeum jubatum (Wild Barley) Triticum repens and Artemidia cana, while the dry hills were principally covered with a short growth of Boutelona oligostachya (Buffialo grass) and Artemisia frigida, the latter being the plant which produces the chief winter pasture of Nevada and Wyoming.

A very remarkable group of plants was detected on a range of sand hills surrounding a small lake east of the Battleford trail. A number of them had not been seen before and hence were the more interesting. The leading forms were Astragulus Kentrophyta, Lupinus Kingii, Franseria Hookeriana, Stephanomeria minor (?) and Polanisia graveolens with various others delighting in a sandy soil. On the borders of Gull Lake amongst other remarkable plants fine specimens of Heliotropum Curassavicum, Psoralea lanceolata and Blitum polymorphum were obtained.

At this time (August 28th) Mushrooms became very abundant and continued with us until'thelatter part of September when the frosts became too severe and prevented their growth. There were three species all equally large and numerous, and although we consumed great quantities of them we never observed any ill effects from their use. There was one species, however, which was very large and more abundant than the others which I did not touch, as I did not like its appearance, yet the usual test indi-
cated it to be nutritious. While crossing the great plains north of the Qu'Appelle in July, 1879, we found mushrooms by the cart load and the past season we used them every day for three weeks while travelling at least 200 miles in an easterly direction. From the reports of other travellers and my own observations I am led to believe that on nearly the whole prairie abundance of mushrooms will be obtained after any great rain fall during the summer. One species of Lycoperdon (Puff Ball) was seen that grew to a very large size, and numerous others were noticed during the whole season scattered over the plain in great profusion. No Lycoperdon is poisonous and all are highly nutritious if gathered young, before the spores turn yellow and cut into thin slices and fried. Were it possible to teach the Indians to discriminate between the good and bad mushrooms, immense quantities could be collected every year, dried and stored away for future use as is done in Norway.

After passing 20 miles east of Gull Lake the soil changed, sand was less abundant, and as a consequence grass became taller. Still proceeding eastward familiar forms began to show themselves and the species of the eastern prairies began to occupy the soil. Amongst the more notable ones were Calamagrostis stricta, Astragalus flexuosus, and bisulcutus, Anemone Pennsylvanica and numerous others. Stipa spartea, Køeleria cristata and Bouteloua oligostachya were the chief grasses on the dry plains, but now the two latter almost disappeared and the whole dry country was covered with a tall growth of the former.

In the valley of Strong Current Creek there were numerous thickets of Shepherdia argentea covered at this time with its beautiful red and acid berries, and these, together with choke cherries (Prunus Virginiana) were eaten with avidity and the former very much relished when boiled to a jelly and sweetened. Wherever the valley of the Saskatchewan was examined these species grew in profusion, forming atc times impenetrable thickets and the fruit always palatable, the latter species never being astringent as it is in the east but always sweet and pleasant.

On the hills sloping towards the South Saskatchewan Rhus trilobata and Sagina decumbens were picked up, and these were the last western forms detected. Shortly after this Artemisia cana disappeared about Latitude $50^{\circ} 50^{\prime}$ and as we proceeded north forest species became more numerous, although not even a willow twig was seen: Graphephorum festucaceum began to appear about Latitude $51 \cdot 40$, and as we crossed the 52 nd Parallel we saw the first indications of wood in the shape of willows of a year's growth.

From a careful study of the herbaceous plants met with as we proceeded north, I am positive that almost all the prairie lying from the base of the Coteau at the Elbow of the South Saskatchewan northwards, has in recent times been covered with forest, but it is a mistake to believe that if fires were stopped trees and willows would spring ap from the soil where none show themselves at present. Both willows and poplar (Populus tremuloides) grow from stolons thrown up from the roots and hardly ever from seeds. and this is the reason they remain so long in the soil struggling against the constantly recurring fires long after other sjecies have vanished for ever. All willows and poplars are, to a certain extent, independent of seeds and it is a wise provision as owing to their flowering so early often no seeds ripen.
Extract from Report of Block Outline survey, between Townships 22 and 27, and Ranges 1 to 12 inclusite West of 2nd Mbridian, by W. Ogilvie, D.L.S.

The Country across Range 1 on the 6th Correction line West of the 102nd Moridian, was generally knolly prairie with much scrub and small poplar; the low places this season in consequence of the heavy rain fall were all covered with water somotimes 3 to 4 feet deep; on the last section crossed, a small creek in a valley about 30 feet deep and 25 chains wide, the valley all a muskeg the creek runs out of a marshy lake of a considerable extent. This I believe to be the head of the Cut Arm Creek. The soil on the first four sections is good black clayey loam, the last two are lighter and in some places gravelly. All of this range adjacent to the line would make fair farming land as the surface is uneven, thus giving a good wet or dry year farm,
and there are many clumps of small poplar suitable for fencing and some small building timber.

Across Range 2 nearly the same conditions hold, but there is more water and less light soil.

Across Range 3 the soil is generally light, in some places sandy, especially the two middle sections. There is much poplar timber on this range; in a few places fair building timber could be got. The last 3 sections are covered with poplar, scrub, and willow with many flats this season covered with water.

Range 4. The soil is generally of good quality. Surface uneven with some ridges of pure gravel and some boulder covered flats; it might be fairly said half this range is woods consisting of clumps of poplar all large enough for fencing and occasionally large enough for fair building timber; also as in the other ranges there are many water covered flats which under ordinary meteorological conditions would be perfectly dry.

Going northward between Ranges 4 and 5 Township 23, the surface is somewhat flatter and consequently generally wetter. Thore are many clumps of poplar and many willow covered flats, also many good meadows-this season full of waterthe soil is generally good black clayey loam : about the middle of this township a large creek was crossed which runs into Leech lake. This lake is about 2 miles east of this Meridian, and lies as nearly as I could judge in Range 4, Townships 23 and 24. It is a large body of water and of very irregular figure, so that its area would be very hard to guess at, but I do not thinkit is less than 10 square miles; in it are said to be. good fish. Extending north west from the lake, there is an extensive flat which I believe is in ordinary years a fine meadow, and, if so, will be of great value to the surrounding country when it is settled. This season it was covered with about 5 feet of water: that it is not always so is proved by the fact that many old cart trails run across it.

Township 24 is generally light gravelly soil; on the south half of it there is mach poplar and willow scrub.

Township 25 is principally poor soil, the surface flat and wet, many muskegs in it, the meadow mentioned in connection with Leech Lake extends into this township Range 5 and I believe across it. This meadow had to be triangulated, which gave considerable trouble, the side on the line being 3 miles long, and several poplar islands which could not be reached for thick grass and deep water, made it necesary to put the triangles to one side of the line, and determine its production on the north side of the obstruction, by azimuths of the triangle sides; unfavourable weather interfered with this, so that 4 days were passed here.

Township 26 is all good black clay loam, and the north half of it is nearly all solid poplar woods, in which good fencing, and some very fair building timber could be got. This wood extends south east to Leech Lake, and in conjunction with the largo meadow mentioned, makes Townships 26 Rangers 4 and 5 very favourable to early settlers.

I crossed this Block, that is Townships 23, 24, 25 and 26, Ranges 1, 2, 3 and 4 , from the north-west corner to the south-east and found the interior of the block, as a rule, much less wooded than the outlines, also generally drier and mach better adapted to settlement, most of the soil I saw being a nice loose black loamy clay, the surface nicely rolling. There are also some extensive meadows this season covered with water.

In the middle of section 34, Township 26, this line crosses the Little White Sand river, which I learned was generally calm and peaceful enough, but this year is a rushing torrent from 30 to 60 feet wide, and from 5 to i5 feet deep. At this point it is 30 feet wide, about 6 feet deep and has a rushing current. About one half mile above this point, there is a rapid of about 3 chains in length and 3 feet fall, and by damming the fall, could, with very little flooding to the adjacent lands, be increased to 6 feet, so that with only one-half or one-third of the present water flow a very fair mill site could be had here. This river and its branches were crossed many times by the line in Ranges 5, 6, 7 and 8, and in some cases, it and its adjacent flats gave a good deal of trouble and delay.

Range 6 is generally fair soil, with a good sprinkling of clumps of small poplar through it.

Range 7 becomes more uneven with generally excellent soil, and might be called poplar woods, with many patches of prairie in it; in many places a road had to be cut for the carts.

Range 8 is all dense poplar woods, with a thick growth of underbrush and many grassy flats covered with deep water; across this Range a cart road had to be cut, which involved much loss of time on the line.

The district covered by these woods is known as the Beaver Hills. I suppose from the fact that the beavers were and still are to be found in it; they are not elevated much above the surrounding plains; out of them flow many small creeks which on the easterly side converge into the Little White Sand River; on the south there are one or two which flow into the Qu'Appelle.

The south half of Township 24 is fine rolling prairie, all excellent soil, in many places fine meadows are to be found; along the edge of the woods some small lakes occur.

Township 23 is generally good black clay loam, the surface rolling, a very few clumps of small poplar; there are some ponds and many small meadows. In the north section of this township this meridian crossed the Battleford trail jast at its intersection, by the Pelly and Qu'Appelle trail.

Across Range 9, the soil is generally a good black clayey loam, in places inclined to be gravelly; there are many small ponds, and a few small clumps of poplars.

The east half of Range 10 is generally gravelly soil with no timber; on the east section, a fine large creek occurs, which runs into the Qu'Appelle. About the middle of this range we enter the woods which constitute the File Hills. Those hills are covered with a forest of poplar and brush, in many places the poplars are large and long, clean trunked, and would supply a good quality of poplar timber; through those woods are many small ponds.

The woods thin out in section 35 Township 22, Range 11, into small poplars and willows, the soil in those woods is generally very good; in the small poplars and willows the soil is in many places light and gravelly, this continues to sections 31, in the same township.

I would say in conclusion that the land along the Qu'Appelle valley is rapidly being settled, the country being in every way (except timber) well suited for settlement.

Extract from Report of Survey of Block Outlines, of the Country lying around the Touchwood Hills. By E. Deville, D.L.S.

My starting point was on the 9th Base Line at the Township corner, between Ranges 12 and 13, west of the 2nd meridian. I reached it at the beginning of July.

About a quarter of a mile from this point, I crossed the only stream of any importance found during the survey; it is about fifty to sixty feet wide, five to eight feet deep and flows into Quill Lake. Several small rapids were seen while driving along this river, and I have no doubt that dams might be erected and afford good mill sites, without flooding the surrounding ground.

The first two miles were in a plain of splendid farming land which seems to extend far to the north west and south east; after this I found nothing but woods, héavy busb, and in some places, poplar bluffs and prairie. I had to cross the Big and Little Touchwond Hills, both heavily wooded with poplar and white birch. In the latter the poplar exceeds sometimes two feet in diameter, is very tall, round, and of good quality. Unfortunately, streams are wanting to float it out and all timber cut up to this day had to be brought out with teams in winter time.

The timber, in the Big Touchwood Hill, is not quite so good, seldom exceeding 12 to 15 inches, and generally rotten at the heart.

I estimate that half of the area of these hills is covered by large and deep lakes of clear and good water, sometimes several square miles each, and full of islands and
bays running in all directions; in ordinary summers, they are surrounded by a dry beach of sand, gravel, or stones, but, last summer, the water was so high that it reached the edge of the wood. While there, we had to build rafts almost every day, and were often prevented from working by the swell on the lakes caused by high winds.

In the ${ }^{\text {a }}$ Big Touchwood Hill, the streams run generally between north east and north west; some are fifteen to twenty feet wide and several feet deep. In the Little Touchwood Hill, I did. not see any creek wortb mentioning.

Fish are said to exist in one of the lakes of the Big Touchwood Hill; I had not the opportunity to verify the fact, but I often saw small ones, about one inch long.

The country is rolling, and, at places, very broken; the soil is a light sandy loam with clay, sand, or gravel underneath. Very desirable locations for farming purposes may be found, with dry ground for crops, hay in the hollows, wood for fuel and fence rails and even timber for building purposes in the poplar bluffis.

Settlers are beginning to turn their attention towards the Touchwood Hills and all appearances seem to indicate that it will soon becume a prosperous settlement.

I was told that spruce and tamarac of very large dimensions were to be found between this and the Saskatchewan; how far the report is true, I was not able to ascertain; should it prove to be so, and means be found to take it out, it would undoubtedly prove a great source of wealth to this part of the country.

With reference to the instruments, I think that I shall only express the general opinion of the profession in saying that the new transit theodolite, supplied for the survey of the Standard Meridians and Parallels, leaves nothing to be desired; in its design, it is perfect, and enables the surveyor to perform with ease, certainty and precision, all the operations of the survey; in its execution, it reflects very highly upon its makers.

I found the agreement between the chainisgs effected with the two steel band chains, better than I expected, seldom exceeding a foot in a mile. Still there are, between the measurements of different surveyors, discrepancies which I am utterly unable to account for. I would, therefore, respectfully suggest the establishment, either at Winnipeg or at any other suitable point, of a standard section where chainmen might be trained before leaving for their respective surveys.

Extract from Report of Survey of Block Outlines between Townships 26 and 31, and Ranges 1 to 12 inclubive, West of 2nd Principal Meridian, by A. L. Rossell, D.L S.

Although our work lay for the most part not more than twelve miles from the lines run in 1876-7, a somewhat detailed description of the country may not be amiss.

Commencing at the 2 nd principal meridian (longitude $102^{\circ} \mathrm{W}$ ) and proceeding west along the 7th correction line, we passed over, for the first twenty miles, a gently undulating prairie with some poplar and willow, and watered by a couple of streams about 30 feet wide, and two feet deep. Three fourths of the soil is of the best quality, and the remaining fourth is classified as 1 to 2 . Continuing west four miles and then turning north twenty-four miles the line passes through a timbered country crossing four streams, and this season, many extensive swamps and sloughs. With the exception of two miles the soil is excellent, but the last twelve miles wouid require drainage to fit it for cultivation.

Beginning again at the 2nd principal meridian and going westerly on the 13th Correction line seventy-two milos we encounter a bush country with poplars and willows throughout and occasional rivers, lakelets and swamps. On this course are crossed the White Sand River and Crooked Hill Creek as well as eight other minor streams. Seven eighths of this distance was over excellent land and the remaining eighth was classified as first to second.

We next proceeded to the intersection of the 9th Base and the meridian between Ranges 8 and 9 west, and produced the latter twelve miles north. For the first five miles we encountered heavy poplar bush and willows and then heavy windfall with
standing green timber, thick willows and quaking swamps; this necessitated "packing" with men for the last seven miles. The soil throughout this twelve miles is good, but the swamps on the last six are both deep and extensive. The only spruce seen during the season was here met with. In an attempt to bring horses through, some of them were badly injured. Any work north or north west of here can best be done in winter. Returning again to the 9 th Base line at the meridian between Ranges 12 and 13 west, and going north, the first three miles are over open rolling prairie, and the remaining nine through thick bush with much windfall and many swampy places; the soil throughout is first class.

We then turned westward from here sixty-four miles along the 9th Correction line. With the exception of the last six miles, west of the Carlton trail, the country is wooded and watered and the soil of excellent quality throughout. The twelve creeks crossed as well as the marshes were swollen to more than double the volume they were in 1876. Some few alkali patches were met with, but the vegetation did not appear to have materially suffered.

A Meridian was run north between Ranges 20 and 21, to the 10th Base, and on this section also the land was undulating and of excellent quality well wooded and watered.

I wish here to correct an error in a previous report. The Quill Lakes are not alkaline but saline. It seemed difficult to believe that the great. volume of water received by the Quill Lakes this year, was disposed of entirely by evaporation as they have no apparent outlet.

A summary of the 240 miles passed over shews that all but nine per cent of the soil was ranked as first class and being well wooded and watered, and in the vicinity of the proposed transcontinental railroad this extensive area will prove a most desirable region for settlement.

A small steamer like the "Alpha could this year have ascended, during high water, the Assiniboine River, from Fort Ellice the present terminus of navigation to at least fifty miles, by water, beyond Fort Pelly, and probably the same distance up the White Sand, Qu'Appelle and Souris Rivers.

I did not run the Meridian between Ranges 8 and 9, connecting the eighth Base and ninth Correction line, as on proceeding thither, extensives fires were observed on the north-western edge of the Beaver Hills (in which our work lay), and I was informed by D. L. S. Ogilvie, that it would take many days to cut a road to our starting point, and that the whole distance to be run was through very heavy woods and swamps.

Surveys in the Beaver Hills and north of the Fishing and Quill Lakes, can be much more economically performed during winter when the swamps are frozen and dog sleds can penetrate without the cost of road making.

Extract froar Report of Exploratory Survey of the headquarters of the
Nohth Saskatceiewan River, West of 114 th Meridian, by J. C. Nelson.
Rocky Mountain House, one hundred and ninety.three miles above Fort Edmonton, and about twenty miles east of the Rocky Mountains, being a central situation in the timber district, was selected as you advised, as a kind of initial point from which I could draw my supplies, and make reconnaissance of the neighboring region.

On the 28th of July, 1 left for the Mountain House, by the Blackfoct trail which branches off the Edmonton road after crossing of the valley of Many Little Rosebuds thirty-five and a half miles from Fort Calgarry.

For thirty miles north of Calgarry, the road follows a valley with a small stream flowing through it called the Nore Creek, and the land to my surprise, I found dry and gravelly, whereas a few miles back on the side the land I pased over last year was very good. The depression containing the dry tract lies betweon the Nore on the west, and Spy Hill and the Sharp Hills on the east.

- On the 29th, I camped near the head of ": Valley of Many Rosebuds." This stream is here but a few inches deep and a yard wide, with a few clumps of poplar
and willow. It flows eastward through a great open plain, and my Indian guide says it becomes an important stream with high steep and wooded slopes beforo reaching the Red Deer River. After crossing this creek, the land becomes more moist, ponds and meadows are frequent and after crossing the stone wail from Morleyville to Edmonton, the land as far as I can judge from appearance is the best I have ever seen. It is moist loose black vegetable mould with a small percentage of gravel and sand. The herbage consists of a dense growth of pea, vine, vetches, grass and low plants and is certainly the richest pasture I have yet come across in the whole N. W.T. The famous stretch of land intersected by the branches of the Dog Pound or Emita Siskan lies to the south-west.

After crossing the Little Red Deer River the country becomes more densely wooded and some excellent spruce was observed growing in hummocks, but no large bodies of it were seen. An expansive view is obtained from a high prominent butte called Red Deer Hill, a short distance south of Red Deer River to the left of the trail. From this hill the surface of the country looks to be a dense forest all the way to the base of the Rockys. I forded Red Deer River in latitude $52^{\circ} 01^{\prime \prime}$ the water just came into the carts, this stream expands at this point into a labyrinth of channels and shoals, and the men had some chopping to clear out the road. On the north side about a quarter of a mile from the ford a considerable stream flows from the north west called "the coulée, "That Comes this Way" or Paystamer Ranaghko. The trail follows up its left bank for twelve miles through a remarkably beautiful country. Alngg its course there are hummocks of spruce, cypress also tamarac; and poplar bluffs out on the prairie; several small creeks were crossed where I saw traces of beaver resolutely at work, and a remarkable tree stands on the trail, called the Head River. The trail then enters a cypress bluff and some muskegs are passed to the right, and at five miles farther on recrosses the coulee at Rccky Fork, and passes over a bottom of several thousand acres with pea, vine and vetches up to the horses shoulders. This singularly fertile flat is intersected by two creeks running parallel but in opposite directions. The coulée rises in the bottom out of a large spring as clear as crystal. The other stream, called the River that Never Freezes falls into the Clear Water River a couple of miles north of white Mud Hill. The mouth of the creek is well known as a fishing ground. One of my men Baptiste Amie caught twenty trout of the finest quality in a little while with a broken hook, some of themiweighing twelve pounds.

The road then follows down the Clear Water River keeping back a mile or two. The land is a sandy loam. Poplar and cypress on the beach, spruce and tamarac along the river. On the 3rd of August I entered what I consider to be the timber district and proceeded to explore the country. On the 5th I moved my camp to the Ford at the mouth of the Clear Water about three quarters of a mile from the Mountain House and 117 miles from Fort Calgary. On the following day, the pack saddles were put in order, observations taken for latitude and time and two of the men commenced the construction of a boat by whipsawing lumber from timber cut at the ford.

I then explored the country lying between the Clear. Water River, 180 feet wide, and the North Saskatchewan up to the Mountains. I discovered a large river in the western part of this tract called "Sheep River" 180 feet wide which joins the North Saskatchewan about twenty miles west of Rocky Mountain House. Prairie Creek 130 feet wide, so-called I believe from the fact of a few small patches of open bottom occurring near to its junction with the Clear Water River, lies midway between the latter stream and the North Saskatchewan and as far as I can judge by the very rough reconnaissance made of this portion of the country its couree lies in parallel line with the course of the other principal rivers and has its elbows in the same trends as the other river of this system.

On the 13th of Augast I went in an easterly direction. On the trail from the Mountain House to Edmonton I crossed three small streams, House Creek, Lobstick Creek and Macauleys Washing Creek, flowing south easterly into the Medicine River. After crossing House Creek the country is only partially wooded looking eastward, and the land appears to bo good in that direction.

Along the valley of the North Saskatchewan and on its south side from the Mountain House to near the 114th meridian the surface of the country is generally smooth or rolling. The same remark applies to the north side as far down as the North branch, where the surface becomes more level. From the Mountain House to the base of the Mountains the country is generally smooth. The land is a clay loam.

The only streams of any importance flowing into the North Saskatchewan from the Clear Water to the 114th meridian are the Baptiste River, and the South fork, the former is a stream about 120 feet wide and the latter has a width of 300 feet. These rivers may be utilized for driving saw logs. The White Mud River is but a small stream choked up with logs and other impediments, but when cleared out it could be made a good stream for driving logs. About 12 miles above the White Mud River there is a coal seam 15 feet in width apparently composed of three layers or beds.

Extract from Report of Standard Outlines between Townships 3 and 7, and
frem Range 17 to 2nd Principal Meridian, and Townships 1 and 2 from Range 1 to 8 inclusive, Wetif of 2nd Principal Meridian, by William Pearce, D.L.S.
Excepting the valley of the Souris, a portion of Township 6 Range 17 W. in the vicinity of Oak Lake, and along the Pipestone Creek, the country gone over was bare prairie. The timber in the valley of the Souris consists chiefly of maple, elm, poplar and some scrub oak. In no place is there any considerable quantity, enough probably to supply for a few years a belt of settlement four or five miles in width along its banks, trom the "Elbow" in Township 6, Range 18 W . to where it is crossed by the 1st Correction line in Range 27 W . West of the second principal meridian in this valley there is very little timber large enough for building purposes.

From the bend known as the "Elbow,", in Township 6, Range 18 W. to the International Boundary, the Souris would for the greater portion of the summer be navigable for steamers. Between the elbow and its mouth there are many places where the current is so rapid that probably it would be well nigh impossible for a steamer to ascend the river. In the neighborhood and to the west of the second principal meridian many good water powers could be obtained on this river.

The valley of the Pembina River joins that of the Souris at the elbow, and at one time probably the waters of the Souris emptied through the Pembina.

Good water was obtained throughout the survey. The snowfall on these plains last winter is said by the Indians to have been about twice the ordinary depth, which filled up all the basins with water, and the summer being a wet one, they continued so all the season, which caused tho country to appear much more than commonly wet. Fully seventy-five per cent. of these basins can be cheaply drained. Usually they would not require it, there not being more than one-fifth of them too wet for growing hay well.

On the greater portion of the Souris plain, spear grass or wild oat grows in great profusion. By many this grass is thought to be destructive to sheep; but Mr. Sharpe, a settier at Turtle Mountain and on whose farm there is considerablo of the same grass, says he has experienced no trouble with his sheep in that regard and has had them there during the past three years. The wool on the sbeep being very short until after the barbed grains have ripened and fallen on the ground, which usually occurs in July, prevents injury.

Townships 3 and 4, Ranges 17, 18, 19 and 20 , are rolling prairie, some hay swamps and ponds, soil good depth and quality, subsoil clay.

Townships 3 and 4, Ranges 21 and $2 \dot{3}$ contain Whitewater Lake. On the east, north and west sides of this lake there are magnificent hay.lands covering an area of probably twenty square miles. This lake having no outlot, in the spring the lowlying lands on its margin are submerged, and as evaporation lowers the lako these lands become dry, and by the time the grass is tit to cut, the ground is dry, hard and smooth, in splendid condition for utilizing hay-saving machinery. There is very little timber on this lake, some on an island near north shore to which access can be
had with teams during the ordinary height of water. This vicinity is particularly well adapted for stock farms.

Townships 3 and 4, Ranges 23 and 24, rolling prairie, soil not very good, in places too much alkali; surface drainage would no doubt, in most places where there is an excess of those salts, carry it off in solution, so that in a very few years there would not be too much remaining for the successful cultivation of cereals.

Township 5, Ranges 17 to 22 is good quality. Across the foregoing ranges and along the south side of the Souris, extending back therefrom for a depth of five or six miles, is a section of country, which for quality of soil and natural drainage cannot be surpassed. There is, however, very little hay lands in this belt. Across Ranges 23 and 24 the southerly two-thirds is not very good, rolling and broken, some places very stony, on the summits of the knolls and ridges rather gravelly. The basins being ponds many of which will be very expensive to drain. Remainder of this township is fair.

Township 6, Ranges 17 and 18, rough high rolling lands full of lakelets, soil on ridges very poor, some timber, oak and poplar, of no considerable extent or value. In range nineteen the greater portion of this township south of the Souris is first class. To the north of that river rolling land, wet basins, soil fair however. Across Ranges 20, 21, 22 and that portion in 23 south of the Souris is first class. In range 23 and 24 to the north of Souris, within one mile of river, fair. After that it is alternately ridges and muskegs. The country to the north east and south of Oak Lake also partakes of this nature. The ridges are light drifting sand, covered with poplar scrub some bluffs of dense growth large enough for rails. This section is useless for any purpose but pasturages.

Township 7, Ranges 24 and 25, alternately sand ridges and muskegs. Range 26 is of fair quality. The northerly half is very good.

Township 8, Range 24, portion not occupied by Oak Lake, is sand ridges and muskegs. In Range 25, there are some very good hay lands. In Range 26, this township will average good second class land.

Townships 7, 8, 9 and 10, Ranges 27 to 34, W. are rolling prairie. The Pipestone, North and South Antler Creeks run through them. Along the banks of these creeks and their branches there is a margin of from five to twenty chains very stony, chiefly small granite boulders, too many to permit the land to be easily cultivated. Well watered by these streams, quality of water cannot be surpassed. Some of the ridges are rather gravelly; but only a small percentage lost in that way. Soil nearly everywhere of fair quality and depth, subsoil generally good clay not of a hard or cold nature. In some places a good many ponds. To the south-east of Moose Mountain these ponds are often quite deep and cannot be readily drained; but generally drainage can be done cheaply. As nearly as could be ascertained this block might be divided thus: 15 per cent stony and gravelly, 25 per cent ponds and hay swamps, remainder very fair land suitable for grain growing,

Between Moose Mountain and the Qu'Appelle river, M.r. Marion a half-breed settler at Oak Lake reports to be magnificent land, and personal observation in the vicinity of the second principal meridian as far north of the 3rd correction line confirms his report.

Townships 1 and 2, Ranges 1, 2 and 3 west of the second principal meridian are sandy loam, fair quality, subsoil sand, good growth of grass. Everywhere in the valley of the Souris, a magnificent crop of wild hops may be obtained, of larger size and better quality than is generally procured from hop gardens in the province of Ontario. Should red clover grow readily in this section and it is probable it will, then these townships would become very valuable as farming lands. By ploughing under occasionally a crop of clover the productive qualities of the soil can be economically maintained. The soil can be vory cheaply worked; but wont permit the cropping without renewal, which many parts of Manitoba and the North-West will allow. A supply of good lignite being readily and cheaply procured, the fuel question for this section is solved.

Aeross Ranges 4, 5, 6, 7 and part of 8 on both banks of the Souris, a belt of very stony land is met with, varying from one half to two miles in width, and is unfit for anything but pasturage. This section is also badly cut up by ravines. That portion of Township 2, lying north of the Souris and outside of this belt is of fair quality, not many ponds or hay lands soil very good clay loam, clay subsoil. Township 1, to the south of this stony belt, is sandy loam, fair quality, subsoil sand.

The northerly half of Township 1 , Range 6 west of 2nd principal meridian was subdivided. Nearly the whole of this has been laid out in mining locations. Finding those claims staked on the ground, it was deemed advisable to make a subdivision thereof. This includes La Roche Percee lignite veins. The S. W. $\frac{1}{4}$ of Township 2, Range 8, W. also bas been subdivided. In the south bank of a ravine which runs into the Souris in this township in several places where the formation is exposed five seams of lignite are met with; the first about twenty-five feet below the sarface and is only a few inches in thickness, then a layer of clay and sand about three feet thick, then a much thicker layer of lignite and then a thinner one of sand and clay, and continues thus till the last layer of lignite visible is between three and four feet in thickness. This lignite seems to contain a large percentage of bitumen. In one place it crops out in the bottom of a pond, tha margin of which has a pavement resembling asphalt, produced likely by a mixture of this bitumen with the sand. At one point a vein was burning fiercely, and probably had been for about a year. Dinner for the party was cooked by this fire. Veins on fire were observed in five different localities. In many places along the valley of this ravine, and also the Souris in this vicinity, mounds covered with burned clay, resembling broken bricks, are met with caused probably by the burning away of layers of lignite between layers of clay. In the neighborhood of La Roche Percée, a formation of sandstone is met with. On the surface this stone is quite hard, but a few inches below it can be pulverized into dust with very little pressure.

Extract from Report of Survey' of Township Outlines, between Townships 26 and 31, and Ranges 1 to 12 inclusive, West of the Principal Meridian, by G. C. Rainboth, D. L. Surteyor.

As regards the gencral features of the country gone over in the course of this survey, and its adaptability to cultivation, I may say that one-half may be classed as prairie, five-twelfths as bush, and one-twelfth as marshes and lakes. Five-sixths is fit for cultivation, and fully one-half I would class as first quality, the remaining onesixth being alkali and marshes. A number of these marshes could be drained, and be thus rendered fit for cultivation, and many of those that it might be difficult to drain, would be valuable as hay lands, particularly in dry seasons. On the whole, I consider that the country enclosed by this survey is as favorable for settlement as any in the North-West Territory.

As regards the timber, I may say that it is fairly timbered for settlement purposes, with poplar and balm of gilead, excepting in Townships Nos. 27 and 28, Ranges 2 and 3, where the settlers would have to haul their building timber from a distance. I am under the impression that at no great distance from the 8th Correction line, spruce and tamarac will be found, as the scattered trees seen from that line would seem to indicate; if so, it will enhance the value of this section of country very much.

There are some very fine streams of running water intersecting the country, mostly feeders of the Wbitesand River, which is a very considerable stream, and which, according to reports acquired from the Indians, takes its rise in the Touchwood Hills.

I might here remark that the greatest injury to this cour.try is resulting from the prairie fires, which are destroying every year more or less of the bush lands, and will eventually completely denude the country of woods, if stringent measures are not taken to prevent them. The principal causes of these fires are camp fires, and cotion used for gun wads by hunters.

## Extract from Report of Subvey of Townseip Outlines, between Townships

27 and 30 inclusive, and Ranges 13 to 16 inolusive, West of the 2nd Pringipal Meridian, by Оtto J. Klotz, D.L.S.

The solid woods are in the north-west and south-west of the block; the former forming part of the Big Touchwood Hills, and the latter of the Little Touchwood. The wood (almost wholly poplar) in the Big Touchwood, was found inferior, generally rotten in the heart, and of not so large dimensions as that of Little Touchwood, and only fit for fuel and rails, while in the Little Touchwood, building timber squaring eight to twelve inches (seldom exceeding the latter) was met, also birch of similar dimensions. Hazel underbrush prevails the whole woods; blueberry and cherry are also found.

The greater part of the arable land is situated a little to the north of the middle of the block, and designated by the name of the "Round Plain."

The remaining part (southern) of the block not already described, consists of prairie with numerous bluffs, furnishing fuel, rails, and in some instances, building timber. A noticeable fact is that in bluffs the wood is almost invariably on the north side of the hill, the south side being bare.

The prairie land is a good, sandy loam, varying in depth from nine to twentyfour inches, underlaid with a yellowish clay; in places granite; hornblende and limestone boulders are found.

In Township 29, Range 15, the best land is situated. In the woods the soil is only a few inches deep, underlaid with argillaceous sand. Although at present the block is covered with innumerable marshes and ponds, yet seven years ago, there was no water to be found except in the larger ponds or lakes. The water now is seven feet higher as stated by the Hudson's Bay Company official at 'Touchwood, and attested by old trails, that now lead through several feet of water.

Extract from Report of the Astronomical Section of the Standard Survey ey W. F. King, D.T.S.

## DESCRIPTION OF THE OOUNTRY.

The country lying north of the Qu'Appelle River, east of Last Mountain Lake, and bounded on the morth by the heavy woods at the sources of the Assiniboine and Red Deer Rivers, with the exception of a few small tracts of sandy land, for example, near the junction of the Qu'Appelle and Assiniboine Rivers, and between the Assiniboine and Whitesand Rivers near Fort Pelly, and excepting also some low-lying land in the upper Assiniboine country, is all very fertile, and one of the best regions for settlement in the whole territory. With the exception of the plain between Last Mountain Lake and the Touchwood Hills and the Pheasant Plain east of the File Hills, there is abundance of wood everywhere, and in many places such as Touchwood Hills, the Qu'Appelle River valley, and the valley of the Assiniboine there is mach large timber.

Going along the north side of the Qu'Appelle, after crossing the outlet of Last Mountain Lake, the nature of the soil changes at once to almost pure sand supporting a little grass. This character of country continues to the Elbow of the South Saskatchewan. The upper Qu'Appelle valley above Buffalo Pound Lake is alkaline, and cactus grows abundantly. The whole country is very dry and there is no wood between Last Mountain Lake and the sandhills near the Elbow, except in the lower valley of Little Arm River, and in ravines opening into the Qu'Appelle valley. Going south from the Elbow the soil shows a slight improvement until the Cotean is reached, 23 miles from the Elbow. Continuing south over the Coteau for 26 miles, the north end of Old Woman's Lake is reached. In the Coteau some of the hill slopes show a light, sandy loam; the country is very rough, and in places are seen the broken sand and clay banks commonly called "bad lands." The hill-tops are generally very stony. Old Woman's Lakes lie north-west and south-east in a deep
depression behind the Coteau: they extend as far as the eye can reach, and are very alkaline.

From Old Woman's Lake to Fort Walsh, 165 miles, the soil is generally sandy. East of Swift Current Creek there is a large tract of alkaline sage desert. West of the Swift Current the soil is better, and in the hollows there is a good growth of grass. 42 miles from Fort Walsh, in the rolling country north of Cypress Hills, the soil is better, aud continues so as far as the Cypress Hills, 11 miles from Fort Walsh. These hills are almost entirely composed of gravel and shingle, and the only arable land is to be found in the deep valleys of the small creeks. On the route travelled there is no wood from the Elbow of the South Saskatchewan to a small creek 60 miles from Fort Walsh. In the valleys in Cypress Hills there is a large quautity of spruce timber, and coal is also found. Going west from Cypress Hills the soil is very sandy and dry, and there is no wood until Belly River is reached. Near Belly River the grass is richer from the greater rainfall; the soil is gravelly, and continues so to Fort McLeod. Good land is found in the river bottoms in this vicinity.

North from Fort Macleod the soil improves gradually all the way. At Mosquito Creek, the soil is very similar to that south of the Qu'Appelle valley near Fort Qu'Appelle. At High River, in the shallow depression which forms the valley, the soil is a rich black loam, similar to that south of Touchwood Hills. From High River to Sheep Creek, the soil is also very good.

Going east from High River to the Blackfoot Crossing the plain is somewhat gravelly, and very like that near Mosquito Creek. In the valley of Bow River, at the Blackfoot Crossing, the land is good. This part of the country is, I think, preferable, for agriculture, to that nearer the mountains, the season being quicker on account of the smaller rainfall and less altitude above the sea.

West from the Blackfoot Crossing to Fort Calgary the soil is similar to that south of the river, improving towards the west. Along the road from Calgary to Morlegville, on the high land north of Bow River, the soil is a rich black loam; but in the valley of Bow River, in the vicinity of Morleyville, and up to the mountains, the soil is very gravelly. The whole of the country near the mountains, is very well adapted to stock raising.

From Morleyville to Red Deer River the soil is a good sandy loam; the growth of grass is very rich.

From Red Deer River to Edmonton the land is in general: vory good, along the Battle River especially.

From Edmonton to Battleford the trail crosses the Saskatchewan at Fort Saskatchewan, follows the chain of lakes and the valley of Vermilion River, and strikes the telegraph line a few miles from the 110th meridian. The land is very good up to about 50 miles from Battleford, after which sandhills appear in places. Noar Battleford the soil is light, but improves towards the slopes of the Eagle Hills. From Battleford to the Elbow of the North Saskatchewan, the nature of the soil is similar to that near Battleford, deteriorating as we leave the Eagle Hills.

Going from the Elbow, towards Duck Lake, the soil improves, and near Duck Lake it is a rich loam. This is also the nature of the country, generally, along the trail, from Duck Lake to Touchwood Hills, with the exception of the Alkaline Plain.

Extract from Report of Standard Outlines between Townships 10 and 19, and from lianaes 17 ro 2nd Principal Meridian, by A. C. Webb, D.L.S.
Commencing at the 3rd Correction Line, north side of Ranges 30, 81 and 32, the land is rolling prairie, soil sandy loam, gravelly in places, frequent ponds of water and excellent for farming or grazing. On the 4th Base, Ranges 29, 30, 31 and 32, rolling prairy with bluffs of poplar and dense scrub, good farming land, frequent ponds of water.

On the meridian exterior, between Ranges 30 and 31, Townships 11, 12, 13 and 14, the land is rolling prairie, soil first-class, excellent for either farming or grazing
purposes, well watered, with some poplar and dense scrub. 4th Correction Line, south side, Ranges 31 and 32, the land is rolling praire, sandy loam, excellent for farming, occasional bluffs of poplar and scrub.

Commencing on the 4th Correction Line, south side, Ranges 27 and 28 the land is much broken by the valley of the Assiniboine River, Miniwaste Creek and other small creeks and ravines; heavy elm, maple, poplar and dense scrub are met with on the slopes of the valley of the Assiniboine River and Miniwaste Creek. Much of the land is low, and early in the season liable to flood, rendering it more adapted for grazing purposes and hay land than for farming. Across Ranges 31, 32 and 33, the land is rolling prairie, sandy loam, partially covered in some sections with poplar and scrub, exceedingly well adapted for grazing.

On the 3rd Correction and 4th Base, across Range 33, the land is undulating and hilly prairic, and well suited for grazing purposes.

On the meridian exterior, between Ranges 32 and 33, Townships 15, 16, 17 and 18, the southern 12 miles, Townships 15 and 16, the land is rolling, soil a sandy loam, partially covered with thick poplar and scrub, splendid farming land. On the northern 12 miles, Townships 17 and 18, approaching the Qu'Appelle River, land is rolling, and mostly covered with small poplar and dense scrub, soil sandy loam with some grarel. The Qu'Appelle River lies in a deep valley of some 320 feet. To the north of the river the soil is good and the land excellent for farming purposes.

Commencing at the 5th Correction Line, south side, Ranges 31,32 and 33, rolling prairie, soil sandy loam, gravelly in places, partially covered with islands of scrub and some dead and fallen poplar timber, excellent grazing land.

In conclusion I would say, that as nearly the whole of the country embraced in my survey was under contract for subdivision during the past season, a more detailed description is not necessary here.

Commencing on the 14th Base Line at the north-east corner of Township 12, Range 27 west, and running west, the land for the first six miles consists of rolling prairie; soil sandy loam with frequent ponds of water; the next six miles is of the same character, with the exception of the soil in places being a little stronger and occasionally stony. On the meridian exterior botween Ranges 28 and 29, Townships 13 and 14, running north, the country is well watered with frequent small ponds, and exceedingly well adapted for farming purposes. Along the 4th Correction Line, south side, across Ranges 29 and 30, similar remarks will apply, although the land being more inclined to be gravelly is more suitable for grazing purposes.

On the meridian exterior between Ranges 26 and 27, Townships 11 and 12, the land is rolling, soil light and gravelly, but fair farming land. On the 3 rd Correction line across ranges $26,27,28$ and 29 , the first six miles is undulating prairie and excellent farming land; the following twelve miles are somewhat rougher, being slightly broken, but the soil never falling lower than class 2.

The remaining six miles across Range 29 is well adapted for grazing land, being rolling prairie, light soil and occasional bluffs of poplar and scrub. On the meridian exterior between Ranges 28 and 29, Townships 11 and 12, the land is rolling prairie, soil sandy loam with ponds of water, some islands of scrub, and well adapted for either arable or grazing purposes.

Extract from the Report of the Operations of the Westrrn Section of the St ndard Survey by Montague Aldous, D.T.S.

## DESORIPTION OF THE COUNTRY.

Between the North Saskatchewan and Battle River, in Longitude $114^{\circ}$ west, the country is thickly wooded with poplar, spruce and birch. Bordering Pigeon Lake the trees are generally from six to eighteen inches in diameter; much of the spruce would make good saw-logs. Pigeon Lake is about 14 miles long, and from 4 to 6 miles wide ; it contains an abundance of white fish, pike and suckers; on the northwest side of the lake there is a small settlement of half-breeds and Indians who subsist
chiefly by fishing. In the winter season Edmonton and surrounding settlements are supplied with fish taken chiefly from this lake; it is distant from Edmonton by cart trail about forty miles.

Battle Lake, at the head waters of the Battle River, is about six miles south-west of Pigeon Lake; it is not more than three or four miles long, and from one to two wide, yet it contains an abundance of fish superior in quality it is said, to those taken from Pigeon Lake. The Stony Indians frequent this lake, and have a small settlement there.

Between Battle River and Swan Lake the country has been overrun by fires, leaving much dry standing and fallen timber; a second growth of poplar and willow has sprung up, but in some places there are small patches of prairie land; the soil throughout is very good. In this section we pass over Gull Lake, Blind Man River and Swan Lake. Gull Lake is a large shallow sheet of water, about 12 miles long and three miles wide, apparently containing but few fish. Blind Man River is a clear rapid stream from thirty to forty yards wide. Swan Lake is about six miles long by two wide; it is apparently very shallow, the grass and reeds extending a long way out into the lake; it does not appear to contain any fish.

From Swan Lake to the Red Deer River, and south of the Red Deer River to the northern limit of true prairie land, in Latitude $51^{\circ} 50^{\prime}$ N., at about the 9th Base Line, is a magnificent stretch of partially wooded country, with a rich black loam soil. I am not prepared to say how far this particularly fertile belt may extend up or down the river, but, from personal observation know it extends downward at least as far as the mouth of Blind Man River. The Red Deer River is a fine stream, about 150 yards wide, similar in appearance to the north and south branches of the Saskatchewan; I crossed it when the water was low, and found the depth varying from four to five feet. I have never heard of there being any rapids or other impediments to navigation between this point and its confluence with the South Saskatchewan, and am of the opinion that steamers, such as run up to Edmonton, will in the future navigate at least as far up as this point.

Before concluding my description of the country north of the Red Beer River, I would draw your attention to a very large tract of particularly fertile land situated on the Battle River; that portion of it which has come under my observation lies between the Bear River and Battle River crossing, but I am informed by Mr . Hardvsty, Chief Factor of Hudson Bay Company, and other good'authorities, that the same quality of land exists on both sides of Battle River, as far down as Battle River Settlement, including an area of about 800 square miles.

Southward from the 9 th Base Line to Bow River is an open undulating plain, entirely destitute of wood; the soil in the northern half of this section is of fair quality, but gradually becomes light and gravelly as we approach the Bow River; the country is generally very dry, water rarely occurring except in several small brackish streams, which flow through this section.

After crossing Bow River, which is a beautiful mountain stream, about 150 yards wide, flowing with great rapidity, the appearance of the country changes greatly, it is much more hilly, and the soil is generally of a good quality. No timber is to be found, except in the river bottoms, but as these streams are quite numerous, they will afford for some time to come sufficient timber for the ordinary purposes of the settler.

At Mosquito Creek, in the latitude of the 5th Base Line, we enter the Porcupine Hills; from this point southward to the 4th Base Line, where we turned east, the zountry is very rough and broken; in the valleys the soil is excellent, and the vegetation most luxuriant ; it is well watered with numerous small creeks, and groves of good pine and spruce frequently occur ; the country is rather rough for easy farming, but for grazing purposes it cannot be excelled.

The country is of the same nature east along the 4th Base Line as far as Willow Creek. Here we enter upon a dry level plain destitate of wood and water, the soil is light and the grass stunted for want of moisture. Along the meridian exterior south to the 2nd Base Line the country is much of the same description. In the valleys of the

Old Man, Belly, and Kootanie Rivers several farmers are settled and succeed in raising very good crops. With the exception of these bottoms I consider, but little of the land in the vieinity of Fort McLeod such as could be cultivated to advantage.

I am informed that there is a large extent of very rich agricultural country lying between the south end of the Porcupine Hills and the Rocky Mountains, at the head waters of the Old Man River, and am of the opinion that the line surveyed generally skirts the eastern limit of the rich country which borders the slope of the Rocky Mountains.

Between the 2nd Base Line and the international boundary we are closely approaching the slope of the mountains, and the quality of the soil and the growth of vegetation noticeably improves.

All the atreams from Bow River to the Boundary Line contain an abundance of trout, which can be caught in great numbers, in the spring and fall, when the water is low and clear.

Before closing this report I beg :to draw your attention to a large extent of excellent farming country which I passed over on my homeward journey, lying south of the Qu'Appelle River between the Moose Jaw Creek and Fort Ellice. For nearly the whole of this distance of 150 miles the soil is generally of an excellent quality, the country being partially wooded and well watered.

From Fort McLeod to Moose Jaw Creek viá Cypress Hills and south end of Old Wives Lake the country is generally poor and unattractive.

Position of certain points on the trail between Fort McLeod and 103nd Meridian, determined by astronomical observation.

| Services. | Latitude. |  |  | Longitude. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | , | " | - | , | " |
| North bank of old Main River.......................................... .. ........... | 49 | 50 | 51 | 113 | 16 | 50 |
| Plains, $14 \frac{1}{2}$ miles east of the coal bank crossing of Belly River ............ | 49 | 38 | 00 | 112 | 37 | 00 |
| Small dry coulee, crossed by trail. ........ ................ ........ ........ ........ | 49 | 39 | 97 | 111 | 46 | 00 |
| Waterhole, five miles west of Seven Persons' Coulée................... ...... | 49 | 37 | 50 | 111 | 33 | 50 |
| Seven Persons', Conlée............................... ......... ........ ........ ...... ..... | 49 | 38 | 00 | 111 | 27 | 30 |
| Branch of Bull's Head Goulée ............... ........................ ............... | 49 | 37 | 30 | 110 | 49 | 30 |
| Cypress Hilla, 12 miles east of Fort Walsh........... ......... ...... .......... | 49 | 30 | 00 | 109 | 42 | 30 |
|  | 49 | 35 | 09 | 108 | 48 | 50 |
| Plains, 129 miles from Fort Walsh...................................... .. ........ | 49 | 48 | 20 | 107 | 32 | 00 |
| Salt Lake in Plains............................... ............................ ...... | 49 | 87 | 04 | 107 | 03 | 40 |
| Forks of Old Wives' Creek .............................................................. | 49 | 65 | 58 | 106 | 34 | 00 |
| South end of Old Wives' Lake........................................................ | 50 | 01 | 29 | 106 | 02 | 40 |
| Plains, north-esst of Old Wives' Lake............................................. | 50 | 11 | 26 | 105 | 40 | 30 |
| Plaine, 12 miles enst of Moose Jaw Creek......................................... | 50 | 31 | 30 | 105 | 10 | 30 |
| North limit of Plains. | 50 | 32 | 45 | 104 | 19 | 30 |
| Plains, 0ne mile west of Weed Creek................................................ | 50 | 23 | 25 | 102 | 42 | 00 |

## Trail distances from Fort McLeod to Fort Walsh.

| $\begin{gathered} \text { Distance } \\ \text { from Fort } \\ \text { McLeod. } \end{gathered}$ | Place. | Distance from Fort Walsh. |
| :---: | :---: | :---: |
| $0 \cdot 0$ | Fort McLeod. ......... ......... ........... ......... . ..... . ..... ...... ......... ......... ..... ...... ...... | 182.0 |
| 2.5 | Willow Creek ........ ........ ................ , ...... .......... ......... ......... ........ ........ ...... | $179 \cdot 5$ |
| $13 \cdot 1$ | Coulée, nortb side of Old Man River .............. ........ ......... ........ ................... | 168.9 |
| $24 \cdot 7$ | Opposite forks of Old Man and Belly Rivers. ................................... .............. | $157 \cdot 3$ |
| $37 \cdot 5$ | Belly River, coal bank crossing.......... ......... ........ ......... ........ ......... ........ ...... | $144 \cdot 5$ |
| $67 \cdot 8$ | Chin Coulée, Salt Lakes... ................. ......... ......... ......... ......... ......... ........ ..... | 114.2 |
| 76.9 | Plains, good waterhole........... ......... ......... ........................... ........ ......... ......... | $105 \cdot 1$ |
| 91.0 | Small dry coulce ......... ......... ......... ......... ......... ......... ......... ................ ......... | 91.0 |
| 101.2 | Plains, good water. | $80 \cdot 8$ |
| 1062 | Seven Persons' Coulée, brackish water.. .......... ....... ...................... ......... ........ | $75 \cdot 8$ |
| 123.9 | do second crossing........... ................. ......... .............. .... | $58 \cdot 1$ |
| 1253 | Sandy Coulée, water in places......... ........ ......... ......... ......... ......... ........ ......... | $56 \cdot 7$ |
| $130 \cdot 4$ | Dry creek ............ ......... ........ ......... ......... . ...... ......... ........ ......... ....... ......... | 51.6 |
| $133 \cdot 7$ | do ................. ........ ........ ........ ........ ......... .............. ......... ........ ...... | $48 \cdot 3$ |
| 134.2 | Branch of Bull's Bead Creek. | 47.8 |
| 136.8 | Bull's Head Creek. ........ ........ ........ ......... ......... ................. ....... ......... ........ \| | $45 \cdot 2$ |
| 144.5 | Coulee, water.............. ......... ........ ........ ......... .............. ........ ...... ........ ...... | $37 \cdot 5$ |
| 147.5 | do do ......... ..... ........ ........ ......... ..... ........ ......... ... ....................... | 34.5 |
| 153.1 | Medicine Coulée..................... | $28 \cdot 9$ |
| $160 \cdot 9$ | Government Indian Farm .......................................................................... | 21.1 |
| 182.0 | Fort Walsh.......................................................................................... | 0.0 |

## Trail distances from Fort Walsh to Fort Fllice, viá the south end of Old Wives' Lakes

 and south side of Qu'Appelle River.| Distance from Fort Walsh. | Place. | Distance from Fort Ellice. |
| :---: | :---: | :---: |
| $0 \cdot 0$ | Fort Walsh. | $443 \cdot 4$ |
| $1 \cdot 2$ | Small creek | $442 \cdot 2$ |
| 6.4 | Four-mile Coulée, Benton Trail Forks..................................................... | 437.0 |
| $17 \cdot 9$ | Creek | $425 \cdot 5$ |
| $21 \cdot 2$ | Lake, half a mile north of trail............................................ .................. | 422.2 |
| 328 | Cross-roads, Battleford to Wood Mountain.............................................. | $410 \cdot 6$ |
| $35 \cdot 1$ | Coulée laying north and south...... ........................... .............................. | $408 \cdot 3$ |
| $53 \cdot 3$ | First strike White Mud River.................................................................. | $390 \cdot 1$ |
| $56 \cdot 1$ | White Mud River Crossiag.............. | $387 \cdot 3$ |
| $61 \cdot 1$ | Old Police Post and Settlers' | $382 \cdot 3$ |
| 62.8 | Creek flowing north. | $380 \cdot 6$ |
| 103.5 | do do east.... | $339 \cdot 9$ |
| $112 \cdot 3$ | Water, two lakes.................................................................................... | $331 \cdot 1$ |
| 121.9 | Creek flowing east.................................................................................... | 321.5 |
| 131.2 | Small creek, water not flowing................................................................... | $312 \cdot 2$ |
| $137 \cdot 2$ | Creek flowing north and east...................................................................... | 3062 |
| 147.9 | Good water.. $\qquad$ | 2955 |
| 171.4 | First enter valley of Old Wives' Oreek. | 272.0 |
| 179.0 | Cross Old Wives' Oreak near forks...... | 264.4 |
| 204.8 | South-west corner of Old Wives' Lake. | 238.6 |
| $205 \cdot 7$ | South end of lake, Observation Point.. | $237 \cdot 7$ |
| 211.7 | South-west corner of east bay of Old Wives' Lake. | $231 \cdot 7$ |
| 213.6 | Leave Old Wives' Lake at Alkaline Lake . | $229 \cdot 8$ |
| 228.7 | Good water..... | $214 \cdot 7$ |
| $239 \cdot 8$ | Souris River.... | $203 \cdot 6$ |
| 2485 | Forks of road, elbow of Moose J8w Creek..................................................... | 194.9 |
| 261.8 | Swamp in Coulée | $181 \cdot 6$ |
| $270 \cdot 1$ | Cotton-wood Creek ..... ....... ................................................................................. | $173 \cdot 3$ |
| 2729 | Pile of Bones Creak | 1795 |
| 284.0 | Boggy Oreek........................ ... ............................ ...................................... .. ................. | 159.4 |
| 293.4 | Trail's fork to Qu'Appelle. | 150.0 |
| $315 \cdot 9$ | Narrow Lake.................................. ...................................................................... | $127 \cdot 5$ |
| 324.8 | Head Man Mountain | $118 \cdot 6$ |
| 333.4 | Coulée...................................................................................................... | 1100 |
| 348.0 | Small creek. | $95 \cdot 4$ |
| $849 \cdot 1$ | do | $94 \cdot 3$ |
| 357.6 | Forks of trail to Qu'Appelle........... | $85 \cdot 8$ |
| 367.9 | Chain of lakes. | $75 \cdot 5$ |
| $368 \cdot 7$ | Small creek.............................................................................. ........... | $74 \cdot 7$ |
| $376 \cdot 7$ | Weed Creek... .... | $66^{7}$ |
| 385.3 | Forks of trail to Qu'Appelle..................................................................... | $58 \cdot 1$ |
| 407.8 | 102nd Meridian.................. | $35 \cdot 6$ |
| $420 \cdot 6$ | Scissors Oreek... | 22.8 |
| $443 \cdot 4$ | Fort Ellice............................................................................................ | 0.0 |

## Extract from Report of G. U. Ryley, D.L.S.

The following is a report descriptive of the country passed over during my inspection survey of the townships surveged last season south of the Assiniboine River.

Township 5, Range 18 W -The 'soil is a clay loam, open prairie, north-west corner rolling, the balance level. A coulée runs easterly through section 21.

Township 5, Renge 17 W -Pelican Lake is situate at the north-east corner of this township, is partly surrounded by banks about 100 feet in height, abd covered with some very good oak and poplar, measuring about 8 inches in diameter. A coulée runs through sections $14,23,24$, and another througb sections 29 and 32 . The only section taken up as yet, as a homestead, is 22, by Mr. M. McMillan.

Township 6, Range 17-The land in this township is high and rolling, broken into small, irregular hills; the only level part being through sections $2,3,4,5$ and 6, which are situated in a valley that extends westward from Pelican Lake. There is a lake of about one square mile, on the north-east corner of this township, comprising a part of sections $22,23,26$ and 27 . ; soil, black clay loam.

Township 6, Range 18 W -The Souris River, having an average width of about 150 feet runs with a strong current through this township; its banks are skirted with oak and poplar. The elevation of the"township sbove the Souris is about 200 feet. Land rolling and broken. A valley extending rom the Souris easterly to Pellican Lake is heavily timbered on the south side with elm, ash, maple, poplar, and some oak, averaging about ten inches in diameter.

Township 4, Range 19 W -Rolling land; open prairie, interspersed with a number of sloughs; soil, clay loam, gravelly bottom.

Township 4, Range 20 W-Rolling land; open prairie; soil, sandy loam. Turtle Mountain trail runs through this township in a south-westerly direction.

Township 4, Range 21 W-A large meadow covers sections 1 and 2, and the land to the south; open prairie ; soil, clay loam. Southern half of this township slopes slightly to the south.

Township 5, Range 21 W -Open prairie ; rolling land ; soil, sandy loam.
Township 6, Range 21 W -Slightly rolling ; open prairie with several ravines intersecting, through which small creeks containing good water flow. The soil in the south-east corner is clay loam; the remainder of the township a heavy sandy loam.

Township 5, Range 22 W -Open rolling prairie ; the land in the north-west corner being clay loam, the balance sandy loam and gravel.

Township 6, Range 22 W-Partly rolling prairie, alternating with level tracts; soil, clay loam; several ravines running through the township containing good water.

Township 5, Range 19 W-Open level prairic in part, the remainder heary rolling land; soil, clay loam, in some parts gravelly.

Township 4. Range 22 W-Two-thirds of the township slopes to the south; the east and west sides of the towuship is a sandy loam with occasional beds of gravel, the central part a clay luam.

Township 6, Range 20 W -Open prairie with the exception of the north-west corner, through which the Souris River flows; said river is lined with small poplar, oak and red willow ; the land is partly level and slightly rolling.

Township 4, Range 25 W -Open prairie, excepting the land bordering on the Souris (which flows through this township also), which is covered with oak and poplar from 8 to 12 inches in diameter; land slightly rolling ; soil, sandy loam.

Township 3, Range 26 W -This township is also watered by the Souris, which is fringed with a similar growth of wood to that mentioned in the preceding township; open prairie with slightly rolling surface.

Township 5, Range 25 W -The Souris River runs almost through the centre of this township in a north-easterly direction. A range of large sand hills traverse the westerly part of the township; similar ranges are situated in the north-east and south-east corners, these are dotted over with oak and poplar, areraging from 8 to 10 inches in diameter. A large marsh of about three square miles occurs in the northern
part of this township, and extends northerly across township 6, and about two miles into township 7; soil, sandy loam.

Township 2, Range 27 W-Open prairie with the exception of that part covered by the Souris, South and North Antlers, which are lined with oak and poplar. The boundary trail runs through this township. At the point where it crosses the Souris several settlers have taken up homesteads, and a small store is kept by one of them on the west bank of that river. The soil is a light sandy loam, with the exception of the flats of the Souris, which is a heavy clay loam.

Township 1, Range 27 W -Open prairie with the exception of that part covered by the South Aniler, which runs through the north-west part of the township. Soil light sandy loam ; rolling prairie.

Township 1, Range 28 W-The description of the last township covers this. The South Antler also running through this, township.

Township 2, Ranges 29 and 30 West-Rolling prairio; soil very light sandy loam, mixed with gravel. The South Antler Creek runs through the southerly part of the former township; its banks are fringed with small oak interspersed with poplar.

Township 1, Range 29 W -Open rolling prairie; soil light sandy loam, with gravel ridges running through the township. The South Antler continues its course through this township, intersecting section 33.

Township 1, Range 30 W -The same remarks with regard to the soil and lay of the land in the last township will apply to this. The South Antler, running easterly, occupies a portion of sections 11 and 12.

Township 1, Range 31 W -The South Antler also runs through the south-easterly part of this township; and with the exception of the timber bordering its banks, the township is an open prairie. The soil is a very light sandy loam.

Township 2, Range 32 W -Is of the same nature with regard to its soil as the last township. The South Antler traverses sections 34, 26, $2 \pm$ and 13, flowing in a south-easterly direction. Its banks are wooded with oak and some poplar.

Township 9, Range 19 W -Soil sand-loam, open prairie, with the exception of sections 1 and 2 and parts of 11 and 12, which comprises a part of the Brandon Hills, covered in a great many places by a thick busb, chiefly poplar and willows. The "Lake of the Hills" 'is situate on the south-east corner of section 2, containing an area of about seventy-two acres. The Little Souris River, $3 \overline{5}$ links in width (in September) runs in a northeasterly direction through the southerly part of the township. There are at present about twelve settlers in this township.

Township 10, Range 19 W -The Assiniboine, a river varying from three to five chains in width, its general course being east and west, almost intersects this township into two halves. lts banks and flats (the latter being generally covered with water in the spring) are wooded with oak, elm and poplar, having a diameter of about 14 inches. The soil is a sandy loam. About twelve settlers have homesteads north of the Assiniboine.

Township 8, Range 19 W-The greater portion of this township is taken up by the Brandon Hills, which rise gradually from the northern part of the township to the southern limit, and then fall again very abruptly to the south; from the height of land the country can be seen for miles to the south. The settlers in the neighboring. townships procure their building timber and firewood from these hills.

Township 7, Range 19 W -The land in this township slopes to the south, and is drained by the Souris River. The Brandon Hills touch the north-wost corner. Soil, clay loam. A large number of settlers have taken up homesteads in this township.

Township 8, Range 20 W -The land is rolling. Soil, clay loam. Open prairie.
Township 7, Range 21 W -Slightly rolling. Prairie intersected at different places by a ravine-Plum Creek and the Souris River. The building of a grist-mill at Plum Creek is in contemplation for next season; the site is on section 33. A large influx of settlers is expected in this and the neighboring townships next summer.

Township 6, Range 23 W-The Souris River, with its banks covered with elm, oak and poplar, runs north-easterly through the north-west corner of this township.

The land in this township to the north of the river is composed entirely of sand-hills, dotted with small oak and poplar scrub. The soil on the south tide of the Souris is a black clay loam. The land is slightly rolling.

Township 5, Range $23 \mathrm{~W}-\mathrm{Is}$ an open prairie. Soil, clay loam.
Township 5, Range 24 W -Is of the same nature as the preceding township. In the south-east corner a small portion of the sand-hills mentioned in the description of Township 5, Range 25, occurs.

In conclusion I might state that nearly the whole country which I have described, together with ths neighboring townships, is adapted for agriculturists, and no doubt will be eagerly taken up by settlers when the country becomes better known. I might also add that during the whole season we were not one day without good water.

Extract from the Report of Tofnship Outlines, between Townships 18 and 31, and from Ranges 27 to the 2nd Meridian, by E. Bray, D.L.S.
The country within the limits of this survey is generally undulating and is considerably broken by ponds, marshes, \&c. I estimate that about $2 \theta$ per cent. of the whole area of land is more or less of a swampy nature, but, no doubt, allowance should be made for the season, which was remarkably rainy. A small tract comprising about one-half of Township 26, Range 31 west (the N.E. half) is sandy and stony, and is therefore inferior. With these exceptions the land is of very good quality; and (especially in the vicinity of streams, \&c., where marshes are not so abundant) the land is well adapted for agricultural purposes.

Bluffs of poplar, mixed with willows, are found within the whole survey. These bluffs are very numerous in the northerly half of the survey, that is to say, in half north of the 5th Correction Line, while south of that line the timber is less plentiful. The timber is generally small, and will be of use only to settlers for fencing and fuel. We did not find much clear open prairie, as most of the plains here are dotted more or less thickly with willow brush.

Water is very plentiful, and in nearly every case I found it good and fresh.
Extract from the Report of Standard Outlines, between Townships 18 and 23, and from Ranges 1 to 12 inclusive, west of the 2 nd Principal Meridian, by W. F. Thompson, D.L.S.

Following the 5th Correction Line, westward from the 2nd Principal Meridian, the country across the first four ranges is thickly dotted with bluffs of poplars, the surface is undulating with long uniform slopes, and in the bottom some grass marshes and a few ponds are met with, but by far the greater portion is high, dry land, with soil of excellent quality.

On Ranges 5 and 6 , the $Q u^{\prime}$ Appelle Valley, at Crooked Lake, is crossed. The bottom of this valley is about 300 feet below the surface of the adjacent country, which latter is here nearly level; on the south side of Crooked Lake there is a large quantity of fair sized poplar and balm of gilead, the country on both sides of the Qu'Appelle River, and extending back a considerable distance, is dry prairie, dotted with bluffs of second growth poplar, the quality of the soil is good.

From the eastern limit of Range 9, and extending some distance beyond the limit of my survey (eastern limit of Range 13) westward, as also to the soath, towards the Moose Mountains, the country is high, dry open prairie with gentle undulations; on Range 8 the Qu'Appelle Valley is recrossed, and excellent drainage is secured for the whole of this tract by numerous ravines leading down to the river, all of which are thickly timbered.

The region over whieh the 6th Correction Line passes from Ranges 5 to 8 (both inclusive) is open rolling prairie without timber, except a few poplar blufts on Range 5; to the north, however, and within five or six miles, as also south upon Phoasant Hill, large quantities of timber are to be found. With the exception of some gravelly knolls on Range 8 the soil is of very good quality.

Proceeding north from the 5 th Correction Line, and along the Meridian between Ranges 4 and 5, for the first two miles the country passed over is undulating and covered with numerous bluffs of poplar; open prairie, with grass marshes and occasional ponds in the bottoms, is then entered and continues fr eighteen miles; thickly timbered ridges to the west are to be seen within five or six miles; moderately level country with bluffs of poplar is then entered, and continues beyond the 6th Correction Line, whero my meridian terminated; the soil is of very good quality. Following the meridian, between Ranges 8 and 9 , northward from the 5 th Correction Line, for the first sixteen (16) miles, high land thickly dotted with bluffs of poplar, and a large quantity of burnt standing timber is passed over, open undulating prairie with occasional grass marshes and ponds is then entered, and continues beyond the 6th Correction Line; the soil is of excellent quality, with the exception of a small gravelly tract near the 6 th Correction Line above named.

Between Ranges 12 and 13 the meridian for the first eight miles, northward from 5th Correction Line, passes over dry gently undulating prairie, cut by thickly timbered ravines running down to the Qu'Appelle River, bluffs of poplar are then met with, and continue beyond the 6th Correction Line. On Township 20 the Qu'Appelle Valley is crossed about five miles east of Fort Qu'Appelle; the soil, with the exception of a small sandy tract on the south bank of the Qu'Appelle is of excellent quality.

The 6th Base Line, which was projected across Range 13, in order to effect a closure upon Astronomical Station No. 15, crosses the Qu'Appelle Valley passing close to Fort Qu'Appelle; in the valley at this point are a number of half-breed settlers and small traders, and occasional settlers of the same class are to be met with for a distance of twenty miles down the valley, but, as the settlers prefor to make a living by raising horses and freighting, little in the way of farming has yet been done by them. I have, however, seen some good samplesiof oats and barley, and large root crops are generally raised.

The whole tract of country within the limits of the survey is composed chiefly of first-class land, the remainder being second-class, and I am satisfied that when it becomes better known, it cannot fail to be rapidly settled, and would respectfully recommend that the township and subdivision surveys of the whole tract be made as soon as possible, in order that the samo may be opened for settlement; also that the standard outlines of that portion of country lying between the 4th and 5th Correction Line, and extending from the 2nd Principal Meridian to Range 17 west be defined, as, from my own observation and information received, I believe this tract to be fully equal to that above described.
Extraot from Report of the Township Outlines between Townships 18 and 2s, and from Ranges 1 to 4 inclusive, west of the 2nd Pbincipal Meridian, by C. T. Miles, D.L.S.

My survey corers a great variety of land, from the light sandy and gravelly soil, accompanied in some few instances by stones and boulders, to the richest of clay loam. The south half of Township 21, Ranges 1, 2 and 3, consist principally of low prairie, undulating, interspersed on the north halves with islands of poplar and willow, and the whole cut up by numerous ponds and marshes, as also the south part of Township 22, in the 3rd Range. Going further north, i.e. in Township 2', the land rises slightly to near the banks of Big Cut Arm Creek, the soil being generally of a light quality and very well wooded with poplar, principally second growth, with dense willow undergrowth. The banks of the Big Cut Arm Creek are very high, the valleys more or less marshy and wooded with some very good poplar and balm of gilead, and the bed of the creek stony. Going west along the sixth base, after leaving the 1st Range, there is a general improvement in the appearance of the land, the soil being of a better quality and consisting of rich clay loam, a rolling prairie with no timber with the exception of bluffs of poplar and willow, in the vicinity of Little Cut Arm Creek, which crosses the 6th Base, on Range 3, five or six times. Running south from the 6th Baso, between Ranges 1 and 2, the soil is generally of a
light nature, very undulating open prairie, with but few ponds, until we strike the Little Cut Árm Creek, where bluffs of poplar and willow are more plentiful; going still furtber south into Township 19, there is no material change until within about three miles from the Correction Line, where little loam is met with, the soil being a clay loam and rolling prairie, alternating with poplar and willow. Running south from the 6th Base, between Ranges 2 and 3, along Township 20, the land is compesed. of rolling prairie of rich clay loam, with a few ponds and marshes, and no timber but some few willow bushes. Going still farther south, along Township 19, no change in the nature of the soil is met with, the land being a rolling prairie, interspersed with some islands of dense willows and other brush.

On the whole I found but a small percentage of land unavailable for the production of crops at some period or other. Although numerous ponds and marshes were met with, more particularly north of the 6th Base Line, yet it is my opinion that by a system of drainage of most of these there would be no difficulty of draining into soma of the deep lying streams, such as the Big and Little Cut Arm Creeks. No fixed rock of any description whatever.

## Department of Interior, Crown Timber Office, Winnipeg, 31st December, 1880.

Sir,-I have the honor to submit the following report of the work of the Crown Timber Office for the year just closed :-

In addition to the statement of work] performed in the office, a schedule is appended, showing the number of saw mills in the Prevince of Manitoba, District of Keewatin and the North-West Territory, ; with other information respecting the milling interests.

| Number of letters received. | 1,058 |
| :---: | :---: |
| do do written | 1,696 |
| do Permits issued. | 642 |
| do Seizures made. | 40 |
| Value of timber seized.. | \$30,000 |
| Number of saw mill returns received. | 60 |
| Amount of timber given in returns as sold......... ........ | 10,000,000 B.M. |
| do do do on hand.............. | 2,500,000 B.M. |
| Number of now mills commenced cutting in 1880....... | 20 |

Four mills were moved during the past season:-
Messrs. Dick \& Banning's from Sandy Bar River to Whole River.
Wesley Smith's from Grassy River to Section 33, Township 14, Range 11 west.
W. S. Ritchie's, Winnipeg, now owned by D. McFayden, removed to Odanah, North-West Territory.

Jeseph Whitehead's, from St. Boniface to Whitemouth River.
I have the honor to be, Sir,
Your obedient servant,
JAMES ANDERSON,
Croun Timber Agent.

## A.

Statement of Sales made during the Year, commencing 1st July, 1879, and ending 30th June, 1880.


WILLIAM MILLS, Accountant.

Department of the Interior,<br>Dominion Lands Branch,<br>Ottawa, 17th December, 1880.

## B.

Statement showing the several Localities on account of which moneys have been received, 1st July, 1879, to 30th June, 1880.

| Locality. | Amount. | Locality. | Amount. |
| :---: | :---: | :---: | :---: |
|  | \$ cts. | Brought forward ................. | $\begin{gathered} \$ \text { cts. } \\ 11, \mathrm{f} 0 \mathrm{~g} 10 \end{gathered}$ |
| Amherstburg .............................. | 2,087 31 | New Brunswick.............. ............. | 2147 |
| Burlington Heights.. ................ ...... | 27765 | Nova Scotia ............ ..... ...... ......... | 025 |
| Chambly | 1,569 98 | Ottawa (Vity)............. .................. | 6,899 82 |
| Côteau-du-Lac....................... ........... | 20196 | Oxford .... ...... ............................ | 340 |
| Cornwall | 3731 | Prescott..... ...................... .... . .... | 57402 |
| Crosby, South | 9788 | Quebec........... ............. .. ...... ..... | 7,561 34 |
| Elmsley <br> Fort Erie | 570 2778 | Sarnia..... ............ ..... ................. | 8000 92062 |
| Gloucester.............................................. | 66173 | Storrington............ ....... ..................... | 14738 |
| Kingston. ......... .......... ............... | 4,532 12 | Three Rivers .......... ......... ............... | 46255 |
| Longreuil. ................................... | 8) 00 | St. Johns, Que. ...... ..... ......... ........ | 31660 |
| Montreal................... .............. ...... | 83600 | Toronto........... ......... .............. ...... | 1,663 96 |
| Nepesn...... ........... ...... ..... ............ | 12488 | W olford.......... ........................... | $15159$ |
| Niagara | 36580 | Registeration;Fees...... ........ | $7640$ |
| Navy Island | 10000 | Refund. ............................ |  |
| Carried forward ... | 11,009 10 |  | 30,091 37 |

WILLIAM MILLS,<br>Accountant.

Department of the Interior, Dominion Lands Branch,

Otrawa, 17th December, 1880.

## C.

Statement of Receipts on account of Ordnance and Admiralty Lands, for the Year commencing 1st July, 1879, to 3uth June, 1880.


- A refund on account of law costs.

WILLIAM MILLS,<br>Accountant.

## Department of the Interior, Dominion Lands Branch, Ottawa, 17th December, 1880.

## D.

Statement showing the Amounts due and remaining unpaid, 30th June, 1880, on account of Rent and Instalments of Purchase Money and Interest, and further sums required to be paid in order to complete purchase (with interest in addition to be calculated up to date of payment).

| Locality. | Rent and Interest due and remaining unpaid, 30th June, 1880. | Amount of Tnstalments due and unpaid, 30th June, 1880. |  | Total. Amount. |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Amherstburg ........................... | 4,488 05 | 8,724 71 | 14,645 50 | 27,858 26 |
| Burlington Heights................... | $\begin{array}{r}5328 \\ \hline 2928\end{array}$ | 8188 4.723 | 8,457 50 | 13516 |
| Chambly ............................... | J,292 08 | 4,723 53 | 8,457 50 | 14,473 11 |
| Chatham, Q....... ........... ........ | 34400 | .... ......... |  | 34400 |
| Carillon...... ........ ..... ........ ..... | 100 | .... ~............ | ..... .............. | 100 |
| Coteau-du-Lac... ....................... | 7510 | ... ..... |  | 7510 |
| Crosby, South ........................ | 8826 | 23932 | 36480 | 69238 |
| Elmsley........................... .. ... | 1370 | ......... | 157 ..... | 1370 |
| Fort Erie.. ....... .............. ......... | 92370 | 72844 | 15734 | 1,809 48 |
| Gloucester................ ...... ....... | 6616 | 34632 | . ............. | 41248 |
| Grenville...... . ................ | 1240 | . ......... .... ...0 | ...................... | 1240 |
| Hochelaga ....... ..... ......... ........ | 81000 | -1.7..... | ..................... | 81000 |
| Kingston, City of........ ............. | 2,080 78 | 5,070 84 | 15,543 54 | 22,695 16 |
| Kingston Mills ................ ........ | 1027 | 4280 | 12840 | 18147 |
| Longueuil ....... ........ ........ ..... | 69000 | ....... .............. |  | 69000 |
| Marlborough ............ ... . ...... ..... | 2700 | ............ | , | 2700 |
| Nepean ......... ....... ........ ..... ...... | 16,686 54 | 1,670 16 | 50641 | 18,863 12 |
| Niagara .............. ........ ........... | 13000 | ........ ......... ..... | ...................... | 13000 |
| Navy Island ............................ | 10000 | ... ........... ...... | ........ ......... ..... | 10000 |
| New Brunswick ....................... | 51565 | ........ .............. | ........ .............. | 51565 |
| Nova Scotia ...... ........ . ........... | 8000 | $7 \times 00750$ | ........ | 8000 |
| Ottawa, City of. .... .... ............. | 18,047 75 | 7,007 50 | 4000 | 25,095 25 |
| Oxford ................ ......... ........ | 120 | ......... | .............. ........ | 120 |
| Pittsburgh .............. ........ ........ | 2548 | 3280 |  | 5828 |
| Prescott.......... ...................... | 11574 | 38860 | 1,474 10 | 1,978 44 |
| Penetanguishene... ........ ........... | 4202 | 6390 | 1... ........ | 10593 |
| Quebec...... .................. ..... ...... | 4,172 94 | 19,586 00 | 10,339 00 | 34,097 94 |
| St. Johns, Q ............................ | 1,455 12 | 8,084 00 | ... ..... | 9,539 12 |
| Sorel.. | 99653 |  |  | 99653 |
| Three Rivers | 6714 | 37303 | 74606 | 1,186 23 |
| Toronto ...... | 1,621 09 | 3,304 50 | 2,580 00 | 7,505 59 |
| Wolford...... ....... ........ ..... ..... | 1,679 80 |  |  | 1,679 80 |
| Windsor.................... ............. | 19200 | 1,600 00 |  | 1,792 00 |
| Total. ........ . | 56,904 78 | 62,068 34 | 54,982 65 | 173,955 77 |

WILLIAM MILLS, Accountant.

Department of the Interior, Dominion Lands Branch, Ottawa, 17th December, 1880:
$\qquad$
Combination of Resuits of Latitude Observations at Station No. 12. Observed by W. F. King, D.T.S.


$$
\begin{gathered}
\text { Probable error }= \pm 0.6745 \sqrt{\frac{1.0873}{8 \times 7}}= \pm 0.093 \\
0^{\prime \prime}, 1 / n \\
\text { Therefore Latitude }=504229.74 \pm{ }^{\prime \prime}
\end{gathered}
$$

Here follows, as a specimen, the computation of one of the latitude pairs at Station No. 12 :-
STANDARD SURVEY-ASTRONOMICAL SECTION.



Statement showing Number of Saw Mills, their Size, Situation,


Sawing capacity, \&c., in Manitoba, Keewatin and North-West Territory.


Statement shewing Number of Saw-Mills, their Size, Situation, Sawing


Winnipeg, December 31st, 1880.
capacity, \&c., in Manitoba. Keewatin and North-West Territory-Continued.


JAMES ANDERSON,
Crown Timber Agent.

Schejule shewing the Dominion Land Surveyors employed during the Year ending on the 31st December, 1880.


Schedole shewing the Dominion Land Surveyors employed during the Year ending on the 31st December, 1880-Conciuded.

| Survegor. | Provinces, \&c. | Nature of Service Performed. |
| :---: | :---: | :---: |
| Ryley, G. U. ....... Collingwood, O... |  | Township outlines, 3 to 6, Range 17 to 2nd Mer. (also check survey). |
| Reid, J. L. ........... | P. Albert, N.W.T | $\left\{\begin{array}{ccc} \text { Sub-div. of Townships } 44 \& 45, \text { in Ranges } 21 & \text { W. of 2ndMer. } \\ \text { do do } \end{array}\right.$ |
| Reiffenstein, J. H... | Ottawa, | do do $21 \& 22$ do $27 \& 28$ do |
|  |  | $\begin{array}{llllll}\text { do } \\ \text { do } & \text { do } & 21 & \text { " } & 22 & \text { do } \\ \text { do } & 19 & & 20 & \text { do } & 23\end{array}$ |
| Snow, J. A. ......... | $\text { Ottawa, } 0$ | $\left\{\begin{array}{lll}\text { do } \\ \text { do }\end{array} \quad \begin{array}{ll}\text { do parts of } 19 \& 20 \\ \text { E. of IndianRes. }\end{array}\right\} \begin{array}{ll}\text { do } \\ \text { do }\end{array}$ |
| Sidclair, Duncan... | Winnipeg, Man... | $\left\{\begin{array}{llllllllll}\text { do } & \text { do } & 3 & \& & 4 & \text { do } & 19 & \text { " } 20 & \text { do } \\ \text { do. } & \text { do } & 3 & 4 & 4 & \text { do } & 25 & \text { c } & 26 & \text { do }\end{array}\right.$ |
| Staunton \& Jones. | Hamilton, O..... | \{ do do 17 "18 do 31, 32, 33 do |
| Staunion a Jones. | Hamiton, O..... | \{ do do 25 " 26 do $27 \& 28$ do |
| Stewart, John ..... | Ottawa, 0 | do do $\begin{array}{lllll}\text { do } & 15 & 16 & \text { do } & 29 \\ \text { do } & 30 \\ \text { do }\end{array}$ |
| Thompson, W. F... | $\text { Cannington, } 0 \text {. }$ |  |
| Unwin, Chas........ | Torouto, 0...... | Sub-div. of Tps. (Reserves) 18 do $16 \& 18 \mathrm{~W}$. of 1st Mer. |
| Webb, A. C.......... | Brighton, 0........ |  |
| Wagner, Wm...... | Ossowo, Man.... |  |

Apparent Places of Stars for the Year 1881. For the


Upper Transit in Longitude $102^{\circ}$ West of Greenwich.


Apparent Places of Stars for 1881. For the


Upper Transit in Longitude $102^{\circ}$ West of Greenwich.


Apparent places of Polaris for 1881 , at 6 p.m., in Longitude $102^{\circ} \mathrm{W}$.


## PART II.

## N(QRTH-WEST MOUNTED POLICE FORCE

COMMISSIONER'S REPORT 1880.

# NORTH-WEST MOUNTED POLICE FORCE. 

## COMMISSIONER'S REPORT-1880.

The Honorable<br>The Minister of the Interior, Ottawa.

Fort Walsh, Cypress Hills, N.W.T., 29th December, 1880.

Sir,-On the 30th October last I received your telegram apprinting me Commissioner of the North-West Mounted Police, from the first day of November last, and subsequently your letter enclosing the Order in Council relating to my appointment, dated the 13th day of October, 1880.

As during the past winter I was on leave of absence, and afterwards on recruit. ing service in the Eastern Provinces, I have had little opportunity of late of judging for myself as the state of the force in the various portions of the northern districts, or of the work performed. The reports of the superintendents in charge will, I trust, furnish this information.

During my absence on leave I utilized my time by visiting Ireland, in order that I might inquire most fully into the practical working of the Royal Irish Constabulary, with a view of making myself thoroughly conversant on matters relating to its organization and discipline, in order that I might be in a position to judge how far the experience gained by this old, efficient, and time-honored corps miz, ht prove of service to the force now under my command.

From the letter of introduction you did me the honor of furnishing me with, I was most courteously received at the Castle, Dublin, the headquarters of the Royal Irish Constabulary. Here I met Colonel Hillier, C.B., the Inspector-General of that corps. To this officer and many others serving under his command, I am greatly indebted for the vast amount of practical information gained.

At Colonel Hillier's suggestion I first went to the depot at Dublin, following step by step the course through which the gentlemen cadets and recruits go, from the hour of their entry for instruction up to the time they are considered fit for duty in a county.

As soon as I had satisfied myself as regards the working of the Depot, I visited the counties, the real field of labor of the Royal Irish Constabulary, inquiring into the office and out-door work performed.

At the Depot, and different points visited, the books-in fact everything-was throwr open to my inspection.

Previous to my visit to the Royal Irish Constabulary, I remained for a month at Aldershot, England. While there, I was offered every facility by Deputy Com-missary-General M. B. Irvine, C.B., C.M.G., commanding the Commissariat and Transport Corps, to inquire into the organization and management of that corps.

I sailed from Liverpool on the 20th March, and arrived in Ottawa on the 10th April. Soon after this, 1 commenced the work of recraiting, meeting the recraits, and having medical examinations held at the various appointed places, which were: Halifax, Quebec, Montreal, Ottawa, Kingston, Toronto, and London.

3-1!

## Recruiting Service.

I sailed from Sarnia on the 28th of May with 48 rocruits, and proceeded to Bismarck, U.S., via Thunder Bay and Duluth, reaching Bismarck on the 5th of June. From Bismarck I took the steamer Rosebud up the Missouri River to Benton, where I arrived on the 19th June. From Benton I proceeded across the plains to Fort Walch.

Two further batches of recruits also reached Fort Walsh via the same route, later in the season. The first, 13 in number, under Sergeant Ryan, a non-commissioned officer, who had been in the Eastern Provinces on leave, reaching Fort Walsh on the 21 st August. The second batch, 39 in number, under Mr. Fortescue, of the Department of the Interior, arrived at Fort Walsh on the 22nd September.

The following return shows the number of men discharged during the year 1880, also the number of re-engaged men and recruits engaged :


There are seventy-eight men serving in the force, whose term of service will expire during the year 1881 ; with few exceptions, their term of service will expire during the month of June.

## Class of Recruits desirable.

On the subject of recruits. I might here mention that I most earnestly trust that the greatest care be shewn in future selection of men for service in the North-West Mounted Police.

I consider that the best class of men to recruit from are farmers, or young men from rural districts, accustomed to perform hard manual labor, who understand the care and treatment of horses. Such men pick up the knowledge required for prairie work much more readily and are more efficient than those recruited from towns and cities. Young Canadian farmers are, in my opinion, the material for the best soldiers in the world. They may be classed as "handy men," excellent axemen; in fact, can turn their bands to anything. As a matter of course, a limited number of artizans and mechanics are required to fill the positions of carpenters, shoeing smiths, shoemakers, tailors, etc.

It is needless to point out that as far as possible，soarching enquiry should be made as to the character of men enlisted，always bearing in mind that men addicted to drink are of the most objectionable class．

It is a serious mistake to imagine，that because this is a prohibitory country， that a man，although unsteady in habits，would make a good policeman，on the presumption that he will be unable to get drink；such a man can never have the confidence of his officers，and should occasion offer，would，in all probability，bring disgrace on the corps．

Clause 6 of the Police Act reads：－＂No＂officer or constable shall be appointed ＂to the Police Force unless he be of sound constitution，able to ride，active and able ＂bodied，of good character，and between the ages of eighteen and forty yeurs；nor ＂unless he be able to read and write either the English or French languages．＂

I trust the spirit of this clause will invariably be acted on．In the past，this has not always been done．A man who cannot ride is useless for service in the Police； worse than useless，in fact，a mere incumbrance．

Of course instruction in equitation is carried on to as great an extent as possible． But it must be remembered that a man who has reached，say thirty or thirty－five years of age，and who has never been on a horse，has but little chance of becoming a good rider，even presuming that for one－fifth of his service he is＇under instruction－ a period that，in a small hard working force like this，it is impossible to give．

## Medical Examination of Recruits．

The medical examination cannot be too carefully carried out．Being forced to invalid men who have been sent up to this country is a great expense to tho Govern－ ment，more so than is apparent to a casual observer．In a civilized country， 2 man unfit for service can be invalided without the slightest delay．You are，however， aware that here it is only during the summer season that invalids can be sent back to the Eastern Provinces．During the time they remain here such invalids have to be cared for in hospitals，thus，in each case，do we not only lose the services of one man for duty，but our strength is still further weakened by being forced to detail other men to perform hospital attendance．

## Recruiting Service．

The recruiting should，I think，be conducted by an officer who has had experience in the class of men required，and in whom confidence，as regards his ability of judging character，might safely be placed．

The following is a retarn showing the distribution of the officers and men from the latest returns：－

|  | Name of Station． | 吅它 |  | $\begin{array}{l\|} \hline \dot{4} \\ \text { 菦 } \\ 00 \\ 00 \\ 0 \\ 0 \end{array}$ |  |  |  |  |  | \％o． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | Fort Walsh．．． |  |  | 2 |  | 2 | 3 | 39 | 47 | 47 |
| B | Qu＇Appelle ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． |  | 1 | 1 | 2 | 4 | 4 | 27 | 39 | ．．．．．．．．0 |
| B | Shoal Lake．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． |  |  |  |  |  | 1 | 3 | 4 |  |
| B |  |  |  | 1 |  |  |  | 2 | 3 | 46 |
| 0 | Fort MacLeod．．．．．．．．．．．．．．．．．．．．．．．．． |  | 1 | 4 | 2 | 4 | 3 | 48 | 63 | $\cdots$ |
| O |  |  |  |  | ， |  |  | 3 | 4 | 67 |
| D | Battleford ．．．．．．．．．．．．．．．．．．．．．．．．．．． | 1 | 1 | 1 | 1 | 2 | 2 | 18 | 26 | ．．． |
| D | Fort Saskatchewan．．．．．．．．．．．．．．．．．． |  |  | 1 | 1 | 1 | ．．．．．．．．． | 7 | 10 |  |
| E | Prince Albert．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． |  |  |  | ．．．．．．．．．． | 2 |  | 33 | $\begin{array}{r}8 \\ 40 \\ \hline\end{array}$ | 40 |
| F | Wood Mountain．． |  | 1 |  |  | 2 | 2 | 33 <br> 24 | 30 |  |
| F | Fort Walsh．．．．．．． | 2 |  |  | 6 | 2 | 1 | 14 | 25 | 85 |
|  | Totals | 4 | 6. | 13 | 13 | 20 | 18 | 225 | 299 | 299 |

## RECAPITULATION.

| Staff Officers |  |
| :---: | :---: |
| Superintendents. | 6 |
| Inspectors ........ | 13 |
| Stiff Sergeants | 13 |
| Sergeants.... | 20 |
| Corporals. | 18 |
| Constables.. | 225 |
| Total Strength | 299 |

[^0]
## Strength of the Furce.

I do not consider that the present strength of the force is strong enough to meet the requirements that the country demands of it. I previously brought this to the notice of the Government while in temporary command as Assistant Commissioner.

I recommend that the strength of the force be increased by two hundred men.
Since the disappearance of buffalo the Indian situation has assumed quite a different aspect.

As long as the buffalo lasted the Indian was self-supporting, independent and contented. Now, however, he is in a very different position, his only means of support is virtually gone, and he has to depend on the Government for assistance, being forced, in so doing, to remain about the. Police Posts, Indian Agencies or other settlements.

True, a very limited number of buffalo are still to be found south of the International Boundary Line, and this has been the means of keeping large numbers of Indians, for a great portion of their time, at all events, out of the North-West Territory.

This cannot continue much longer, the Indians that do hunt for a living only manage to eke out a most miserable existence. Ere long they will be unable oven to do this, and will then return to this country. Thus the Indian population will, to all intents and purposes, be increased. This population, too, will, irrespective of the aid received from Government, bo a starving one, a dangerous class raquiring power, as well as care, in handling.

Another patent reason that has further impressed me with the conviction that an increase of the Force is necessary, is, the advancement of civilization now being made.

Our satisfactory relations with the Indians in the past is most certainly a matter of the utmost congratulation, and will, I trust, be the means of furthering the chances of lasting and permanent peace. Nevertheless, it must not be lost sight of, that all the intricacies and dangers of the Indian question are not over.

The experience of our neighbors to the south of the international boundary line cannot be without its lesson to us. In their case the military had no trouble with the Indians until settlors appeared on the scene.

These settlers, unaccustomed to the Indian manner and habits, do not make due allowances and exhibit that tact and patience necessary to successfully deal with Indians, and which is shewed them by an organized force kept under control.

As an instance of this during the past summer, a settler within a few yards of Fort Walsh became annoyed at a Cree Indian he found leaning on his garden fence, and struck the Indian in the face with his fist. Tbis so enraged the Indians of the tribe the assaulted man belonged to, that notwithstanding the fact that a fine was inflicted on the settler, they proceeded in a body to his garden, which they commenced at once to destroy, and, but for the timely arrival of the Police, I am of opinion that much more serious consequences would have followed. Had this happened, it is hard to tell where it would have ended.

The Force now in Battleford and Sasketchewan District (44) is altogether too small.

This District embraces a vast section of country, which in some places is becoming settled; and is inhabited by say 7,000 Indians of different tribes, many of whom have at various times given much trouble, and been the cause of great anxiety.

## FORCE AT WOOD MOUNTAIN.

The Force at Wood Mountain is also inadequate.
Wood Mountain is in proximity to Indian agencies on the other side of the line. From these agencies Indians come ostensibly to hunt, but really on the look out for horses to steal, and are only too ready to make our country along the frontier the base for their operations.

This horse stealing, particularly among different tribes, is not unlikely to lead to still further and more serious trouble.

The American Treaty Indians, located on reservations in the vicinity of the boundary line, were in the habit of hunting buffalo on our side of the line in days when these animals made their way north.

These Indians have in this way become familiarized with our country, and the strength of the force we keep at different points.

At Wood Mountain they are aware that in the past the force stationed there has been small.

I have already reported to you the circumstances connected with the killing of a half-breed namod Tempt Couvert, presumably by Indians from the United States, some fifty or sixty miles from Wood Mountain ; also the killing of Indians at Roche Percee.

There is a considerable half-breed population at Wood Mountain.
The country is suitable for settlement.

## Wood Mountain Post Unsuitable.

The present fort in which the force at Wood Mountain is stationed is altogether unsuited to the purpose to which it is being put, nor do I consider the location a good one.

A new post might advantageously be erected near a point known as the "Willow Bunch," about thiriy-five miles east of the present post.

This post would require to be large enough to receive from fifty-five to sixty men and horses.

## FORT WALSH.

I understand it is the intention of the Government to move the headquarters of the force from Fort Walsh.

Sach a change is beyond a doubt most advisable.
I am not, however, of opinion that the neighborhood of the .Jypress Hills can be entirely abandoned as a police post, unless it has "been decided that the Indian Reservations are also to be moved.

From what I learn the Indian Farm operations at "Maple Creek," some thirty miles north-east from Fort Walsh, have been successflll.

If this farm is to be maintained a force of police will be necessary in the vicinity.
Near this Indian farm at "Maple Creek" is a suitable point for the erection of a police post.

There is good timber to be had for building and other purposes, and crops pat in would not suffer from summer frosts.

About "the bottom," where Fort Walsh is situated, farming operations have invariably proved a total failure, and a similar state of affairs can, I think, always be anticipated.

Grain put in never comes to maturity, owing to the prevalence of summer frosts; even the root crops have not been successful.

Hay is not procurable within a reasonable distance.
If I mistake not, the height of Fort Walsh above the sea level is some 3,400 feet.
Another reason for keeping a portion of the force within accessible distance of Cypress Hills. The wood to be found here must always prove a great attraction to travelling Indians, who will from time to time be passing through this section of the country, more particularly as long as even a remnant of former herds of buffalo are to be found on the Missouri and Milk Rivers in the United States.

Such Indians are likely, without the presence of the police, to make the Cypress Hills the scene of their battle grounds, as they have done in former years.

Should the Government consider it at present unadvisable to sanction my recommendation as regards the increase of the force by 200 men, I trust, notwithstanding, that the matter may not be altogether unacted on. Even an increase of 100 men would prove of an inestimable benefit. Were either of these increases made I would not recommend that the number of officers be added to. The number now in the force would be sufficient to meet the requirements of the service.

By careful and economical management on all points, the question of extra expense would not be of a serious nature. On the other hand, on the "stitch in time" principle, it might prove to the country a saving of many thousands of dollars.

## Selection of Future Headquarters of Force.

I am perfectly well aware of the many important considerations that require to be most carefully weighed, before a poin ${ }^{\prime}$ for the headquartors of the force can be finally settled upon.

It is a matter that cannot be looked at merely from a military point of view.
The future construction of public works throughout the North-West Territories, the rapid immigration that may safely be anticipated, and the settlement that will necessarily accompany it, must, I presume, also prove important factors as regards the permanent establishment of police headquarters. It would then be a most greivous mistake to arrive at any hastily formed conclusion which might, and the chances are would, be a sourje of never ending regret. However, at whatever decision the Government may hereafter arrive at, in the selection of a suitable point, I venture to recommend that the following be not lost sight of:-

1st. That it is essential the headquarters be in a section of country likely to prove successful from an agricultural point of view.

2nd. That there be a plentiful supply of building timber, fire-wood and good water.

3rd. That the point selected be a central one, where information from other portions of the North-West Territory can be readily imparted to the commanding officer. Where reinforcements could at short notice be forwarded to other posts. Where the various Indian tribes could best be controlled from ; and lastly, where the presence of the police would further the advancement of civilization, and at the same time aid materially the Indian Department in the suecessful adoption and carrying out of the policy of the Government.

## On Force Being Divided into Districts.

I recommend that the Tervitory be divided into districts, a superintendent placed ${ }^{-}$ in oharge of each, with a suitable number of officers and men ander him, in accordance with the arnount of police work to be performed.

Each superintendent being rosponsible to the Commissioner tor the discipline, peace and order of his district, also for all district stores, etc.

## Headquarters to be Depot of Instruction.

I propose that for the future the headquarters of the force be a depot of instruction, at which place all officers and men joining the force will be sent, where they will remain until thorougbly drilled and instructed in the various police duties.

To carry out this plan successfully, it is indispensible that a competent staff of instructors be at my disposal.

A portion of such a staff I can obtain by selection from officers and noncommissioned officers now serving in the torce. In addition to this, however, I recommend that the services of three perfectly qualified non-commissioned officers be obtained from an Imperial Cavalry Regiment. I am satisfied that the inducements we could hold out would be the means of obtaining the best class of non-commissioned officers to be had in England. I would not recommend that non-commissioned officers of more than five years service be applied for. Old men, who have already spent the best days of their life in the British service, would be quite unfit for the work that in this country they would be called upon to perform, nor would they be likoly to show that energy and pride in their corps which is desirable that, by example, they should inculcate into others.

Instructors of the class I have described, in addition to the knowledge they would impart to others, would serve as models for recruits, as regards soldierlike conduct and general bearing. The importance of the benefits the force would thus derive cannot, in my opinion, be overrated.

The police force is principally composed of as fine a body of young men as could be found in any organization in the world. Many of whom are the making of excellent non-commissioned officers. It is with this fact in view, that I make the above recommendation, in order that the good material at our command may be made the most of, properly developed, if I may use such an expression.

Again, we have many non-commissioned offirers, who though well informed as regards their own duties, have not the " naek " of imparting such knowledge to otbers. It does not necessarily follow that because a man is a good drill himself, that he is also a good instructor.

Pay of Force might be increased by length of service and good conduct.
I would recommend that the pay of non-commissioned officers and men be increased by length of service, in cases where such service has been in all respects satisfactory. This would virtually take the place of good conduct pay in the British service, and would, I have overy reason to believe, prove a strong incentive towards inducing men to conduct themselves properly during their term of service, which under existing regulations is of considerable length, five years; more particularly may this be expected now that free grants of land are no longer given in recognition of good service. The line to be drawn in a force like this, between well and badlyconducted men cannot be too plainly marked and felt by the men themselves. I do not consider it necessary to here enter into this matter in further detail.

## Application of Pecuniary Penalties, Formation of Recreation Rooms, \&cc.

Clause 15 of the Police Act, under the head of "Application of pecuniary penalties" reads:-
"All pecuniary penalties "so imposed shall form a fund to be managed by the Commissioner, with the approval of the Minister charged with the control and management of the force, and applicable to the payment of rewards for good conduct or meritorious services, to the establishment of libraries and recreation rooms, and such other objects as the Minister may approve, for the benefit of members of the force."

The introduction of this clause in the Act is unquestionably judicious. In the cases: of men performing exceptionably good or meritorious services, I would recommend that the superintendent, or other officer commanding their posts, at once bring their names to the favorable notice of the Commissioner, with a view of such men being specially rewarded out of the money accruing from pecuniary penalties inflicted. It might also be advisable to publish annually the names of men so rewarded, together with the nature of the good service they have performed. Of course great care must. be exercised in judging between ordinary duty and "meritorious service."

As to the establishment of libraries and recreation rooms. In the British service, where, in most cases, the men are in the midst of comforts and amusements that civilization affords, it is, nevertheless, deemed most advisable that regimental libraries and recreation rooms be established. The object is :-
"To encourage the soldiers to employ their leisure hours in a manner that shall combine amusement with the attainment of useful knowledge, and teach them the value of sober, regular and moral habits."

This, I consider, applies even much more strongly to the North-West Mounted Police, whose service is performed in a country where the surroundings are so totally different from those to which they have been accustomed, and where they are deprived of such pleasure and recreation as in the older Provinces are always attainable. I make these remarks merely to point out a want that in the past we have suffered from.

From departmental communications I am lately in receipt of, I feel satisfied it is your earnest desire that the wants of the force, as regards libraries and recreation rooms, be supplied effectively, and with the least possible delay.

Arms.
There is now in use in the force the Snider carbine and the Winchester rifle. On the organization of the force, the Snider carbine was the only rifle issued ; since then, however, one hundred Winchester rifles, improved pattern, have been purchased, with which "A" and " $F$ " divisions are now armed.

The Snider carbine has stood, so far as durability goes, the rough work which it has been put to during the last seven years very well. In this length of service it is not to be wondered at that many have become damaged, and some unserviceable. The Snider carbine is now considered in many respects an obsolete military arm, and is somewhat unsuited to the wants of a force in this conntry, where a large portion of the Indian population is armed with an;accurate shooting weapon. Still, however, bearing in mind the expense that a change of arms would recessitate, I think the Snider carbine may be utilized by us for some further time, at all events. The amount of Snider ammunition on hand is large.

The Winchester riffe, which is a repeating one; and capable of receiving eight cartridges in the magazine, has many good points, and is a favorite arm with the western prairie men. I do not, however, consider it a good military weapon. The system of riffing is good, but the rifle is altogether too weak in construction to meet the rough handling that at times it is impossible to prevent its receiving. As an example of its weakness: Some time ago a man on sentry at night slipped and fell ; in doing so the barrel of his rifle was broken at the joint where it is secured into the breech apparatus. Other similar instances hare occurred. The back sight on the Winchester rifle is badly attached to the barrel. The sight slides readily from one side to the other, which of course interferes with accurate shooting. The rifles of this pattern that we now have in our possession, I propose arming the force along the frontier with. By so doing all these rifles will remain in one district, and the ammunition in the various stores will be of the same description.

In making the above remarks about the Winchester rifle it must not be fancied that I object to it as a military arm because it is a repeating one. On the contrary, I do not for a moment lose sight of the fact that it may now be acepted as a foregone conclusion that ere long repeating riffes will take the place of those at present in more general use throughout the armies of the world. But I am unaware, so far, of a really good military weapen on the repeating principle having been invented. This want-for such it is-however, will doubtless soon be overcome, let us hope before our Snider carbines become unserviceable.

The revolver with which the force is armed is of the "Adams" pattern. This revolver is not such as I shouid recommend were a new purchase being made; they -can, howevor, be made to answer all practicable purposes.

The question of further arming the North-West Mounted Police with swords is one to which I have given considerable attention.

There are times when a sword would prove an encumbrance to a Mounted Policeman ; times, therefore, when it would be undesirable. It is, of course, requisite that in the question of arms, the number and weight carried by each man should be reduced to a minimum consistent with efficiency.

In making ordinary prairie trips where no serious danger of attack is to be anticipated, I should be sorry to see cur men's ondurance further taxed by their being furced to add a sword to the arms they already carry.

These are my objections to the constant use of swords in the force. There is however, another side of the question to be looked at. In caye of our men being called upon to act either on the offensive or defensive, it may be accepted that they will invariably be largely outnumbered. This being the case it is most essential that each man should be as fully armed as posside. The sword, in addition to his rifle and revolver, might be invaluable in instances that are commonly known, and not inexpressively termed "tight places."

If I mistake not, the late General Custer, U.S.A., objected to the sword being employed in Indian warfare, on account of the noise made in carrying it. I presume General Custer, in condemning the sword, must have meant his remarks to apply to one carried in a steel scabbard such as the British cavalry now use.

Similar and other objections have been advanced by officers of much experience in England. Some thirty years ago, General Sir Charles Napier, while on this subject, wrote:-
"The cavalry steel scabbard is noisy, which is bad; heavy, which is worse, and destroys the weapon's sharp edge, which is worst."

Taking all things into consideraticn, I would recommend that the police force be issued with swords, all ranks being thoroughly drilled and instructed in their use. The swords to remain in store except in cases of emergency (or for drill purposes) where their actual use is to be expected.

The best description of scabbard would, I think, be ones male of wool covered with leather, bound and shod with steel; such scabbards are used by the native cavalry in India, and are considered by many professional authorities as by far the best and most serviceable in the world.

It will be remembered that the 7th United States Cavalry, who fought under the late General Custer, at the battle of the "Big Horne" (known as the Custer Massacre), were not armed with swords. From various accounts of this fight given me by the Sioux Indians who took part in it, I am led to believe that had this arm been in use the results would not, in all probability, bave been so terribly disastrous.

## Artillery Branch.

The artillery armament of the force consists of four 7-pr. mountain guns (bronze); at Fort Walsh. Two 9-pr. M.L.R. guns, and two small mortars, at Fort Macleod.

## Clothing and Kit.

I have lately forwarded to the Department the proceedings of a Board of Officers assembled for the purpose of furnishing a full report on the quality and make of the clothing and kit supplied to the force.

I haye already informed you that I fully concur with the opinion given by this Board; I need not, therefore, again deal with the matter in detail. It will sulfice for me here to remark that the various articles of clotbing and kit should be of the best quality procurable.

I also think that in the matter of kit, some reconsideration is necessary. This can doubtloss be sati-factorily arranged heroatter.

The supply of clothing at each post should be in excess of the actual wants, in order that a fair latitude Le allowod to replace articles lost or destroyed, which the men could obtain on repayment. It is important, too, that the arrangements for
the transport of clothing be such as would insure the clothing reaching its destination early in the season, in order that the men receive everything they are entitled to in one issue. Issuing one article months after another, is unfair to the men, as it does not allow them to make their clothing last as it should, nor can their general appeurance be as good as otherwise would be expected.

## Saddlery.

The question of the most desirable saddle for the force forms a subject of much importance. The "Californian saddle" appears to be preferred by the majority of the men in the southern divisions.

As the old "universal saddles" issued to the force on its organization are fast becoming unserviceable, it will be necessary to purchase new ones. I have myself ridden thousands of miles in the Californian and English saddles.

Taking all things into consideration, I think the choice lays in favor of the English high cantle dragoon saddle as being the most suitable and serviceable for the North-West Mounted Police, but I would recommend the following modifications:-

1st. The saddle might be somewhat reduced in weight.
2nd. That the "cantle" be cut down two inches, as it is in the way of a man mounting; it is also unnecessary in our case, as we carry no valises.

3rd. That the crupper and breast plate be done away with and two three-inch web girths be substituted for the leather ones.

4th. That the stirrups be of wood instead of iron.
5th. That a light close felt numnah accompany each saddle.
The large wooden stirrup, such as used on the California saddle, is very much preferable for prairie work, to the iron (English) pattern.

In winter the iron stirrup is so cold that it becomes unbearable. In summer, to a man whose boots become slippery from constantly walking on the prairie graes, the iron stirrup is a source of annoyance and discomfort owing to the difficulty experienced. in keeping the stirrup.

I have already informed the Department that I considered the "Whitman" bit more suitable for the force than the English cavalry bit. The latter is too heavy for prairie work. The "Whitman" bit is a pleasant one for a horse, does not irritate or chafe the mouth, answers also as a strong curb bit suspended by a swivel snap which hooks to any bridle or halter ; is a powerful bit, giving the rider perfect control of his horse.

I recommend the English cavalry head collar, which with proper care would last for years, a five ring halter to be exclusively used in the stables, and the English caval'y head collar for outdoor service.

With the "Whitman " bit, bitheads would not be required.
Horses.
The following return shows the distribution of the horses of the force from the latest returns:-

|  | Name of Station. | $\begin{aligned} & \dot{\mathbf{\Phi}} \\ & \text { W } \\ & \text { W0 } \\ & \text { 0 } \end{aligned}$ | 家 | - | 㖴 |  | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | Fort Walsh. | 40 |  |  |  | 40 | "F" Division, horses at Fort |
| B | Qu'Appelle and Ont-station.. | 46 | ........ | 2 | ...... | 48 | Walsh attached. |
| 0 | Fort Macleod do .. | 46 | 41 | 62 | 3 | 152 | * Colts include : |
| D | Battleford do .. | 65 | .. ..... | 2 | 1 | 58 | 4 Four-year olds. |
| E | Fort Walsh....................... | 30 | ......... | ........ |  | 30 | 18 Three-ytar olds. |
| F | Wood Mountain ......... ........ | 26 |  |  |  | 26 | 20 Two-year olds. |
|  | Totals ................ |  | 41 | ${ }^{\bullet} 66$ | 4 | 354 | $\frac{24}{66}$ Yearings and under. |

From this it will be seen that the force is much under its establishment of horses, more so, even, than is apparent from the above returns, as many of the horses shown therein now require to be cast as being unsuitable for police work.

Few people understand the extraordinary amount of work that the police horses perform. To give an example of this, I cite, as an instance, the distance travelled by Constable Armour and his team from the 1st April to the 1st November last:-


The entablishment of horses in the force` should be somewhat increased. The distances travelled in this country are so great that horses coming in from trips on the prairin should have sufficient rest to allow them to recruit their strength before being again detailed for duty. This, with our present number of horses, we cannot do. It often happens that horses come in from some duty that has necessitated their travelling some 300 or 400 miles over the prairie. Before these horses are in a proper condition to be worked, we are forced, with our present slim establishment, to start them off again on some police duty that requires immediate attention.

There is no doubt whatever but that, in the past, this has added materially to the death list.

During the winter months the majority of our horses are not so constantly worked as at other times of the year. I think, then, it would be advisable, with a view of reducing our expenditure for forage, to send (from most of our posts) to the police farm at Fort Macleod as many horses as can be spared, in order that they may be " wintered out."

The climate about Fort Macleod is sufficiently mild to allow of this being dome. There would, of course, be no expense connected with it. In the spring, the horses could be driven back to their various posts.

Experience has taught us that the best class of horses for the force are to be had about the rural districts of Canada.

## Force at Fort Walsh.

On the 5th day of August the force at Fort Walsh moved into camp.
The spot selected for an encampment is situated some two miles from Fort Walsh, and was in every respect a suitable one.

The placing of the men under canvass was on the recommendation of the surgeon, and from Doctor Kennedy's roport it will be seen that he considers this precautionary measure a most fortunate and successful one. In the same report Doctor Kennedy mentions the manner in which Fort Walsh was cleansed, fumigated, \&c., during the time the men were under canvass.

The force returned to Fort Walsh on the 7th day of October.
While in camp, equitation, foot, arm and marching drills (including troop movements) were performed daily. The men here were put through a course of musketry and target practice.

## Indian Payments.

On the 4th day of August, Mr. Allan"McDonald, Indian Agent of Treaty No. 4, -arrived at this post for the purpose of paying the annuities to the Cree Indians at the Indian reservation at "Maple Creek," and the Assiniboine Indians at the Indian reservation at the head of the Cypress Hills.

Mr. McDonald having applied to me for the service of an officer of the force to aid him in making payments, I detailed Inspector Cotton for this duty.

As Mr. McDonald wished to consult with me on matters relating to the payment of certain Cree Indians who had arrived from the north, I proceeded for that purpose to "Maple Creek."

After the payment of the Cree Indians was completed at Maple Creek, at Mr. McDonald's request, I accompanied him to the head of the Cypress Hills, while he paid the Assiniboine Indians at the Indian reservation there.

I kept an escort of police at Maple Creek and the head of the Cypress Hills during the time the payments were being made.

The money to make these payments, as well as for other Indian payments at Fort Macleod, had been previously brought to me from Qu'Appelle by SergeantMajor Bradley, who commanded the escort of our force detailed for that purpose.

The money for Fort Macleod I immediately sent there by Inspector McDonnell, who was accompanied by an escort. The remainder I handed over to Mr. McDonald here.

## Specia. Visit to Wood Mountain.

On the 18 th of November last I left this place for Wood Mountain, accompanied by Inspector Cotton, the Acting Adjutant of the force, and Surgeon Kennedy. We reached there on the 23 rd November.

While there I had several long interviews with "Sitting Bull" and other chiefs of the American refugee Sioux.

The reasons that necessitated my visit to Wood Mountain, and the result of the interviews I have ailuded to, I have already fully reported to you. It is needless, 1 herefore, that I should here enter into any recapitulation, further than saying that I trust that at no very distant date "Sitting Bull" and his followers will have quietly surrendered to the United States authorities, thus relieving us from what in the past has been a source of great and jerpetual anxiety.

Many of the refugee Sioux have already surrendered themselves to the American authorities.

The principal chicf so surrendering was "Spotted Eagle," who, with sisty-five lodges, gave himself up at Fort Keogh, United States, during the month of October last. "Spotted Eagle" is a chief of much influence with the Sioux; the number of his followers was considerable. The fact of his having surrendered will not be without its good resulte, inasmuch as it is likely to be the means of inducing the remaining camp under " Sitting Bull," still on this side of the line, to follow his example.

From Superintendent Crozier's report you will notice that a Sioux Indian named "Low Dog" left Wood Mountain, accompanied by his followers, on the eleventh instant, with the full intention of surrendering.

I am perfectly satisfied that this, to us, most satisfactory state of affairs was brought about from the contents of your messages, which I transmitted to the Sioux at my late interviews with them.

On my return trip from Wood Mountain I experienced very severe and stormy weather, which set in almost immediately after my departure from that post. The thermometer during the six days I was en route must have averaged something like $30^{\circ}$ belo zero. The distance from Fort Walsh to Wood Mountain is 190 miles; of this, 130 miles passes through a barren and bleak plain, where not the slightest particle of wood is to be found.

The officers and men composing the party suffered much from exposure, all being more or less frost-bitten. At times it became necessary to literally dig the horses and conveyances out of snow drifts in the coulées.

This we succeeded in doing until a point within 17 miles of Fort Walsh was reached. Here it was as much as we could do to get the horses themselves out of the snow. When this was accomplished, each officer and man took the harness off a horseand rode bareback into Fort Walsh, which was reached long after dark. On arrival
here we ascertained that the mercury in the thermometer was frozen. Everything we were forced to abandon when the horses were taken out of the harness was brought in the next day.

I have alluded to my return from Wood Mountain in order that some slight idea may be formed as to the hardships encountered by the Mounted Police in the winter trips they are forced to make over the plains. The one I have thus hastily described is no exception; similur occurrences are constantly happening.

## Sarcee Indians at Fort Calgary.

During the past month some difficulty was experienced with the "Sarcee" Indians at Fort Calgary. It appears they threatened to help themselves to Government rations. This having been reported to the officer in temporary command at Fort Macleod, he proceeded with a party of 30 men to Fort Calgary, where matters were satisfactorily arranged. I have already forwarded to you the report I received from the officer commanding at Fort Macleod, in which I am informed that the conduct of the men employed in this special duty was satisfactory in every respect.

I also received a letter from Lieut.-Colonel J. F. Macleod, C.M.G., S.M., who, alluding to the men of the force being sent to Fort Calgary, says:-
"I think it a very fortunate thing that this display of force was made."

## Probable Change of Site for Fort Macleod Necessary.

I have to call attention to that portion of Superintendent Winder's report, which alludes to the change of course taken by the "Old Man's River."

From this and other reports that have reached me, I fear it will be necessary to change the present site of Fort Macleod before the spring.

## Fire at Fort Macleod.

I have already forwarded to you a letter I have received from the officer commanding at Fort Macleod relating to a fire which took place there on the night of the 5 th instant, by which the stables and saddler's shop were destroyed. Beyond these buildings the loss of Government property was small.

You are aware of the reasons that have prevented my visiting Fort Macleod since my appointment as Commissioner. I iutend leaving for that place almost immodiately. The result of my inspection will be transmitted to you without delay.

## Hospital on Indian Reservation Required.

I have to call attention to the concluding portion of Dr. Kennedy's report in which he exemplifies the necessity which exists for the establishment of a hospital or infirmary on the Indian Reservations. I fully concur with what Dr. Kennedy says on the subject.

Offences such as "Horse Stealing" Committed along Frontier might with Advantage be made Extraditable.

On the 8th instant I addressed an official communication to you in which I expressed a wish that some understanding might be arrived at between the Dominion and American Governments, by which offenders could be arrested in either Canada or United States for offences committed along the frontier. More particularly would such an arrangement relate to "horse stealing." I notice that Superintendent Crozier in his report goes fully into the subject. He points out how alive the Indians
are to the fact that the International Boundary Line is a barrior behind which they can shield themselves and escape punishment for crimes they are constantly committing. The Indians when speaking of the boundary line are in the habit of-as Superintendent Crozier says-calling it the " medicine line."

I am of the opinion that if crimes committed along the frontier were considered as extraditable offences, that both countries would dorive a benefit from it.

Criminal Cases in "Southern District."
The statement annexed shows the number of criminal cases tried before the officers of the force, in the southern divisions, during the year ending the 24th December, 1880.

## Customs.

The following is the Customs returns of the past year for the Port of Fort Walsh. This return shows the amount of Customs duty collected by police officers up to the 21st instant:-

> Total value of goods imported in bond through the United States (exclusive of groods for the NorthWest Mounted Police)
> $\$ 28,50000$
> Total value of gooods on which duty was collected...... 84,03500
> Total amount of duty collected................................ 17,232 91
> Total value of exports.................................... ........ nil.

## Gaol Required in the North-West Territories.

I would recommend most strongly that a gaol be built at some central point in the North- West Territory, to which prisoners undergoing lengthy sentence might be sent. At all points our guard room accommodation is small, nor do I consider it advisable that our guard rooms should be employed as prisons or penitentiaries.

If this recommendation was acted on I am of opinion that sentences inflicted could be carried out much more effectually than under the present system.

At this moment there are thirteen prisoners confined at Fort Walsh. Guard room accommodation is, properly speaking, only capable of receiving three prisoners. Thus I have been forced to make use of a quarter as a temporary prison room.

## Signalling,

The establishment of a proper code of signalling would prove of much utility to the force.

I intend having a suitable code laid down, in whieh every officer and man will be fully instructed.

## Heliography.

I know of no country where heliography, or sun telegraphy, could be more advantageously adopted; nor where the results obtainable would be more likely to be successful.

With a common hand mir:or I have already made experiments that, though necessarily limited, as regards distance, were by no means unsuccessful.

While in England last year, I was in a position to judge of the importance with which heliography is now regarded by the military authorities.

During my stay at Aldersot, England, I was, owing to the kindness of Major Le Mesurier, R.E., Inspector of Army Signalling, allowed to inspect the various heliographic instruments under his charge.

The three-inch Mance heliograph is a useful and portable one, could be carried over the shoulders of a mounted or dismounted man without occupying more space than a pair of binoculars or field glasses.

This particular pattern of heliograph is not, however, efficient for a distance of over thirty miles. Doubtless, since my visit to England, some similar instrument available for much greater distance has been invented. I trust the Department will make enquiries on the subject, with a view of obtaining a heliograph suitable for use in this country.

I might here mention that almost every Blackfoot Indian carries a small hand glass around his neck, which he uses for signalling purposes, in addition to the attraction it possesses as an article of toilet.

I am aware that Colonel Macleod has already reported to you the death of Superintendent Edmund Dalrymple Clark, which occurred here on the 2nd October last. I cannot, however, refirain from mentioning the serious loss the Force has sustained from the death of this promising young officer, nor is it possible to overrate the high esteem in which Captain Clark was deservedly held by his comrades of all ranks throughout the force.

I enclose herewith Annual Reports from Superintendents Winder and Crozier, and from Surgeon Kennedy.

I regrot extremely that the other reports have not reached me. The weather, of late, has been exceptionably stormy and severe. This will, I fear, be the means of preventing these reports reaching me by the 31st instant, as arranged upon. Under the circumstances, I deem it advisable to forward this without further delay.

Immediately on the arrival of the remaining reports, I will forward them to you.

Before closing this report, I might state that owing to the recent date of my appointment as Commissioner, I have been unable to make a thorough tour of inspection of all the Police posts. This is a matter of much regret to me. There are many mubjects requiring attention, which, from lack of information, I have been nuable to enter into in this report. I am also fully aware that my report does not contain, by any means, a perfect account of the important service performed by the Police during the past year.

> I have the honor to be, Sir,
> Your obedient servant,
A. G. IRVINE,

Commissioner.
NORTH-WRST MOUNTED POLICE.


44 Victoria. Sessicaal Papers (No 3.) A. 1881


## SUPPLEMENTARY REPORT OF COMMISSIONER.

Headquarters, Fort Walsh, N.W.T., 18th January, 1881..

SIr,-Since I forwarded my report I visited Fort Macleod. I left this post on the 30th December last, and reached Fort Macleod on the 3rd instant.

The course of the "Old Man's" River at Fort Macleod has changed.
This river at high water deviates from its original course in two places, passing immediately in front and rear of the fort. In rear the water flows within a few feet of the west side of the fort.

The deviations made from the original course of the "Old Man's" River have continued, becoming more and more formidable.

It is quite possible, in fact probable, that in the coming spring many of the present buildings would be carricd away if left in their present positions.

Taking all things into consideration it is absolutely necessary that Fort Macleod be removed from its present site.

I recommend that a new site be selected at the police farm, which is situated some thirty miles south-west from where the fort now stands.

This farm is in all respects suitabie for the location of a post.
Building material can be readily obtained from the Rocky Mountains in the vicinity of the farm.

From this change of location the cost of the maintenance of a post would be most materially reduced. Wood and coal, for instance, could be obtained by our men near the farm.

The farm produce too would, by the change I recommend, always be at hand, which would virtually be a considerable saving, as under existing circumstances, overything has to be hauled 30 miles.

The wear and tear then of farm material would be reduced.
There are at present a considerable number of settlers about the police farm, and I have every reason to believe that this number will soon become largely increased.

This point will, beyond doubt, shortly become one of importance.
It is a particularly fine stock raising country.
At present the trails leading to Fort Macleod pass by "Whoop Up," Slide-out" and "Stand Off."

It would be necessary to establish a small police out-post and custom house at some central point in the neighborhood of these places, to inspect trains and waggons coming in.

I recommend, that immediately on the location of the new post being decided upon, that a survey of a town site be made in order to prevent buildings being erected in an indiscriminate manner.

I made an inspection of the police farm and found everything in a most satisfactory condition. The greater part of the up-hill work is now over ; most of the necessary improvements made.

I enclose herewith annual reports from Superintendents Jarvis and Herchmer, Inspector Steele, Surgeon Miller, and asupplementary report from Superintendent Crozier.

I have to call your attention to that portion of Superintendent Herchmer's report in which he mentions the increase of barrack accommodation required at Battleford and Fort Saskatchewan. I recommend most strongly that his suggestions be acted on.

I also attach a further return of cases tried here since the closing of my report.

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

The Honorable
The Minister of the Interior, Ottawa.
A. G. IRVINE,

Commissioner.
Additional Cases tried at Fort Walsh, up to 30th ${ }^{\circ}$ December, 1880.


## REPORT OF SUPERINTENDENT W. D. JARVIS.

Fort Macleod, 7th January, 1881.

Sir,-I regret that, in forwarding my annual report, I am unable to give a full account of the duties performed by myself and the men under my command up to the month of July last, as I was then transferred from Fort Saskatchewan, and the books and memoranda having been left there, I have no doubt that the officer now in charge will make a satisfactory report of the work done there. But up to the time of my leaving I beg to state, as I had the pleasure of doing last year, that the conduct of the men was most praiseworthy, as hardly any of them were brought before me for offences against the Police Act, and that I was ably assisted in my duties by Inspector Gagnon. Since my arrival at Fort Macleod the work has been up-hill. Until the end of October, I had not enough men to carry on the ordinary barrack duties. Nevertheless, the few I had worked most creditably, and did severe duty without complaint.

I find the horses of " C " Division nearly worked out, and, with the present ration of oats, it is impossible to get them into or keep them in condition. The stables were destroyed by fire on the 5th December, as has been already reported. A few horses are billeted in the village; the remainder are herded on Willow Creek, about three miles from the post, and are doing as well as could be expected for hurses in low condition. It being absolutely necessary to have shelter for the horses, I have taken the responsibility of building a stable to accommodate 20 horses at a cost of $\$ 500.00$. The losses by the fire have already been reported, and as nearly all the saddles were destroyed, I have sent to Fort Saskatchewan for as many as can be mpared. I have visited the Police Farm several times, and found the work being done as well as possible, and the oat crop good, considering the unusually bad season.

I beg particularly to call your attention to the soldier like behaviour of the detachment of thirty men under Inspector Denny, when obliged to ride to Fort Calgary and back, a distance of 200 miles, in the depth of winter, without tents or any of the usual comforts of a soldier on the line of march.

As nearly as I can estimate, since my arrival here, various Officials of the Indian Department have travelled with either two or four-horse teams belonging to this division, a distance of 1,980 miles.

The total amount of Customs duty collected here for the year 1880 amounts to $\$ 15,433.38$. There have been fifteen cases tried by police officers, besides those brought before the resident Stipendiary Magistrate. Sixty gallons of smuggled whiskey were seized and destroyed by the police since my taking over command here.

I regret that reports have been made to the Government respecting spirits boing sold in Fort Macleod, and I honestly state that the reports are much overrated.

A certain amount of spirits does come in on permit from the Lieut.-Governor, but very little drunkenness is apparent, though there have been a few cases.

I have the honor to be, Sir,

## Your obedient servant,

W. D. JARVIS,

Superintendent.

The Commissioner N.W.M.P. Forwarded

A. G. Irvine.<br>Commissioner.

# REPORT OF SUPERINTENDENT W. WINDER. 

Fort Walsh, N.W.T., December 12th. 1880.

Sir,-In accordance with your instructions, I have the honor to forward you herewith the following report of Fort Macleod district from the 1st January to the 10th Augast.

I regret that not having access to the official diary at Fort Macleod, I will be unable to make this report as complete and accurate as I should have wished.

With few exceptions the conduct of the men under my command has been excellent.

The force was put through the usual annual drill, commencing on April 12th and continaing until June 1st. The target practice, considering the circumstances, was good, but I do not think the iseue of ammunition is sufficient to allow the men to become proficient in marksmanship. They are armed with the old Snider carbine, which I consider inferior to the Winchester as a military arm.

Last year I reported that the Old Man's River had changed its course breaking through a narrow neck of land that divided the main stream from a slough. This year the river reverted to its old bed, breaking through lower down, cutting off another large portion of the island on which the Fort is built, and causing the demolition of several houses. The soil of the island is a loose mixture of sand and gravel, and to show the strength and velocity of the current I may mention that in one night one hundred and twenty yards of the bank was washed away. To save the saw-mill from being swept away it was necessary to move it from its old site. The whole lower portion of the island, including a part of the farm, was inundated, and the water rose so high as to approach within twenty yards of the Fort itself. The level of the flood was not five feet from the floors in the Fort. Judging from what I have observed during the last two years, I consider that the present site of the Fort will be unsafe if the water should rise as high as it has done in the past.

With the exception of a new roof on the hospital, very little building has been done.

Up to the time that I handed over the command to Superintendent Jarvis, thirty-nine men had taken their discharges; some of them had completed their term of service, and the remainder took advantage of the Order in Council dated 5th April, A.D. 1880.

This number includes two who were invalided. Of these thirty-nine men twentyfive remained in the country, some of them taking up land and going into cattle raising. The settlement in the vicinity is consequently increasing.

I am bappy to be able to state that cattle killing by the Indians has decreased very much since last year, only one case was reported, and although arrests were made conviction was impossible, on account of insufficient evidence.

The settlers now say that since the Government has been feeding the Indians regularly they have not been troubled by them.

The Indian Agent arrived here on the 13th of April, up to this time between two and three hundred Indians had been fed daily, all the work being done by the police. These Indians were employed as much as possible in work about the Fort, and never gave us the slightest trouble. On the arrival of Mr. Macleod all Indian affairs were turned over to him.

Early in February a report reached me that considerable destitution existed among the Stoney Indians at Calgary and Morleyville. By order of the Commissioner I sent Inspector Frechette to relieve the distress. His report on this subject was forwarded to the then Commissioner of the Police.

About the middle of June, Patterson, the man in charge of the Indians at Blackfeet Crossing, reported to Mr. Macleod, the agent, that he was having considerable difficulty with them. On the 18th I accordingly accompanied the agent to the Crossing, conversed with several of the head men, and found them all quiet and peaceably disposed. I therefore considered that Patterson had become unnecessarily
alarmed, but as he seemed to have great fears for his personal safety Mr. Macleod allowed him to resign, leaving another man in his place.

On the 18 th July Inspector Macdonell and party arrived from Fort Walsh with money for the Indian payments. The payments commenced soon afterwards, and were carried on almost wholly by the officers of the police. Inspector McIlreo paid the Bloods at Macleod, Inspector Dickens the Piegans on their reserve, Inspector Frechette the Stoneys at Morleyville, and I accompanied the agent to the Blackfeet Crossing to assist in paying the Indians there.

We were detained at the Crossing for several days owing to the non-arrival of carts cortaining flour and provisions usually given to the Indians at these payments.

During this time the agent and myrelf had several councils with the Indians, and the Sarcees expressed a decided wish to have a reservation of their own, separate from the Blackfeet. As soon as the carts containing the goods arrived the payments commenced and passed off without any difficulty.

On receipt of their money the Indians immediately supplied themselves with clothing and provisions, and seemed to spend very little of their money in useless articles as they had been in the habit of doing in former years.

A great variety of miscellaneous services have been rendered to the Indian Department by the police, but as the record is kept at Macleod I am unable to give the details.

I am sorry to have to allude to the death of two members of the force, Constabie Hall of "F" Division, who died' in hospital, and Constable Hooley of "F" Division, who was drowned in Belly River on the 24th July.

I annex a return showing the magisterial work performed at Macleod up to the time of my leaving there.

On July 16th the Indian "Jingling Belle," who escaped from the guard-room last year, was cleverly recaptured by Corporal Patterson in the Blood camp, to which he had returned in disguise.

Before concluding, I beg leave to suggest and recommed that a hay press be procured and forwarded to Fort Macleod betore the coming summer, as owing to the bigh winds prevailing there during the season for cutting hay, large quantities of the same are lost in transjort from the hay field to the corral at the Fort, and from the corral to the stables.

> I have the honor to be, Sir, Your obedient servant, $$
\text { W. WINDER, }
$$ Superintendent.

Lieut.-Col. Irvine,
Commissioner N.W.M.P., Fort Walsh.
Forwarded,
A. G. Irvine,

Commissioner.

## REPORT OF SUPERINTENDENT J. M. WALSH.

Brockville, 31st December, 1880.
Sir,--I have the honor to submit the following report for the year ending 31st December, 1 z 80 :-

January 1st. Sitting Bull and Sioux ${ }^{n}$ Indians (about 450 lodges) were encamped on Frenchman Creek, north and south of the 49 th parallel. During this month the snow was very deep, and I found it hard to keep close communication with the camp, but the Indians did not venture out more than the necessity of procuring food compelled them. Nothing transpired of notice during the month of January.

February 1st. Report reached me that the "Minnicangon," an Indian who for over a year I had been persuading to return to a United States reservation, had, with 60 lodges of Sioux, surrendered to the United States authorities at Poplar Creek Agency, and also that 20 lodges of Brules Sioux had returned to Spotted Tail Agency to surrender.

February 2nd. Was obliged to send nine horses to cattle herd at foot of the mountain, 25 miles distant from the post, owing to their being under a slight attack of scurvy, which disease has prevailed in this district for some time.

February 22nd. Kendall Smith \& Co., failing to furnish 20 tons of hay promised me, I was forced to send six additional horses to hord and reduce the forage of hay to 12 lbs. per day, and increase the forage oats to 8 lbs . per day, for the remaining horses. The herd returned to the post about 1st May, and although the winter was the severest experienced for years in Wood Mountain, and grass very scarce, owing to great prairie fires that passed over the country in the autumn, both horses and cattle were in very good condition. This, from other facts previously represented, proves conclusively that Wood Mountain is a stock-raising as well as an agricultural district; that horses and cattle and sheep can run the hills during the winter months without any danger of perisining by storm, by cold or by want of grass. Highly prized as Bow River district may be as a stock-raising country, and although it may have an advantage over Wood Mountain by possessing a more extended range and having a somewhat shorter winter, yet in all other respects it cannot excel Wood Mountain. The grass of Wood Mountain is as good, if not superior, to that of Bow River, and Wood Mountain has a great advantage over Bow River by being 400 miles nearer to the eastern markets. No part of Montana-and Montana is quoted highly as a stock-raising country-can produce a more nutritious grass, and hills and valleys more abundantly supplied, than Wood Mountain, added to which it is fertile from its western to its eastern limit. Both valley and bench land can be cultivated. Timber may be sumowhat scarce owing to fires that occurred some few years ago, but there is a young growth rising up that will again soon fill the vast coulees. There can be no want of fuel in Wood Mountain, for coal can be seen in the face of the creek banks.

March 6th. On this day, guide and interpreter Joseph Lariviere left the post on foot about 4 p.m. to go to his home, one mile distant. He called at the house of one Barheam, about half way, and warmed himself, and then preceeded on his journey; after which time I could find no positive proof that he was again seen alive. His duty being such as to give liberty to absent himself for the purpose of visiting the camps and villages to pick up news, he was not missed until the morning of the 8th, when it was reported to me that he had not reached home. The evening of his departure from the post there was a very severe snow storm, and the conclusion arrived at was that he possibly got lost, and perhaps was still wandering about the mountain. I at once despatched all available men with horses and about 20 Indians, and every possible search was made, without effect. In the month of June his body was found about six miles south-east of the post. Hospital Sergeant Holmes examined the body, and no marks of violence being visible, decided that Lariviere came to his death by perishing in a storm. The body was interred by the police a few yards from where it was found.

March 10th. Sioux Chiefs " Broad Trail" and "Little Knife," with 40 lodges, arrived at this post. They informed me that 125 lodges of Sioux Indians had surrendered at Poplar Creek and were drawing rations. The remainder of the tribe including Bull, were scattered in hunting camps along the Frenchman Creek and Milk River.

April 1st. The Sioux camp at this post had increased to 150 lodges, with Bull at its head. The meat of the camp this day became exhausted and owing to the poor condition of the Indian horses, the buffalo, 70 miles distant, could not be reached and further supply could not be procured. Hunger and suffering prevailed for the next five or six weeks. Horses that died from scurvy, and carcases of horses that died during the autumn and early winter, were gathered up and eaten. In some cases persons became so reduced as to render them unable to assist themselves, and I was
forced to make small issues of food to save their lives. Following this want of food and the cating of diseased horses, an epidemic appeared, which marked its results by the many graves now to be seen in Wood Mountain. The conduct of those starving and destitute people, their patient endurance, their sympathy, and the extent to which they assisted each other, their strict observance of law and order, would reflect credit upon the most civilized community.

I am nleased to inform you, as no doubt it will give you pleasure to know, that the greatest good feeling and consideration was extended to those poor sufferers by the men at Wood Mountain Post. The little that was daily left from their table was carefully preserved and meted out as far as it would go, to the women and children. During this five or six weeks of distress, I do not think that one ounce of food was wasted at Wood Mountain Post. Every man appeared to be interested in saving what little he could, and day after day they divided their rations with those starving people. I must further mention that the Indians received assistance from the halfbreeds.

April 4th. Iron Dog, Sioux chief, returned to Spotted Tail Agency. I received a letter frem the Indian Agent at Red Cloud Agency: it informed me that a party of Sioux Indians under "Waterspout," persuaded by me to return and surrender, had arrived at his agency.

April 22nd. Captured Alex. Bresum, who was attempting to evade Customs Act; fined him $\$ 50$.

April 24th. "The One-that-Killed-the-White-Man," Ogallalla, Sioux, and three lodges, left my post for Fort Keogh, for the purpose of surrendering to General Miles.

May 10th. Sioux Chief "Hairy Chin" and twelve lodges returned to the Missouri River, with the intention of surrendering and settling on a reservation. At this date, by arrivals from the plains, the camp had increased to 240 lodges. Buffalo were reported at Milk River, and hunting parties with meat began to arrive. I again commenced counselling the Indians to return to the United States, pointing out as clearly as possible the absurdity of their expecting any assistance from the Canadian Government; also the great inducement held out to them by the United States, being similar to what was now being done by the United States Government for Indians already on reservations. Day after day I have placed this before them, and pressed them not to delay too long accepting the offer made by the United States, for the privilege of returning on such favorable conditions might any day be withdrawn. Though "Sitting Bull" opposed for a yeur and a half my arguments, setting forth the benefit and happiness that he and his people would receive by their surrender, my view of the question during this time kept gradually gaining strength, and at this date the camp became so favorably impressed that "Bull," finding his opposition unavailing, said:-"The people of my camp who wish to return to agencies can do so, I will place no obstacie in their way." He kept his word, and within the next five days, 50 lodges were on the move to the Missouri River, with a view of surrendering.

June 7th. "Sitting Bull," under excitement, owing to the result of a very stormy council meeting, made an attempt to rescue one of his followers, a prisoner that I had caused to Le arrested at the instance of Mr. Légarree, Magistrate at "Wood Mountain. By a determined resista nce made by the Police, twenty in number, "Bull" and his warriors were forced to retire from the post. Sevoral reports having reached methat evening and the following morning that " Bull" contemplated an attuck on the post, though I did not put much reliance in the reports, I deemed it prudent to barricade the approaches to the post, that in the event of an attack, I Could not ouly successfully repel it, but offer good protection to the trading eatablishments in the immodiate vicinity. I kept up the barricade for several days, antil "Bull" came and apologized for his conduct, and asked my forgiveness, which I granted him.

May 19th. Sioux camp reduced at my post to 100 lodges. "Bull" admitted that there are only 150 lodges of the once large camp of Tetons Sioux north of the
line, the others having returned to the United States with a view to surrendering. He expressed bis intention o? remaining in Canada, but said he was prepared to shake hands with the Americans and end all feeling of hostility between them and himself. "These," he said, "are words never spoken and sentiments never felt by me before. To-day I show you my heart; you can make known my feelings."

May 25th. I this day arrested Grant and Martin for breach of the liquor law, and fined them each $\$ 50$ and costs. I here wish to favorably mention the name of Constable James Davis, to whom I entrusted, with Constable Fearon, the ferleting out of this case. Davis discovered sufficient evidence to criminate the parties and sent Fearon to inform me. In the absence of Fearon, three men, whom Davis wished to secure, undertook to leave Grant's house, and Davis arrested them, when they mado a determined effort to escape; but Davis, by firmness and coolness, succeeded in holding them until assistance reached him, when he conveyed them to the post.

June 7th. By the assistance of Sitting Bull I recovered from the Sioux camp at Burnt Timber, nine horses, the property of the United States Government and citizens, and returned them to Mr. Porter, United States Indian Agent at Poplar Creek.

July 7th. Previous to my departure from Wood Mountain Sitting Bull requested me to interest myself in his behalf to secure a home for him in Canada, with certain privileges attached. I explained to him that it would be but a waste of labor on my part to undortake any such task, and a waste of time on his part to await the results. I endeavored to persuade him to give up all idea of remaining in Canada. He persisted in his desire, and added that if the Canadians refused to give him a home (or using his own words, "if the 'White Mother' is determiued to drive me out of her country, and force me into the hands of peoplo I know are but awaiting, like hungry wolves, to take my life,") would I not see the President of the United States and ascertain the best conditions on which he (Bull) would be permitted to return, and if the conditions would be faithfully and fully carried out. To this I replied: "If the Canadian Government permit me to do so, I will comply with your request."

By examining reports it will be found that "Sitting Bull" and bis followers, two years ago, had a very hostile feeling towards the people of the United States, so much so that "Bull" said the sight of an American mado him sick. On 1st of April this year, "Bull" informed his followers that any of them desiring to return to the United States might do so. On the 19th of May last he said he was ready to shake hands with the Americans. On the 6th of July he requested me to see the President in his behalf. Permit me to explain how the change in this man and bis followers was brought about. Neither hunger nor prospective siarvation in his camp at any time tended to effect it, as many persons imagine, but it was done by pationt, hard work, days and nights of steady persuasion, argument, and illustration, to establish in the minds of the Indians a confidence in the people of the United States, and sense of security in their dealings with them. I taught them that it was their duty to dicipline their hearts to a better feeling towards the people to whom they were naturally allied, and to whom they must return at no distant day; and the necessity of a moro friendly and better consideration by them of the conditions of surrender offered by the United States Government. That the American yeople were prepared to assist them I proved by what they were doing for the Sioux Indians at the Red Cloud and Spotted Tail and other Agencies. I consider it of the greatest importance to both countries that Sitting Bull be settled either in one or the other, for while he is wandering about the plains the tranquility of the frontier cannot be considered certain. His unsettled camps keep up a constant friction amongst the Indians on both sides of the line. The dissatisfied Indians at the American agencies knowing that they will be welcome at his camp, and the young warriors be attracted by the love of free life that exists around Bull, cannot become reconciled to living quietly on a reservation. The bad influence of this wandering life of "Bull's" extends to our Indians.

I now beg to make a few remarks on a report that has gone the rounds of the press, both in Canada and the United States, that I was negotiating with Sitting Bull to induce him to consent to be exhibited through the country. Idle and absurd as such reports may seem, yet $I$ feel it my duty to emphatically contradict them, and to say, though I have been asked to assist in securing an engagement of Sitting Bull, I have always declined to do so. Another report, as I am informed, has also gained currency, that Sitting Bull would have surrendered during the last summer, had it not been for the encouragements which I held out to him, of possibly being able to return to hiscamp with better terms of surrender than the United Slates had accorded to other Indians. As to this, 1 beg to say that this report is likewise false, for I have never given Sitting Bull any such encouragement. As I have already stated, after most urgent requests made by Sitting Bull, I told him if the Canadian Gorernmont would permit me, I would see the President or Secretary of the Interior for him. I never heard Bull demur very much to the conditions of surrender offered him by the United States Government. His only objection appeared to be the doubt that the conditions would be carried out, and particularly with regard to himself.

July 15th. I handed over the Wood Mountain District to Superintendent Crozier, and took my departure for Qu'Appelle, my new district, which place I reached after a march of four days, and where I met a detachment of my division under command of Inspecter Steele, who had arrived some weeks preceding. Inspector Steele had taken over the district from Superintendent Herchmer. I remained at the Qu'Appelle five days, during which time I decided upon the necessary barrack and stable accommodation required for the division during the winter, to be erected by the men of the division Inspector Steele to conduct the work in my absence. I visited Shoal Lake and handed over the police quarters at that place to the Indian Department, reserving barrack and stable room for six men and horses. Having been granted a sick leave, I proceeded from this place (Shoal Lake) to Brockville, Ont.

With so small a force as I had at Wood Mountain, it was very hard to keep up proper discipline, but the conduct of the detachment was extremely good, as can be seen by the fow entries against the men composing it, in the annual defaulters' sheet of the force.

As the saddlery of the force must be very soon renewed, I would recommend to Your notice the Whitman saddle, patiern lately adopted by the U.S. army. It is lighter and lers perishable than any saddle manufactured, and lightness and durability are the essential quaiities for a saddle in the police service. Mr. Whitman, late of the U.S. army, the patentee of this saddle, is a cavalry officer of much experience, and from direct observation on frontier service of what class of saddle would be most suitable for rough service, for ease and comfort to horse and rider, decided on the one now recommended. I have used for several years a No. 17 California saddle, from Which sprung Mr. Whitman's first idea of the saddle brought out by him, and during that period had many opportunities of trying its superior qualities, on long and fast rides both in summer and winter, and not iu one instance did I tind this saddle to gall my horse. I have used the Whitman saddle tor six months and find it equal in all respects to the Californian, besides having the advantage of boing much cheaper, and lighter and less perishable. The bearings of the Whitman on the hornes beck are the same as the Californian tree No. 17. I would suggest an examination of this anddle before adopting any other.

I have the honor to be, Sir,
Your vory ubedient servant, J. W. WALSH, Supeintendent N.W.M.P.

REPORT OF SUPERINTENDENT L. N. F. CROZIER.

Wood Mountain, Dec., 1880.
Sir,--In accordance with instructions, I have the honor to submit the following Report:-

## INDIANS AT FORT WALSH.

At the beginning of the year I was in command at Fort Walsh. There were at that time in the vicinity of the Fort between five and six hundred Indians to whom I was issuing rations. After receiving their annuities, Indians from all parts of the Territory came to the Cypress Hills in pursuit of buffalo, but, finding there were none in that section, a good many at once crossed the international boundary, and continued travelling until they found game. A large proportion, doubtless, thinking they would, in any case, be looked after by the Government, made up their miuds to remain within easy reach of Fort Walsh for the winter. Knowing the provisions on hand would not be equal to the heavy drain such a number of people would make upon them, I determined to make every possible effort to induce them to leave for the buffalo country before the season became too far advanced for travelling on the plains. By dint of talking and persuasion, I at last prevailed upon numbers to leave; those remaining, to the number above stated, being in most instances so badly off for horses that they could not move-a regular issue of rations had to be made to them for the winter. [ found it necessary, shortly after the winter had set in, to eatablish a small detachment at the Big Island Lake, about twenty-one miles from the Fort, and where the Indian Department cattle were then herded, in order the more conveniently to feed about two hundred Indians whom I had brought there from different places. Before doing this, provisions had to be taken to the camps by the police, in some instances as far as sixty miles, and, as the season advanced, this service became, not only frequent and difficult, but dangerous. The Indian horses were 80 wretchedly reduced from cold and scarcity of grass that they were not even able to carry food from the Fort to their camps. I cannot help romarking that it was fortunate, indeed, that the Indians about the Cypress Hills were looked after and able to procure a supply of provisions from the Fort, otherwise hundreds certainly would have starved to death. Feeling the necessity of economizing the supplies on hand in every possible way, I purchased tackle and nets, that by fishing the Indians might, to a certain extent, help to gain their living. The experiment was at first only partially successful, notwithstanding my sending members of the force, experienced fishermen, with the Indians to the different lakes to set their nets and render all possible instruction and assistance. Towards spring, however, a considerable number of fish were caught by the Indians in the lake at the head of the mountain, where the Assinniboine Reservation now is, and after the opening of the season fish in several small creeks became very numerous, so numerous that they were literally "scooped up." At one time thousands of Indians were receiving food from this mource.

I issued, also, from thme to time, ammunition, for, although game of all sorts was scarce during the winter, the young men were able to shoot something occasionally, which helped to prevent the expenditure of the supplies so necessary in the event of a large influx of Indians.

## INDLANE COMING IN FROM PLALNB.

Abont the middle fof April the Indians commenced coming in large numbers from'Milk River, on the American side, where they had wintered. In every instance they were starving. Many said they had but little to eat during the greater part of the winter, and would have come to the Fort sooner had they been able; men and teams were kept constantly on the road with provisions to meet and feed the starving
camps as they arrived. The number of Indians increased daily, until at one time there were as many as five thousand about the Fort. Every effort was made to induce them to move on to their own country as soon as able; but for a long time without avail. Those who came in from the plains were certainly not in a condition to move; on the other hand, those who bad been about the Fort all winter were in much better condition to travel. I tried in every possible way to get rid or themgave them supplies sufficient to last them to the end of their journey, but after eating everything up they would invariably return with some sort of an excuse and ask for more.

It was not until June that any of the camps left for their own agencies, and then they were only induced to do so by sending trains of provisions with detachmenty of police in charge, who served out to them a ration from day to day as they travelled along.

## HORBE STBALING.

When the spring opened horse stealing prevailed to a fearful extent. There were at one time camped out together Sioux, Crees, Bloods, Blackfeet, Salteaux, and occasional war parties from the American tribes living along the Missouri, all of whom were stealing each from the other.

I very much feared a serious collision between the tribes would be the result of so much stealing. Angry altercations occurred more than once, and shots were fired by a party of Assinniboines into the Sarcee camp. The Sarcees wisely refrained from returning the fire, and placed matters in the hands of the police.

Porhaps no better proof could be adduced of the authority and influence of the force, and the respect in which it is held, than the fact of detachments being able, when the Indians were greatly excited, to enter their camps and recover stolen property. Certainly I can say that it was only by the constant and prompt action, as well as mediation of the police, that much serious trouble between the tribes was averted.

## THE INDIAN PATMENTS.

By instructions received from the Indian Dommissioner, I assembled the chiefs of the Northern Indians on the 2nd of May; informed them there would be no payments at the Sounding Lake, and asked where, instead of that place, they wished to receive their annuities. Their answers I forwarded to Mr. Dewdney and the agents at Battleford and Edmonton.

## DAILY ROUTINE AT FORT WALEH.

In addition to the ordinary duties and routine, foot, riding and gun drill was carried on during the entire winter and spring.

The gun detachment was put through a regular course of firing practice under the supervision of the artillery officer.

The annual carbine practice took place in the autumn of 1879 . There was commanding officer's parade every week, when arms, clothing and ammunition were inspected. Kit, saddle and medical inspections were also held weekly.

## ARRIVAL OF THE OOMMISSIONER.

Commissioner Macleod and Mr. Galt arrived from Fort Macleod on the 29th May. The former took command of the Fort, the latter management of the Indians.

## INSPEOTION BY COMMISBIONER.

On the 28th June, the division under my command was paraded (mousted) for inspection and drill before the Commissioner. At the conclusion of the parude the Commissioner complimented the officers and men upon the general efficiency of the
troop. On the following day the Commissioner had a thorough inspection of the kits, quarters, arms, ammunition, \&c.

On the 8th of July, I left Fort Walsh with the Commissioner to take over the command at Wood Mountain, to which place the headquarters of my division had been lately transferred.

## WOOD MOUNTAIN.

On the 13th of July the Commissioner, self and escort arrived at Wood Mountain. I took over the command from Superintendent Walsh, who left with his detachment for Qu'Appelle on the 15th July.

## ARREST OF WHISK\&iy TRADERE.

On the 18th of July, I arrested and fined.two men, Blondin and Marchand, \$200 and $\$ 50$ respectively and costs for trading and having intoxicating liquor illegally in their possession. The liquor, thirty gallons of wbiskey, was also seized and spilled.

## THE SIOUX.

Since my arrival here I have had frequent interviews with the hostile Sioux, when I urged upon them the necessity of accepting the terms of surrender offered by the Americans. On the 18th of July, the Chief "Spotted Eagle" came to see me. I had a long council with him and informed him of the message I had received from the "Queen's Council House." At the conclusion of our talk he said he would return to his own country and surrender. His words were:-"Now that there is to be no more blood spilt upon the American side, I will shake hands with the Americans strong and live in my own country." The old warrior went from here to the Yankton Camp on the Red Watcr Creek, where he remained until October, when, with about sixty-five lodges, he surrendered to the American autuorities at Fort Keogh.

## DEPARTURE OF THE SIOUX.

From the first interview I had with Sitting Bull, after my arrival here, I noticed that he wirhed, whatever his reasons or objects might be, to delay tho surrender of the hostiles. I therefore concluded to break his influence with the camp ; conseqently, on subsequeut occasions instead of treating him with exceptional deference and addressing myself especially to him in council, I spoke to the people generally, telling them not to allow any one or any set of men to prevent their accepting the American terms of surrender. I explained how much their women and children would benefit by such a step; that whatever they as men thought, or whatever prejudices any particular man had respecting the Americans, they would be cruel to their families if they longer rejected the offer, now that starvation was imminent in this country and that they could not hunt south of the line without a constant dread of attack from the American troops.

This and similar arguments constantly used not only in council but whenever I met any of the Indians, no matter what their standing, soon began to have an effect upon the camp, in fact so great an effect that Sitting Bull and his soldiers had to prevent lodges leaving several times by force. You will remember my having so reported to you not long since. About three weeks ago the whole camp arrived near the fort; Sitting Bull upon arrival came at once to see me; by his conversation and manner it was plain that he felt his influence was fast waning, and although he told me , as he had often done before, that he was going seon to surrender, one could see that he wished to delay as long as possible.

On the 3rd of December, I had a long talk with Low Dog. He said: "I want you to tell me all about the message you have received from the Queen." I did so and impressed upon him how foolish the people were to remain here and starve,
because of the whim or selfish caprice of one or a few men, I said, if any wish to remain behind let them do so, but why should they keep back ail the others. "Low Dog" said in reply: "Thore are people in the camp now who want to go, as I before told you, I want to go and I will go, send your interpreter with me to the camp that he may bear witness that I am telling the truth, when I repeat what you have told me, and I will take away so many lodges that the rest will be bound to follow." I felt now that not only would the influence of "Sitting Bull" be broken" but that there would be such dissension in the camp, and so many people would follow the lead of "Low Dog," that the few remaining, including Sitting Bull would, by force of circumstances, be compelled to go with them. My anticipations have been so far realized that with the exception of a few individuals, the camp left here with the full determination of surrendering. On the morning of the 11th December they broke camp, "Low Dog" had broken up the old and formed a new "soldier lodge," (which is the governing power of the camp). When I last heard of them on the morning of the 12 th, they were across the line and travelling fast. Of course something may occur to cause them to change their minds, and until they actually surrender it can not be said that we are positively rid of them.

## horse stealing.

Horse stealing prevaile 1 to a great extent in this vicinity during the autumn. Among other cases I reported to you that ot a party of Indians (supposed to be American) who after securing the horses, fired into a lodge and killed a half-breed named Antoine Liplante. Unless some understanding is arrived at between the American and Canadian Governments that offenders may be promptly and vigorously dealt with, I very much fear that killing and stealing will increase to such an extent that the country along the border will be scarcely habitable. When the Indians are made to understand that the mere fact of "hopping" across the line doos not oxempt them $\mathrm{N}_{\mathrm{N}}$ from punishment, there will be a much greater guarantee of their good behaviour. Now they call the boundary the "Medicine line," because no matter what they bave done upon one side they feel perfectly secure after having arrived upon the other.

Disabuse their minds of any such idea by delivering offenders to the authorities of the country in which crime is committed, then punish them as their offences merit, and trouble to a great extent from horse stealing and other Indian outrages along the border will cease.

The instances have been few tha we have not been able to recover from our Indians horsen stolen by them from the American side. It cannot, however, be said that the Americans have been as successful in recovering property for us.

Their officials are certainly always ready and willing to do whatever lies in their power, but heretofore there has either not been a sufficient force in the Indian country to support the civil authorities in carrying out the laws, or their system is at fault. Our Indians cannot understand why the Canadian authorities make them return all the animals they procure south of the line, while they cannot receive similar redrees from the Americans.

## STRENGTH OF THE FORCE AT WOOD MOUNTAIN.

The strength of the force necessary to be permanently maintained here will depend, to a great extent, upon the location of the Indian reservations upon both sides of the line, as well as the action of the Indians themselves. It Indian reservations are situated close to the line, it is only to be expected that a strong force will have to be maintained upon both sides, not only to prevent trouble between the In-
In dians of the two countries, which for some years, at least, would be very apt to occur, but to give a soense of safety and security to settlers. On the other hand, if the In-
diand bat to give a sense of safety and security to settlers. On the other hand, if the In-
dians are placed on reservations and settle down a considerable distance from the
border border, it does not seem to me that there would be the same reason for maintaining a large forco along the frontier. During the present unsettled state of affairs, a foree
of at least fifty men should be stationed here until the surrendered hostile Sioux are settled upon their reservations, and even afterwards, unless they are placed far from the border, and well watched, we will have to expect the presence of parties of their young men from time to time, and as they will not have the same interest in behaving themselves as when this country was their home, it is only natural to suppose that they will not restrain their mischievous inclinations. In fact, should they come, they would do so, in all probability, as "war parties," which means horse stealing, or when neessary or convenient, killing people as well. Threats to that effoct have, I understand, been already made by those who have gone to the American agencies. Then, in addition to the hostile Sioux, there are covering our frontier from Assiniboine to Buford, thousands of American Indians who, though agency Indians, roam about the country seemingly without restraint, and are altogether unreliable. Therefore, for the present, at least, if a force is to be maintained here at all it should be a strong one.

## THE FORT.

The building at present dignified by the name of "Fort," affords neither proper accommodation, comfort or defence. If, therefore, a "force" is to be kept here, new buildings will have to be erected. In doing so the fort should be built to accommodate, if necessary, more than fifty men and horses. Owing to the scarcity of building timber and firewood in this immediate vicinity, it might be necessary to change the present site. A place known as the "Willow Bunch," some thirty miles east of this, seems, in many respects, a desirable location for a post.

## BUILDING AND FATIGUES.

During the entire autumn we have been busy building and repairing in order to make the old buildings here habitable. The old house formerly used as a Quartermaster store has been torn down and a good building for the kind erected, a large corral has been built for the hay and two others for the cattle. All the buildings inside and out have been mudded (a substitute for plaster) and floors laid in the stables. We also laid up for winter use two hundred cords of wood. All this ework was done by the men of the detachment, which, together with all other police duty, has kept us very busy.

## HRRDING CATTLIS.

Another year I hope the supply of meat will be procured by requisition on the contractor as required. At present we herd our own cattle, an arrangement which is most inconvenient and unsatisfactory. No less than a non-commissioned officer and three men have been required to herd them, and oven then they stampeded twice. Being so near the lines and among so many hungry Indians it was only by the greatest good luck we recovered them.

## OONDUOT AND DIECIPLINE.

I could not wish for a more willing, orderly and obedient body of men than those under my command. Although their life is such that they are completely deprived of the pleasures and amusements to which civilized beings are ordinarily accustomed, their conduct would be exemplary anywhere.

PRESENT STRENGTH.
The strength of the detachment here is two officers and twenty-eight non-commissioned officers and men and twenty-six horses.

> I have the honor to be, Sir, Your obedient servant, $$
\text { L. N. F. CROZIER, }
$$

Supt. Commanding.
The Commissioner,
North-W'st Mounted Police, Fort Walsh.

Forwarded.
A. G. Irvine, Commissioner.

SUPPLEMENTARY REPORT OF SUPERINTENDENT L. N. F. CROZIER.
Wood Mountarn, 31st Dec., 1880.
Sir,-That my report should reach you by the time requested I was obliged to forward it to headquarters on the 15th of December.

In order to complete the year I have now the honor to inform you that I sent Inspector Macdonell and a detachment to the Sioux camp on the 16th ult. to get from the Indians a band of thirty-three horses belonging to the half-breeds of the settlement at the "Six Mile Coulee."

The Sioux had refased to give up the horses to the owners themselves, and the matter was then placed in my hands, when I took the above action.

The borses were at once given up. At the same time the Indians said they would have delivered the horses to none others but the "red coats."

Since your departure I have built an addition to the fort in a house $20 \times 20$ on the south-east corner of the fort, which will answer the double purpose of a barrack room and a bastion. This I was impelled to do on account of the overcrowded state of the rooms, and because of additional men daily expected from headquarters.

> I have the honor to be, Sir, Your obedient servant,
L. N. F. CROZIER,

Supt. Commanding Post.
The Commissioner,

> North-West Mounted Police, Fort Walsh, Cypress Hills.

Forwarded.
A. G. Irvine,

Commissioner.

## REPORT OF SUPERINTENDENT JAMES WALKER.

Ottawa, 15th December, 1880.
Sir,--I have the honor to enclose you the following report respecting the force ander my command during the present year.

At the beginning of the year my command was stationed at Battleford, Prince Albert and Duck Lake, with headquarters at Battleford.

There were large numbers of Indians in the vicinity of these poats during the fore part of the year; those at Battleford were principally Crees and Assiniboines, and have their reserves in that neighborhood, but, owing to the scarcity of game, they were unatle to obtain sufficiont food and came frequently around the post for assistance which was given them by the Indian Agent. At Prince Albert and Duck Lake, in addition to the Crees that have their reserves in that vicinity, there were about 110 lodges of Sioux. About 20 lodges of these were said to be from Sitting Bull's band. It was thought at one time that the presence of so many Sioux would lead to trouble with the settlers, but I am happy to be able to state that these fears were not realized, as these Indians made themselves generally useful in the settlement by cutting wood for the mills and steamboat and doing any work they could get from the settlers. It is also a matter of congratulation that although these and the other Indians in that district were often in want, that not a single case of a breach of the peace was reported against them at any of the posts under my com. mand. The American Sioux returned south as soon as spring opened, and those under White Cap returned to their reserve near Moose Wood, on the South Saskatchewan.

The conduct of the members of the force under my command has been very good, and breaches of discipline which occurred were of a trivial nature.

The wood required for the different stations under my command was supplied by members of the force for which they received 50 cents per cord in addition to their pay. At Battleford they also cut and delivered, during the winter, sufficient rails to fence thirty acres and ploughed fifty acres in the spring, which was sown with eats, they also ploughed about one acre of potatoes and other vegetables; these crops were all looking exceedingly well when 1 handed over the command of that post in August last.

I was granted leave to proceed to Ontario the beginning of April last, and left nspector French in charge. I returned to duty again in the beginning of July and resumed command of the Battleford district. On the 24 th of July, at the request of the Indian Commissioner, I proceeded to Fort Pitt to pay the annuities to the Indians in that locality. I arrived at Fort Pitt on the 26th and was engaged with the payments for four days. I found the Indians well disposed and becoming quite interested in their new modes of living as tillers of the soil. After finishing these payments I returned to Battleford to await the arrival of Superintendent Herchmer, who was to relieve me at Battleford. This officer arrived on the 4th of August, when I proceeded to hand over the command to him.

I left Battleford for Fort Walsh on the 21st of August, going by way of Edmonton and Fort Macleod, with the Indian Commissioner, who had requested me to accompany him owing to his having to carry a large sum of money for the payment of Indian annuities; I arrived at Fort Walsh on the 29th September, and was about taking over command of " E " Division, when I was ordered to proceed to the Missouri River on duty. I left Fort Walsh on the 5th of October, and on my arrival at the Missouri I received orders to go on to Ottawa, which I did, arriving in Ottawa on the 2nd of November.

I have the honor to be, Sir,
Your obedient servant,
JAMES WALKER,
Superintendent, "E" Div., N.W.M.P.

The Commissioner,<br>North-West Mounted Police.

report of superintendent W. M. herchmer.
Battleford, N.W.T., 30th November, 1880.

## The Commissioner <br> North-West Mounted Police, Fort Walsh, N.W.T.

Sir,-I havo the honor to forward, for your information, my report for the past eleven (11) months.

Early in March, Inspector Antrobus arrived at Shoal Lake, I having met him at Winnipeg; by instructions received he was to proceed to Qu'Appelle with reinforcements from Shoal lake, as soon as possible. Owing to the extraordinary depth of snow, I was unable to carry qut these instructions until the end of April, when Inspector Antrobus and four men proceeded to Qu'Appelle and relieved Inspector Griesbach, who took charge at Swan River.

In May, I accompanied the Royal Commission to Qu'Appelle and back to Rapid City, at the same time transporting the money for the annuity payments in the -Northern District; this money was taken on from Qu'Appelle by Inspector Antrobus to Carlton, and reached there before the time appointed.

On the 30 th June, pursuant to instructions, I met the steamboat at Fort Ellice, and there took charge of money for annuity payments in the Southern District, and immediately despatched it with an escort to Qu'Appelle. On this trip, a horse died. From Qu'Appelle the money was immediately sent on to Fort Walsh by Inspector Antrobus.

Early in July I received, per Inspector Steele, orders to hand over the Qu'Appelle District to "B" Division, and to proceed to Battleford with my division to take command of the Saskatchewan District, which comprises Battleford, Fort Saskatchewan, Prince Albert, and Duck Lake. This order was carried out, and, as soon as possible, I marched out with the headquarters of my division, consisting of the surgeon and five men, and proceeded via Qu'Appelle, where I picked up the balance of my men and horses under Inspector Antrobus.

On arriving at Duck Lake, I was informed by Mr. Hughes, a Justice of the Peace, that the Indians had shot three cattle belonging to the Indian Department. Information was immediately taken and warrants issued against the three chiefs who appeared to have been the instigators. As to their arrest, which was successful, I refer you to my report already sent in.

I left my division at Duck Iake and took the prisoners, four in number, to Prince Albert, where they were to ie tried. Finding only a sergeant at that place, I left a detachment of five constables with him and returned to Duck Lake, and 8tarted on for Battleford, which place we reached on the 5th August, having made the trip from Shoal Lake in thirteen days' travel, and took over the command from Superintendent Walker. I immediately set to work, in pursuance with instructions, to make the buildings habitable, they being in a very dilapidated state, and unfit for men or horses to occupy.

A few days after, I proceeded to Prince Albert, to meet H. Richardson, Esq., Stipendiary Magistrate, and to be present at the trial of Indian prisoners.

In September, I went to Fort Saskatchewan, inspected that station, and returned via Frog Lake, where I arrested two Indians for having assaulted Indian Farm Instructor Delaney. I tried them at Fort Pitt, sentenced ihem, and brought them on to Battleford. This case I have also reported on. At the same time I brought down the prisoners from Edmonton sentenced to the penitentiary, and sent them on to Duck Lake, from which place they were taken on to Qu'Appelle and handed over to "B" Division.

In October, I proceeded to Prince Albert with H. Richardson, Esq., to attend Court; I inspected the detachment, and found all correct.

For liquor, prairie fire, and other cases, see annexed schodule.
The health of my command has been uniformly good, as will be seen by the surgeon's report.

Two horses (including the one while on Indian service) have died on the road from scouring, a very severe form of which was prevalent this season. Three have died at this station; two from urine fever, and one from heart disease; they were in good condition, and died suddenly. I have received five remounts.

Discipline has been good, I having had only a few trivial cases to dispose of. Eight (8) men have been discharged on expiration of service, and three (3) under Order in Council. I have received two (2) recruits. We are short of men and I consider there is work here for forty. The men have all gone through a course of foot and mounted drill, under Inspector; Antrobus and Sergeant-Major Belcher, and both men and horses have done well.

The stores have arrived in good time, and are of excellent quality, with the exception of the flour, but no better could have boen obtained, unless imported, as the wheat crop was a partial failure, owing to summer and fall rains.

I tound about fifty (50) acres in oats here; it has turned out well; from the quantity so far threshed I should judge the yield will be about thirty (30) bushels to the acie. This would have been better, but a quantity was destroyed by wild cattle continually breaking in, although the fence was a good one of its sort, being made of strong rails and every care was taken to keep it up. If farming operations are continued I would suggest that wire fencing be used, that being the only kind that will effectually stop cattle. Owing to press of work, and being short-handed, I was obliged to contract for the harvesting of the grain.

A great deal of work has been done here, the barracks and stables have been overhauled, improvements and alterations made, and now they are very convenient and comfortable. The stockade has been erected; this was a difficult matter, as, owing to more pressing work and being short-handed, it was left till the last and then the ground was frozen hard. There were not sufficient pickets, so long fence rails had to be used to fill up; the number required can be procured this winter. I would suggest that I be authorized to erect bastions at the corners. I must draw your attention to the cheerful and willing manner in which the work has been performed. I would also suggest that all the buildings be plastered outside; they are built of cottonwood, which is very susceptible to weather, and are already showing signs of decay, lath and plaster would form an air chamber, prevent rot and save the buildings for a number of years; they would be much more easily heated, and so save fuel, which is becoming difficult to get and therefore expensive. This year we have been obliged to go nine (9) miles for fuel. I would recommend that coal be used in part next season, it could be landed here from Fort Saskatchewan at about ten dollars (\$10) per ton for the first year, and would become cheaper as the trade developed. If this scheme is accepted a few coal stoves would be required.

A guard room and hospital are argently required; they could be ereeted by ourselves at a small expense, there being logs available. Two of the bnildings, unavoidably left outside the stockade, should be moved in; this could also be done at little expense. There is good barrack accommodation here for forty men, and excellent stabling for the same number of horses.

I have transferred to the Indian Department horses and oxen as follows :
At Shoal Lake, 2 horses and 2 colts.
Battleford, 2 horses and 1 ox.
Fort Saskatchewan, 1 horse and 2,colts.
Prince Albert, 3 horses.
Making a total of eight (8) horses, four (4) colts and one (1) ox. I have also cast and sold at Fort Saskatchewan two (2) horses, one (1) cow and two (2) oxen.

At Fort Saskatchewan there exists a great necessity for a proper barrack and guard room ; these could be erected cheaply, as material is easily got at there and at reasonable prices. There is no proper store accommodation, and the room at present occupied by the men is just suited for that purpose. The gaard room is too small, too low, and very unhealthy; it is only a makeshift, being under the same roof as the kitchen-the said roof being useless. There have been several prisoners confined there for long periods, on serious charges, some being from the Peace River.

In my opinion the detachment at Fort Saskatchewan is too small, it should be kept up to the strength intended.

At Prince Albert I found that the quarters occupied by our men were totally unsuited to our requirements, several families occupying the same building, which was horribly cold, and the stabling miserable. I succeeded in renting desirable premises, thoroughly convenient as to situation and accommodation for men, horses and stores, and easily heated. I moved the detachment in. I also removed the detachment from Duck Lake to Prince Albert, for the reason that the quarters occupied were required by the owners, and no otber building was attainable; also because the reason for which the detachment was sent there no longer existed, as the Indians of that neighborhood are showing their desire to be peaceable,-this change is owing to the lesson taught them last summer. I have instructed the sergeant in charge at Prince Aibert to visit Duck Lake at stated intervals, and to be ready to attend to any call from there. As the contract awarded did not include Prince Albert, I arranged, on satisfactory terms, with Messrs. Stobart, Eden \& Co., for the supply of provisions and forage to be delivered from time to time as required. At present there is an Indian prisoner in our charge at Prince Albert, sent in from Fort Simpson, in Athabaska, for the murder of his wife. He was committed for trial there, but, as the witnesses were not sent in, he cannot be tried before next summer.

In the execution of duty I have travelled over 4,000 miles, and Inspector Antrobus, 2,000.

Enclosed find a return showing the distribution of men and horses of my division, and also a schedule comprising magisterial and police duties performed. We have two warrante on hand for service.

> I have theihonor to be, Sir,
> Your obedient servant,
W. M. HERCHMER, Superintendent.
Forwarded,
A. G. Irvine, Commissioner.



Return showing Distribution of＂D＂Division；Men and Horses．

| Place． | Officers． |  |  | Staff Sergeants． |  |  |  |  | Remarks． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \text { 吕 } \\ & \text { ob } \\ & \text { 品 } \end{aligned}$ |  |  |  |  | 安 |  |
| Battleford．．．．．．．．．．．．．．．．．．．．．．．． | 1 | 1 | 1 | 1 | 1 | 1 | 20 | 32 |  |
| Fort Saskatchewan ．．．．．．．．．．． | ．．．．． | 1 |  |  | 1 | 1 | 7 | 12 |  |
| Prince Albert．．．．．．．．．．．．．．．．．． |  |  |  |  |  | 1 | 7 | 11 |  |
| Totals．．．．．．．．．．．．．．．． | 1 | 2 | 1 | 1 | 2 | 3 | 34 | 55 |  |

W．M．HERCHMER．
Superintendent Commanding．

## REPORT OF INSPECTOR S．B．STEELE．

Qu＇Appelle，November 3， 1880.
To the Commissioner，
North－West Mounted Police， Fort Walsh．
Sir，－In accordance with instructions I have the honor to report as follows：－
On the 21st of July last，I took over command of this division from Superin－ tendent Walsh，who proceeded to Ontario on leave of absence．

The Indian payments in this treaty（No．4）commenced early in July，and non－ commisoiond officers and men of this command took part in them as follows ：－

Eergeant－Major Bradley and two constables escorted treaty money to Fort Walsh， for payment there；Corporal Bliss and fise constables escorted the sub－agent with money，to the payments at Fort Ellice，and assisted him at that place；Constables McCormack and Ross assisted Inspector Antrobus in paying the Indians at the Touchwood Hills．Censtable McCormack paid a band of Indians at this place， during the absence of the agent at other points，and during the regular payments at this place，two constables were placed under the orders of the agent each day．

Lieut．－Colonel MacDonald，the Indian agent here，informed me that the above duties were carried out to his entire satisfaction．

On the arrival of the division at this post there was not accommodation enough for the number of men to be stationed here，consequently I received instructions to erect quarters and temporary stabling．Work was commenced on the buildings on the 1st of last August and was finished in November．

The tuildings consist of one barrack room， $60 \times 25$ ，guald room，cells，carpenters and shoeing－：mith＇s shops；the four last mentioned are under one roof．These structures are of a substantial nature，well thatched and whitewashed．

The temporary stable which was erected is $125 \times 30$ ，and is built of heavy posts and rails，placed in two rows，and stuffed between，and covered with hay；swinging bales，suitable racks and mangers are provided．

All the lumber required for the barracks was hanled from Swan River barracks, a distance of $1 \because 8$ miles, and the logs were provided at least seven miles from this post. All the work, with the exception of the thatching and chimney building, was performed by our own men. They did it with the greatest cheerfulness, the noncommirsioned officers driving leams and working in the woods the same as the constables. The trarsport of the lumber from Swan River entailed a great deal of bard work, there being two large rapid and unfordable streams on the route, and the road being almost impassable from water, the result of the large quantity of snow which fell last winter and rain which fell during the early part of the summer.

This division is now distributed as follows: 1 officer, 38 non-commissioned officers and constahles at Qu'Appelle; 1 non-commissioned officer and 3 constables at Shoal Lake; 1 officer and 3 constables at Swan River barracks; and 1 officer on leave

I had no authority to post more than two constables at Swan River barracks, but I found it necessary to increase the number to three for the coming winter, lest in the event of any duty requiring two men having to be performed, the officer would, in the case of fire or any other emergency, be left without any one to assist him.

The post at Shoal Lake is not, in my opinion, situated at the best point to prevent the smuggling of liquors into the Territory. There is a large tract of settled country along the Little Saskatchewan, the inhabitants of which can bring in liquor at pleasure, and others who wish to avoid Shoal Lake post by crossing at the rapids, a point on the Assinniboine river, and take the south trail for the west. The horses in this division have done a good deal of hard work this summer, and have stood it very well ; the bronchos have stood the work rather better than Canadian horses, especially when they were compelled to do without their usual allowance of oats. Several of the horses have become unserviceable through age, not being able to stand the rapid travelling which at times is necessary in this country.

There is now a good supply of waggons on hand here and they are in fair order. In travelling through very bad roads the broad-tired waggons were far easier on horseflesh, as they are not so liable to cut down. The broad-gauge waggons, two of which are here, are not fit for travelling on the old cart trails of this part of the territory, the tires are too narlow, and horses cannot travel on the trail, owing to the wideness of the gauge.

The only serviceable saddles in the division are a few of the Califirnian pattern. In this division the Californian saddle has been used very much, and is the favorite with all; it has been fuund to be the most durable, the casiest on horseflesh, and the most comfortable riding saddle, especially during the winter, that we have ever had. In the event of the division having its present number of Californian saddles increased to that required for the whole strength, I beg to recommend that some other way of carrying the carbine than the present one, across the horn of the saddle, be adopted.

All the Indians in this section are now on their reserves and preparing for a start at farming next spring. The presence of a troop of police has materially assisted in bringing about this desirable state of affairs. The supplies for this post and Swan River for the year 1880-81 were, with the exception of fuel for this post, and hay and fuel for Swan River barracks, supplied by Messrs. Baker \& Co. ; they are of good quality.

The supplies for Shoal Lake were obtained from Messre. Mowat \& Saffray.
The fuel for this post is cut and piled in the woods at the rate of 75 cents per cord, and our own men haul it to barracks. That for Swan River is supplied by Const. McDermott, and that for Shoal Lake by contract.

The conduct of the non-commissioned officers and men of this division has been exemplary, every duty which they have been called upon to perform they have dera creditably. I cannot speak too highly in their praise.

I annex a list of persons who have been confined in the guard room and been in the custody of the division since I took over command in July last.


I have the honor to be, Sir,
Your most obedient servant,
S. B. STEELE,

Inspector Commanding Post.
Forwarded,
A. G. Irvine,

Commissioner.

## REPORT OF SURGEON GEORGE A. KENNEDY.

Fort Walsh, N.W.T., 23rd December, 1880.
Sir,-I have the honor to present you with the following medical report of Fort Walsh for the year 1880 :-

The general health of the force at this post during the year has not been good. The average number on the sick list has been twelve, which would make the average sickness about eight per cent. This is a large proportion, when it is considered that the force is supposed to contain none but picked men in the early prime of vigor and manhood. During the winter and epring months, affections of the throat and chest are very common, in the summer disetses of the digestive organs came into prominence, and in autumn, malarial influences are at work undermining constitutions and disseminating disease. The causes of this unsatisfactory state of affairs are not far to seek, and will be alluded to in the latter part of this report.

The health of the force, though by no means good, presents a favorable contrast in some respects to 1879 and preceding years. Thus, not one case of mountain fever is shown in the hospital records. This is all the more remarkable, as at Fort Assiniboine, where all the conditions are more unfavorable to the development of the disease, they had six cases, and at other points south of the line it was very prevalent.

As the subject has been, and always will be, a matter of importance to Fort Walsh, I consider that it will not be time or space thrown away if I take this opportunity of recording, in the fewest possible words, my experience of the disease.

In the first place, then, I regard the fever as essentially malarial, varied in its course and symptoms by the altitude and local surroundings. As for the causes I have nothing to add to what Surgeon Kittson said on the subject in his last report, except that I would admit the air as an important factor. Considerable discussion has recently taken place as to whether it has any connection with typhoid fever. In the cases which I have seen, all the prominent symptoms of typhoid are absentthere was no abdominal tenderness, no inflammation of pryus glands, and no exantheurand except that it left the patient very weak and emaciated, I saw no resemblance between the diseases. It is true that in extreme cases the typhoid condition sets in, but this is common to the majority of low fevers, and is essentially different from typhoid fever. It is equally true that typhoid may co-exist with what is known as mountain fever, but I am speaking of the latter, pure and simple.

Again, I think I may safely say, that if taken in time, it can always be abated by large doses of quinine. I have had, during the season, a large number of cases, both in the force and among the half breeds, which were shown as intermittent fever or cold. These presented themselves with all the initiatory symptoms of mountain fever, and were invariably discharged in a few days-cured by quinine. By reference to the appendix, it will be seen that only five cases of intermittent fever are recorded. This, however, does not show the extent of the malarial influence, as many cases were recorded as colds, the first symptoms of mountain fever being those of a heavy cold, and it being difficult to distinguish the two except by the treatment. That these cases mostly were malarial, is proven by the fact that they could not be cured until quiniue had first been administered.

The reasons why Fort Walsh enjoyed an immunity from this fever, I regard as threefold.

First-Great attention to sanitation undertaken at the commencement of spring, and continued until the cold weather set in. All the measures rocommended by Surgeon Kittson were thoroughly and conscientiously carried out. As soon as the now was off the ground the fort was thoroughly cleaned, the civilians were visited and compelled to remove and burn all refuse matter and oftal which had collected around their premises, and all Indians in the vicinity were made to move to some distance below the fort. Then, as the season became more advanced, the force was moved out under canvas, and the free pure air, the good spring water and the outdoor life kept the fever off. While the men were under canvas, the hut rooms were thoroughly cleaned, fumigsted and whitewashed. The floors were all taken up, and, after the groundhad been allowed to dry, laid down again on a higher foundation. The atables were similarly treated, and better drainage secured. In fact, nothing was left undone which might in any way be instrumental in warding off the disease.

Second-The experience of former years. Everyone knew and drcaded the disease, and as soon as they noticed the first symptoms, came at once under medical rreatment. The disease was thus always easily avoided.

Third-'The nature of the season; and this I consider the most important of the three. Very little rain fell in the usualrainy season, May and June. Then followed a very cool summer, with a heavy rainfall in August and September. Thus all the. conditions favorable to the development of the prentias microcosms which are 90 dangerous and so fatal, were absent. With a heavy rainfall in May and June, and a hot summer following, it is to be feared that the ravages of mountain fever would be extensive.

I think a carefal reflection on the foregoing facts will force us irresistibly to the conclusion that Fort Walsh is not a healthy place. The past has been a healthy year, and still eight per cent. of a body of picked men have been sick all the time. In the village, containing a population of perhaps a hundred, there have been nine deaths, a proportion of ninety to the thousand. The ratio in the towns and villages of Ontario is about fifteen, a striking contrast. In this connection I would try to draw your attention to my letter of 29 th December, 1879, giving reasons why I do not consider the situation of Fort Walsh a healthy one.

However, the experience of the past year or two has shown us how much can be done by attention to sanitary and hygenic measures. By repeating every season what has been done this year, aid by instituting a fow reforms to which I propose to call your attention, it is to be hoped that the health of the torce will be maintained in a moderately good state, and that we will be spared the necessity of chronicling any serious calamity.

I have mentioned that the force was under canvas for some time during the summer. We moved from the Fort in August and returned in October. The camp was situated some two miles from the Fort, on the bank of a running stream, and close by a spring of good clear water. The surface of the ground presented a gentle inclination, the soil was light and dry, and all the indications were apparently favorable to a good state of health. But the weather proved to be very disagreeable. During the whole time we were under canvas rain fell almost every other day, and at intervals snow varied the monotony. The tents were most of them old and of the poorest description, affording but little protection from a beavy rain, which would penetrate the canvas as through a sieve. As a consequence, colds, coughs, rheumatism and affections of the throat were common on the sick list. Notwithstanding all this, the general health was above the average, and I believe the camping out, on the whole, had a most desirable effect.

I should recommend that it be repeated every year at Fort Walsh, but I should also recommend that proper tents be supplied. The bell tents, as at present used, seem to me the best for ordinary purposes, but considerable improvement might be effected in the quality of the canvas and the arrangements for ventilation. With their full complement of men, the pockets at the side and top are not sufficient for this latter purpose, and this is particularly the case in rainy weather.

It has fallen to my lot during the past year to examine upwards of one hundred recruits. and I am glad to say that the large majority of them were splendid specimens of Canadian manhood. But improvement can generally be effected, and I see the necessity for improvemont in the following respect: twenty-five of this hundred are boys in age, and many of them in development. Now, the nature of the service in this country is such that only a fully developed man can perform it. For instance, a severe winter trip across the plains (a matter of almost daily occurrerce) is enough to test the stamina and endurance of a strong vigorous man. A boy, who has not yet ceased to grow, and whose systom has not fully arrived at matority, might very readily break down and be ruined in health for the remainder of his life. I would, therefore, suggest that in future, unless under exceptional circumstances, twenty-one be the minimum age of recruits. Last year I had to recommend for invalidation four of the recruits of 1879 ; and at least one of them should never have been enlisted. I think that too much care cannot be exercised in the medical examination of applicants for admission into the force.

The past year has been marked in a manner which will cause it to be remembercd with sorrow by erery one who has ever been connected with the force. I allude to the death of Captain Clark. The only one of the officers whom death has taken from us, his untimely end will mark 1880 as the saddest year in the history of the force. As I have already made a special report, I would not mention this, but it is an event of the year over which I cannot pass.

In the latter part of November, I visited and sinspected Wood Mountain post. The quarters for the men are the usual low log huts with mud roofs, which seem to be the only style of buildings in vogue in this part of the territory. As living in them is decidedly unhealthy, they should be replaced by properly-constructed barrack rooms at the earliest opportunity.

The hospital accommodation is practically nil, and I would suggest the advisability of erecting a small cottage hospital, capable of containing, say, eight or ten men.

I would now call your attention to a few reforms which I think might be instituted with advantage to the sanitary condition of Fort Walsh.

The guard room, of which Surgeon Kittson spoke so strongly in his last annual report, still stands, and, I think, at the present time thore are nine prisoners contined in it, besides a guard of four men. The necessity for some different arrangement is a most urgent one, and is one of the first things which should be attended to.

The huts at present occupied by " E " Troop are not only not conducive to health, but provocative of disease. l have no hesitation in saying that living in these rooms swells the sick list and materially detracts from the efficiency of the force. Built as they are, they have been condemned by all medical authorities. As much as could be done to render them habitable was done last summer, but they have been occupied too long, and should be replaced by better and differently constructed ones. Good barrack rooms, built on common-sense hygienic principles, will be found to be an economy. The health of the men will be better, they will be more cheerful and contented, and will work to better advantage. In this country, and in winter especially, thero is absolutely nothing to which men can turn in their leisure moments. The ordinary pleasures and pursuits of civilized life are wanting, and they are thrown entirely on their own resources. They have no place to go but to their rooms, and these present no prospect save that of confinement to an unwholesome atmosphere, with the alternative of an hour or two's reading or a game of cards. I feel strongly on this point, and am certain that if the men were furnished with good, comfortable, properly-ventilated barrack rooms, and a commodious, well-appointed reereation room, not only the health, but the comfort, morale, and general efficiency of the force would be greatly increased.

These remarks apply with equal force to Wood Mountain.
The medical work among the Indians during the yeur has been large. In the early months, I was frequently called on to treat the Sarcees, Crees and Assiniboines, but nothing of any particular importance occurred.

In September I was ordered to the Head of the Mountain to enquire into the causes of some sickness which had broken out among the Assiniboines. I found a large number of the tribe prostrated, and treated some sixty or seventy cases.

Fifteen hundred Crees camped on the east hill near the Fort, They had not been long settled when an epidemic of diarrhœea and dysentery broke out among them. Almost every individual in camp was affected, and quite a number, principally children, died. As an instance of how common it was, I may mention that I visited and treated one bundred and fifty cases in one day.

Shortly atter this, a report was brought me that small-pox had broken out in the camp. I proceeded there at once, and found that the small-pox was a case of scarletina. It was the first of an epidemic which was destined to run through the band. Fortunately, the type was a mild one, with few throat symptoms, and, with ordinary care, not specially dangerous. It was confined principally to the children, although many of the adults were also affected. On the $\because 8$ th there were some twenty cases; on the 18 th Uctober, when I visited the camp at the ten-mile erossing, I found sixty-six cases. Ali these received medical treatment. Up to this time the number of deaths had been twelve. I think that in all there were perhaps one hundred and fifty or two hundred cases, and that the number of deaths amounted to fifteen or twenty. It is very difficult to obtain correct statistics from Indians.

On the 20 th October I visited this camp again on arcount of another small-pox report having reached here. It is needless to state that it was found to be as false as the first.

October and November were marked by the prevalence of measles on the reserves at the "Head of the Mountain" and "Maple Creek." A few deaths resulted from this visitation.

Since the lst of July last, I have visited the "Head of the Mountain" four times, and "Maple Creek" twice.

I would now beg leave to make an extract from a report made at the time to the Commissioner of Indian affairs:-
" On the 24th October, hearing that there were two Indians at the 'Lake' who had been shot by the Sioux and brought in by some half-breeds, I proceeded there to investigate the matter and, if necessary, furnish medical aid. I found that these two Indians, a man and a boy, were the remnants of a party who had been fired on by the Sioux just south of the line on or about the 3rd of September. The party had included a woman also, but she had died in consequence of her wounds, exposure and privation. The man had received a ball in the calf of the leg, but as no bones had been broken, and he was doing well, I did not inteifere with him. The boy, however, had been shot twice, once in each leg. In one leg, the ball had entered above the knee, passed down alongside of the joint and emerged some three inches below, inflicting in its course eomminuted fractures of the tibia and fibula. His wounds I considered so serious that I brought him to the Fort with me next day. On the 26th the Indian agent procured quarters for him in the village * * $*$ On the 27 th I administered chloroform to the patient and made a careful examination of his injuries. I found that his knee joint was diseased, and that all the tissues had been so badly shattered that amputation through the thigh would be necessary. I accordingly performed the operation at once.

I am happy to say that recovery was rapid and complete and that he is now able to move about.

The only other case deserving of mention is that of the imbecile half-breed, Ruben. He had his feet badly frozen in November and received injuries from which he died on December 7th. His death was attributable, I think, to the exposure and shock which his low vitality could not withstand.

It was very difficult to obtain suitable quarters for both the Indian boy and Ruben, and I think that these cases exemplify the necessity which exists for the establishment on the reserves of some place where the sick, wounded, and infirm, can be properly cared for and treated.

Appendix A shows the diseases treated during the jear, the number of cases, and average duration of treatmont.

I have the honor to be, Sir, Your obedient servant, GEO. A. KENNEDY, M.B.

Surgeon, N.W.M.P.

Linut.-Col. Irvine,
Commissioner, N.W.M.P., Fort Walsh.
Porwarded,
A. G. Ibvine, Commissioner.

## APPENDIX A.

Disenges treated at Fort Walsh during the Year 1880.

G. A. KENNEDY, M.B.

Surgeon, N.W.M.P.

## REPORT OF SURGEON ROBERT MILLER.

Battleford, ${ }_{2}^{2}$ N.W.T., 23rd November, 1880.
Sir,-Purauant to instructions I have the honor to report for your information the following:-

On the 18th January I left Shoal Lake for Qu'Appelle, news having arrived of the severe illness of Constable MacDougall; arriving at the latter plice on the 21st, I found Constable MacDougall suffering from a severe attack of erysipelas of the face. I remained in attendance one week, the patient being then convalescent.

During the winter the health of the men at Shoal Lake was very good. There were some cases of diarrhoa, and the usual affections incident to severely cold weather-frost-bites, bronchitis and rheumatism.

On the eve of departure from Shoal Lake, in July, with Superintendent Herchmer, I found it necessary to leave Constable Wilson behind, as he was rendered unfit for travel by chronic rheumatism; medicines and instructions were left in competent hands.

Throughout the trip from Shoal Lake to Battleford, the general health of officers and men was excellent.

In conjunction with Hospital-Sergeant Holmes, I made out, at Qu'Appelle, a requisition of medicines and medical comtorts for Superintendent Walsh's command. These medicines, etc., have arrived at Qu'Appelle, together with all that was useful in the old Swan River supply.

The new quarters of the detachment at Prince Albert are a great improvement on the old, being warm and comfortable; the general health of the men is excellent.

I accompanied Superintendent Herchmer to Fort Saskatchewan, and find that there is a great lack of medicine and no hospital. In the event of an epidemic, or even one case of severe illness, the barrack sleeping room will be found a very inadequate place for the proper treatment of the patients or patient.

Medicines were to have been sent to Fort Saskatchewan from the south. HospitalSergeant Herchmer informs me that none have arrived; my own stock at Battleford is too meagre to admit of my supplying him with but very few.

The guard room at Fort Saskatchowan is badly built and very deficient in ventilation ; another larger and better building is much needed.

There have been some cases of rheumatism and quinsy during the early part of the winter, but no man was off duty more than four or five days; one case of ergsipolas in an employed man.

At this station also, there is no hospital; there is a dispensary, that is all.
The neighborhood of Battleford is healthy. The water is very hard, causing amongst middle-aged residents a tendency to gravel.

A well inside the barrack square would be a great boon, as either river, North Saskatchewan or Battle River, is over half a mile from barracks.

I have treated a number of cases of sickness amongst the Indians, which will be duly reported to the Indian Commissioner.

> I have the honor to be, Sir,
> Very respectfully yours,
> ROBERT MILLER,

Lieut.-Colonel Irvine,
Commissioner North. West Mounted Police, Fort Walsh, N.W.T.
Forwarded
A. G. Irvine,

Commissioner.

## REPORT,

## RETURNS AND STATISTICS

of the

# INLAND REVENUES 

OF THE

## DOMINION OF CANADA

FOR THE

FISCAL YEAR ENDED 30Th JUNE,

## 1880.

Presented to.both Houses of Parliament by Command of His Excellency, J. C, Aikins,

Minister of Inland Revenue.


OTTAWA:
printed by mäclean, Roger \& Co., Wellingt jn street, 1880 .

## To His Excellency the Right Honorable Sir John Douglas Sutherland Campbelap Marquis of Lorne, K.T., G.C.M.G., P.C., Governor General of Canada, dc., \&c., \&c.

 May it Please Your Excellency:I have the honour to transmit to Your Excellency the Returns and Statistios of Inland Revenue of the Dominion of Canada, for the Fiscal Year ended 30th June, 1830, as prepared and laid before me by the Commissioner of Inland Revenue.

All of which is respectfully submitted.
J. C. AIKINS,

Slinister of Inland Revenue.
4th December, 1880.

## CONTENTS.

PAGE.
Rrport of the Commissioner of Inland Revenue, for the Fiscal Year ended 30th June, 1880 :- Financial Statrments, as detailed below ..... 1-50
Statibtics (Appendix A) d.l ..... 51-196
Expenditure (Appendix B) do ..... 197-240
Hydraclic Rents, \&c. (Appendix C), as detailed below ..... 241-257
Index, Alphabetical. Vide end.

## FINANCIAL.

|  |  | Page. |
| :---: | :---: | :---: |
| 1 | Gengral Refenur Account-Showing amount of Revenue accrued and collected from all sources, during the year ended 30th June, 1880. |  |
|  | General Expmiditore Account-Showing the cost of collecting the above..................... | 2 |
| 3 | Excise Collection Divisions-In account with Revenue | 4 |
| 4 | do do do Expenditure | ${ }^{6}$ |
| 5 | Canal Revenus, Collectors of do Revenue .... | 0 |
| 7 |  | 12 |
| $7 \frac{1}{2}$ | do do do Expenditure ... ....................................... | 13 |
|  | Hydraulic Rents, \&c.-Summary Statement of Lessees' Accounts .......... ................. | 14 |
|  | Harbiurs, Ehidges, Frrmies, \&c., Lessees, kc., of-In account with Re | 15 |
|  | Culling Timber-Supervis.or and Deputy Supervisor do do | 16 |
| $10 \frac{1}{2}$ | do do do Expenditure | 17 |
|  | Bill Stamps-Siowing Revenue accrued Minor Expmadituras ........ | 18 |
|  | Minor Explendituras ....... | 19 |
| 13 | Comparative Statement of Excisable Articles taken for consumpticn, during the years ended 30th June, 1878, 1879 and 1880, respectively | 22 |
| 14 | Statements showing the amounts deposited $m$ inthly (by Inland Revenue officers and Jthers) to the credit of the Honorable the Receiver-General, on account cf each of the above Revenues, respectively $\qquad$ $\qquad$ | 24 |
|  | Comparative Monthly Stathment of Excise Revenue accrued-Showing increase or decrease of Revenue yielded by each article, respectively, during each month of the fiscal year, as compared with the resiective periods of the previous year. ..... | 28 |
|  | Refends-Stateruent of -Shuwing names of parties to whom, and under what suthority, duties were refunded | 30 |
| 17 | Departmental Expenditure-Showing Expenditure on accoant of the Inside Service of the Department | 36 |
|  | Weiguts and Measures, Gas and Law Stamps-Statement showing Reveuue accrued... | 37 |
| $\begin{gathered} 19(a) \\ .4 \end{gathered}$ | \} Weights and Measurms-Inspection Divisions-In account with Revenue |  |
| $1: 1(b)$ | ¢ Weichis and Measures-inspection Divisions-Ia account with Revenue ........ ........ |  |
|  | Gas and Law Stamp3-Distributors of-In account with Ialand Revenue Department... | 41 |
| 2) (a) | Weigmts and Meascres-Inspection Divisions-In account with Espenditure | 44 \& 46 |
| $21(b)$ |  |  |
| 22 23 | Gas-Inspection Districts-In account with Expenditure. ..... ................................. | 48 |
| 23 | Statement showing the Amount Voted, and the Expenditure Authorised, fur each Service, for 1879-80. $\qquad$ $\qquad$ $\qquad$ $\qquad$ | 50 |

## CONTENTS－Continued．

## STATISTICS－（Appendix A．）

## EXCIS


canals．

|  |  |  |  |  | Ditto under vari－ ous heads． $\qquad$若荡 |  | ls ued onth ach al． $\qquad$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Page． | Page． | Page． | Page． | Page． | Page． | Page． | Page． | Page． | Page． | Page． |
| Welland Canal | 92 | 142 | 118 | 168 | 224 | 130 | 174 | 132 | 176 | 136 | 138 |
| St．Lawrence Canals．．．． | 96 | 146 | 118 | 168 | 124 | 130 | 174 | 132 | 176 | 136 | 138 |
| Burlington Bay Canal ．． | 100 | 150 | 119 | 169 | 125 | 131 | 175 | 133 | 177 | 137 | 139 |
| Ottawa Canals．．．．．．．．．．．．． | 104 | 154 | 119 | 169 | 125 | 131 | 175 | 133 | 177 | 137 | 139 |
| Ohambly Canal．．．．．．．．．．． | 108 | 158 | 118 | 168 | 124 | 130 | 174 | 132 | 177 | 136 | 138 |
| Rideau Canal．．．．．．．．．．．．．．． | 112 | 162 | 119 | 169 | 125 | 131 | 175 | 134 | 178 | 137 | 139 |
| tt．Peter＇s Canal．．．．．．．．．． | 116 | 166 | 119 | 169 | 12.5 | 131 | 175 | 134 | 178 | ．．．．．．．．．． |  |
| Newcastle Dist ．Works．． | 117 | 167 | 119 | 169 | 125 | 131 | 175 | 134 | 178 | ．．．．．．．．． | ．．．．．．．． |

CONTENTS - Continued.
STATISTICS—(Appendix A.)-Continued.


CO.NTENTS—Concluded.
EXPENDITURE-(Appendix B.)


Distribution of Seizures
Amount refunded to Ex-Deputy Inspectors of Weights and Measures on account of Superannuation238

## HYDRAULIC RENTS-(Appendix C.)

Amount due from each Lessee, 1st July, 1879
do accrued during the year ended 30 th June, 1880 ......................................
do of abatements authorised..............................................................................................
do remaining due by each Lessce on 30 th June, 1880

## COMMISSIONER'S REPORT.

## COMMISSIONER'S REPORT.

CONTENTS.§ 1. Comparative Statement of Revenue fur five years ..... xv
2. Details of decrease in 1879-80 ..... xV
3. Summary Statement as to Excise. ..... xvi
Spirits:
§ 4. Comparison as to quantity of spirits ..... xvii
5. Percentage of decrease ..... xvii
6. Cause of decrease ..... xvii
7. Illicit distillation ..... xvii
8. Spirits in bond ..... xviii
9. Spirits exported ..... xviii
10. Consumption of Excisable Goods per capita. ..... xviii
Malt and Malt Liquor
§ 11. Comparison of five years as to malt ..... xviii
12. Comparison of averages ..... xviii
13. T'aken for consumption ..... xix
14. Malt exported ..... xix
15. Malt in bond ..... xix
16. Quantity used for brewing and distilling ..... xix
17. Net revenus from malt and malt liquor. ..... xix
Tobacco :
§ 18. Comparison of five years ..... xx
19. Manufactured ..... XX
20. Taken for consumption. ..... xxi
21. In bond ..... xxi
22. Increased consumption of Canadian leaf ..... xxi
23. Comparative consumption of cigars. ..... xxi
Petrolefm: page
§ 24. Quantity inspected and fees collected ..... xxii
25. Petroleum Inspection Act, 1880 ..... xxii
26. Importance of greater exactitude in inspection. ..... xxii
27. Specific gravity easily determined ..... xxii
28. Unreliability of Pyrometers heretofore used. ..... xxiii
29. Experiments while legislation was under con- sideration ..... xxiii
30. Comparison of Pyrometers. ..... xxiii
31. Information obtained from Agent of New York Petroleum Association. ..... xxiii
32. Use of electricity. ..... xxiv
33. Standard Pyrometer established by the Im- perial Act ..... xxiv
34. Effect of temperature of the atmosphere on the tests. ..... xxiv
35. Comparison of tests by several operators taken in same room at the same time ..... xxiv
36. Essential difference between the English Standard Pyrometer and the Pyrometers in use here ..... xxv
37. Defects in the Tagliabues Pyrometer ..... xxy
38. Causes of error in ..... xxv
39. Considerations governing the construction of an improved Pyrometer ..... xXV
40. Differences between the Pyrometer heretofore in use and the proposed standard instrument. ..... xxvi
41. Minor differences ..... xxvi
42. Reasons for not adopting the English Standard Pyrometer ..... xxvii
43. Time occupied in arriving at a satisfactory result ..... xxvii
44. Inspection of imported petroleum for Customs Department. ..... xxvii
Manufactures in Bond :
§ 45. Comparison of five years ..... xxvii
Public Works :
§ 46. Small decrease in Revenue ..... xxvii
47. Summary of Canal Revenue ..... xxviii
43. Decrease of revenue on Welland Canal ..... xxviii
49. Transhipment of,grain at Fort Colborne ..... xxix
50. Statistics for season of navigation to follow ..... xxix
Slides and Booms:
51. Comparison of Revenue ..... xxix
Hydraulic Rents and Minor Public Works: ..... page
52. Outstanding balances ..... xxix
Culling Timber:
§ 53. Revenue and cost of office ..... xxix
Bill Stamps:
§ 54. Comparison of Revenue. ..... XXX
Weights and Measures and Gas :
§ 55. Revenue and Expenditure ..... xxx
Prevention of Adulteration of Food :
§ 56. Supplementary Report to follow ..... XXX
Outside Service :
§ 57. Examinations ..... XXX
58. Examinations for special class. ..... XXX
59. Improvement in the Excise staff. ..... xxxi
Inspection of Staple Articles:
$\S 60$. Returns in relation thereto ..... XXXI

## REPORT.

To the Honorable
The Minister of Inland Revenue.
Sir,-Herewith I have the honor to submit statements of the Comparison revenues collected by this Department, for the Fiscal Year onded $\begin{gathered}\text { of total } \\ \text { erenue for }\end{gathered}$ 30th June, 1880, together with the usual information as to the cost five years. of collecting them, and statistical details respecting sources whence the revenues were derived.

1. The following summary comparison shows the accrued revenues for the years ended 30th June, 1876, '77,' 78, '79 and '80, respectively:

2. By the above statement it will be seen that the revenue accrued during the year just closed was $\$ 4,972,808$, as against $\$ 6,087,683$ for

Details of decrasse in 1879-80, the years $1878-9$, being a decrease of $\$ 1,114,775$, or nearly 181 per cent.
The decrease has arisen as follows:-
Upon Excise ..... \$1,096,039
" Public Works ..... 10,041
" Culling Timber. ..... 3,844
" Bill Stamps. ..... 9,218
$1,119,142$

Less increase-

The cause of this large decrease will be found in the exceptional entries for duty, both of Spirits and Tobacco, mado in anticipation of the tariff of 1879. These entries swelled the revenue of that year above the normal amount, and without doubt a large proportion of the duty paid stocks were brought over to 1879-80, thereby decreasing the entries for duty of that year.

Summary Statement as te Excise.
3. The following Statement will show the details of Excise Revenue accrued during the past year, compared with the four years ended 30th June, 1876, 1877, 1878 and 1879, respectively :

| Articles. | 1. | 2. | 3. | 4. | 5. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1876. | $187 \%$ | 1878. | 1879. | 1880. |
|  | \$ | \$ | \$ | \$ | \$ |
| Spirits .................. ........ | 3,099,893 | 2,650,852 | 2,708,585 | 3,297,382 | 2,292,974 |
| Malt Liquor............ ......... | 14,188 | 7,475 | 6,636 | 7,640 | 6,410 |
| Malt................... ...... ...... | 327,709 | 389,257 | 538,592 | 462,785 | 298,188 |
| Tobacco................ ......... | 1,775,450 | 1,630,390 | 1,581,502 | 1,584,877 | 1,613,407 |
| Petroleum................ ..... | 285,563 | 235,329 | 6,469 | 8,274 | 16,426 |
| Manufactures in Bond...... | 27,834 | 30,054 | 36,894 | 38,086 | 33,269 |
| Seizures ........... ........ ..... | 1,675 | 1,597 | 3,934 | 4,361 | 13,908 |
| Other Receipts................ | 5,975 | 5,670 | 5,458 | 4,787 | 7,571 |
| Total ......... ......... | 5,538,277 | 4,950,624 | 4,888,070 | 5,408,192 | 4,312,153 |

## Spirits.

4. The following tables of quantities are given for comparison, as Comparison leading to a more just conception of the subject than a comparison of spirizantity of the revenues collected under rates of duty which have been frequently changed :

5. It will be seen from the above that the quantity of spirits taken Percentage for consumption during the past fiscal year is less by $1,355,888$ of decrease. gallons-about 37 per cent.-than the quantity taken in 1879 , and less by 969,030 gallons, or $29 \frac{T_{1}^{\top} 0}{3}$ per cent., than the average quantity taken during the four preceding years.
6. As I pointed out in my report last year, this is largely the Cause of result of the ex-warehousing of spirits in February, 1879, in anti- decrease. cipation of an increase of the ducy.
7. There is, moreover, reason for fearing that illicit distillation Illicit dishas largely increased, having been stimulated by the increase of the tillation. duty on spirits.

The statement in Appendix $\mathbb{F}$ shows the number of illicit stills seized during the fiscal year, which is one-third more than the number scized during the previous yeur.

Spirits in bond.

Spirits exported.

Consumption of excisable goods per capita.

Comparison of five years es to malt.
8. The quantity of spirits held in bond at the commencement of the past fiscal year was $1,265,977$ proof gallons, and at the end of the year the quantity was $1,719,737$ proof gallons, being an increase of 453,760 proof gallons.
9. There has been a very marked falling off in the exports of spirits, the quantity for 1879-80 being less than one-thirteenth of that for 1878-79.
10. Appendices $\boldsymbol{A}$ and $\boldsymbol{3}$, are a continuation of similar statistics in former reports, and show the consumption of goods subject to Excise, and similar goods imported and subject to Customs duty, per head of the estimated population during a series of years.

## Malt and Malt Liquor.

11. The following Statement shows the transactions in Malt during the year ended 30th June, 1880, and four preceding years:-

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | む̀ <br>  |  |  |
|  | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | Lbs. | \$ |
| 1875-76..... | 7,962,939 | 51,876,385 | 30,693,447 | 10,123,378 | 7,190 | 19,015,309 | 327,709 |
| 1876-77..... | 19,015,309 | 39,235,298 | 28,878,551 | 11,577,814 | 2,910 | 17,791,332 | 389,257 |
| 1877-78..... | 17,791,332 | 48,229,293 | 26,534,587 | 19,151,181 | ........ | 20,334,857 | 538,592 |
| 1878-99.... | 20,334,857 | 46,291,230 | 27, 705,037 | 18,235,790 | ;687,851 | 19,907,4C9 | 462,785 |
|  | 65,104,437 | 185,622,206 | 113,901.622 | 69,088,163 | 697,951 | 77,048,907 | 1 718,343 |
| Annual average of |  |  |  |  |  |  |  |
| four years, ended 30th |  |  |  |  |  |  |  |
| June, 1879. | 16,276,109 | 46,405,551 | 28,475,405 | $14,772,041$ $37,077,709$ |  | 19,262,227 | 429,586 |
| 1879-80..... | 19,907,409 | 58,940,565 | 28,902,354 | 37,077,709 | 743,268 | 12,124,643 | 298,188 |

12. The quantity of malt manufactured during the fiscal year shows an increase over the average of the four preceding years of $12,535,014 \mathrm{lbs}$., and exceeds by several millions of pounds the largest production of any previous year since this article has been subject to Excise duty.
13. The quantity taken for consumption exceeds the average of Taken for the four years preceding by $426,949 \mathrm{lbs}$., and is in excess of the consumption. quantity taken in $1878-9$ by $1,107,317 \mathrm{lbs}$.
14. The quantity of malt exported during the past fiscal year was Malt 37,0i7,709 lbs., being more than double the quantity exported during exported. 1878-79.
15. The quantity remaining in bond on 30th ${ }^{\mathrm{E}}$ June, 1880, was Malt in bond. 12,124,643 lbs., or 7,782,766 lbs. less than at 30th June, 1879.
16. During the fiscal year $26,419,244$ lbs. of malt were used in the Quantity used manufacture of malt liquor, and 2,474,494 lbs. in distilling. for brewing
17. Of the whole revenue collected from malt and mall liquor, the Net revenue sum of $\$ i, 507$ was refunded as a drawback of malt duty on malt malt liquor. used in the manufacture of 43,485 gallons of malt liquor exported. $\$ 4,155$ as the duty paid on malt contained in 126,762 gallons of malt liquor consumed by Her Majesty's troops and navy, and $\$ 680$ as a drawback of malt duty on mall contained in 55,178 gallons of spirits exported. There was also refunded $\$ 1,892$ duty paid on malt used in the manufacture of beer which was destroyod as unfit for use, and $\$ 35,042$ under the provisions of 42 Vic., chap. 15 , on $1,499,101$ gallons of malt liquor remaining in stock on 14th March, 1879. Add to these amounts $\$ 99$ duty over-charged on malt, $\$ 400$ overpaid on maltsters' licenses, and $\$ 75$ twice paid for brewers' licenses, and we have $\$ 43,850$ as the total amount refunded on account of malt and malt liquor. The net revenue from these two sources was therefore $\$ 260,747$, of which $\$ 160$ was derived from malt liquor, in the manufacture of which other substances than malt had been used.

The average revenue from malt and malt liquor during the preceeding four years was $\$ 425,648$.

## Tobacco.

Oomparison of five jears.
18. The transactions in Manufactured Tobacco of all descriptions, stated in pounds, during the five years ended 30th June, 1880, are shown in the following Statement:-

| Year ended 30th June. | 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In Warehouse, 1st July. | Manufactured during the Year. | Taken for Consumption. | Exported. | Otherwise acconnted for. | In Warehouse, 30th Jane. |
|  | L. ${ }_{\text {L, }}$ |  | ${ }_{8,353,955}^{\text {Lbs. }}$ | Lbs. | Lbs, | Lbs. |
| 1875-76........... | 3,930,494 | 7,168,446 | 8,353,955 | 630,492 | 5,802 | 2,108,691 |
| 1876-77... ........ | 2,108,691 | 7,991,610 | $7,720,633$ $7,475,622$ | 610,996 401,221 | 170,357 | $2,745,745$ $2,638,737$ |
| 1878-79........... | 2,638,737 | 7,400,857 | 7,445,997 | 399,791 | 146,520 | 2,047,286 |
|  | 11,423,667 | 31,501,105 | 30,996,207 | 2,042,500 | 345,606 | 9,540,459 |
| Annualaverage of four years ended 30th |  |  |  |  |  |  |
| June, 1879.... | 2,855,917 | 7,875,276 | 7,749,052 | 610,625 | 86,401 | 2,385,115 |
| 1870-80........... | 2,047,286 | 8,521,757 | 7,658,614 | 260,345 | 12,958 | 2,637,126 |

To the above quantities are to be added the quantity of leaf taken for consumption in a raw state, during the same years, which will give the following additional columns:-

|  | 7 |  | 8 | 9 |
| :---: | :---: | :---: | :---: | :---: |
|  | Raw Leaf taken for Consumptlon. |  | Total Tobacco taken for Consumption. | Duty collected thereon, including License Fees |
|  | Oanadian. | Foreign. |  |  |
|  | Lbs. | Lbs. | Lbs. | \$ |
| 1875-76.......... .................... | 11,932 | 158,272 | 8,524,159 | 1,775,450 |
| 1876-77 ............................. | 8,630 | 87,203 | 7,816,466 | 1,630,390 |
| 1877-78.. ........ .............. ..... | 3,202 | 42,507 | 7,531,331 | 1,581,603 |
| 1878-79 .............. .......s. ...... | 1,402 | 55,896 | 7,503,295 | 1,584,877 |
|  | 25,166 | 343,878 | 31,365,251 | 6,572,220 |
| Annual average for four vears ended 30th June, 1879 | 6,291 | 85,969 | 7,841,313 | 1,643,055 |
| 1879-80..................... ........ | 43,744 | 111,926 | 7,814,284 | 1,643,407 |

Manufactured
19. The production of manufactured tobacco during the past fiscal year was $\$ 1,120,900 \mathrm{lbs}$. greater than was produced during 1878-79, and $646,481 \mathrm{lbs}$. in excess of the average annual production of the four years ended 30th June, 1879.

2n. It will be seen that the quantity taken for consumption was Taken for $10,9,9$ lbs. greater than the quantity taken in the previous year, but consumption. fell short of the annual average taken during the four years ended 30th June, 1879 by 27,029 lbs.
21. The stocks of manufactured tobacco remaining in warehouse in bond. at the close of the fiscal year were greater than the stocks so held on the 30 th June, 1879 , by $589,840 \mathrm{lbs}$. and $252,011 \mathrm{lbs}$. greater than the average at the close of the four years ended 30th June, 1879.
22. There has been an increase in the quantity of Canadian raw Increased leaf taken for consumption, the quantity for the past fiscal year of Consumption being $43,744 \mathrm{lbs}$. as against $1,402 \mathrm{lbs}$. in the previous year. It is leaf. hoped that the measures taken to enforce the provisions of the Act passed last Session relating to this article will result in an augmented revenue from this source.

Cigars.
23. In continuation of the tabulated Statements contained in last Oomparative year's report, the following is now submitted :of cigara.

| Year. | Total Consumption. | Customs Duty. | Excise Duty. |
| :---: | :---: | :---: | :---: |
|  | Lbs. |  |  |
|  | 488,273 | 70 cts . per lb. | $40 \mathrm{cts}, \mathrm{per} \mathrm{lb}$. |
| $1876 \ldots . .$ | 507,866 | 70 do | 40 do |
| 1877...... | 417,703 | 50 do and 20 per cent. ad valorem. | 40 do |
| 1878...... | 496,860 | 50 do do do do | 40 do |
| 1879...... | 606,864 | 50 do do do do | 40 do |
| 1880...... | 504,231 | 50 and 60 cts. per lb. and 20 per cent ad valorem. | $40 \text { do }$ |

The total consumption in the past fiscal year shows, therefore, a decrease of nearly 17 per cent., as compared with the previous year, but while there has been a decrease on imported cigars of almost 127 per cent., there has been an increase on cigars of Canadian manufacture amounting to nearly 4 per cent.

Of the whole quantity taken for consumption the proportions have been:-

$$
\begin{aligned}
& 1873 \text { imported........................ } \\
& \text { Canadian...................... } 27.09 \text { per cent. } \\
& \text { 2xi }
\end{aligned}
$$

| 1874 imported | 64.64 per cent. |
| :---: | :---: |
| Canadian . | 35.36 do |
| 1875 imported. | 36.00 do |
| Canadian | 54.00 do |
| 1876 imported | 38.48 do |
| Canadian | 61.52 do |
| 1877 imported. | 23.85 do |
| Canadian | 76.15 do |
| 1878 imported. | 27.00 do |
| Canadian | 73.00 do |
| 1879 imported. | 34.88 do |
| Canadian | 65.12 do |
| 1880 imported. | 18.5 do |
| Canadian | 81.5 do |

## Petroleum.

Quantity
inspected and 24. The number of packages of petroleum inspected during the fees collected. fiscal year was 164,989 , on which fees were collected amounting to $\$ 16,426$, being an increase over the preceding year of 5,746 packages and of $\$ 8,152$ fees collected.

Petroleum
Inspection
Act 1880.
25. The Act of 1879 having been found unsatisfactory in practice was repealed during the Session of 1880, and a new Act enacted, which is in some respects more stringent, but its main feature is that it imposes on the makers of and dealers in petroleum full responsibility for the quality of the article made or offered for sale by them. The duties of the Government Inspectors are now limited to deciding whether the petroleum is of the quality represented by the vendors. Under the former Act they were required to determine and advise the makers of its quality.

Importance of
26. But the nature of the penal clauses of the Act make it a matter greater exactitnde in inspection. of very grave importance that the Inspectors should be able to determine, with a close approximation to exactitude, not only the specific gravity, but the temperature at which the flash defined by the Act can be obtained.

Bpecifie
27. The determination of the specific gravity is a very simple affair, but the flash test is surrounded by so many elements of uncertainty that the Department has found it necessary to enter upon a thorough investigation of the subject, and of the means available for arriving at the desired result.
28. Petroleum was first subjected to inspection in 1863 , under the Act 31 Vic., cap. 50 . Since that time an instrument known as Taglia bues Pyrometer has been used for the purpose of testing. It has long Unreliability of pyrometers
heretofore been known to the Department that tests by this instrument could not be relied upon as agreeing with each other, except under the most farorable conditions. This uncertainty was not regarded as of any grave importance so long as the flash test was considerably below what petroleum submitted to inspection would usually stand. Nevertheless, several cases arose in which discrepancies between the results obtained by different offices occasioned a good deal of inconvenience, both to the Dopartment and to individuals. Still the instrument was admitted to be the best known for the purpose, and the Petroleum Association of Now York continue to rely on it for ordinary tests. It was not, therefore, until it was proposed to raise the test to the present standard and to increase the severity of the penaltics as to forfeiture of goods that the Department determined to enquire whether an instrument could be constructed, which, in the hands of an operator exercising such degree of skill as is usually possessed by the officers of the Department, could be relied on for such accuracy in the results as would be a guarantee that no injustice would be done to the owners of the goods tested.
29. While the proposed legislation was under consideration last spring, a great deal of interest was taken in this matter by various persons, and a number of tests were made, in the test room attached to the Inland Revenue Office of the Ottawa Division, by the Collector, who is a careful operator, as well as by others. The results showed a considorable variation in tests taken by difforent instruments of Tagliabues pattern, even when used by the same operator and under similar conditions. But with the same instrument, the same manipulation, and the same operator, the results were sufficientiy near each other for practical purposes.
30. The information thus gained, led to a careful comparison as to the form and dimensions of the stock of pyrometers on hand in the Department, as also of the indication given by the several thermometers. Experiments were also made to ascertain the extent to which the result may be affected, by the ascertained variations betweon the instruments.
31. While these matters were under consideration, a gentleman Information arrived from New York, Mr. Holly, representing the Petroleum ${ }^{\text {obtained from }}$ agent of New Association of that city, from whom a good doal of valuable inforxxiii

York Petroleum Association. electricity.
mation was obtained as to the modes of testing used by that Association, and as to the difficulties they had experienced in obtaining uniformity in the results of the test. Mr. Holly was good enough to leave for use of the test room here, an instrument identical with those used in the service of his principals. It is in all essential particulars the same as the Tagliabues instrument heretofore used in Canada.
32. Acting upon information received from Mr. Holly, the Department has obtained from New York an instrument in which the flash is obtained by electricity. This method of obtaining the flash is unquestionably the most perfect as regards unifor mity of result, but the instrument is not suitable for general use.
33. Another instrument, which is established as the Standard Pyrometer in Great Britain by the Imperial Petroleum Act of 1879 has also been obtained. Both are now in the Department, and a large number of tests have been taken with them for purposes of com parison.
34. Up to this point the experiments had been carried on in a room at a temperature not exceeding $70^{\circ}$ Fabrenheit ; subsequently, as the heat of the atmosphere increased it has been noticed that the discrepancies between the results obtained have largely increased. Not only is there a marked difference in results obtained by different operators, but the same operator, with the same instrument, and, with samples taken from the same can, has reported results varying as much as five degrees. The difference between different operators has been, in many cases, as much as eighteen degrees, and I have now several cases before me where the difference ranges from $20^{\circ}$ to $25^{\circ}$.

## Comparison of tests by several operators taken in the same room at the same time.

35. These discrepancies appeared so serious as to demand a personal examination of the methods followed by the officers who reported results so widely apart, and for that purpose I arranged for them to meet me at Toronto, where tests were made by them in the same room, with the same petroleum, first using their own instruments and then exchanging them. Under these similar conditions the same discrepancies arose, and it becamo evident to me, as well as to other officers of the Outside Service whom I consulted, that the operator not only has it in his power to vary his results by upwards of $20^{\circ}$ without any obvious departure from the code of instructions, but that be must be a man of more than average carefulness who can invariably report his results within a rango of five degrees of the truth.
36. The essential difference between the English Standard Pyro- Essential meter and all the pyrometers in use here is, that in the former the difference petroleum is excluded from free connection with the atmosphere while the vapor is being generated, and when the test for the flash is taken the light is plunged into the cup which contains the vapor at the instant when connection with the atmosphere is made.
37. In the Tagliabues, as well as in all the American instruments Defects in the I have seen, free connection is constant between the contents of the Pagliabues test cup and the atmosphere.
38. I have endeavored to ascertain the effects of these opposite con- Causes of ditions and the observations made for that purpose have led to the error in. conclusion that the results of the tests are influenced by:-
(a.) The temperature and the barometric and hygrometric states of the atmosphere.
(b.) The area of the opening by which the vapor generated in the test cup can escape.
(c.) The degree of rapidity and uniformity with which the sample is heated.
(d.) The point at which the flame is applied.
(e.) By the currents of air which cause eddies in the movement of the vapor and which sometimes draw it away from and sometimes impel it towards the point at which the flame is applied.
39. The pyrometer heretofore in use in Canada (Tagliabues) is so constructed as to permit-to some extent to invite-serious errors from each of the influences above mentioned, but, inasmuch as it is the instrument in reference to which the flash tests mentioned in the

Oonsiderations governing the construction of an improved Pyrometer. statute were determined, it could not-without doing an injustice one way or the other-..be replaced by one which would give the flash at a degree of temperature differing very much from the average result heretofore obtained. The object of the Department has therefore been to obtain an instrument that would give as nearly as possible uniform results in the hands of an operator of ordinary intelligence exercising reasonable care in following the instructions. This, I think, has been accomplished in the instrument which has been adopted, and of which a supply is now being constructed.

Differences between the Pyrometers heretofore in use and the proposed standerd instrument.
40. The difference between the old instrument and the new consists mainly:-
(a.) In the size of the water bath which in the old instrument contained less than half a gill of water, while in the new it contains nearly one-third of a gallon. In this respect the new instrument is similar to the instrument described in the Imperial Act. The large water bath insures great uniformity of temperature.
(b.) In the mode of applying the flame and the regulation of its size. This in the old instrument has been the chief source of error, as both the size of the flame and the point of application could be widely varied by the operator, and, as regards either, it has rarely happened that two men could be found who would act alike. In the new instrument perfect uniformity in both these essentials is insured.
(c.) In the admission of atmospheric air to the test cup without which the flash cannot take place. In the old instrument this was an act distinct from the application of the flame, and the difference in the time between the opening of the air valves and the application of the flame was a fruitful source of error. In the new instrument the opening of the air valves and the application of the flame is a simultaneous operation.
(d.) In the application and quality of the thermometers for determining the temperature at which the "flash" occurs. In the old instrument the thermometers were of very inferior quality, varying in themselves from two to three degrees. They were only applied in the test cup. In the new instrument the thermometers are of the best construction carefully verified by the standard instrument, and therefore giving uniform results. They are applied to the water baths as well as to the sample being tested.
41. There are other minor improvements, such as the prevention of metallic contact between the sample cup and the vessel to which the heat is applied, but the most important of these minor changes is the interposition of an air-chamber between the cup in which the sample is contained and the vessel containing the water-bath. This arrangement produces steady and uniform increments of heat.
42. If it had been possible to adopt the construction of the English Reasons for instrument entirely, especially as to the absolute closing of the sample cup so as not to permit the escape of vapor until the instant at which the flame is applied, greater certainty of action would have been insured. But it was found impossible to do this without subjecting the sample to a more severe test than that contemplated by the Act, for the English instrument is so positive and searching in its action that the earliest formation of vapor is detected, and if it were applied in our inspection the "flash" test for petroleum would practically be raised from $115^{\circ}$ to about $125^{\circ}$
43. The experiments, and correspondence that have led up to Time ocwhat I am persuaded will prove to be a satisfactory result have arriving occupied a good deal of time, and not until recently have I felt a satisfactory justified in recommending the adoption of a standard instrument, and the manufacture of a supply for the use of our officers.
44. At the request of the Customs authorities, this Department Inspection of has undertaken the inspection of imported petroleum at the Ports of Windsor, Sarnia, Brantford, Hamilton, Guelph, Toronto, Belleville, for Customs Kingston, Brockville, Prescott, Ottawa, Montreal, Quebec and Charlottetown, and this work has, of course, added to the ordinary work of the excisemen at these places.

## Manufactures in Bond.

45. The revenue derived from duties levied on goods manufactured Comparison in bond-chiefly vinegar and methylated spirits-during a series of five years has been as follows :-

| 1875-6 | \$27,834 |
| :---: | :---: |
| 1876-7 | 30,053 |
| 1877-8 | 36,894 |
| 1878-9. | 38,086 |
| 1879.80 | 33,269 |

There has been manufactured for export 28,728 gallons o varnish as against 399 gallons in the previous year.

Public Works.
46. As will be observed upon reference to the following Table, the small revenue derived from Canals, Hydranlic and Other Rents and Minor in revease Public Works is somewhat greater for the past fiscal year than for the
year 1878-9, but the revenue from Slides and Booms has still further declined.

| - | 1878-9. | 1879-80. | Increase per cent. | Decrease per cent. |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ |  |  |
| Canal Tolls, \&c........... ................. | 325,392 | 326,037 | $0 \cdot 19$ |  |
| Slides and Booms.......... .................. | 69,372 | 56,350 | ....... | 18.77 |
| Hydraulic and other Rents .... ......... | 29,405 | 31,164 | 6.00 | ...... ........ |
| Minor Public Works........................ | 26,686 | 27,263 | $2 \cdot 16$ | .............. |
|  | 450,855 | 440,814 | ..... . | ......... ....... |

Canals.

Summary of canal revenne.

Decrease of revenue on Welland Canal.
47. The following Statement gives a summary of the Canal Revenue, showing the increase or decrease in each Canal:-

| Canals. | 1878-9. | 1879-80. | Increase per cent. | Decrease per cent. |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ |  |  |  |
| Welland ............... . .................... | 185,947 | 162,796 |  | 12.45 |
| St. Lawrence ..... .......................... | 73,672 | 86,130 | 16.91 | ........ |
| Cbambly.............................. ..... | 16,634 | 18,693 | $12 \cdot 37$ | ....... |
| Ottawa.................. ..... .... ........... | 40,156 | 48,952 | 21.90 |  |
| Rideau ....... ........................ ................. | 4,880 3,923 | 5,492 3,712 | 1254 | 7 |
| St. Peter's...... .................................. | Und | r re-const |  |  |
| Newcastle District Canals. ............. | 180 | 262 | 45.55 | ............. |
|  | 325,392 | 326,037 | . | .............. |

48. The following is a Statement of the revenue derived from each class of articles on the Welland Canal, and shows the increase or decrease compared with the previous years:-

| olls on | 1878-9. | 1879-80. | Increase per cent. | Decrease per cent. |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ | \$ |  |  |
| Vessels......... ........ ........................ | 19,138 | 17,869 | ..... ........ | 6.63 |
| Passengers......................... ........... | 343 | 81 | .... | $76 \cdot 38$ |
| Produce of Forest .............. ............ | 17,279 | 16,483 | ...... ........ | $4 \cdot 6$ |
| do Animals ..................... | 114 | 129 | $13 \cdot 15$ | ...... -.......0 |
| do Agriculture................. | 82,198 | 89,910 | $9 \cdot 38$ | ... |
| Manufactures and Merchandise......... | 66,772 | 38,177 | 9 | 74.9 |
| Total Tolls........................ ines, | 185,844 103 | 162,649 147 | ......... ..... | .............. |
| Total. | 185,947 | 162,796 | . | 12.45 |

49. The quantity of grain transhipped at Port Colborne in 1880 and three previous years is given below. The total number of grainladen vessels lightened at that port in 1880 was 209, against 178 in the previous year. The number unladen without eatering the Canal was 51, as against 25 in 1879. The quantity of grain lightened was as follows:-

| - | 1877. | 1878. | 1879, | 1880. |
| :---: | :---: | :---: | :---: | :---: |
|  | Centals. | Centals. | Centals. | Dentals. 297,483 |
| Wheat........... ................ ....... ..... | 37,440 | 48,595 | 278,732 | $297,483$ |
| Corn ........ ............... .................... | 75,580 | 147,789 | 160,622 | 203,552 |
| Barley ..................................... ..... | 5,600 | .......... | ...... ..... | -. |

The quantity of grain discharged in the Port from vessels which did not enter the Canal was as follows:-


## Canal Statistics for the Season of Navigation.

50. The statistics for the season of navigation, 1880, will be given Statistics for in a supplementary report, and will be accompanied by the usual comparative statements.

## Transhipment

 of grain at Port Colborne. season of navigation to follow,
## slides and Booms.

51. The revenue accrued from these works in $1879-80$ was $\$ 56,350$,
being $\$ 13,022$ less than the revenue of the previous year. This amount is nearly the same as that by which the revenne of 1878-79 fell short of 1877-78. The outstanding balances have decreased $\$ 289$ during the year, and at its close amounted to $\$ 209,608$.

## Hydraulic and other Rents, and Minor Public Works.

52. The balances due for hydraulic and other rents increased Outstanding during the year from $\$ 188,091$ to $\$ 201,895$, and the balances due on minor public works also increased from $\$ 48,615$ to $\$ 69,853$.

## Culling Timber.

53. The revenue from this source shows a decrease of $\$ 3,844$, com- Revenue and pared with 1878-9, and amounts to only \$23,014. The outstanding cost of office. xxix
balances at 30 th June, 1880 , were $\$ 27,845$, or $\$ 4,079$ less than at the close of the previous year. The cost of the Cullers' Office in 1879-80 was $\$ 44,888$.

## Bill Stamps.

Comparison of revenue.
54. There is a still further decline in the revenue from this source, the amount for $1879-80$ being $\$ 176,115$, against $\$ 185,333$ in 1878-9.

## Weights and Measures and Gas.

Revenue and expenditure.
55. The revenue derived from this source during the year was $\$ 20,812$, and the expenditure on account thereof, $\$ 60,934$. A special report in relation to this service has been prepared, and will form a supplement to this Report.

Preventicn of Adulteration of Food.

Supplementary report to follow.
56. During the year the expenditure under this Act was $\$ 8,887$. A full account of the work done, together with the reports of the Analysts, will be found in a supplementary report.

## Outside Service.

Examinations
57. During the fiscal year a Board for the examination of officers of the Outside Service (Excise) met in the month of June, at Charlottetown, St. John, Toronto and London, and examined 12 candidates. Since the close of the fiscal year the Board met during the months of July and August last, at London, Toronto, Halifax, St. John, Quebec, Montreal and Ottawa, in the order mentioned, when 61 candidates presented themselves. Of the total number (73) examined at these two periods, 26 obtained first class certificates, 20 obtained second class, and 18 obtained third class, while 9 failed to pass. Of the whole number, 41 were probationary officers who had not previously been examined, 27 were officers who were desirous of improving their standing, and 5 were officers who had been a considerable time in the Service, but had not hitherto obtained any classification.
58. An examination of those who desired to qualify for admission for special class. to the special extra class of Fxcisemen took place in the City of Hamilton during the month of October of the present year, at which there were 21 caudidates, of whom 10 succeeded in obtaining the required number of marks. Tabulated tables of the results of these examinations will be found in Appendices $\mathbf{6 j}$, 3 and $\mathfrak{H i}$.
59. The result of the examinatios above referred to has been to Improvement demonstrate a very marked improvement in the qualifications of in the excise the Excise staff generally. There are now but very fow officers in that branch of the Service who have not passed the examinations in one or other of the grades, and all have been greatly stimulated to improvement by the knowledge that their prospects of promotion largely depend on their ascertained qualifications.
Inspection of Staple Articles.
60. Appendices $\mathbb{1}$, $\mathbb{C}, \mathscr{y}$ and $\mathbb{C}$ comprise returns in relation to Returns in the inspection of staple articles. relation thereto.

A. BRUNLL,<br>ommissioner.

24th November, 1880.

## APPENDIX $\mathbb{C}$.

Statement showing the number of Illicit Stills seized during the Fiscal Year ended 30th June, 1880, with Names of Owners, Schedule Value, \&c.

| Seizure Numberg. | Date. | Division. | Owners. | Schedule Value. | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | \$ cts. |  |
| 8 | Aug. 25, 1879.. | Collingwood... | John Snow .................. | 3000 |  |
| 9 | Dec. 4, 1879.. | do ... | Donald Campbell.. ........ | 8000 |  |
| 10 | do 17, 1879.. | do ... | James Freckleton.. | 2500 |  |
| 12 | April 19, 1880... | do ...' | Wm. Shaw \& Robt. Leslie | 17300 | Fined \$500 and imprisoned. |
|  | Sept. 12, 1879 : | Goderich.. ..... | Unknown | 4100 |  |
|  | Oct. 9, 1879. | do ........ | Geo. Robertson...... ....... | 5850 | Fined $\$ 500$ and imprisomed for 6 months. |
| 69 | Jan. 21, 1880.. | do ........ | James Scheils .............. | 7250 | Paid $\$ 500$ penalty. |
|  | do 23, 1880.. | do ......... | Thos. Bell ..... ..... .... .. | 2650 |  |
| 73 | May 20, 1880. | do $\ldots$........ | A. \& M. Freiberger \& J. | 1300 |  |
|  | July 16, 1879.. | Ottawa.. ........ | Ang. Cartier. .............. | 2600 | Escaped. |
| 39 | Aug. 25, 1879.. | do . ......... | M. Fiynn \& Jas. Mooney. | 10840 |  |
| 40 | Sept. 5, 1879.. | do .......... | John Oameron ........i . | 1000 |  |
| 42 | Jan. 8, 1880.. | do ........... | D. \& O. Latremouille..... | 2500 | Fined $\$ 500$ and imprisoned for 6 mos. with hard labor. |
| 43 | Feb. 27, 1880..: | do .. ........ | Marcel Normand........... | 3000 | do do |
| 18 | Dec. 24, 1879.. | Sarnia... ........ | Unknown............ ........ | 1200 |  |
| 106 | Sept. 6, 1879.. | Toronto ... . ... | R. Montgomery ......... ... | 2650 |  |
| 109 | Feb. 4, 1880.. | do ...... | Unknown ..................... | 2250 |  |
|  | Sept. 26, 1879.. | Montreal ........ | Dosithée Allard............ | 6825 |  |
| 305 | Dea. 11, 1879. | do ........ | O. Picard \& F. X. Rieu- deau.............. ...... | 6530 |  |
| 309 | Jan. 20, 1880.. | do ....... | A. Proust .................... | 200 |  |
|  | Feb. 6, 1880... | Quebec.. ........ | Jean Boulé...... ............ | 450 |  |
|  | do 6, 1880.. | do ........... | Ohas, Guimont.. ........... | 450 |  |
| 35 | Nov. 4, 1879.. | Halifax........... | Alex \& Isaac Mattatal... | 500 |  |
| 34 | Jan. 27, 1880.. | do . ......... | M. M. McDonald........... | 1145 |  |
| 36 | do 28, 1880... | do . ........ | Chas, Williams ........... | 890 |  |
| 38 | April 14, 1880.. | do $\qquad$ |  <br> Alex. Jollymore | 500 |  |
| 39 | $\text { June 30, } 1880 . .$ | do .......... | Neil Fraser and others... | 4650 |  |
| 4 | Nov. 14, 1879.. | Victor $a$ | Thos. W. Graham. | 10000 |  |
| 5 | do 26, 1879... | do ......... | John Stewart............... | 2000 |  |
| 6 | Dec. 9, 1879.. | do ......... | Wm. Mc Hugh.............. | 79471 |  |

A. BRUNEL, Commissioner.

Department of Inland Revende, Ottawa, 24th November, 1880.

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


Inland Refenue Departient,
Otratha, 24th November, 1880.

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


## APPENDIX 解。

## INSPECTION OF STAPLE ARTICLES.

List of Boards of Examiners appointed under 37 Vic., Cap. 45 and 39 Vic., cap. 33, respecting the Inspection of certain Staple Articles of Canadian Produce existing at the expiration of the Fiscal Year ending 30th June, 1880.


List of Board of Examiners appointed under 37 Vict., Cap. 45, and 39 Vict., Cap. 35, \&c.-Continued.


[^1]| Place. | Article. | Examiners. |
| :---: | :---: | :---: |
| Hamilton. | Flour and Meal. | Wim. Gillesbr. F. W. Ferrman. S. E. Gragurg. |
| do .... .... ....................... | Leather and Raw Hides., ......... ......... | John Fiald <br> .John Alexander. <br> John Garreth. |
| Londen | Flour and Meal, and Whest and other grain.......................... ................ | O. B Hint. <br> G. Ptillins. <br> 1. Pearson. |
| do ................................ | Beef and Pork, and Butter............... | P. Heath. Joher Tantion. Henry R. Eckley. |
| Ealifax, City and County of..... | Butter......... ............... ..... ...... ......... | Josenh J Northrup. Ales:m Smith. Obas. Gratam. |
| do do | Fish and Fish Oils | Levi Hיrt. 1 F "halen. Wmi.H. Hurt. A. B. Criwe. J. S. Belcher. |
| do do | Leather and Raw Lides.. ................. | Michael Dwser. <br> R. W. Letwon <br> John Woodell. |
| St. John, N.B........... ....0.0.. .. ... | Flour and Meal. ......................... ...... | Thomas 4. Hankine. S. S Hall W. F. Harrisnn. Ceorge S D. Forest. W. W. Turabull. |
| do ....... n.................. | Beef and Pork ............. .......e. ......... | W. O. Torlsoe.' <br> H. D. Trion. <br> C. M. Bostwick. <br> F. Anein <br> Luke Stewurt. |
| do .......................... | Fish and Fish Oils...... .................... | Feorge DeForpst. W V Rarbour. Oliver Emery John (I. Litilahale. Juseph Coran. |
| do <br>  | Butter. $\qquad$ $\qquad$ | S. D Rerion. M. Lindsay. Ribt. Gruik3hank. Wm. Bretze. J. K. Puddingtoa. |
| do .......................... | Leather and Raw Hides.................... | Wm. Peters. F Collins. W. E. Vrnom. James Rubinann. Francia Nauuel. |
| Essex, Kent and Lambton........ | Leather and Raw Hides. | Wm. Praser. David Pratt. Griadison Royd. Wen Molintefr. Thomas Daook. |

List of Board of Examiners appointed under 37 Vic., Cap. 45 and 39 Vict., Cap. 35, \&c.-Continued.

| Place. | Article. | Examiners. |
| :---: | :---: | :---: |
| Perth ànd Huron . ............... | Fish and Fish Oils | Hugh Bain. James Clark. Charles Howland. Daniel Strachan. Daniel Ferguson. |
| do ................... | Leather and Raw Hideg. | George A. Hilton. <br> A. Smith. <br> Edward Colling. <br> Joseph Norfolk. <br> Thomas Stoney. |
| Brant and Haldimand............. | Leather and"Raw Hides. | Hugh Finlayson. <br> John Wallace. <br> John Douglas. <br> John Grant. <br> Joseph Wallace. |
| Bruce and Grey..................... | Fish and Fish Oils | James Muir. Thomas McGaw. <br> Alex. Gordon. John Dobson. Donald McAuley. |
| Simeoe and Algoma. ............. | Fish and Fish Oils | George Watson. <br> M. L. McGrath. <br> Cbarles Drury. <br> Wm. Calverlay. <br> Thomas D. McConkie. |
| do ............... | Leather and:Raw Hides. | George Watson. <br> M. L. McGrath. <br> Charles Drury. <br> Thomas D. McConkie. <br> Wm. Calverlay. |
| Ontario and Durbam.............. | Flour and Meal, and Wheat and other grain. $\qquad$ | James Anderson. James H. Hagerman. Harvey M. Ross. Edward Peplow. Henry Wade. |
| Northumberland and Hastings. | Leather and Raw Hides. | Dary \& Edwards. Phippin \& Graham. Richard Osborne. D. W. Mullett. Joh Welsh. |
| Yarmouth, Nova Scotia... ........ | Fish and Fish Oils | Augastus F. Stoneman. Byron Phadd. Samuel M. Ryerson. |
| Cape Breton ........ ........ ........ | Fish and Fish Oils | W. H. Moore. <br> J. Christie. <br> A. Gillis. <br> Donald McDougald. <br> Wm, Buchanan. |
| Richmond... ......................... | Fish and Fish Oils | Alexander McCuish. <br> Duncan Cameron. <br> Nm. Malcolm. <br> Donald Matheson. <br> Duncan Mchae. |

List of Board of Examinic: npmointed undre 37 Vict., Cap. 45, and 39 Vict., Cap. 45, dc.-Com :cu.

| Place. | Article. | Examiners. |
| :---: | :---: | :---: |
| Isle Madame...... ...... ...... ........ | Fish and Fish Oils | David Gruchy. James Phalan. John Frehill. (Ieo. N. Bissett. D. N. Shaw. |
| Antigonish | Fish and Fish Oils | Wm. Gervoir. :Hugh R. McAdam. Duagald McMillan. Michael Crispo. Patrick Webb, |
| Lanenburgh | Fish and Fish Oila | W. N. Zwicker. Geo. W. Richardson. Samuel Risser. Charles Morash. James McLachlan. |
| Victoria............................... | Fish and Fish Oils | John W. Burke. John McLean. John McDonald. Angus MeIvor. Duncan M. Askill. |
| Guysborough . ........ .a.o..... ...... | Fish and Fish Oils | Jos. W. Hadley. <br> Solomon Cohoon. <br> Michael Keating. <br> Wm. S. Peart. <br> Herbert Cunningham. |
| Mary'm................................. | Fish and Fish Oils ............................ | Jame: McOntcheon. <br> D. W. Crockett. <br> James Heblow. <br> John McDaniel. <br> Wm. Pride. |
| Pictou................................... | Leather and Raw Hides................... | Richard Tanaer. <br> Cooper Henderson. <br> Wm. McLean. <br> John R. Noonan. <br> Joseph Gordon. |
| Sbelburne ............. . ...... ........ | Fish and Fish Oils .............. ...... . .... | Joseph Watters. <br> Samuel Loak, jr. <br> Jacob Lock. <br> Howard Lock. <br> Edward Capstick. |
| Earrington............................. | Fish and Fish Oils $\qquad$ | W. Robertson. <br> T. Nickerson. <br> W. Sargent. <br> W. H. Coffin. <br> N, Banks. |
| Inverness ......... .o..... ............ | Fish and Fish Oil | Walter Lawrence. Farquhar McRae. Christopher Smythe. James G. McKeen. Peter Paint. |
| Colehester. ...... ............. ......... | Fish and Fish Oils...ce .o.0.0............... | James Flemming. John M. Blackie. <br> L. O. Layton. <br> S. D. Spencer. <br> Robt. Lowis. |

List of Board of Examivera appointed nnder 37 Vict,. Cap, 45, and 39 Vict., Cap. 45, \&c.-Continued.


## A. BRUNEL, <br> Commissioner.

Inland Revenur Department, Ottawa, 24th November, 1880.

## APPENDIX

## INSPECTION OF STAPLE ARTICLES.

List of persons who have obtained Certificates as Inspectors and Deputy Inspectors of Staple Articles of Canadian Commerce, under 37 Vict., Cap. 45, and 39 Vict., Cap. 33.

| Division. | Article. | Inspector. | Deputy Inspector. | Residence. |
| :---: | :---: | :---: | :---: | :---: |
| Quebec.dodo | Flour and Meal. $\qquad$ <br> Beef and Pork $\qquad$ <br> Fish nnd Fish Oils. $\qquad$ | Benj. Rousseau <br> David Nolan........ <br> John Auld $\qquad$ | Phil. Roussear... ....... | Quebec. do |
|  |  |  | J. O . . No............. ......... |  |
|  |  |  | Jean Langlois ............. | do |
|  |  |  | H. Grenier................. | do |
|  |  |  | Israel Bellevean. | do |
|  |  |  | Wm Sutherland......... | do |
|  |  |  | Louis Cote., .............. | do |
|  |  |  | J J. Brady........ ......... | do |
|  |  |  | Jeffry Roo ........ ........ | do |
| do ............. B | Butter......... ......... ......... | Pierre Patoine.....\| | 1. Frascr.................... | do |
|  |  |  | Thad. Shea ............. .... | do |
|  | Leather and Bides Flour and Meal $\qquad$ |  | Guillaume Bouchard... | do |
|  |  |  | John Donaldson ......... | do |
|  |  |  | John Dore.................. | do |
|  |  |  | Wm. Cummings.......... | do |
|  |  |  | Chas. Baillairge ......... | do |
|  |  |  | P. Lacombe. .............. | do |
|  |  |  | Jas. A. Quinn. ........... | do |
|  |  |  | Jos. Fleldiag | do |
| Montreal .............. |  | Aldric Fortin. Mathew Hutchison Louis A. Boyer...... | J. O. Gingras. ............ | Montreal. |
|  |  |  | John Brodie ............ .. | do |
|  |  |  | John Fairbairn........... | do |
|  |  |  | Hospice Labelle. ......... | do |
|  |  |  | Jas. Williamson. |  |
|  | Wheat, \&c.... ................ |  |  | do |
| do $\qquad$ | Beef and Pork............... .. | Wm. L. Fager ...... | Thos. Buchanan. ......... | do |
|  |  | James Doheney..... | Michael Doheney......... | do |
| do -......... | Ashes........................ | Dyde and Major.... | ................ . ............ | do |
| do $\qquad$ | Fish and Fish Oils ........ | L. E. Morin.: ........ | Thos. D. Quinn.......... | do |
| do $\qquad$ | Leather and Hides........ | Thos. Hawkins...... | Antoine Masson.......... <br> D. Sykes | do |
| Ottawa | Bntter...... ........... ......... | Samuel Christie.... | T. F. Forfar......... ...... | Ottawa. |
|  |  | Abel Harris ......... | Daniel Morrison.........e. | do |
|  |  | D. Macdonell-....... | W. A. Mighton ... ......... | do |
| do ............. I | Leather and Hides........ |  | Mathew Norris............ | do |
|  |  | Fre. McCullough... | Thcs. Taylor......... ...... | do |
|  | Butter $\qquad$ <br> Leather and Hides. $\qquad$ <br> Flour and Meal.. ............ | Wm. ${ }_{2}^{*}$ Burrows........ ......... ......... ...... ........ |  | Kingaton, |
| Kingston. $\qquad$ do $\qquad$ Toronto_ . .......... |  | Peter McKinnon... |  |  |
|  |  | James Rough........ <br> Wm. Greey |  | Toronto. do |
| do | Grain . .................. ..... | Wm. Greey........... Joseph Harris...... | ……........ .-... ..... ............ | $\begin{aligned} & \text { do } \\ & \text { do } \end{aligned}$ |
| do ............... | Fish and Fish Oils ......... | Richard Young..... | ........ ..... ...... ............ | do |
| do ............. | Leather and Hides ......... | Jos. Armstrong .... | ......... . ........ ...... | do |
| Hamiltor.e........ | Flour and Meal. $\qquad$ <br> Butter $\qquad$ | John Smith........... | ...... | Hamilton. |
| do ... ....... |  | ${ }^{\circ} \mathrm{do}$ do ......... |  | do |
|  | Leather, \&c. | James Brown........ | .................... ..... ...... | do |
| London. ...... ...... |  | James Oliver....... | ......... ......... ........ ....... | London. |
| $\begin{aligned} & \text { Halifax ................ } \\ & \text { do ........... } \end{aligned}$ | Butter. $\qquad$ | H. Graham..... .... |  | Halifax. |
|  | Fish and Fish Oils........ | E. Ryan ......... ...... | James Fortune. ......... <br> John Breunan | do |
|  |  |  | John Gaul......... | do |
|  |  |  | Wm. Wamboldt.......... | do |
|  |  |  | Jas. McGill................ | do |
|  |  |  | Joseph Mulcahy...........\| | do |

List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


List of persons who have obtained Cirtificates as Inspectors, \&c.-Continued.


List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


List of persons who have obtained Certificates as Inspectors, \&c.-Continued.

i -. of persons who have obtained Certiticates as Inspectors, \&c.-Continued.


A. BRUNEL, Commissioner.

Inland Revenue Department, Ottawa, 24th November, 1880.

## APPENDIX 1.

Of Staplo Articles of Canadian Commerce, who are empowered to act under Acts 37 Vic., cap. 45, 39 Vic., cap. 35 , and 43 Vict., cap. 20 , up to the end of the Fiseal Year, 30th June, 1880.

| Division. | Article. | Name. | Office. | Residence. |
| :---: | :---: | :---: | :---: | :---: |
| Ontario, |  |  |  |  |
| Brace and Grey............. |  | Neil McAuly. Geo. S. Miller. $\qquad$ | Inspector........Dep. Inspector | Southampton. |
| do do .............. |  |  |  |  |
| Essex, Kent and Lambton |  | John Carpenter........ | Inspector.. ..... | Chatham. |
| do do do | Hides ....... <br> do $\ldots$. <br> do $\ldots$ | J. W | Dep. Inspector | Windsor. |
| Hamilton.................... |  |  | Inspector. ...... |  |
| Kingston ................... | ${ }_{\text {do }}^{\text {do }}$... | P. Gardner.............. | do ........ | Kingston. |
| Lanark and Renfrow...... Lincoln and Welland .... | Leatherand Raw | A. P. M. Culver | do - ..... | Dalhousie. |
| London | Hides.......... do |  | do . ...... | St. Catharines, London. |
| Northumberland and | \| $\left\lvert\, l l_{\text {do }} \begin{array}{ll}\text { do... }\end{array}\right.$ | James Oliver........... | $\begin{array}{cc} \text { do } & \ldots . . . . . . \mid \\ \text { do } & . . . . . . . \end{array}$ |  |
| Hasting3. ........... |  | John Hodge ............ |  | Belleville. |
| Northrmberland and |  |  | do ....... |  |
| Hastings................ |  | Jesse Fennel............Wm. Bletcher........ |  | Trenton. <br> Port Hope. |
| $\underset{\text { de }}{\text { Ontario and }}$ do | Flour and Meal.. |  | do ......Dep. InspectorInspector...... |  |
| do do | Wheat and other Grain. $\qquad$ | W. Bletcher. $\qquad$ Jeremiah Long $\qquad$ |  | $\left\lvert\, \begin{gathered} \text { do } \\ \text { do } \\ \text { Ottawa. } \end{gathered}\right.$ |
| Ottawa. | Butter $\qquad$ <br> Leatherand Raw |  |  |  |
| do .. | $. \text { Hides.......... }_{\text {do }}^{\ldots}{ }_{\mathrm{J}}^{\mathrm{J}}$ | Jeremiah Long ......... |  |  |
| Perth and Huron... ........ |  | Francis McCulloagh. John Meyers ......... | do |  |
| Toronto .............................. | Flour and Meal. <br> Wheat and othe | Wm. Greey ..... ...... |  | $\begin{aligned} & \text { Strstiord. } \\ & \text { Toronto. } \end{aligned}$ |
|  | $\begin{gathered} \text { Grain } \\ \text { Leatherand.... } \\ \text { Hidea } \end{gathered}$ | Joseph Harris. ......... |  |  |
| do |  |  |  | do |
| Simcoe and Algoma.. | Fish and Fish Oil | Joseph Armstrong... | do ....... | $\stackrel{\text { do }}{\text { Collingwood. }}$ |
|  | Leatber and Raw <br> Hides. | Wra. Chappell ........ |  | do |
| Qubbec. |  |  | do |  |
|  | Flour and Meal.. Louis A. Boyer ........ <br> do .. J. C. Gingras........... |  | Inspector. ..... | $\begin{gathered} \text { Montreal. } \\ \text { do } \end{gathered}$ |
|  |  |  |  |  |  |
|  |  |  | Dep. luspector |  |
|  | Wheain.......... Thos Bickerstaff .... Inspec:or........ |  |  | do |
| do do |  |  |  |  |
|  |  |  |  |  |
| do ..................... | Fish and Fish Oili' L | Dyde \& Major.. ....... <br> L. E. Morin. $\qquad$ | $\underset{\text { Dep.Inspector. }}{\substack{\text { do } \\ \text { do } \\ \ldots}}$ | do |
| do |  | Leatherand Rä <br> Hides.. $\qquad$ Thos Hawkins $\qquad$ Insuector |  |  |
| do |  |  |  |  | $\begin{aligned} & \text { do } \\ & \text { do } \\ & \text { do } \end{aligned}$ |
| do ............. ........ |  |  |  |  |  |
| $\underset{\text { Quebec..... .... }}{\text { do }}$ |  |  |  |  |  |  |  |  |  |
| do ... | Flour and Meal.. B | Benjamin Rousseau... Philleas Rousseau.... | Inspector...... . <br> Dep.Inspector. | Quebec. <br> do |  |
| do | Beef and DorkFish and Fish Oil | David Nolan............ <br> John Auld | Inspector ........ | do |  |
| do |  |  |  |  |  |
| do ${ }_{\text {do }}$................................. |  | Israel Belleveau......... <br> J. J. Brady $\qquad$ <br> Louis Coté $\qquad$ <br> IH. Grenier $\qquad$ <br> Jenn Langlois $\qquad$ <br> John Mathieu. <br> Jeffery Roe $\qquad$ $\qquad$ | Dep. Inspector | do |  |
| do | do .... |  | do | do |  |
| do |  |  | - do |  |  |
| do ......... ............. |  |  |  | do |  |
| do ........................ |  |  |  |  |  |
| do .. |  |  | do $\quad .$. | $\begin{aligned} & \text { do } \\ & \text { do } \end{aligned}$ |  |

## xlix

List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


List of persons who have obtained Certificates as Inspectors, \&c.-Continued.


A. BRUNEL,<br>Commissioner.

Inland Revenue Department, Ottawa, 24th November, 1880.

Statement showing Quantities of certain Staple Articles of Canadian Produce, June, 1880, and the Fees accrued thereon, as returned to the

FLOUR.


## $\mathfrak{G}$.

Inspected under provisions of 37 Vic., Cap. 4.5, during the Fiscal Year ended 30th Department of Inland Revenue by the respective Inspectors.

| Fine. |  | Fine Middlings. |  | Pollards. |  | Strong Bakers. |  | Sour. | Rejected. | Fees A ccrued. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{2}$ Brls | Brls. | ${ }^{\frac{1}{2}}$ Brls. | Brls. | $\frac{1}{2}$ Brls. | Brls. | $\frac{1}{2}$ Brls. | Brls. | Brls. | Brls. |  |
| 29 | 4,103 |  | 1,273 | ..0.0000 | .... | ......... | 350 | . | 311 | ${ }_{957}{ }_{02}^{\text {cts. }}$ |
| ......... | 5,416 |  | 2,758 | ......... | 430 |  | 560 | 1,532 | 4,988 | 4,809 26 |
| ......... | 183 |  | 149 |  |  |  | 801 |  |  | 55206 |
| 29 | 9,702 |  | 4,180 |  | 430 | ... | 1,711 | 1,532 | 5,299 | 6,318 34 |



| Pork, |  |  |  |  |  |  | $\begin{gathered} \text { Fees } \\ \text { Accrued. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prime Mess. | Prime. | Thin Mess. | $\begin{aligned} & \text { Extrs } \\ & \text { Prime. } \end{aligned}$ | English <br> P. Mess. | Rejected. |  |
| Tierces. | Brls. | Brls. | Brls. | Brls. | Brls. | Brls. |  |
| ... | 587 | 647 |  | ... | ...... | 680 | $\begin{gathered} \$ \text { ets. } \\ 1,288 \\ 25 \end{gathered}$ |
| 3 | 130 | 5 | 869 | 285 | 168 | 278 | 1,559 70 |
| 3 | 717 | 652 | 569 | 285 | 183 | $9 \div 8$ | 2,847 95 |



4-D $\frac{1}{2}$


FISH


G-Continued.
Articles of Canadian Produce Inspected, \&c.-Continued.


OILS.


APPENDIX G.-Continued.
Statement showing Quantities of certain Staple Articies of Canadian Produce Inspected, \&c.-Continued.


LEATHER AND RAW HIDES.

| Division. | Leather. |  |  | Hides. |  |  | Calf Sking. |  |  | $\begin{gathered} \text { Fees } \\ \text { Accrued. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 1 | 2 | 3 | 1 |  | 3 |  |
|  | Sides | Sides | Sides |  |  |  |  |  |  |  |
|  | Pieces. | Pieces. | $\underset{\text { Pieces. }}{\text { or }}$ |  |  |  |  |  |  | \$ cts. |
| Qupbec............ ........ | 48,845 | 38,533 | 5,621 | 12,692 | 1,929 | 82 |  |  | .... | 2,297 48 |
| Montreal.................. | 102, 058 | 103,4n2 | 10,058 | 31,335 | 7,785 | 4,856 | ........ |  |  | 6,520 43 |
| Toronto ....... ...... .... | 974 |  | .......... | 39,231 18,514 | 12,603 3,285 | 1,452 |  |  |  | 2,694 30 |
| London ....................... |  | .... ..... |  | 7, ${ }^{18,285}$ | ${ }^{3} 910$ | 3 |  |  | - | 1,32719 315 |
| Ottawa..... ............... | . ..... | .......... | ,.......... | 7,223 | 3,138 | 469 | 23. | .... |  | 54330 |
| St. Jobn ... .......... |  |  |  | 4,337 | 284 | 52 |  |  |  | 23543 |
| Kingston ................. | ........... | .......... |  | 6,812 | 566 | 446 | ....... | ....... |  | 38795 |
| Hastings................ | .... |  |  | 4,161. | 686 | 172 | ......0 |  |  | 25095 |
| Lincoln and Welland. |  | \|..... | ..... | 6,154 | 215 | 4 | 539 |  |  | 35858 |
| Perth and Huron....... |  | - |  | 2,(95 | 370 | 31 | 680 | 245 |  | 15993 |
|  | 151,877 | 142,064 | 15,679 | 139,839 | 31,771 | 7,973 | 5,744 | 2,053 | 30 | 15,091 29 |

A. BRUNEL,

Commissioner.

## Inland Revenue Department, Otrawa, 24th November, 1880.

Table showing Marks obtained by Candidates for Examination before the Inland Revenue Board of Examiners, during the Fiscal
 CANDIDATES WHO ARE ENTITLED TO A FIRST CLASS CERTIFICATE.







|  |
| :---: |



CANDIDATES WHO ARE ENTITLED TO A SEOOND-OLASS CERTIEICATE.


## APPENDIX 12.

Statement showing the result of the Special Class Examination, held at Hamilton on 13th, 14th and 15th October, 1880.

|  |  |  |  |  |  |  |  |  |  |  | Distillers' Stock Books. |  | $\begin{aligned} & \text { Bonded Manufactures } \\ & \text { Stock Books. } \end{aligned}$ |  | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Maximum value... |  | 250 | 75 | 100 | 100 | 125 | 100 | 200 | 150 | 100 | 125 | 75 | 1,500 |
| 1 | 24 | Oameron, D. M.. ..... | 98 | 207 | 55 | 79 | 88 | 113 | 98 | 200 | 150 | 100 | 125 | 75 | 1,388 |
| 2 | 25 | Gerald, Chas ......... | 90 | 234 | 71 | 79 | 73 | 90 | 100 | 200 | 150 | 100 | 125 | 75 | 1,387 |
| 3 | 26 | Striker, E. H........... | 83 | 216 | 70 | 98 | 98 | 125 | 82 | 193 | 145 | 100 | 125 | 50 | 1,385 |
| 4 | 27 | Iler, Burritt. | 92 | 210 | 70 | 78 | 74 | 90 | 87 | 200 | 150 | 100 | 125 | 75 | 1,351 |
| 5 | 28 | Lawlor, H... ............ | 98 | 207 | 69 | 78 | 70 | 117 | 100 | 200 | 150 | 100 | 110 | 50 | 1,349 |
| 6 | 29 | Biaby, J. C... ........... | 91 | 222 | 73 | 93 | 84 | 124 | 95 | 200 | 110 | 75 | 125 | 25 | 1,317 |
| 7 | 30 | Spearman, J.. ........ | 88 | 217 | 64 | 74 | 89 | 100 | 95 | 186 | 150 | 75 | 125 | 50 | 1,313 |
| 8 | 31 | Bennett, Jas............. | 77 | 197 | 55 | 91 | 75 | 120 | 77 | 200 | 145 | 100 | 125 | 50 | 1,312 |
| 9 | 32 | Dingman, N. J ........ | 69 | 164 | 62 | 69 | 79 | 98 | 87 | 200 | 150 | 100 | 125 | 75 | 1,278 |
| . 10 | 33 | Conway, B, J......... | 76 | 145 | 68 | 70 | 86 | 121 | 87 | 200 | 145 | 100 | 125 | 50 | 1,273 |
| 11 | 34 | Uusuccessful Candi- dates................... |  | 89 | 64 | 78 | $5 \%$ | 12 | 38 | 171 | 83 | 100 | 125 | 50 | 920 |
| 12 | 35 | do do .. | 59 | 139 | 54 | 62 | 60 | 86 | 75 | 200 |  |  |  | ..... | 735 |
| 13 | 36 | do do ... | 59 | 143 | 49 | 72 | 73 | 62 | 68 | 165 |  |  |  |  | 691. |
| . 14 | 37 | do do ... | 45 | 124 | 62 | 60 | 51 | 81 | 74 | 180 |  |  |  |  | 677 |
| 15 | 38 | - do do ... | 62 | 100 | 48 | 72 | 75 | 43 | 87 | 157 |  |  |  | . | 644 |
| 16 | 39 | do do .. |  | 81 | 63 | 56 | 49 | 63 | 51 | 148 |  |  |  | ...... | 566 |
| 17 | 40 | do do ... | 57 | 104 | 59 | 73 | 69 | 82 | 83 | ...... | ....... |  |  |  | 527 |
| 18 | 41 | do do ... | 52 | 109 | 61 | 47 | 61 | 90 | 51 |  |  |  |  |  | 474 |
| 19 | 42 | do do ... | 52 | 142 | 51 | 81 | 49 | 17 | 25 |  |  |  |  |  | 417 |
| 20 | 43 | do do ... |  | 135 | 39 | 67 | 48 | 48 |  |  |  |  |  |  | 380 |
| 21 | 44 | do do ... | 70 | 110 | 58 | 73 | 45 |  |  |  |  |  | . | .. | 356 |

Inland Revenue Department, Ottawa, 29th November, 1880.
A. BRUNEL,

Commissioner.

## INLAND REVENUE BOARD OF EXAMINERS.

Special Class Examination held at Hamilton, 13th, 14th and 15th October, 1880.
Conditions.
1st. Candidates are not allowed to use any books or manuscript for reference.
2nd. They must not leave the room until the questions placed in their hands have been disposed of.
3rd. The number of hours to be devoted to each subject will be specified on the Examination Papers, and upon the expiration of the time so allotted, the Papers, with such answers as the Candidates can give, must be given in. They should therefore refrain from occupying time upon questions with which they know themselves to be unacquainted.
4th. When questions require arithmetical computation, the work must be given in full.
5th. The first sheet of questions is to be signed in full by the Candidate ; to all other shoets his initials will suffice.
6th. A number will be assigned to each candidate on entering upon the Examination. 7th. The subject must be designated at the head of eaeh sheet, and the number of the question be prefixed to each reply.

| No. | SUBJECT. | No. of Questions. | Time Allowed. | Maximum Number of Marks Attainable. |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Hours. |  |
| 1 | Inland Revenue Laws:. | 19 | 2 | 100 |
| 2 | Distilling...... | 25 | 3 | 250 |
| 3 | Malting......... | 6 | 1 | 75 |
| 4 | Tobacco Manufacturing........................... | 12 | 1 | 100 |
| 5 | Bonded Manufactorics, Vinegar Testing, \&c.. | 11 | 1 | 100 |
| 6 | Malt Gauging ....... .............................. | 8 | $1 \frac{1}{2}$ | 125 |
| 7 | Hydrometer, Saccharometer and Specific Gra- <br> vities.. $\qquad$ | 10 | $1 \frac{1}{2}$ | 100 |
| 8 | Grain and Spirit Stock Taking......................... |  | $5{ }^{2}$ | 200 |
| 9 | Distillers' Stock Buoks............................. |  | 4 | 150 |
| 10 | Tobacco Manufacturers' Stock Books............ |  | 2 | 100 |
| 11 | Bonded Manufacturers' Stock Books............... |  | 1 | 125 |
|  | For Correct Results............... ............... |  |  | 75 |
|  |  |  |  | 1,500 |

N.B.-To pass. Special Class, candidates will be required to obtain fifty per cent. of each and every subject submitted, and eighty per cent. of the whole.

No. 1.

## INLAND REVENUE BOARD OF EXAMINERS.

## INLAND DEVENUE LAWS AND REGULATIONS.

Time :-Two hours.Value.
3

1. What Act or Acts now govern the management and collection of the
Revenue on goods manufactured subject to Exciso.
2. What is understood by the terms "Subject to Excise." ..... 3
3. How many methods are provided by law for computing the duty payable ..... 6
by Distillers? Name them?
4. What are the duties of an officer in making a survey of premises for which ..... 4
an application for licence has been made?
5. State the rospective licence fees payable by manufacturers and others ..... 5under the existing law?
6. Under what cunditions may apparalus suitable for distilling spirits be ..... 4manufactured or imported?
7. What is the nature of the information required before cancelling bonds ..... 6 given by manufacturers and others?
8. What are the provisions of the law in respect to persons carrying on ..... 6 business subject to Excise who fail or neglect to ronder all accounts, \&c., and to pay all duties and penalties at the proper time?
9. What are the requirements of the Inland Revenue Act as to weights and ..... 6Exciso?
10. What partial substitutes may be used for Malt in the manufacture of ..... 7 Beer? Under what conditions is their use lawful, and what arethe minimum proportions in which such substitutes may be used toentitle a Brewer to a refund of the duty on Malt so used?
11. Is the duty collected upon all Malt made for use in distilleries? State the ..... 6law in this respect?
12. Under what conditions is an Officer of Inland Revenue by himself or with ..... 6 assistants justified by the law in making a forcible entrance intopremises " subject to Excise?"
13. What information is necessary to be furnished by parties applying for ..... 7licenses to cultivate tobacco before the same can be granted?
14. What special provision is made in the law as to the mannerof determining ..... 5
the quantity of Malt chargeable with duty in case of dispute?
15. What is the maximum per cent of increase allowed on Malt placed in ..... 7Bond, and how are surpluses, if any, to be dealt with if a portion of
the Malt were exported?
16. What is the law in respect to the removal of goods from premises wherein ..... 5they were manufactured?
17. What are the duties of Officers seizing property as forfeited under tho ..... 5Act?
18. How may property seized be disposed of, if not claimed, or liable to ..... 3become deteriorated in value, or abandoned?
19. To what books and papers kept by, or the property of manufacturers,6may Officers of Excise have access, and under what circumstancesmay any of thom be removed from the premises?

# No. 2. <br> INLAND REVENUE BOARD OF EXAMINERS. DISTILLATION. 

Time-Three Hours.
Value.
5. Name the apparatus used, and the precautions which should be taken to prevent fraud in connection with the operation necessary to the completion of the manufacture of Spirits, after being charged with duty?
6. Suppose a tun of beer or wash had become attenuated to the gravity of water, would you consider that all the saccharine matter had been converted into alcohol?
7. Were the contents of a fermenting tun allowed to remain for a number

```
7
``` of days after fermentation was completed, would the indications shown by the saccharometer be reliable as to the prevention of fraud; if not, what additional precautions should be taken during the time the beer or wash is so kept?
8. What causes might arrest the process of the conversion of saccharino in solution, into alcohol?
9. If upon testing the product of ten tuns of beer or wash, numbers one to ten inclusive containing \(7,500 \mathrm{lbs}\). of grain each, and an aggregate of 39,199 gallons of beer, (having been run through a continuous still,) the product was found to be \(3,9 \overline{5} 5 \cdot 05\) proof gallons. A sample, however, was taken from tun number 2 , which only contained 3,873 gallons of beer, what should the alcoholic value of the sumple of beer indicate when distilled and tested?
10. What is the difference between Continuous and Intermittent Stills?
11. Name the different kinds of Stills in use in Canada.
12. Describe as minutely as you can the process of running, or working, Continuous Stills, from the commencement to the close of a day's operations, and should the strength of the spirits flowing from the tail of the worm during the time fall below the desired strength, what would be necessary to restore the strength required?
13. Describe the running, or working, of intermittont, or repeating Stills, viz., a pair of short Stills, a two-chambered Still, and a three-chambered Still respectively, extending the operation to the distillation of two, or more charges.
14. What do you understand by the terms "Testing Alcoholic Value," "Special Tests," and "Testing for Duty," respectively?
15. Describe the method of obtaining the alcoholic value of a quantity of beer, by means of tho ordinary apparatus used in distillories wor'zed with intermittent Stills, without having recourse to the Closed Receiver?
16. Preparatory to, and during the above process, what precautions should bo taken to insure obtaining correct results?
17. What is meant by "Low Wines," and how are they dealt with, both in the working of continuous and intermittent Stills?
should be taken to ensure accurate results?
21. Give the net product of the following charge, and stato the alcoholic value of the beer:-

> Charge 517 gallons beer.
> Entiro contents of tun 12,017 gallons beer. And 1,500 lbs. grain.

18. Describe the method of taking a "Special Test," and what special momoranda are necessary to make in official diary, beyond the detailed record of such test.
19. Why is it specially necessary to take the above tosts, and where should the results be recorded?
20. Describe fully the method of "Testing for Duty," and what precautions
22. If upon examination of a closed receiver preparatory to taking a special tost
it was found to contain 100 gallons of water and af:er the product of the tun to be tested was run into it, it contained 550 gallons at 10.6 o. p., what was the strength of the product of the tun? If the receiver contained 200 gallons of spirits at 35.6 o. p., instead of water, and after the product of the tun was run into it 560 gallons were found at \(\mathbf{4 2 . 4} \mathrm{o}\). p., what was the strength of the spirits, the product of the tun?
23. Casks of spirits Nos. 1 to 27 inclusive containing 10,530 pounds net at 50 o. p. were removed from a distillery in bond, and upon arrival at destination Nos. 1 to 10 inclusive was found 30 lbs . short, and Nos. 11 to 15 inclusive, 20 lbs ., the balance of the quantity was correct as to weight, but the whole only tested 48.1 o. p., work out and shew deficiency on Form No. 18. Explain how the deficiency found should be dealt with, in the Division from which it was removed, and in the Division in which it was received, also in the Stock Book of the Distiller and in the Semi-Annual Stock Statement and Warehouse Ledgers; if the above were a surplus instead of a deficiency, explain how it should be dealt with?
24. In the ordinary working of intermittent stills, in testing the alcoholic value of a quantity of beer, or in taking a special test, should the drop valve in the connection between the bottom of the doubler and still be left open, either by design or accident, thereby allowing the low wines from the preceding charge to flow into the still, instead of being retained in the doubler, how would you proceed to reclaim the low wines with a view to obtaining the correct alcoholic value of the charge of beer then in the still?
25. Suppose three casks of spirits containing 45, 4 S and 50 standard gallons respectively, and marked 500. p., upon being tested are found to be only 48 o . p., what quantity would it be necessary to remove from each cask the same to be replaced by spirits \(65 \mathrm{o} . \mathrm{p}\)., to bring the strength up to \(50 \mathrm{o} . \mathrm{p}\).? In another case three casks of same capacities and marked 25 u . p., were found to be 27.5 u . p., what quantity would it be necessary to remove from each, and replace the same by 50 o. p., to bring the strength up to 25 u.p.? Give the work for each case in full?

No. 3.

\section*{INLAND REVENUE BOARD OF EXAMINERS.}

MALTING.
Time-One hour.
1. What is Malt ? ..... 10
2. What chemical changes does grain under goin the different processes neces- sary to the production of Malt? ..... 11
3. Do you consider a greater quantity of spirits is obtainable from grain suitable for Malting than from Malt the product thereof, when not use in combination with other grain? ..... 11
4. For what reason other than its adaptability to the production of the best qualities of ales or beer, is barley generally used for Malting? ..... 16.
5. Is Malt intended for porter differently troated to that intended for ale or beer? if so, describe the treatment. In what proportion is Malt so treated generally used? Does this treatment impair or improve its saccharine value? ..... 16
6. From your own personal knowledge state minimum and maximum times in which barley may be converted into Malt by different Maltsters? ..... 1175
No. 4.
INLAND REVENUE BOARD OF EXAMINERS.
TOBAC00.
Time-One hour.
1. What are the different kinds of Tobacco upon which Excise Duty is levied? ..... Value. ..... 5
3. Does the same description of Leaf always contain the same per cent of moisture? Explain when it might contain more, and when less than the standard allowance ? ..... 10
4. Explain minutely the process of manufacturing Plug or Cavendish Tobacco, also tabac blanc en torquette. ..... 20
5. What process does Leaf Tobacco undergo after being grown before it acquires the flavor peculiar to Manufactured Tobacco ? ..... 5.
6. Explain as concisely as possible the process of cultivating Tobacco until it is fit for the market? ..... 20
7. How is Snuff manufactured, and what ingredients are generally used in! addition to the Tobacco? ..... 5
8. In testing a sample of Tobacco weighing. 564 of a pound, I find the weight is reduced to. 493 of a pound : what per cent. of moisture did it con- tain? ..... 5
9. What part of the Leaf contains the most moisture, and why ? ..... 310. At what period is the duty levied on Plug Tobacco and Cigars, and atwhat time is the manufacture considered completed?7
11. What per cent. of weight might be allowed for stems in Raw LeafTobaceo?
12. Could you distinguish in Manufactured Tobacco whether other leaves than Tobacco had been used ? If so, how?

\section*{No. 5. \\ INLAND REVENUE BOARD OF EXAMINERS.}
bONDED MANUFACTORIES AND VINEGAR TESTING.
Time-One hour.
Value. —.
1. What is a Bonded Manufactory, and what articles may be manufactured therein? Name those most generally mado.6
2. Describe the process of Vinegar Manufacture, and name what invisible element is utilized, and how. ..... 15
3. How might a Bonded Manufacturer defraud the Revenue, and can it be done successfully without the assistance of the officer in charge, or by his neglect? ..... 10
4. How should the Vinegar made in a factory compare with the spirits and other materials used, except water. ..... 8
5. What are the duties of an Officer in charge of a Bonded Manufactory? ..... 12
6. In the Manufacture of Methylated Spirits, what materials are used, in what proportions, and what standards must they be, and by whom supplied? ..... 10
7. In testing Vinegar what solution is used, and why ? ..... 5
8. Give an explanation of how the constant factor 5.1 is derived, or what it represents? ..... 7
9. Supposing a sample of Vinegar of 100 grains to be 6.5 o p. how many, grains of the standard solution would be required to neutralize it ? ..... 9
10. Describe the mode of making a standard solution of Ammonia for Vinegar Testing as used in the Excise, and how is the proper gravity ascer- tained? ..... 7
11. Supposing it requires 200 grains of the standard solution of Ammonia to neutralize the acid in 235 grains of Vinegar, what is the strength of the Vinegar, and what per cent. of Acetic Acid does it contain? ..... 11
No. 6.
INLAND REVENUE BOARD OF EXAMINERS.
malt gataing.Time-One and a half hrurs.
1. What is the steeping capacity of a cistern that will hold 4,000 gallons of Value. ..... 12 water? Give result in cubic inches, and malt measures.
2. If called upon to grant Certificates of Capacity for a Malt-House, how ..... 15 many steep cistern of the above capacity would you authorize being used by persons holding 1st, End, 3rd and 4th class Licenses respect- ively?
3. What compensating factor may be used in computing the capacity of ..... 11 Nalt-Houses, in lieu of the method given in Circular No. 150, and how ascertained? ..... 14 signify or represent, and what computations may be facilitated by their use.
5. Required the diameter of a steep cistern having a steeping capacity of 80 ..... 20 centals of Barley, weighing 22 pounds to M.C. I., the depth of the cistern boing 48 inches.
6. What would be the length of a Couch-frame having a depth of 30 inches ..... 18
and width 72 inches capable of holding the above steop, the Couch-frame being filled level with the top?
7. A Cylindrical Cistorn whose diameter is 103 inches having a drip of \(2 \frac{1}{2}\) ..... 15inches is filled with dry barley to the depth (gruginer from the lowestside) of 60 inches, what quantities should be found upon taking thefollowing gauges?
Couch Gauge. Floor " Kiln "
8. A Cylindrical Steep Tub, whose external circumference at the top of the20stave is 24 feet, and inside dopth 5 feet 6 inches, is half filled withBarley-supposing the staves to be 2 inches thick at top, how manypounds of barley at 22 pounds per M. C. I. does it contain, and howmany cubic inches and pounds of Malt woull you expect to obtainfrom the Barley when Malted.

\section*{No. 7.}

\section*{INLAND REVENUE BOARI OF EXAMINERS.}

\section*{HYDROMETER, SACCHAROMETER AND SPECIFIC GRAVITIES.}

\section*{Time-One and a half hours.}
1. What part of the specific gravity of water does each sub-division on the ..... Value. ..... 5 stem of the Saccharometer indicate?
2. In testing a sample of worts at \(60^{\circ}\), the Saccharometer with the poise ..... 71000 attached floats with the division 15 at the surface; what is thespecific gravity of the worts? How many degrees, and what percent. heavier than water?
3. What does the factor 045 given in Circular 109 signify or repesesent?8
4. Describe the process necessary for obtaining the alcoholic value of a ..... 13sample of beer or wash removed from a distillers.
5. Describe the process of obtaining the quantity of malt used in the manu- ..... 12
facture of ale or bear.6. What was the original specific gravity of a sample of Molasses, if after20being diluted with six times its own bulk of distilled water, itindicated a specific gravity of 1.054 , and how many standard gallonswould there be in a hogshead containing 1140 lbs . net?
7. If a vessel were found to contain 2500 gallons of spirits by measure at \(37^{\circ}\) ..... 10temperature, and 48 over proof, how many gallons by measure wouldthere be at \(62^{\circ}\) temperature. Give and describe the work fully?
8. Will the strength of the same sample of spirits as shewn by Sikes' ..... 5Hydrometer at different temperatures compensate for the expansionand contraction in volume, and why?
9. In what way may the indications of Sikes' Hydrometer be utilized to ..... 15compensate for expansion and contraction of spirits at different tempe-ratures and thereby give the equivalent bulk at 62e? Give an illus-tration.
10. Would the strength of a volume of spirits be changed if lowered from \(62^{\circ}\) to ..... 5\(33^{\circ}\) temperature, thereby contracting the volume say 4 p.c. ; and why? 100

No. 8.

\section*{inland revenue board of examiners.}

STOCK TAKING.-GRAIN.

Time-2 hours.
1. A reatangular bin full of malt with the exception of the space occupied in \(\left\lvert\, \frac{\text { Valce }}{20}\right.\)
one corner by a hopper which is empty. Dimensions of bin, opposite sides \(148 \mathrm{in} .\), ends 114 in ., depth \(8 \mathrm{ft} .6 \mathrm{in} . ;\) the hopper is at the top 45 in. by \(40 \mathrm{in} .\), and at the bottom 10 by 3 in ., and of the same depth as the bin, two of its adjacent sides being formod by the side and end of the bin, and the other two sloping from the top to the bottom, as indicated by the dimensions above given. A measure of 1 M. C. I. is found to weigh 10 lbs . How many centals of malt are there in the bin to 2 places of decimals?
2. The stock of Indian corn is found thrown up against the end wall of a gra-
nary 27 feet 6 inches in width. It extends along the side walls at the base 20 foet, within which dimensions it is confined by boards running across the granary parallel to the end wall to the height of 4 feet. From the top of these boards the grain slopes even!y up to the height of 10 feet against the end wall. A measured sample of 1 M. . C.I. weighs \(\_8 \mathrm{lbs}\). What is the aggregate quantity?
3. In addition to a bin containing 137.37 centals, there is a further lot of rye extends 30 feet along either wall and is confined by boards to the height of 4 feet, from the top of which it slopes evenly back to the top of the pile which is levelled off at 148 inches from the floor. At the top it extends six feet along either wall. A sample weighs 26 lbs. to the M. C. I. How many centals of rye are there in all?
4. A bin containing nats, weighing 16 lbs to the M. C. I., is of the following dimensions:-10 feet long, 8 feet 4 inches wide, and 83 inches in depth. State the aggregate quantity in bin.
5. There were found piled up in a corner of the granary 19 barrels, each having a capacity of 50 Imperial gallons which had been temporalily filled with wheat. A sample, weighed 28 l bs. to the M. C. I. State the aggregate quantity.
6. In addition to the above a quantity of mill offal was found to weigh 8,347 lbs., which, with the above completed the entire Stock taking of grain.

Note.-The candidate is required to take a memorandum of the results of these computations, in order that he may enter them as the actual stock on hand, after writing up the Grain Stock Book, which will be the subject of a succeeding paper.
SPIRITS
Time- 3 hours.In taking Stock of the Spirits in the Distillery, the following gauges weretaken, from which to compute the quantities at leisure. The rectifiers havingbeen shut off at bottom at the time of stock taking :
1. Five rectifiers, each containing Spirits at \(30 \mathrm{u} . \mathrm{p} .\), , ..... 25
Bottom diameter 60 inches.
Top ..... C5 "
Depth ..... 100 "
Space between false and real bottom ..... 2 "
Thickness of false bottom. ..... 2 "
Depth of coal ..... 80 "
Wet dip over coal ..... 6 "
2. Five Rectifiers containing Spirits at proof in process of rectification,- ..... 25
Bottom diameter ..... 110 inches.
Top ..... 100 "
Depth ..... 100 "
Otherwise the same gauges as the above.
3. Receiver No. 1 contains spirits 65 o. p.,- ..... 22
Bottom diameter. 140 inches.
Top ..... 130 "
100 ..... "
Wet dip ..... 75 "
In this Receiver was discovered an encumbrance in the form of a scantling\(3 \times 3 \frac{1}{2}\) inches, resting on the bottom of the vessel and supporting the top.4. Receiver No. 2 containing spirits at 50 o. p.,-10
Bottom diameter 135 inches.
Top ..... 128
Depth ..... 110 "
Wet dip ..... 93
5. Receiver No. 3 containing spirits at 8 u. p.,-10
Bottom diameter. 160 inches.
Top ..... 150 ..... 150 "
Depth ..... 120
Wet dip. ..... 112 "
6. The Mixing Tub containing spirits at'30 u. p.,-10
Bottom diameter. 160 inches.
Tup ..... 157 "
Depth ..... 50 "
Wet dip ..... 42 "
7. The Still Charger contained spirits at 30 u. p., - ..... 10
Bottom diameter 165 inches.
Top ..... 155 "
Depth ..... 144 ..... "
Wet dip ..... 140
8. The Low Wines Tub contained spirits at 20 u. p.,-10
\begin{tabular}{|c|c|}
\hline Bottom diametor. & 70 inches. \\
\hline Top & 60 " \\
\hline Depth. & 75 \\
\hline Wet dip. & 60 \\
\hline
\end{tabular}9. In a ldition to the spirits in bond, namely 838 pkgs., aggregating 44,93: 64proof gallons, the following were found, duty paid, on distillery pre-mises, viz.:-

Nors.-The aggregate quantity of spirits, as ascertained by the above compntations, will
Nors.- The aggregate quantity ot spirits, as ascertained by the abil therefore take a note be required to close the paper on Stuck Book No. 2. The candıdate will therefore take a note
of it before giving in this paper.
\[
\begin{gathered}
\text { No. } 9 . \\
\text { INLAND REVENUE BOARD OF EXAMINERS. }
\end{gathered}
\]

\section*{DISTILLER's sTOCK BOOKs.}

\section*{Time-Three hours.}
Massrs. W. Thompson \& Co., of London, commenced operstions as Distillers upon t'ie 1st day of August, 1874, with the tollowing stock of grain and spirits :Un the 16 th of the same month operations were stayed and stock was taken, the result of such stock-taking being that recordod in the preceding paper.
The candidate is required, from the information afforded by this paper, to write up the Stock Books Nos. 1 and 2, and make out S. M. Return and Form G. No. 7.

\section*{STOCK ON HAND, 18t AUGUST, 1874.}
\begin{tabular}{|c|c|c|}
\hline & & Value. \\
\hline \multicolumn{2}{|l|}{Grain. Oentals.} & \\
\hline Malt, domestic................................................... & \(301 \cdot 76\) & \\
\hline Indian corn, foreign...................... ........................ & 1,773•14 & \\
\hline Rye, domestic......................... ..... ...................... & 1,238 12 & \\
\hline Oats and other grain.......................................... & 169.80 & \\
\hline Wheat.... & 76.08 & \\
\hline Mill offal. & 64.78 & \\
\hline Tota & 3,623•68 & \\
\hline \multicolumn{3}{|l|}{Spirite.} \\
\hline \multicolumn{2}{|l|}{Proof gallons..................................................... 76,338.76} & \\
\hline \multicolumn{2}{|l|}{Of which......................... .............................. 30,575.53} & \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Being 486 packacres, were in Bonded Warchouse, and the remainder, Duty paid, Ex.Distillery.}} & \\
\hline & & \\
\hline
\end{tabular}

PURCHASES FROM 1st AUGUST TO 16tir AUGUST.
\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Aug. 3. J. Williams, Detroit, per G. T. R., Indian Corn.... 4,000. 00}} \\
\hline & & \\
\hline & 5. Removed from own ma & \(30 \cdot 00\) \\
\hline " & 6. & \(46 \cdot 20\) \\
\hline " & 7. & 30.00 \\
\hline & 10. J. Benson, Township of Middlesex, per waggon,oats & 123.72 \\
\hline & 11. Removed from own malt house, mal & 24.00 \\
\hline & 11. J. Williams, Detroit, corn. & 66.68 \\
\hline & 12. Removed from mali house, malt & 16.00 \\
\hline & 13. Tecumseh Mills, per waggon, mi & \(160 \cdot 10\) \\
\hline & 14. Removed from malt house, mal & 31.72 \\
\hline & 15. W. Thomas, Guelph, G. T. IR., r & 040-52 \\
\hline \multicolumn{3}{|r|}{Total...... .................................... ..... 6,567.52} \\
\hline \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Aug. 15. Purchased from Walker \& Sons, Windsor, 344 packages, containing 18,119 gallons of whiskey, 25}} \\
\hline & & \\
\hline
\end{tabular}

GRAIN MASHED, OR OTHERWISE ACCOUNTED FOR.


\section*{SPIRITS REMOVED FKOM PREMISES.}

Aug. 5. Shipped 100 brls. duty paid spirits, E,130 G. 25 u. p., to G. Barber, Stratford, per G. T. R., marked 3.74 c. 1 @ 100.
Aug. 6. Shipped 100 brls. spirits in bond, 5,119 gallons, 50 o. p., to W. M. Lotbridge, Hamilton, per G. T. R., marked \({ }_{3}{ }_{3 \cdot 74 \text { c., }}^{\text {N. B. }} 1\) @ 100.
Aug. 10. Shipped 100 brls. duty paid spirits, 5,145 gallons, 25 u. p., to James Cowan, Toronto. per G. T. R., marked \(3 \cdot 37\) c., 1 @ 100.
Aug.'15. Shipped to Ramsay \& Co., Toronto, per G. T. R., in bond, marked :-
O. N. B. 18.
3.74
\} Nos. 253 @ 343, 96 brls. spirits, 25 u. p. 4,932 gallons.
\(\}\) " 349 @ 352, 4 " 50 o.p. 209 "
Aug. 15. Shipped J. Williams, St. John, N. B., per G. T. R., in bond, marked O. N. B. \(\underset{3 \cdot 75}{16,}\}\) No. \(51 @ 100,50\) brls. spirits, \(5^{\prime}\) ) o. p., 2,588 gallons.
A. 1881

MEMORANDUM OF DETALiS SHOWN IN LOCK-LABEL BOOK DURING THE FIST HALF OF AUGUST, 1874.
\begin{tabular}{ccccccc} 
Date of Test. & Beer & Grain. & G. in C. R. & Strength. & Proof Gals. \\
Aug. & 3. & 49,580 & 90,150 & 4,034 & \(35 \cdot 3\) & o.p.
\end{tabular}

Of this quantity there was:-
\(\left.\begin{array}{c}\text { Entered for Warehouse, } 602 \text { brls.......... } \\ \text { Entered for duty, Ex-Distillery. . ....... } \\ 6,761 \cdot 12\end{array}\right\}\) Proof gallons.
The stock on hand at the close of the half-month, both as to grain and spirits, was that produced by the computations on the preceding paper.

No. 10.

\section*{INLAND REVENUE BOARD OF EXAMINERS.}

BTOCK BOOK8.-TOBACOO.
Time-Two hours.

lxxiv

PURCHASED DURING ONE MONTH AS UNDER.

Hbds. Raw Leaf Customs Entry. Lbs.
\begin{tabular}{|c|c|c|c|c|c|}
\hline & From J Williams & 18 & 12,369 & 46,791 & \[
\begin{aligned}
& \text { per cent } \\
& \text { Nil }
\end{aligned}
\] \\
\hline July 3, & From J. Williams, & 25 & 13,234 & 36,500 & 1,500 \\
\hline " 10 , & New York, arriv- & 30 & 15,016 & 50,120 & 2,500 \\
\hline & ing at the dates & 27 & 16,115 & 40,237 & 1,200 \\
\hline  & set opposite. & 15 & 16,475 & 19,652 & 3,820 \\
\hline
\end{tabular}

July 17. From Walker \& Co., Montreal, 100 cases liquorice, 164,748 lbs.
25.100 hhds . sugar. 201,608 lbs.

The following quantitics of raw mater:al had been taken into use in the manufacture of Tobacco :-
\begin{tabular}{|c|c|c|c|c|c|}
\hline & Foreign Pkgs. & Tobacco Lbs. & Liquorice. Lbs. & \begin{tabular}{l}
Sugar. \\
Lbs.
\end{tabular} & Gum. Lbs. \\
\hline July 3, & 20 & ( 25,500 & 7,325 & 2,000 & \\
\hline " 5, & 26 & | 33,168 & 7,410 & 2,000 & 100 \\
\hline " 8, & 23 & 29,525 & 7,106 & 2,000 & \\
\hline " 10, & 24 & 36,600 & 8,000 & 2,000 & \\
\hline " 12 , & 22 & 28,050 & 8,124 & 2,0:0 & \\
\hline " 14, & 21 & \{26,325 & 7,116 & 3,000 & \\
\hline " 16, & 25 & 31,425 & 8,000 & 1,000 & 50 \\
\hline " 21, & 23 & 29,325 & 8,000 & 2,000 & \\
\hline " 23, & 24 & 30,600 & 7,500 & 3,000 & \\
\hline " 28, & 22 & 28,050 & 8,000 & 3,000 & 50 \\
\hline " 31, & 23 & (29,325 & 8,000 & 2,000 & \\
\hline
\end{tabular}

Foreign Raw Leaf Tobacco
Pkgg.
Lbs



Liquorice.

Proportion of
weight due to weight due to moisture in excess of 10 per cent.

THE MANUFACTURED TOBACCO PRODUCED WAS AS FOLLOWS:
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline & Pkgg. & Lbs. & \multicolumn{5}{|r|}{\multirow[b]{6}{*}{Entered for Ent'd for ConsumpWarehouse, tion Dre-Factory.}} \\
\hline July, 2 & 414 & 18,216 & & & & & \\
\hline " 3 & 205 & 9,103 & & & & & \\
\hline " 6 & 61 & 26,840 & & & & & \\
\hline " a & \(41^{0}\) & 18,260 & & & & & \\
\hline " 10 & 41 & , & & & & & \\
\hline " 13 & 614 & 27,016 & \multirow[b]{2}{*}{July 15:} & Pkgs. & Lbs. & kg & \multirow[t]{2}{*}{5831} \\
\hline " 15 & 444 & 18,256 & & \multirow[t]{2}{*}{3,056} & 130,199 & \multirow[t]{2}{*}{63} & \\
\hline " 18 & 540 & 23,760 & & & & & \\
\hline " 20 & 360 & 15,840 & & & & & \\
\hline " 22 & 331 & - 041 & & & & & \\
\hline " 25 & & 23,0)3 & & & & & \\
\hline " 28 & 530 & 23,300 & & & & & \\
\hline " 31 & 537 & 20,621 & \[
\text { " } 31,
\] & 2,805 & 117,650 & & \\
\hline
\end{tabular}

\section*{MANUFACTURED TOBACCO DISEOSED OF AS FOLLOWS :}

July 2, Sold John Smith, London:-
125 pkgs. Tobacco, 4,375 lbs., duty paid.
" 3. Sold James Thompson, Guelph:-
260 pkgs . Tobacco, 12,0コ0 lbs., for removal in bond.
" 6. Sold Samuel Merrit :-
200 pkgs . Tobacco, 8,500 lbs., for export.
" 8. Sold John Brown, Montreal :-
20 pkgs. Tobacco, \(9,100 \mathrm{lbs}\). transferred.

July 10. Sold Peter Robertson, Kingston :300 pligs. Fobacco, \(23,250 \mathrm{lbs} .\), for removal in bond. 1,250 " " 53,125 " for export.
- 10. Stems destroyed by order of Department, \(3 \because, 560\) lbs.
" 10. Sold Samuel Millar, Pertb:-
300 pkgs. Tobacco, \(10,500 \mathrm{lbs}\)., duty paid.
16. Paid duty Ex-Warehouse, and taken into stock :\(1,650 \mathrm{pkgs}\). Tobacco, \(45,890 \mathrm{lbs}\).
18. Sold Wm. Daniels, Prescott :-

1,000 pkgs. Tobacco, \(46,599 \mathrm{lbs}\)., for removal in bond.
2. Sold Joshua Wilson, Montreal :-

10 pkgs . Tobacco, \(1,074 \mathrm{lbs}\)., transferred.
" 25. Sold Donald McDonald, Cornwail :-
500 pkgs. Tobacco, 17,764 Ibs., duty paid.
" 28. Stems destroyed by order of Department, 27,365 lbs.
: 31. Sold John Thomas, Montreal :-
3 pkgs. Tobacco, シ18 lbs. transferred.
\(\qquad\)

No. 11.
INLAND REVENUE BOARD OF EXAMINERS.
Bonded Manufacturers' Stock Books, \&c.
Time-Two hours.

Commenced operations on the first of August, 1880, with the following stock on hand, viz. :

Vinegar, 10 Casks, 420 galls., at \(4.4 \%\) A.A.
4414.06 gallons Proof Spirits and 2,401 gallons of Sour Beer.

During the first half of August the following quantities of Vinegar were produced, all of which were Warehoused:-

August 2, 450 gallons, containing 6.273 per cent. of Acetic Acid.
\begin{tabular}{lllllll} 
" & 3,465 & " & " & 6.120 & " & " \\
" & 4,920 & " & " & 5.916 & " & " \\
" & 5,420 & " & " & 6.120 & " & " \\
" & 6,845 & " & " & 6.018 & " & " \\
" & 7,490 & " & " & 6.324 & " & " \\
" & 9,510 & " & " & 5.916 & " & " \\
" & 10,940 & " & " & 6.528 & " & " \\
" & 11,380 & " & " & 6.374 & " & " \\
" & 12,460 & " & 13,350 & " & " & 6.120 \\
" & 14,490 & " & " & 6.420 & " & " \\
" & 15,470 & " & " & 6.320 & " & " \\
\hline
\end{tabular}

1800 gallons spirits at proof were used as mix free of duty, and 3,500 gallons containing 5.7 per cent. of A. A. were removed from the factory duty paid, and 420 gallons containing 6.12 per cent. of A. A. were removed in Bond during the above-mentioned period.

The Candidate is required to reduce the several quantities"to proof gallons, make out S. M. Return and fill in Semi-Annual Stock Statement; none of the atock to be considered in process at close of period,

\section*{FINANCIAL RETURNS, 1879-1880.}
Dr.
No. 1.-GENERAL REVENUE ACCOUNT, 1879-80.

44 Victoria. Sessional Papers (No. 4.)
1)R.


\title{
EXCISE \\ No. 3.-Collection Divisions (For Details, see:
}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Balances } \\
\text { due } \\
\text { 1st Jnly, } \\
1879 .
\end{gathered}
\]} & \multicolumn{8}{|c|}{Amounts accrued during the year, including License Fee} \\
\hline & Spirits. & Malt & alt. & Tobacco. & etroleum
aspection
Fees. & Bonde Manufa & eizures. & Other Receipts \\
\hline 4120
1,15118 & 81,475 68, & \[
\begin{array}{rr}
50 & 00 \\
200 & 00
\end{array}
\] & ,472 190 & 17,460
450
40 & & & & \\
\hline \multirow[t]{2}{*}{…................} & 12,332
8,458
88 & \[
\begin{array}{cc}
180 & 00 \\
25 & 00
\end{array}
\] & ............ & -............... & ….................. & .............. & \multicolumn{2}{|l|}{…......... \(\mid\).............} \\
\hline & \[
\begin{array}{r}
8,458 \\
68 \\
6,444 \\
\hline 10
\end{array}
\] & \[
\left\lvert\, \begin{array}{r}
\ldots . . . . . . . . . . . ~ \\
550
\end{array}\right.
\] & 6,276 11 & \(\begin{array}{r}979 \\ 4,619 \\ \hline 10\end{array}\) &  & ............ & …12 15. & \multirow[t]{2}{*}{} \\
\hline 60374 & \[
\begin{array}{ll}
0,434 & 41 \\
28,350 & 30 \\
68,961 & 23
\end{array}
\] & \[
82500
\] & 27,800 76 & 13,778 30! & 1,296 30 & & & \\
\hline 2,386 08 & \[
90,609 \quad 42
\] & & 11,789 81 & 203,402 20 & 3120 & 10,449 27 & & \\
\hline 331 & 65,582 76 & & 5,870 87 & 89,361 93 & & \multirow[t]{2}{*}{\[
\begin{array}{r}
4,43119 \\
25885
\end{array}
\]} & 2500 & 1,09200 \\
\hline 831 & 80,775 14 & \multirow[t]{2}{*}{\[
\begin{array}{ll}
400 & 00 \\
200 & 00
\end{array}
\]} & 39,839 33 & 92,767 60| & 8,422 60 & & & 45000 \\
\hline & \multirow[t]{2}{*}{91,699
39,560
39} & & \multirow[t]{2}{*}{3,465
3,837
37} & \multirow[t]{2}{*}{40,23646
45,192} & \multirow[t]{2}{*}{........... 160} & ............| & 2748 & \multirow[t]{2}{*}{5000
10000} \\
\hline 724 & & \[
\begin{aligned}
& 9 \\
& 9
\end{aligned} \quad \begin{array}{lll}
200 & 00 \\
\hline
\end{array}
\] & & & & \multirow[t]{2}{*}{........ ...} & \multirow[t]{2}{*}{8...... \(2 . .\).} & \\
\hline & \[
23,03889
\] & 10000 & 3,837 37 & 4,658 50 & 16080 & & & 100 00 \\
\hline & \multirow[t]{2}{*}{25,660 83} & 5000 & 2,483 48 & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{2,974 90'}} & \multicolumn{3}{|l|}{....... ........ .............. ...............} \\
\hline 168 & & 15000 & 15,473 09| & & & \[
\left\lvert\, \begin{gathered}
\text {............. } \mid \\
\ldots . . . . . ~ . . . ~
\end{gathered}\right.
\] & \multirow[t]{2}{*}{250} & \multirow[t]{2}{*}{...............} \\
\hline 288 & 20,501 32 & 5000 & 64468 & 3,857 10 | & 4,101 25 & \multirow[t]{2}{*}{... .........} & & \\
\hline 16760 & 28,878 30 & 20000 & 8,760 56 & 6,891 09 & & & ......... & ............. \\
\hline \multirow[t]{2}{*}{1,84670
60238} & \multirow[t]{2}{*}{\[
\begin{aligned}
& 190,878821 \\
& 355,37053
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& 750 \\
& 225 \\
& 200
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\begin{array}{rl}
74,151 & 31 \\
7,414 & 99
\end{array}
\]} & \multirow[t]{2}{*}{\[
\begin{array}{r}
234,25307 \\
25,613
\end{array} 14!.
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
77410 \\
\ldots . . . . . . .
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& 8,33926 \\
& 1,529 \quad 27
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\begin{array}{r}
2,877 \\
10 \\
10 \\
50
\end{array}
\]} & \multirow[t]{2}{*}{\[
\begin{array}{r}
1,44250 \\
60175
\end{array}
\]} \\
\hline & & & & & & & & \\
\hline *14,449 91 & 1,253,429 71 & 4,835 0 & 216,359 27 & \multicolumn{2}{|l|}{769,304 71 14,921 80} & \multicolumn{2}{|l|}{25,107 84, 10,974 71} & 47570 \\
\hline & 2,328 48 & \multicolumn{2}{|l|}{...... ........|} & \multicolumn{2}{|l|}{\[
22808
\]} &  & ........ & ........... \\
\hline 11,233 & \multirow[t]{2}{*}{504,466 35
\(\mathbf{2 3 1 , 4 2 4} 32\)} & 50000 & 37448
51,38583 & \multicolumn{2}{|l|}{228
354,254
71} & \multirow[t]{2}{*}{-1..6. \({ }_{\text {6,424 } 97}\)} & 10496 & 10000 \\
\hline & & & 3,099 64 & 126,803 58. & \multirow[t]{2}{*}{......................} & & \multirow[t]{2}{*}{2,59233
3630} & \multirow[t]{2}{*}{} \\
\hline & \multirow[t]{2}{*}{\[
\begin{array}{rl}
24,338 & 58 \\
6,278 & 42
\end{array} .
\]} & \[
\begin{array}{ll}
51 & 00 \\
50 & 00
\end{array}
\] & 3,171 84 & 1,013 60 & & ................ & & \\
\hline & & \multirow[t]{2}{*}{……7.0.0.} & . & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{......... ...... |........ .. ......}} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{.......... .......... ..|.............}} \\
\hline & \multirow[t]{2}{*}{\[
\begin{array}{ll}
24,570 & 52 \\
15,108 & 91
\end{array} .
\]} & & & & & & & \\
\hline 14640 & & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & 1,365 50 & ........... ....... & \multicolumn{2}{|l|}{…........... ............. 641} & \multirow[t]{2}{*}{} \\
\hline 30429 & \begin{tabular}{|c|c|}
\(15,1 . . . . . . . . . . \mid\) \\
11,169 & 69
\end{tabular} & & & 6360 & & & 1760 & \\
\hline 11 & 819,885 27 & \[
72500^{\prime}
\] & 58,488 62 & 483,806 07 & 40 & \multicolumn{2}{|l|}{6,424 \(97 \quad 2,81560\)} & 10000 \\
\hline 953 & \multirow[t]{3}{*}{\[
\begin{array}{rr}
63,081 & 30 \\
531 & 90 \\
66 & 73
\end{array}
\]} & \multicolumn{2}{|l|}{\multirow[t]{3}{*}{}} & \multicolumn{2}{|l|}{\multirow[t]{3}{*}{\[
\begin{array}{r|r|}
9,730 & 90 \\
130,615 & 90 \\
12,178 & 10 \\
8, \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . ~ & \ldots 29 \\
8, & \text {.............. }
\end{array}
\]}} & \multicolumn{3}{|l|}{\multirow[t]{3}{*}{}} \\
\hline & & & & & & & & \\
\hline 100 & & & & & & & & \\
\hline 9635 & ,670 83' & \multicolumn{2}{|l|}{} & 160,854 20 & ......... & 35637 & 1785 & 37500 \\
\hline 9318 & \[
\begin{array}{r}
1,051 \quad 62 \\
97,92759
\end{array}
\] & ............... & \[
3,42644
\] & \[
\begin{array}{r}
16,22310 . \\
138,17080
\end{array}
\] & \begin{tabular}{l}
................ \\
-******* * * * + .
\end{tabular} & \multicolumn{2}{|l|}{1,380 02 .............} & 60000 \\
\hline & 1 & 10000 & 3,426 44 & 154,393 60 & & \multicolumn{2}{|l|}{1,380 02 ............} & 00 \\
\hline & \multirow[t]{3}{*}{\[
\left.\begin{array}{rrr}
13,597 & 99 \\
33,824 & 43 \\
9,778 & 19
\end{array} \right\rvert\,
\]} & \multirow[t]{3}{*}{\[
\begin{array}{ll}
100 & 00 \\
250 & 00 \\
150 & 00
\end{array}
\]} & \multirow[t]{3}{*}{\[
\begin{array}{ll}
1,793 & 79 \\
3,810 & 34 \\
5,876 & 36
\end{array}
\]} & \multirow[t]{3}{*}{\[
\begin{array}{ll}
27,859 & 80 \\
27,937 & 12 \\
15,251 & 20
\end{array} .
\]} & \multirow[b]{2}{*}{..................} & \multicolumn{3}{|l|}{\multirow[b]{3}{*}{........ ....... ..... 2000}} \\
\hline 48641 & & & & & & & & \\
\hline 199 & & & & & & & & \\
\hline 1,563 & 57,200 61 & 5000 & 11,480 4 & 75,048 12 & & & & 000 \\
\hline \({ }^{2} 29\) & 2,292,974 63 & 6,410 & \multicolumn{2}{|l|}{298,187 72 1,643,406 70} & \multicolumn{4}{|l|}{6,426 20 33,269 20 13,907 \(86 \quad 7,57070\)} \\
\hline & 14499 & \[
7500
\] & 7521 & \(8250)\) & & & 0 & \\
\hline & \[
2,292,82964
\] & \multicolumn{7}{|l|}{\(6,33500 \quad 254,412511,642,881 \quad 70 \mid 16,4 \div 6 \quad 20,33,26920 \quad 12,47785 \quad 7,57070\)} \\
\hline \multicolumn{9}{|l|}{\multirow[t]{2}{*}{- These amonnta are leas than the balances ahown at 3uth June, 18:9, in the accounts of the Inst. at the time of the increase of the duty on Spirits, in 1874, through a misunderstanding of the Inland Revenue Department, Ottawa, 1st September, 1880.}} \\
\hline & & & & & & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline Total Duties Accrued. & Total Debits. & Divisions, & Deposited to the credit of the ReceiverGeneral. & \[
\begin{gathered}
\text { Balances } \\
\text { due } \\
\text { 30th June, } \\
1880 .
\end{gathered}
\] & Total Credits. \\
\hline \$ cts. & \[
\begin{array}{ll}
\$_{4,867} & \text { cts. } \\
24
\end{array}
\] & .........Sundry Balances...... & \(\$ \mathrm{cts}\). & \[
\begin{array}{cc}
\$ & c t s \\
4,867 & 24
\end{array}
\] & \[
\begin{gathered}
\$ \mathrm{cts} \\
4,867 \mathrm{24}
\end{gathered}
\] \\
\hline 9,406 09 & 9,556 32 & .......... Algoma ......... ........ & 9,378 07 & 17825 & 9,556 32 \\
\hline 71,608 47 & 71,649 67 & ........ Belle ville ................. & 71,082 76 & 56691 & 71,649 67 \\
\hline 18,032 83 & 19,184 01 & . ....... Cobourg................. & 18,613 78 & 57023 & 19,184 01 \\
\hline 8,553 88 & 8,553 88 & ........ Collingwood ............ & 8,553 88 & & 8,553 88 \\
\hline 7,42381 & 7,423 81 & . ...... Cornwall.......... ...... & 7,423 81 & 687 & 7,423 81 \\
\hline 40,393 21 & 40,604 75 & ......... Goderich.. ......... ..... & 39,917 38 & 68737 & 40,604 75 \\
\hline 112,661 59 & 113,265 33 & ........ Guelph.................. & 111,908 99 & 1,356 34 & 113,265 33 \\
\hline 326,686 35 & 329,072 43 & ........Hamilton.. .............. & 327,608 65 & 1,463 78 & 329,072 43 \\
\hline 126,563 75 & 126,895 73 & ........ Kingston................ & 125,214 97 & 1,680 76 & 126,895 73 \\
\hline 222,915 92 & 223,747 16 & ......... London................... & 223,447 73 & 29943 & 223,747 16 \\
\hline 135,679 27 & 135,679 27 & Ottawa & 135,679 27 & & 135,679 27 \\
\hline 89,363 26 & 90,087 34 & Paris. & \{9,371 68 & 71566 & 90,087 34 \\
\hline 28,565 04 & 28,577 04 & Perth..................... & 28,227 78 & 34926 & 28,577 04 \\
\hline 31,169 31 & 31,231 31 & ........Peterborough........... & 31,187 31 & 4700 & 31,234 31 \\
\hline 94,440 19 & 94,609 18 & Prescott......... ... .... & 94,147 34 & 46184 & 94,609 18 \\
\hline 29,154 35 & 29,443 08 & Sarnia.... & 28,999 60 & 44348 & 29,443 08 \\
\hline 44,729 95 & 44,897 55 & St. Cath & 44,64515 & 25240 & 44,897 55 \\
\hline 513,163 29 & 515,012 99 & Toronto & 513,12866 & 1,884 33 & 515,012 99 \\
\hline 390,895 18 & 391,497 56 & Windsor & 374,762 21 & 16,735 35 & 391,497 56 \\
\hline 2,301,408 74 & 2,315,858 65 & Cnt & 2,283,299 02 & 32,559 63 & 2,315,858 65 \\
\hline 2,95604 & 2,956 04 & ........... Beauharnois. & 2,886 75 & 6929 & 2,956 04 \\
\hline 918,741 22 & 929,974 32 & ......... Montreal... ........ ...... & 920,591 57 & 9,382 75 & 929,974 32 \\
\hline 363,969 87 & 363,969 87 & ......... Quebec.............. ..... & 363,969 87 & & 363,969 87 \\
\hline 28,610 32 & 28,610 32 & Sherbrooke.. ........... & 28,610 32 & ......... ........ & 28,610 32 \\
\hline 6,278 42 & 6,278 42 & Sorel ... & 6,278 42 & ................. & 6,278 42 \\
\hline 24,697 52 & 24,697 52 & ........st. Hyaci & 24,697 53 & & 24,697 62 \\
\hline 16,538 82 & 16,685 22 & ........ St. Jobn's & 16,685 22 & & 16,685 22 \\
\hline 50683 & 50683
11558 & Terrebon & 50683 & & 1150683 \\
\hline 11,250 89 & 11,555 18 & Three Riv & 10,577 64 & 97754 & 11,555 18 \\
\hline 1,373,549 93 & 1,385,233 72 & ........ Q & 1,374,804 14 & 10,429 58 & 1,385,233 72 \\
\hline \[
\begin{array}{r}
9,73090 \\
203,22902
\end{array}
\] & 9,73090
204,18260 & .. Cape Breton............ & 9,73090
200,83568 & 3,34693 & 9,73090
204,18260 \\
\hline 12,710 00 & 12,71000 & Pictou & 11,961 00 & 7:900 & 12,710 00 \\
\hline 8,396 03 & 8,406 03 & Yarm & 8,396 03 & 1000 & 8,406 03 \\
\hline 234,065 95 & 235,029 53 & Nova & 230,923 61 & 4,105 92 & 235,029 53 \\
\hline \[
\begin{array}{r}
17,274 \quad 62 \\
241,60 \pm 55
\end{array}
\] & \[
\begin{array}{r}
17,27462 \\
242,53640
\end{array}
\] & Miramich
St. John. & \[
\begin{array}{r}
17,27462 \\
241,57197
\end{array}
\] & 96443 & \[
\begin{array}{r}
17,27462 \\
242,53640
\end{array}
\] \\
\hline 258,879 17 & 259,811 02 & & 258,846 59 & 96443 & 259,811 02 \\
\hline \(\begin{array}{lll}43,351 & 58 \\ 65,841 & 89\end{array}\) & \[
\begin{array}{ll}
44228 & 98 \\
66.328 & 30
\end{array}
\] & ........ \(P\) & 43,600
64,665
58 & \[
\begin{array}{r}
62880 \\
1,66272
\end{array}
\] & \[
\begin{array}{ll}
44,228 & 98 \\
66,328 & 30
\end{array}
\] \\
\hline 65,84189
35,055 & 35,255 32 & British Columbia & 35,016 10 & 1,63922 & 35,255 32 \\
\hline 144,249 22 & 145,812 60 & & 143,281 86 & 2,530 74 & 145,812 60 \\
\hline 4,312,153 01 & 4,341,745 52 & Total............. ......... & 4,291,155 22 & 50,590 30 & 4,341,745 52 \\
\hline 46,250 21 & ...... & Less Refunds, per Stat. 16.1 & & & \\
\hline 4,265,902 80 & & ..Net Revenue. ......... & & & \\
\hline
\end{tabular}
fiscal year. The difference is caused by the deduction of \(\$ 3,021.72\), which was incorrectly charged meaning of the Law.
A. BRUNEL, Commissioner.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline  &  &  &  & Total. & Divisions. &  \\
\hline \begin{tabular}{l}
\(\$\) cts. \\
4398
\end{tabular} & \(\begin{array}{cc}\$ \\ 632 & \text { cts. } \\ 32\end{array}\) & \[
\begin{array}{cc}
\$ & \text { cts. } \\
12 & 00 \\
57 & 96
\end{array}
\] & \$ cts, & \[
{ }_{658}^{\$} \quad \mathrm{cts} . \mid
\] & Algoma.. & \(\$ \mathrm{cts}\).
\(\qquad\) \\
\hline 4398 & 3,604 27 & 5796 & & 3,701 21 & Belleville & \\
\hline 465 & 2,144
1,042
11 & 3796 & & 2,182 30 & ... Cobourg ........ ......... & \\
\hline & 1,042 600 & 1604
1200 & & 1,06270
61269 & ...... Cullingwood............ & \\
\hline & 6,504 72 & 8696 & & 6,591 68 & ....Goderich.. ......... .. ... & \\
\hline & 11,848 89 & 20196 & & 12,050 85 & ...... Guelph... ............ ... & \\
\hline 446 & 10,487 63 & \(\pm 7753\) & & 10,669 61 & ..... Hamilton & \\
\hline 1571 & 7,737 98 & 11748 & & 7,855 46 & ... Kingston................... & \\
\hline 1571 & 10,037 52 & 17202 & & 10,225 25 & ..... London., ........ ........ & \\
\hline & 3,059 68 & 4200 & 050 & 3,102 18 & .... Ottawa & \\
\hline & 5,776 65 & 7081 & ... ........ 1 & 5,847 46 & ...Paris.. & \\
\hline & 1,052 26 & 1796 & & 1,070 22 & . Perth & \\
\hline & 1,375 67 & 1200 & & 1,387 67 & ..... Peterboro'. .......... ... & \\
\hline & 6,097 11 & 10000 & & 6,197 11 & ..... Prescott. ................. & \\
\hline & 3,194 96 & 4204 & ........ ...... & 3,137 00 & ..... Saraia... ........ ........ & \\
\hline 1946 & 4,482
46
20,317
88 & 7837 & & 4,560 83 & .... St. Catharines.. ........ & \\
\hline & 20,317 88 & 31746
159 & & 20,651 80 & ..Toronto.................. & \\
\hline 61409 & \(\begin{array}{r}11,562 \\ 8,249 \\ \hline 8\end{array}\) & 15936
13162 & \(49 \cup 8\) & \(\begin{array}{r}11,771 \\ 8,995 \\ \hline\end{array}\) & ...... & 599 \\
\hline 71615 & 119,707 65 & 1,863 53 & 4958 & 122,3:36 91 & ..... Ontario. & 2599 \\
\hline & 43212 & 496 & & 43708 & ... Beauharno & \\
\hline & 89824 & 332 & & 90156 & .... Joliette................... & \\
\hline 36 & 20,699 78 & 30567 & & 21,370 42 & ..... Montreal. & \\
\hline ..... ........... & 7,680 41 & 11400 & 005 & 7,794 46 & ..... Quebec.. & \\
\hline & 73730 & 1200 & .............. & 74930 & ..... St. Hyacinthe.......... & \\
\hline & 84434 & 992 & ............. & 85426 & .....St. John's. & \\
\hline & 45704 & 496 & ............. & 46200 & ......Sherbrooke & \\
\hline & 24023 & 246 & & 24269 & .....Sorel. . & \\
\hline & 50376 & 287 & & 50663 & ......Terrebon & 1879 \\
\hline & 1,695 73 & & & 1,095 73 & .....Three Rive & 2937 \\
\hline & 29400
4.09615 & 600
7995 & & 30000 & ...... Magdalen Isla & \\
\hline 173 & 4,096 15 & 7996 & & 4,35004 & ......District Inspectors. & \\
\hline 53890 & 37,979 10 & 546 & 005 & 39,06+17 & ..... Quebec . & 4816 \\
\hline 1884 & 65908 & 624 & & \(68+16\) & ..... Cape Breton & \\
\hline 5785
2500 & 6,26916
73781 & 8256 & & 6,409 57 & .....Halifax... ........ ........ & \\
\hline 2500 & 73781
52978 & & & 76281
53610 & ..... Pictous.. & \\
\hline 20000 & \[
\begin{array}{r}
52978 \\
2,36256
\end{array}
\] & 632
3600 & & 53610
2,59856 & ......Yarmo & \\
\hline 30169 & 10,5588 39 & 13112 & & 10,991 20 & Nova Scotia.. & \\
\hline & 1,076 26 & 1993 & & 1,093 22 & ...... Miramichi. & \\
\hline & 7,072 66 & 14037 & & 7,21303 & ......sit. John .. & \\
\hline & 2,056 72 & 3600 & & 2,092 72 & ..... District Ins & \\
\hline & 10,205 64 & 19633 & & 10,401 97 & ...... New Brunswick... & \\
\hline & 3,443 84 & 5247 & & 3,496 31- & . .... Prince Edward Island & \\
\hline 7500 & 4,685 49 & 7300 & ....... ..... & 4,738 49 & ...... Manitoba... .............. & \\
\hline 7500
25000 & 5,579 71 & 9993 & & 5,754 6t & ...... British Columbia ...... & \\
\hline 25000 & 9,184 83 & 4800 & & 9,482 83 & ...... GeneralContingencies & \\
\hline & 2,047 66 & & & 2,047 66 & ...... Law Costs........, & \\
\hline & 3,907 18 & & & 3,907 18 & ......Queen's Printer... & \\
\hline & 1,730 77 & & & 1,730 77 & ......Stationery Office....... & \\
\hline 3255 & 5,661 82
2,28260 & & & \begin{tabular}{l} 
5,694 37 \\
\(\mathbf{2 , 2 8 2}\) \\
\hline 1
\end{tabular} & \begin{tabular}{l}
......Preventive Service.... \\
Com. to Cus. Officers
\end{tabular} & \\
\hline & \(\begin{array}{r}2,28260 \\ \hline 216,97468\end{array}\) & & 4963 & 2,28260 & ..... Com. to Cus. Officers. & -... \\
\hline 1,914 29 & 216,974 68 & 3,010 50 & 4963 & [221,949 10 & .....Grand Total............. & 7415 \\
\hline
\end{tabular}

Intand Revenue I)epartment, Ottawa, 1st September, 1880.
in account with Expenditure.
Appendix B.)
Cr.

Expbnditurg adthorized by tee Departyent.

A. BRUNEL, Commissioner.

CANALS, \&c.,
Dr. No. 5.-Collectors of Canal Tolls, (For Details, see


Inland Revenue Department, Uitawa, 1st September, 1880.
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{Collection Divisions.} & \multicolumn{2}{|l|}{Deposited to the Credit of the Receiver-General.} & \multirow[b]{2}{*}{\[
\left|\begin{array}{c}
\text { Balances } \\
\text { due 30th June, } \\
1880 .
\end{array}\right|
\]} & \multirow[b]{2}{*}{Total.} \\
\hline & On account of Canal Revenue. & On account of Hyd. Rents, and other Rev. from P.Works. & & \\
\hline \begin{tabular}{l}
Welland Canal. \\
Port Colborne.
\end{tabular} & \({ }_{119,486}^{\$ 12} \mathbf{c t s}\) & \$ 110 cts. & \[
\begin{array}{cc}
\$ & \text { cts. } \\
4,540 & 10
\end{array}
\] & \[
\begin{array}{cc}
\$ & \mathrm{cts} \\
124,136 & 42
\end{array}
\] \\
\hline ...... Port Dalhousie ........ ................. & 33,179 59 & 62388 & 9217 & 33,895 64 \\
\hline .........Dunnville. ......... ......... .............. & 77112 & 42672 & 6486 & 1,262 70 \\
\hline ......... Port Maitland.......... ................ & 1,497 95 & ..... ...... & & 1,497 95 \\
\hline ......... Port Robinson.. & 2,566 66 & 86800 & 50196 & 3,936 62 \\
\hline St. Catharines. & 1,603 97 & 2,655 26 & & 4,259 23 \\
\hline \multirow[t]{2}{*}{......... Chippawa.................................} & 10306 & & 3238 & 13544 \\
\hline & 159,208 47 & 4,684 06 & 5,231 47 & 169,124 00 \\
\hline \multicolumn{2}{|l|}{St. Lawrence Canals.} & 1,120 00 & 18713 & 4,449 63 \\
\hline ..... ... Oornwall.............. ......... .. ... ..... & 14,896 70 & -29500 & 17957 & 15,371 27 \\
\hline ......... Edwardsburg & 58208 & 53500 & 5981 & 1,176 89 \\
\hline ...... Lachine... & 4,264 36 & ............ & 24084 & 4,505 20 \\
\hline ......... Montreal . ......... .. ..... ...... ........... & 41,244 88 & 8,509 76 & 8340 & 49,838 04 \\
\hline ......... Kingston. & 22,530 85 & 8, & 70558 & 23,236 43 \\
\hline ......... ..............Tetal, ....... .. ..... ......... & 86,661 37 & 10,459 76 & 1,456 33 & 98,577 46 \\
\hline \begin{tabular}{l}
Chambly Canal. \\
Chambly
\end{tabular} & 4,454 55 & ................... & 17856 & 4,633 11 \\
\hline ......... St. John's...... ..... ..... ........ ........ & 13,289 61 & ......... ...... .. .. & 100 & 13,290 61 \\
\hline ......St. Ours.. & 77184 & & 12352 & 89536 \\
\hline ...... ................ Total... .............. ......... & 18,516 00 & .................... & 30308 & 18,819 08 \\
\hline Ottawa Canals.
............................................................. & 29,194 81 & & & 29,194 81 \\
\hline ......... Grenville... ......o.. ........ ... .. ........ & 16,117 05 & & & 16,117 05 \\
\hline ......... Carillon ...... ................. ................ & 1,001 21 & 1600 & 10124 & 1,118 45 \\
\hline ...... - Ste. Anne's Lock.......................... & 2,607 73 & & 19483 & 2,802 66 \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
\(\qquad\) Total \(\qquad\) \\
Rideau Canal.
\(\qquad\) Ottaws
\end{tabular}} & 48,920 80 & 1600 & 29607 & 49,232 87 \\
\hline & 2,831 57 & 1,179 00 & & \\
\hline \multirow[t]{2}{*}{\(\qquad\) Kingston Mills.
\(\qquad\) Smith's Falls} & 2,185 42 & 1,37800 & 9910 & 2,662 52 \\
\hline & 45416 & & & 45416 \\
\hline ........ .............. Total................ ......... & [ 5,471 15 & 1,557 00 & 9910 & 7,127 25 \\
\hline ......... Burlington Bay Canal................. & 3,704 80 & 21000 & 11593 & 4,030 73 \\
\hline \multirow[t]{2}{*}{\(\qquad\) Newcastle District Works....... ...... Sundry.} & 29793 & ..... ...... ....... & 6745 & 36538 \\
\hline & & & & \\
\hline \multirow[t]{2}{*}{\(\square\) E. R. Benjamin
\(\qquad\) Estate of late J. S. Clark} & & & 10000 & 10000 \\
\hline & & & 15000 & 15000 \\
\hline \begin{tabular}{l}
Estate of late J. S. Clark \\
......... ......... ...... Total.
\end{tabular} & & & 47000 & 47000 \\
\hline -........ .............. Grand Total................ & 322,780 52 & 16,926 82 & 8,039 43 & 347,746 77 \\
\hline \begin{tabular}{l}
\(\qquad\) Less Refunds, per Stat. 16... ........ \\
Net Revenue
\end{tabular} & & & & \\
\hline
\end{tabular}
A. BRUNEL, Commissioner.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Balances due
by
Collectors,
\&c.,
1st July,
1879. & \[
\begin{gathered}
\text { Amounts re- } \\
\text { ceived } \\
\text { from Depart- } \\
\text { ment } \\
\text { to meet Ex- } \\
\text { penditure. }
\end{gathered}
\] & Deduction
from
Salaries for
Super-
annuation. & \(\left|\begin{array}{c}\text { Balances due } \\ \text { to } \\ \text { Collectors, } \\ \text { \&r.j } \\ 30 \text { June, } \\ 1880 .\end{array}\right|\) & Total & Collection Divisions. \\
\hline \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & Welland Canal. \\
\hline ................. & 3,116 95 & 5008 & & 3,167 03 & ........ Port Colborne .................... \\
\hline ......... ........ & 1,81129
77980 & 2400
1500 & ... & 1,835
794
29 & ........ Port Dalhousie.. ......... ......... \\
\hline ... & 77980
60346 & 1500 & ................. & 79480
61350 & .......... Punnville ....... .............. ..... \\
\hline ................... & 73381 & 1440 & .................... & 74821 & ......... Port Robinson.................... \\
\hline ............ ..... & 22661 & 404 & ......... ....... & 23065 & ........ St. Catharines................... \\
\hline ......... ......... & 7,271 92 & 11756 & ......... ......... & 7,389 48 & ..Totals ... ........ ........... \\
\hline 5684 & 1,075 45 & 1692 & & 1,149 21 & ........ Beaubarnois ........ . .... ....... \\
\hline . & 1,051 31 & 1995 & ...... ........... & 1,071 27 & ........ Cornwall......... ........ .... ... \\
\hline ......... ......... & 7,332 13 & 9575 & & 7,427 88 & ......... Montreal... ........... .............. \\
\hline ......... & 2,805
1,130 & 3600
1998 & ......... ......... & 2,84177
1,150 & ......... Lachine ........................... \\
\hline ........ ......... & 1,130 04 & 1995 & ................. & 1,150 00 & ......... Edwardsburg. ...... ...... ......... \\
\hline 6684 & 13,391 70 & 18859 & & 13,640 13 & Total \\
\hline 2128 & 1,477 44 & 2628 & . & 1,525 00 & ........ Chambly ........ ........... ........ \\
\hline 2500 & 92351
61200 & \[
\begin{aligned}
& 1604 \\
& 1200
\end{aligned}
\] & & 964 55 & ......... St. John's. ...... .................. \\
\hline .................. & & & ..... ... & & St. Our \\
\hline 4628 & 3,012 95 & 5432 & & 3,113 55 & .Totals \\
\hline ................ & 73838 & 1200 & 2500 & 77538 & ......... Grenville........................... \\
\hline ................. & 52578 & 632 & ................. & 53210 & ........ Sarrillon............. ....... ...... \\
\hline ................. & 92446 & 1800 & ................. & 94246 & ........ St. Anne's Lock ..... ..... ..... \\
\hline ......... ........ & 2,188 63 & 3632 & 2500 & 2,249 94 & . Totals \\
\hline 2500 & 1,564 60 & 1566 & .......... ...... & 1,605 26 & \\
\hline ................... & 25197
21647 & 248
248 & & \[
\begin{aligned}
& 25445 \\
& 21895
\end{aligned}
\] & Kingston Mills \(\qquad\) Smith's Falls \\
\hline 2500 & 2,033 04 & 2062 & & 2,078 66 & ..Totals.............. ......... \\
\hline ................. & 29628 & 372 & |........ ....... & 30000 & ........ Burlington Bay Canal.......... \\
\hline & 284 & & & 284 & .........Newcastle District Works...... \\
\hline ........ ........ & 1,567 21 & 2796 & & 1,595 17 & .........Inspector of Canals............. \\
\hline ........ ......... & 33625 & ............ ... & . ................ & 33625 & ......... General Contıngencies ........ \\
\hline .................. & 61223
15069 & |................. & . ......... ....... & \begin{tabular}{l}
612 \\
150 \\
\hline
\end{tabular} & ........ Queen's Printer................... \\
\hline .................. & 15068 & ................ & \(\cdots\) & & ....Stationery Office ................ \\
\hline 12812 & 30,866 72 & 44909 & 2500 & 31,468 93 & ................ Grand Total....... ...... \\
\hline
\end{tabular}

Inland Revenue Department,

\section*{1879-80.}
in account with Expenditure.
Appendix B.)

\section*{Cr.}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Balances due to & \multicolumn{5}{|c|}{Expenditure authorized by the Department.} & \multirow[t]{2}{*}{Balances
due by
Collectors,
\&c.,
30 th June,
1880.} & \multirow{2}{*}{Total.} \\
\hline \[
\begin{aligned}
& \text { 1st Jily, } \\
& 1879 .
\end{aligned}
\] & Salaries. & Special Assistance. & Rent. & Travelling
Expenses. & Other Expenses. & & \\
\hline \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. \\
\hline ......... ........ & 2,800 00 & , 55 & 29200 & & 7503 & & 3,167 03 \\
\hline ......... & 1,408 30 & 29455 & .. ......... & ... .... ...... & 13244 & ............... & 1,835 29 \\
\hline ........ & 75000 & ............... & -100.... & .. ...... .....- & 4480 & . & 79480 \\
\hline .... ......... & 50000 & .... \(\cdot\).... & 10000 & ...... ......... & 1350 & ................ & 61350 \\
\hline .................. & 72000 & ... ........ & ... ........ & . ........... & 2821 & ................ & 74821 \\
\hline .............. & 20000 & & & & 3065 & ........ ........ & 23065 \\
\hline .................. & 6,378 30 & 29455 & 39200 & ................. & 32463 & ................ & 7,389 48 \\
\hline -......... ......... & 84996 & 750 & ..... ........ & 1559 & 27616 & & 1,149 21 \\
\hline ...... & 1,000 00 & & & & 7127 & ... & 1,071 27 \\
\hline ....0 & ¢, 33520 & 1,054 34 & 52500 & & 51334 & .... .......... & 7,427 88 \\
\hline ...... & 1,908 00 & 26000 & 40938 & ... & 25273 & 1166 & 2,84177 \\
\hline ......... ......... & 1,150 00 & ............... & ............ & . ...... ...... & & ................ & 1,150 00 \\
\hline ......... ......... & 10,243 16 & 1,321 81 & 93438 & 1559 & 1,113 50 & 1166 & 13,640 13 \\
\hline . & 1,500 00 & .. & & & 2500 & & \\
\hline ...... .......... & 80000
60000 & ............... & 16000 & ................ & 455
1200 & 1200 & 96455
62400 \\
\hline ..... ............ & & .-.............. & .............. & .............. & & & \\
\hline .... & 2,900 00 & ............ ..... & 16000 & ................ & 4155 & 1200 & 3,113 55 \\
\hline ................. & 60000 & & 5000 & ... & 12538 & .............. & \(\bigcirc 7538\) \\
\hline ......... ......... & 500
900 & ................. & ............. & ....... ....... & 3210 & ................ & 53210 \\
\hline ......... ......... & 90000 & ......... ......... & ............. & ....... & 4246 & ................ & 91246 \\
\hline & 2,000 00 & .................. & 5000 & .... ........ & 19994 & ................ & 2,249 94 \\
\hline -1............. 005 & 1,07237
20000 & 47550 & ................. & 1800 & 5739
3640 & \(\cdots\) & \begin{tabular}{r}
1,605 \\
\hline 254 \\
254
\end{tabular} \\
\hline ................. & 2 CO 00 & ..... ........... & & & 1895 & . & 21895 \\
\hline 005 & 1,472 37 & 47550 & ......... & 1800 & 11274 & ........ ....... & 2,078 66 \\
\hline ................. & 30060 & ................. & & ..... ........ & & ........ ........ & 30000 \\
\hline -........ ........ & .......... & ................. & ........ ..... & & . 284 & ............... & 284 \\
\hline ..... & 1,399 92 & & ..... ..... & 9600 & 9925 & & 1,595 17 \\
\hline ...... ........... & ........... & & & - & 33625 & ... n........... & 33625 \\
\hline .0.... ........... & ............ & . ............... & & & 61223 & ........ ........ & 61223 \\
\hline .... ........... & .......... & & & \(\cdots\) & 15068 & . & 15068 \\
\hline 005 & 24,693 75 & 2,091 89 & 1,536 38 & 12959 & 2,993 61 & 2366 & 31,468 93 \\
\hline \multicolumn{8}{|c|}{\multirow[t]{2}{*}{A. BRUNEL, Commissioner.}} \\
\hline & & & & & & & \\
\hline
\end{tabular}
Dr.

No. \(7 \frac{1}{2}\).-SLIDES AND BOOMS' EXPENDITURE, 1879-80.

Dr．
\begin{tabular}{|c|c|c|c|}
\hline  & \begin{tabular}{l}
 \\
o \\

\end{tabular} &  & \multirow[t]{9}{*}{} \\
\hline  & \begin{tabular}{l}
 \\
 \\

\end{tabular} &  & \\
\hline  &  &  & \\
\hline  &  & \[
\begin{aligned}
& 0 \\
& 0 \\
& \vdots \\
& \vdots \\
&
\end{aligned}
\] & \\
\hline  &  &  & \\
\hline  &  &  & \\
\hline － & \begin{tabular}{l}
 \\
笑がビテ
\end{tabular} &  & \\
\hline  & \begin{tabular}{l}
 \\
 \\

\end{tabular} &  & \\
\hline 边 &  &  & \\
\hline
\end{tabular}

No. 10.-CULLERS' REVENUE, 1879-80.


\begin{tabular}{|c|c|c|}
\hline \(\underset{\sim}{ \pm}\) & ※ & \[
\begin{aligned}
& \stackrel{m}{0} \\
& m \\
& m \\
& \underset{\sim}{0}
\end{aligned}
\] \\
\hline \begin{tabular}{l}
 \\

\end{tabular} & \%
0 & \[
\begin{gathered}
\infty \\
\infty \\
\infty \\
\infty \\
\\
\hline
\end{gathered}
\] \\
\hline  & \% & ¢
0
08
0.0 \\
\hline
\end{tabular}
No. 111 —SUNDRY MINOR EXPENDITURES.


Dr.
No. 12.-Stamp Distributors in


Inland Revenue Department, Ottawa, 1st September, 1880.

\section*{STAMPS, 1879-80.}
account with Inland Revenue Department.
Cr.


\author{
A. BRUNEL, \\ Commissioner.
}

No. 13.-Statement showing the quantities of the several Articles subject 1878,1879 and 1880 , with
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow{3}{*}{Articles subject to Duty.} & \multicolumn{4}{|c|}{1878.} \\
\hline & \multicolumn{3}{|c|}{Quantities.} & \multirow[b]{2}{*}{Duty.} \\
\hline & \[
\left\lvert\, \begin{gathered}
\text { Ex- } \\
\text { Manufactory }
\end{gathered}\right.
\] & \begin{tabular}{l}
Ex- \\
Warehouse.
\end{tabular} & Total. & \\
\hline \multirow{4}{*}{Spirits at 00c. and \$1 per gallon.................... Malt Liquor at 8c. and 4c. per gallon. \(\qquad\) do duty having been paid on the Malt} & Gallons. & Gallons. & Gallons. & \$ cts. \\
\hline & 548,845 133 & 2,459,026 & 3,007,871 & 2,707,08.4 83 \\
\hline & 8,577,912 & ........... ........... & 8,577,942 &  \\
\hline & Lbs. & Lbs. & Lbs. & \\
\hline Malt ........ .......... ..... ............ ......... ......... ..... & 6,090,861 & 20,443,726 & 26,534,587 & 530,691 74 \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Tobacco at 20c. per lb. \(\qquad\) do \\
4 c . and 10 c . per lb . \(\qquad\) \\
Cigars at 40c. jer lb. \\
Snoff at 20c. per lb.
\(\qquad\)
\(\qquad\)
\end{tabular}} & 597,182 & 6,429,383 & 7,026,565 & 1,405,313 15 \\
\hline & 258,042 & -............... & - 562,674 & 145,070 75 \\
\hline & 72,947 & 8,392 & 81,339 & 16,267 90 \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Raw Leaf Tubacco, Foreign, at 10 c . and 4 c . per lb. \\
Raw Leaf Tobacco, Canadian, at 10 and 4 c . per \(1 b\).
\end{tabular}} & & 42,506 & 42,506 & 8,501 30 \\
\hline & \multirow[t]{2}{*}{................} & 3,202 & 3,202 & 32025 \\
\hline & & & 7,521,328 & 1,575,977 55 \\
\hline \multirow[t]{2}{*}{Inspection Fees on Petroleum} & & & & 6,469 22 \\
\hline & & & ................ & 36,394 45 \\
\hline \multirow[t]{5}{*}{} & ....................... & & ...................... & 1,500 00 \\
\hline & & & ................. & 6,625 00 \\
\hline & & & ......... ........ & 7,900 00 \\
\hline & & .... ..... .... & ......... ........ & 5,525 00 \\
\hline & & ....... ......... & ..... & 50000 \\
\hline Totals...... ........ ........ ...... & |........... ..... & & .0.... ......... & 4,878,678 43 \\
\hline
\end{tabular}

Inland Revenue Department, Ottawa, 1st September, 1880.
to Excise daty taken for Consumption, during the Years ended 30th June, the Daty collected thereon.


\section*{A. BRUNEL, \\ Commissioner.}

No. 14.-Statement of Amounts deposited monthly to the credit of the Year ended
\begin{tabular}{|c|c|c|c|c|c|}
\hline & Ontario and Quebec. & \begin{tabular}{l}
New \\
Brunswick.
\end{tabular} & Nova Scotia & Other Provinces. & Total. \\
\hline Joly :- & \(\$\) cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. \\
\hline Excise and Seizures... ............. & 211,50181 & 18,767 46 & 14,954 49 & 10,264 25 & 255,488 61 \\
\hline Csnals . ...... . ........ ............. & 39,569 05 & & ............. & 21775 & 39,569 05 \\
\hline Ifydraulic and other Rents....... & 2,016 96 & .... & ........ ......... & 21775 & 2,234 71 \\
\hline Minor Public Werks...... ....... .. & 15525 & ................ & ........... ..... & & 165 25 \\
\hline Slides..... ............................. & 4,682 12 & ... & . & ................. & \[
4,68212
\] \\
\hline Cullers ................ ................ & 2,74684
12,42364 & 62985 & 49000 & ..... ...........| & 2,74684
13,63871 \\
\hline \begin{tabular}{l}
Inspection of Weights and Measures and Gas. \\
Other Revenues
\end{tabular} & \[
\begin{aligned}
& 29919 \\
& 87381
\end{aligned}
\] & 1125 & 3080 & 05 & \[
\begin{aligned}
& 34093 \\
& 87381
\end{aligned}
\] \\
\hline Total & 274,268 66 & 19,408 56 & 15,474 99 & 10,577 22 & 319,729 43 \\
\hline \multicolumn{6}{|l|}{Acaust :-} \\
\hline Excise and Seizares ................ & 232,524 02 & 19,695 31 & 12,493 65 & 8,447 81 & 273,160 29 \\
\hline Canals................... ............. & 51,519 20 & ....... ........ & ........ ....... & 2000 & 51,519 20 \\
\hline Hydraulic and other Rents ........ & 1,932 8 \% & .... ..... ..... & ........ ........ & 2000 & 1,972 82 \\
\hline Minor Publie Forta................. & 34790 & & & . & 34790 \\
\hline Slides. ........ ........ ...... ........... & 70409 & & ........ ........ & ........... & 70409 \\
\hline finllers.. ... ..... ...................... & 2,439 63 & ................ & ........ ........ & ..... ........... & 2,439 63 \\
\hline Bill Stamps....... ....... ......... & 15,543 70 & 47310 & 63974 & 28500 & 16,941 54 \\
\hline Inspection of Weights and Measures and Gas. & 20915 & 2600 & 4700 & 1150 & 29365 \\
\hline her & , & & & ........ ......... & \\
\hline Total.. ........ ........ & 305,240 51 & 20,194 41 & 13,180 29 & 8,763 81 & 347,379 12 \\
\hline \multicolumn{6}{|l|}{Stptember : -} \\
\hline Excise and Seizares ........ ........ & 272,595 37 & 22,092 90 & 17,370 45 & 12,609 68 & 324,668 38 \\
\hline Cansls.................. ............. & \(\begin{array}{r}54,45546 \\ 448 \\ \hline\end{array}\) & .................. & & & 54,45546
44800 \\
\hline Mydraulic and other Rents....... & 44800
28265 & ........... ..... & ...... .......... & ........ ........ & 44800
28265 \\
\hline Slides ......... ........ ............ ....... & 9,509 15 & & & & 9,509 15 \\
\hline Cullers...... & 4,948 51 & & .1. & & 4,918 51 \\
\hline Bill Stamps....... & 10,803 60 & 63650 & 71820 & 19300 & 12,351 30 \\
\hline Inspection of Weights and Measures and Gas. & 38116 & 775 & 3100 & & 41991 \\
\hline Other Revenues & & & -10.0.0.0. & & ... \\
\hline Total & 353,423 90 & 22,737 15 & 18,119 65 & 12,802 66 & 407,083 36 \\
\hline \multicolumn{6}{|l|}{Octobrr:-} \\
\hline Excise and Seigures ................ & 309,665 46 & 24,017 85 & 22,601 71 & 12,997 20 & 369,282 22 \\
\hline Canals ..................... ........ & 48,547 77 & . .... ...... & ... & . & 48,547 77 \\
\hline Hydraulic and otber Rents....... & 1,551 23 & .......... & ..... & ........ ........ & 1,551 23 \\
\hline \begin{tabular}{l}
Minor Public Works............... . \\
Slides
\end{tabular} & \[
\begin{array}{r}
29976 \\
2,527 \quad 17
\end{array}
\] & ...... & .......... ........ & & 29976
2,52717 \\
\hline Slides. & 2,527
2,313
81 & . & & & 2,527
2,31381 \\
\hline Bill Stamps....... ...................... & 21,627 07 & 88730 & 40850 & 28500 & 23,207 87 \\
\hline Inspection of Weights and Measures and Gas.. & 73950 & 1025 & 2725 & 2200 & 79900 \\
\hline Total.... & 387,271 77 & 24,915 40 & 23,037 46 & 13,304 20 & 448,528 83 \\
\hline
\end{tabular}

Hon. the Receiver-General, on Inland Revenue Account, during the Fiscal 30th June, 1880.
\begin{tabular}{|c|c|c|c|c|c|}
\hline & Ontario and Quebec. & New Brunswick. & Nova Scotia. & Other Provinces. & Total. \\
\hline Novepber :- & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. \\
\hline Excise and Seizures................. & 4,270 78 & 24,282 44 & 16,818 41 & 10,242 48 & \[
405,81411
\] \\
\hline Oanals ........... .... -.............. & 27,933 60 & ................. & ................. & ......... ......... & 27,933 60 \\
\hline Bydraulic and other Rents...... & 84116 & . & - & ............ ...... & 84116 \\
\hline Minor Public Works ................ & 33352 & ........... & ........ & . & 33352 \\
\hline Slides................ ......... ....... & 4,057 74 & ... & ........ ........ & ......... ........ & 4,057 74 \\
\hline Oullers. ............ .... .............. & 71989 & -1.0 & & & 71989 \\
\hline Bill Stamps......................... & 14,368 08 & 52250 & 29450 & 28500 & 15,470 08 \\
\hline Inspection of Weights and Measures and Gas.. & 73345 & & 5200 & 1550 & 80095 \\
\hline Other Kevenues...................... & .............. & ....... ........ & ............ ..... & ..nurno & .................. \\
\hline Total ............ ...... & 403,258 22 & 24,804 94 & 17,164 91 & 10,542 98 & 455,771 05 \\
\hline \multicolumn{6}{|l|}{Decembrr:-} \\
\hline Excise and Seizures.. ...... ....... & 382,887 58 & 22,991 51 & 26,320 33 & 10,428 71 & 442,6:8 13 \\
\hline Canals .... . ...... ................... & 8,449 96 & !......... ........ & ................. & . ............. & 8,4¢9 96 \\
\hline Hydraulie and other Rents...... & 9600 & ! & & 22358 & 31958 \\
\hline Minor Public Works.............. . & 7313 & & & ...... ...... ..... & 7313 \\
\hline Slides....... ..... ........ .. ........... & 4,217 02 & & & ...... ...... ..... & 4,217 02 \\
\hline Oullers. ... .............. ..... ........ & 4,153 85 & & & & 4,15385 \\
\hline Bill Stamps.. ..................... & 12,172 58 & 42750 & 72390 & 38000 & 13,703 98 \\
\hline Inspection of Weights and Measures and Gas & 1,373 98 & 5595 & 2400 & 2190 & 1,475 83 \\
\hline Other Revenues & ...... ......... & ......... & & . & …….. .... \\
\hline Total. & 413,424 10 & 23,474 96 & 27,068 23 & 11,054 19 & 475,021 48 \\
\hline \multicolumn{6}{|l|}{Jandary :-} \\
\hline Excise and Seizure9.. ...... ........ & 273,333 55 & 17,975 61 & 16,704 79 & 12,063 89 & 320.07784 \\
\hline Cankls........ .... ..... ..... ....... & 1,019 63 & ......... ........ & ......... ........ & & 1,019 63 \\
\hline Hydraulic and other Rents....... & 4,870 00 & & ......... ........ & ...... .... .... & 4,87: 00 \\
\hline Minor Public Works. & 14322 & ................. & |........ ........ & ........ ........ & 14322 \\
\hline Slides. ... ...... .. ................ & 94635 & & ......... ....... & ......... & 91635 \\
\hline Cullers. & 14010 & & & & 1.4010
112014 \\
\hline Bill Stamps....... .................. & 9,847 09 & 68875 & 74480 & & 11,260 64 \\
\hline Inspection of Weights and Measures and Gas. \(\qquad\) & 1,575 79 & 6985 & 4687 & 1087 & 1,703 38 \\
\hline Other Revenues.. & ... & & …....... .... & ..... ..... & \\
\hline Total.. ........ ......... & 291,855 73 & 18,734 21 & 17,496 46 & 12,074 76 & 340,161 16 \\
\hline \multicolumn{6}{|l|}{Prbruaiy :-} \\
\hline Excise and Seizures................ & 267,810 21 & 16,986 90 & 11,564 01 & 9,79149 & 306,15: 61 \\
\hline Oanals..7. ... ..... . ............. & \[
\dddot{1.32985}
\] & & . ................. & .................. & 1,3:9 \(8 \mathbf{8 6}\) \\
\hline Hydranlic and otler Rents......
Minor Public Wo:ks. ............ & \begin{tabular}{l}
1,32985 \\
1,250 \\
\hline 129
\end{tabular} & & & & \(1,3: 985\)
1,25029 \\
\hline Slides.............. .... ................ & 2,608 39 & & .......... & . ....... . ........ & 2,608 39 \\
\hline Cullers., ......... ..... ... ......... .... & 32067 & ... & . ..... ........... & .. & 32: 67 \\
\hline Bill Stamps. \&......... .... ..... & 14,372 13 & 72390 & 59032 & 47500 & 16,161 35 \\
\hline Inspection of Weights and Mrasures and Gas.. & 1,867 38 & 8470 & 10857 & 2267 & 2,083 32 \\
\hline Total.. & 289,558 92 & 17,795 50 & 12,262 90 & 10,289 16 & 329,906 48 \\
\hline
\end{tabular}

No. 14.-Statement of Amounts deposited monthly to the credit of the Year ended


\author{
Inland Revenue Department Ottawa, 1st September, 1880.
}

Hon. the Receiver-General, on Inland Revenue Account, during the Fiscal 30th June, 1880
\begin{tabular}{|c|c|c|c|c|c|}
\hline & Ontario and Quebec. & New Brunswick. & Nova Scotia. & Other Provinces. & Total. \\
\hline May:- & \$ ets. & \$ cts. & \$ cts. & \$ cts. & \$ cts. \\
\hline Nxcise and Seizures... ............ & 316, 29805 & 25,617 99 & 24,466 48 & 14,269 36 & 380,751 88 \\
\hline Canals............................... & 40,590 30 & ...... & & & 40,590 30 \\
\hline Hydraulic and other Rents....... & 32400 & ................ & \(\cdot\) & ......... ........ & 32400 \\
\hline Minor Public Works.............. & 26705 & ........ ......... & ........ & ........ ......... & 26705 \\
\hline Slides. ........ ......... ........ ........ & 21,271 56 & ......... ........ & ............ ..... & ...... ..... ...... & 21,271 56 \\
\hline Cullers....... .. ........ ............. & 90530 & & & & 90530 \\
\hline Bill Stamps.......... ................ & 13,966 25 & 45600 & 53163 & 23750 & 15,191 38 \\
\hline Inspection of Weights and Measures aud Gas. \(\qquad\) Other Revenues. \(\qquad\) & \[
\begin{array}{r}
1,98666 \\
15000
\end{array}
\] & 19550 & 13301 & 1123 & 2,32640
150 \\
\hline Total. & 395,859 17 & 26,269 49 & 25,131 12 & 14,518 69 & 461,777 87 \\
\hline Juxs:- & & & & & \\
\hline Excise and Seizures................ & 376,680 26 & 26,008 63 & 28,199 42 & 19,759 26 & 450,647 57 \\
\hline Canals......................... ... ... & 49,836 06 & ......... ....... . & ................ & \(\cdots\) & 49,836 06 \\
\hline Hydraulic and other Rents...... & 97750 & ................. & ........ ........ & . & 97750 \\
\hline Minor Public Works.. ............. & 53073 &  & & ...... ..... ...... & 53073 \\
\hline Slides ...... ...... .. .. ...... ........... & 6,012 48 & ... & ... & ............. & 6,012 48 \\
\hline Cullers. .................. . ........... & 7,832 10 & ................ & & & 7,832 10 \\
\hline Bill Stamps.: ....... ................ & 11,059 48 & 1,254 95 & 79173 & 78900 & 13,895 16 \\
\hline sures and Grs. & 2,621 62 & 32409 & 22221 & 4631 & 3,214 23 \\
\hline Total ............. ..... & 455,650 23 & 27,587 67 & 23,213 36 & 20,594 57 & 532,945 83 \\
\hline Grand Total......... & 4,262,060 87 & 267,998 79 & 234,010 05 & 147,237 23 & 916,306 94 \\
\hline
\end{tabular}

\author{
A. BRUNEL, \\ Commissioner.
}

No. 15.-Comparative Monthly
\begin{tabular}{|c|c|c|c|c|c|}
\hline From what Source. & July. & August. & September. & October. & November. \\
\hline SPIRITS......... ........ \(\left\{\begin{array}{l}1878.79 . . . . \\ 1879-80 . . .\end{array}\right.\) & \(\begin{array}{ccc}\$ & \text { ctg. } \\ \text { 208,811 } & 21 \\ 109,534 & 05\end{array}\) & \[
\begin{array}{cc} 
& \$ \\
& \text { cts. } \\
193,062 & 44 \\
135,091 & 31
\end{array}
\] & \[
\begin{array}{cc} 
& 8 \\
208,395 & \text { ets. } \\
163,950 & 31
\end{array}
\] & \[
\begin{array}{cc} 
& \text { S } \\
\text { cts. } \\
290,725 & 43 \\
207,631 & 30
\end{array}
\] & \[
\begin{array}{rr} 
& \$ \text { cts. } \\
302,486 & 72 \\
208,132 & 05
\end{array}
\] \\
\hline \begin{tabular}{l}
Increare in 1879-80 \\
\(D_{5}\) crease in 1879-80
\end{tabular} & 99,27716 & 57,971 13 & -1...........0. & 83,094 13 & \(\ldots\) \\
\hline MALT LIQUOR....... \(\left\{\begin{array}{l}1878-79 . . . . \\ 1879-80 . . .\end{array}\right.\) & 4,83616
4,700 & 55000
450 & 40000
40000 & \[
\begin{aligned}
& 45000 \\
& 35000
\end{aligned}
\] & \[
\begin{aligned}
& 10000 \\
& 25000
\end{aligned}
\] \\
\hline \begin{tabular}{l}
Iscrease in 1879-80 \(\qquad\) \\
Decrease in 1879-80.
\end{tabular} & 13616 & 10000 & ..................... & 10000 & \[
15000
\] \\
\hline MALT. ..................... \(\left\{\begin{array}{l}1878-79 . . . . \\ 1879-80 . . . .\end{array}\right.\) & 29,271 72
16,00986 & \begin{tabular}{l}
30,883 \\
16,839 \\
\hline 19
\end{tabular} & \[
\begin{aligned}
& 40,65592 \\
& 21,877 \quad 38
\end{aligned}
\] & \[
\begin{aligned}
& 58,50572 \\
& 27,676 \quad 49
\end{aligned}
\] & \[
\begin{array}{ll}
55,660 & 04 \\
31,961 & 15
\end{array}
\] \\
\hline Increase in 1879-80...... Decrease in 1879-80 ..... & 13,261 86 & 14,04361 & 18,778 54 & 30,829 23 & 23,698 89 \\
\hline \[
\text { TOBACCO .............. }\left\{\begin{array}{l}
1878-79 \ldots . . . \\
1879-80 \ldots . .
\end{array}\right.
\] & 125,822
127,356
53 & \[
\begin{aligned}
& 126.85191 \\
& 118,37666
\end{aligned}
\] & \[
\begin{aligned}
& 128,03170 \\
& 138,17419
\end{aligned}
\] & \[
\begin{aligned}
& 161,09635 \\
& 159,450 \quad 47
\end{aligned}
\] & \[
\begin{aligned}
& 130,52305 \\
& 152,9: 546
\end{aligned}
\] \\
\hline \begin{tabular}{l}
Inchease in 1879-80.. ............... \\
Decrease in 1879-80
\end{tabular} & 1,534 08 & 8,475 72 & 10,142 49 & 3,645 88 & 22,402 41 \\
\hline PETROLEUM........... \(\left\{\begin{array}{l}1878-79 . . . . \\ 1879-80 . . . .\end{array}\right.\) & 24730
73210 & \[
\begin{array}{r}
50385 \\
1,41175
\end{array}
\] & \[
\begin{array}{r}
73044 \\
1,91910
\end{array}
\] & \[
\begin{array}{r}
94910 \\
2,92350
\end{array}
\] & \[
\begin{array}{r}
93940 \\
1,9.595
\end{array}
\] \\
\hline \begin{tabular}{l}
Increase in 187980 \(\qquad\) \\
Decrease in 187980
\end{tabular} & \(48 \pm 80\) & 90790 & 1,188 66 & 1,974 40 & 1,006 55 \\
\hline  & \[
\begin{aligned}
& 3,74985 \\
& 3,28766
\end{aligned}
\] & \[
\begin{aligned}
& 3,30135 \\
& 2,46933
\end{aligned}
\] & \[
\begin{aligned}
& 4,07319 \\
& 2,60704
\end{aligned}
\] & 3,382
3,76981 & \[
\begin{aligned}
& 3,22706 \\
& 2,28044
\end{aligned}
\] \\
\hline \begin{tabular}{l}
InCREASE in 1879-80... ................ \\
Decrease in 1879-80.
\end{tabular} & 46219 & 83202 & 1,46615 & 38756 & 94662 \\
\hline \[
\text { SEIZURES ........ ...... }\left\{\begin{array}{l}
1878-79 \ldots . . . \\
1879-80 . . . .
\end{array}\right.
\] & 75281
7,40357 & \(\begin{array}{r}658 \\ 93 \\ \hline 30\end{array}\) & 12800
9806 & \[
\begin{array}{r}
11000 \\
2,598 \quad 48
\end{array}
\] & \[
\begin{array}{r}
55943 \\
6344
\end{array}
\] \\
\hline \begin{tabular}{l}
Inoreabe in 1879.80... .............. \\
Decrease in 1879-80
\end{tabular} & 6,650 76 & \[
56551
\] & 2994 & \[
2,488 \quad 48
\] & \[
49599
\] \\
\hline OTHER RECEIPTS.. \(\left\{\begin{array}{l}1878-79 . . . . \\ 1879-80 . . .\end{array}\right.\) & 54500
650 & \[
\begin{aligned}
& 40000 \\
& 40000
\end{aligned}
\] & \[
\begin{aligned}
& 40000 \\
& 40000
\end{aligned}
\] & \[
\begin{aligned}
& 40275 \\
& 67300
\end{aligned}
\] & \[
\begin{aligned}
& 44300 \\
& 60350
\end{aligned}
\] \\
\hline \begin{tabular}{l}
Increasm in 1879-90... ............... \\
Decrease in 18:9-80
\end{tabular} & 10500 & & & 17025 & 16060 \\
\hline Total Incrkare in 187980 \(\qquad\) Total Decrease in 1879-80 \(\qquad\) & \[
104,36273
\] & 81,07962 & ㅈ․ 63,38896 & \(\cdots\) & 95,77671 \\
\hline
\end{tabular}

Inland Revenue Department, Ottawa, 1st September, 1880.

\section*{REVENUE.}

Statement, 1878-79 and 1879-80.

No. 16.-REFUNDS, 1879-80.

44 Victoria.
Sessional Papers (No. 4.)
A. 1881






\begin{tabular}{|c|c|c|}
\hline  & &  \\
\hline  & &  \\
\hline  & & \begin{tabular}{l}
 \\

\(\qquad\) \(\stackrel{\text { ® }}{\Xi}\)
\end{tabular} \\
\hline  &  &  \\
\hline 苞 & &  \\
\hline  & &  \\
\hline  & &  \\
\hline
\end{tabular}

sLides and booms dues.
\begin{tabular}{|c|c|c|c|c|}
\hline  &  & \begin{tabular}{l}
Duty refunded under 31st Vic., cap. 5, sec. 49 \\
\(\begin{array}{lll}\text { do } & \text { do } & \text { do } \\ \text { do } & \text { do } & \text { do }\end{array}\) \\
Total Slides and Bocms \\
Grand Total Kefunds
\(\qquad\)
\(\qquad\)
\(\qquad\)
\end{tabular} &  & \[
\begin{array}{r}
13962 \\
\hline 47,78281 \\
\hline
\end{array}
\] \\
\hline \multicolumn{5}{|l|}{A. BRUNEL,} \\
\hline
\end{tabular}
Inland Revenue Department,
Ottawa, 1 ist September, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Dr. & & & & (For Details, see Appendix B.) & & & Cr. \\
\hline  & Disbursed hy the ReceiverGeneral. & Deduction for Superannuation. & Total. & - & Salaries. &  & Total. \\
\hline \$ cts. & \$ cts. & \$ cts. & 3 cts. & & \$ cts. & \$ cts. \({ }^{\text {d }}\) cts. & \$ cts \\
\hline ............... & 7,00000
\(26,6: 588\) & ............. & \(\begin{array}{r}7,000 \\ 27,150 \\ \hline\end{array}\) & ...... Minister of Inland Revenue....... ...... ...... . ................ & \(\begin{array}{r}7,000 \\ 27,150 \\ \hline\end{array}\) &  & 700000
27,150 \\
\hline …............ & 26,6588
47186 & ..... ........ & 27,150
47186 & ...... Advertising in and subscription to newspapers .......... & .......... . .... &  & 471 86 \\
\hline 1666 & 3,275 00 & .............. & 3,291 66 & ..... Stradry persons, for additional assistance........ ........ & ................ & 3,275 00 & 3,291 66 \\
\hline ..... ...... & 63301 & ............. & 63301 & ...... Montreal and Dominion Telegraph Companies......... & ................. & 63301 ...... ........ & 63301 \\
\hline ......... & 80278 & ............ & 803 78 & ..... Queen's Printer ............... ........... ...................... & ........ ..... & 80278 -............ & 80278 \\
\hline .............. & 2,090 79 & ...... . ..... & 2,060 79 & .....Sundry persons ........ ........ .......................... ........ & .............. .. & 2,690 79 ............. & 2,190 79 \\
\hline ............ . & 22215 & ..... ........ & 22215 & ..... Postages .......... .... .......... ......... ............. .......... & ......... ........ & 22215 ............ & 22215 \\
\hline 1666 & 41,849 11 & 52412 & 4?,389 89 & ..... . .... ........... ... . . Tutals ......... ..... ....... ................... & 34,15000 & 8,223 \(23 \quad 1666\) & 42,389 80 \\
\hline \multicolumn{8}{|l|}{\begin{tabular}{l}
Inland Revenue Department, \\
Ottawa, 1st September, 1880.
\end{tabular}} \\
\hline
\end{tabular}
WEIGḢTS AND MEASURES, GAS AND LAW STAMPS, 1879-80.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Dr. & \multicolumn{7}{|l|}{No. 18.-Statement showing the amount of Revenue accrued.} & \multicolumn{2}{|l|}{Cr.} \\
\hline - & Weights Measures Stamps. & \[
\underset{\text { Stamps. }}{\text { Gas }}
\] & Law
Stampa,
Supreme
Court. & Total. & - & Weights \({ }^{\text {and }}\) Stamps. & \({ }_{\text {Stamp3 }}^{\text {Gas }}\) &  & Total. \\
\hline \multirow[t]{6}{*}{To amount of Stamps des'royed or returned To Uommission allowed To amount of Stamps remaining in bands of Distributers, To Balance, being the Revenue acerced during 18:9-80......} & \$ cts. & \$ cts. & cts. & \$ cts. & \multirow[t]{4}{*}{\begin{tabular}{l}
By amount of Stamps in hands of Distributori \\
By amount of Stamps issued by the Inland
Revenua Department during the year .......
\end{tabular}} & \multirow[t]{3}{*}{\[
\begin{array}{cc}
\$ & \text { cts. } \\
1,091 & 55
\end{array}
\]} & \$ cts. & \$ cts. & \$ cts. \\
\hline & 3,457 28 & & & & & & 20,837 50 & 14245 & 22,061 50 \\
\hline & 23 & .............. & 6686 & \({ }^{3,46886}\) & & & & & \\
\hline & 34,715 92 & 22,478 25 & - 10510 & 67,299 27 & & 54,119 24 & 4,112 00 & 1,300 00 & 69,531 24 \\
\hline & 17,037 59 & 2,461 25 & 1,270 49 & 20,769 33 & & & & & \\
\hline & 55,210 79 & 24,939 50 & 1,442 45 & 81,592 74 & Total ............. & 55,210 79 & 24,939 50 & 1,442 45 & 81,592 74 \\
\hline & & & & & & & A. BRU & NEL, Commissi & ner. \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline .... ..........) & 1,166 00 & 250 & 1,168 50 & |..... Charlottetovn, P.E.I.. ........ ....... .......| & ............. & 6942 & 1,085 19 & 2389 & 1,169 50 \\
\hline ..... ...... & 1,168 00 & ............. & 1,166 00 & ..... Winnipeg ...... & ..... ....... & 6915 & 1,085 90 & 29.95 & 1,166 00 \\
\hline 1,99155 & ........ & ............. & 1,(9165 & .... Victoria, B, \(a\) & ............ & ......... & 1,(9165 & ............ & 1,091 55 \\
\hline 1,691 55 & 54,119 24 & - 4245 & 55,253 24 & ..... Grand Total & 3,457 28 & 15,223 49 & 34,715 92 & 1,856 55 & 55,253 24 \\
\hline
\end{tabular}
WEIGHTS AND MEASURES STAMPS, 1879-80.
Dr. No. 19 (b).-Deputy Inspectors of the Old Divisions in account with Inland Revenue Department. Cr.

GAS AND LAW \({ }^{\text {En }}\) STAMPS, 1879-80.
No. 20 -Stamp Distributors in account with Inland Revenue Department.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{\({ }_{\substack{\text { Balances, } \\ 1879 \\ \text { 1st July, }}}\)} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Stamps } \\
\text { Sssued to } \\
\text { Inspectors }
\end{gathered}
\]
dc.} & \multirow[t]{2}{*}{Total.} & \multirow[t]{2}{*}{Districta.} & \multirow[t]{2}{*}{\(|\)\begin{tabular}{c} 
Commis- \\
silown \\
siowed to \\
Distributor \\
of Law \\
Stamps. \\
Ste
\end{tabular}} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Stamps } \\
\text { returned, } \\
\text { or } \\
\text { or }
\end{gathered}
\]} & \multirow[t]{2}{*}{Deposited of Receiver General.} & \multicolumn{2}{|l|}{} & \multirow[t]{2}{*}{Total.} \\
\hline Stamps on hand. & \[
\begin{aligned}
& \text { Cash on } \\
& \text { hand. }
\end{aligned}
\] & & & & & & & Stamps on hand & \[
\begin{gathered}
\text { Cash } \\
\text { on hand. }
\end{gathered}
\] & \\
\hline \$ ct & \$ cts. & \$ cts & \$ cts. & & cts. & \$ & cte. & \$ cts. & \$ cts. & \$ cts. \\
\hline 1,064 25 & 1725 & 51750 &  &  & & & 18
665 & \[
\begin{array}{r}
498 \\
1,015 \\
75
\end{array}
\] & ................ & - \(\begin{array}{r}517 \\ 1,80 \\ \hline\end{array}\) \\
\hline & & \(5: 500\)
11250 & ( 523500 & ...... Cobourg ......................... & ............... & & 7375 & 1,222 50 & 625 & \({ }_{1,30250}^{50}\) \\
\hline 1,188 00 & 200 & 11250
60900 & 1,509 500 & ...... Lendon....................................... & & & & 509 00 & & \({ }_{509}{ }_{500}\) \\
\hline 74875 & 1180 & 175 & 760 715 & ...... O tatawa ........................... & . & -........... & 64
150
150 &  & ........... & [ 76025 \\
\hline & & \({ }_{625} 70\) & \({ }_{555} 515\) & ..... Port Hope.................................. & & -............. & 1650 & \({ }^{608} 50\) & & \({ }_{5}^{525} 500\) \\
\hline 3,256 25 & 2900 & 50000 & 3,785 25 & .Tcronto,......... & .............. & & & 3,192 75 & 6300 & 3,785 25 \\
\hline 6,257 25 & 6975 & 2,86100 & 9,181 00 & ........ Ontario .... & & & 78075 & 8,341 00 & 5925 & 9,181 00 \\
\hline & & & & & & & & & & \\
\hline \[
\begin{aligned}
& 5,77775 \\
& 1,69025
\end{aligned}
\] & 1000 & 49800 & \[
\begin{aligned}
& 6,275 \\
& 1,700 \\
& 1,75
\end{aligned}
\] & \begin{tabular}{l}
..Montreal \\
...Quebec .
\end{tabular} & & ...... ..... & \[
\begin{aligned}
& 81000 \\
& 259 \\
& 25
\end{aligned}
\] & \begin{tabular}{l}
5,46575 \\
1,441 \\
\hline
\end{tabular} & .... & \[
\begin{aligned}
& 6,4575 \\
& 1,70025
\end{aligned}
\] \\
\hline 7,468 00 & 10 & 49800 & 7,9 & ........ Quebec. & ............... & & 1,069 25 & 6,906 75 & & 7,966 00 \\
\hline & & & & & & & & & & 1,248 25 \\
\hline \({ }_{2}^{1,178} \mathbf{1}\) & 1125 & 10000 & \({ }^{1,2489} 25\) & St. John. & ......... ..... & -.......... & 9350 & 12,195 75 & & 2,289 25 \\
\hline 3,265 00 & 2250 & 15000 & 3,53750 & ...... New Brunswick & ...... ....... & & 15900 & 3,378 50 & & 3,537 50 \\
\hline 2,409 50 & 3050 & 50000 & \[
\begin{array}{r}
2,94000 \\
483 \\
\hline 85
\end{array}
\] & ..... Halifax ............................ & & & \[
\begin{array}{r}
41650 \\
350
\end{array}
\] & \[
\begin{array}{|l|l|l|l|}
2,430 \\
400
\end{array}
\] & 3000 & \[
\begin{array}{r}
2,919 \\
{ }_{483} 90 \\
75
\end{array}
\] \\
\hline 2,893 25 & & 50000 & 3,423 75 & Nova Scot & & & 42000 & 2,973 75 & 3000 & 3,423 75 \\
\hline & 30.0 & & & & & & & & & \\
\hline
\end{tabular}
GAS AND LAW STAMPS, 1879-80-Concluded.

\begin{tabular}{|c|c|}
\hline － &  \\
\hline  &  \\
\hline  & \＆ \\
\hline \[
\begin{array}{l|l} 
& \text { 品敬 }
\end{array}
\] & ¢0\％ \\
\hline  & ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ \\
\hline  & \％i\％ \\
\hline  &  \\
\hline \begin{tabular}{l}
6181＂ \(\mathrm{A} \mathrm{T}^{\mathrm{n} \rho}\) \\
781 ssuossad K．lp －uns ot әnp әәu빕
\end{tabular} &  \\
\hline  &  \\
\hline \[
\begin{gathered}
\stackrel{\rightharpoonup}{3} \\
\stackrel{\rightharpoonup}{4}
\end{gathered}
\] &  \\
\hline \begin{tabular}{l}
0881 ‘annf \\
q7oe scuesiad sap \\
－uns of onp әousigg
\end{tabular} &  \\
\hline  &  \\
\hline  วuә рәа！әәәл zunouv &  \\
\hline  －uns \(\delta q\) ənp 20ив！日g &  \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 6000 & \[
\begin{array}{r}
475 \\
13 \\
18
\end{array}
\] & ............ & \[
\cdots
\] & \[
\begin{gathered}
47500 \\
638
\end{gathered}
\] &  & 1............ & \[
\left\lvert\, \begin{array}{ll}
100000 \\
\cdots \cdots
\end{array}\right.
\] & \[
\begin{array}{ll}
375 & 00 \\
50 & 00
\end{array}
\] & 1....... & 13.18 & \[
\mid
\] & ........... & \(\begin{array}{r}475 \\ 6328 \\ \hline\end{array}\) \\
\hline 5000 & 69828 & & & 64828 & Nelv Brunsori & \(\ldots\) & 10000 & 52000 & & 2828 & & & 61828 \\
\hline & & & & & & & & & & & & & \\
\hline 2185. & 4500 & .......... & & \({ }^{4} 4500\) & \(\qquad\) & & …........ & 45
20
00
0 & & 185 & & & \({ }_{21}^{45} 85\) \\
\hline & 12000 & & & 12009 & Hants.... ...................... & \(\ldots\) & & & .... .... & & 3000 & & \(\begin{array}{r}1: 0 \\ 30 \\ 300 \\ \hline 0\end{array}\) \\
\hline 30
\(2+00\)
\(2+\) & & ......... & & 24000 & .tuneoburg & .......... & & ............ & & & & 2400 & 2400 \\
\hline & 4168 & ......... & ... & \({ }^{41} 66\) & Pictou ..........: & & 4166 & .... & & & & & 4166
6697 \\
\hline ......... & 669 ? & & & 6697 & istrict Inspector. & - & & & 6697 & ...... & & & \\
\hline 85 & 27363 & & & 34948 & ...Nova Scotia & & 4166 & 8500 & 6697 & 185 & 00 & 2400 & 34948 \\
\hline & 1035 & & & 1035 & Prince, P.E I... & & & & & 1035 & & & 1035 \\
\hline 65382 & 3, 9 ) 54 & 327 & 4 20 & 3,737 31 & ....Grand T & 328 & 14166 & 2,536 95 & 400 & \(2{ }^{26} 07\) & 130 & 29916 & 3,787 31 \\
\hline
\end{tabular}
Inland Revenue Department,
Ottawa, 1st September, 1880.
> A. BRUNEL,
> A. Commissioner.
DR．
\begin{tabular}{|c|c|c|c|}
\hline 寅 &  &  &  \\
\hline  & ¢ & ＊＊ & （ \\
\hline  &  & ¢ &  \\
\hline  & （\％） & \[
\begin{array}{l|l|l|}
\hline 6 & =8 & 0 \\
7 & 68 & 0 \\
\hline
\end{array}
\] &  \\
\hline  &  & ¢ &  \\
\hline  & 長 & － & \\
\hline  & \％ & ¢0： & （1）： \\
\hline  &  &  &  \\
\hline  －uns of ent exurigy &  & & （1） \\
\hline \[
\begin{aligned}
& \dot{\omega} \\
& . \stackrel{\rightharpoonup}{\partial} \\
& \stackrel{\rightharpoonup}{\partial} \\
& \hline
\end{aligned}
\] &  &  &  \\
\hline 安 &  &  &  \\
\hline \begin{tabular}{l}
0881 ＂วunf \\

\end{tabular} & ¢ &  &  \\
\hline \begin{tabular}{l}
nombnaue \\
－Jodng \(20 j\) selurl \\
－85 щojј реұоирәа
\end{tabular} &  &  &  \\
\hline  tuəmisbdəa mos ．pas！eved s7unomy &  &  & ¢¢¢ \\
\hline \begin{tabular}{l}
 \\

\end{tabular} & \％ 0 ¢ &  &  \\
\hline
\end{tabular}

Inland Revenue Department,
Otrawa, Ist September, 1880
Dr.
No. 22.-Inspection Districts in account with Expenditure.
(For Details, see Appendix B.)

\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{} \\
\hline & \\
\hline &  \\
\hline &  \\
\hline & 8) \(\begin{aligned} & 8 \\ & 0 \\ & 0\end{aligned}\) \\
\hline & (1) \\
\hline \[
\begin{aligned}
& 8 \\
& 8 \\
& 8
\end{aligned}
\] & (18 \\
\hline & (1) \\
\hline \multicolumn{2}{|l|}{} \\
\hline \[
\begin{aligned}
& 8 \\
& 8 \\
& 8
\end{aligned}
\] &  \\
\hline &  \\
\hline \(\stackrel{8}{8}\) &  \\
\hline \[
\begin{aligned}
& \text { ò } \\
& \text { ön }
\end{aligned}
\] &  \\
\hline & (1) \\
\hline
\end{tabular}
A. BRUNEL,
Inland Revenue Department,
Ottawa, 1 st September, 1880.

No. 23.-Statement showing the Amount Voted and the Expenditure Authorized for each Service, for 1879-80.


\author{
A. BRUNEL, \\ Commissioner.
}

\author{
Inland Revenue Department, Otrawa, 1st September, 1880.
}

\section*{APPENDIX A.}

\section*{STATISTICS.}

\section*{APPENDIX A.-SPIRITS.}

No. 1.-Return of Manufactures,
\begin{tabular}{|c|c|c|c|}
\hline \multirow[t]{2}{*}{:Revenue Divisions.} & Grain and Molasses, \& c., used for Distillation. & \multicolumn{2}{|l|}{Licenses issued and amounts collected.} \\
\hline & Lbs. & No. & \$ \\
\hline Belleville, Ontario......... ................. ......... ......................... & 1,156,720 & 1 & 250 \\
\hline Guelph do ................................ ....... ................. & 2,817,920 & 1 & 250 \\
\hline Paris do ............... .............. .......... .................. & ... & 1 & 250 \\
\hline Perth do .......... ............................................... & 160,268 & 2 & 375 \\
\hline Prescott do .............. ............................................ & 6,689,960 & 1 & 250 \\
\hline Toronto do ................................. .......................... & 25,443,000 & 1 & 250 \\
\hline Windsor do ................................... ...................... & 16,914,450 & 1 & 250 \\
\hline Joliette, Quebec ..... ......... ................ ..................... ............... & 31,640 & \} 1 & 125 \\
\hline Montreal do ......... ...................... ................................... & 4,200 & & \\
\hline Halifax, Nova Scotia \(\square\) & Galls. Molasses. 8,200 & \[
\} 1
\] & 125 \\
\hline Manitobs..................... ......... ........ . ......... ............ ................. & 176,160 & 1 & 250 \\
\hline British Columbia.. ....... ......... ......... ............................... .... & Sugar. & \} 1 & 250 \\
\hline ( Gallons Molasses. ......... & 8,201 & & \\
\hline Totals.............. ........ , ..... .... ...................... & 53,394, 258 & 12 & 2,625 \\
\hline (Sugar......................... & 2,413 & & \\
\hline
\end{tabular}

\author{
Inland Revenue Department, Ortawa, 1st September 1880
}
for the Year ended 30th June， 1880.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Proof Spirits at \(\$ 1\) and \(\$\) & anufactured 3 per Gal． & Duty col Manu & ted Ex－ tory． & \multicolumn{2}{|l|}{Duty accruing on Spirits Warehoused．} & Total duty collected Ex－Manu－ factory and on Licenses． \\
\hline Gallons． & \＄cts & Gallons． & \＄ot & Gallons． & \＄cts． & \＄cts \\
\hline 60，328－20 & 60，328 20 & 5，148•75 & 5，148 75 & 55，1ヶ9•45 & 55，179 45 & 6，398 75 \\
\hline 149，749．14 & 149，749 14 & 34，504－33 & 34，504 33 & 115，244．81 & 115，244 81 & 34，754 33 \\
\hline Rectifiers＇ & License． & & & & & 25000 \\
\hline 8，086．37 & 8，080 37 & 973 \({ }^{6} 6\) & 97376 & 7，112－61 & 7，112 61 & 1，348 76 \\
\hline 359，214．58 & 359，214 58 & 28，933•71 & 28，933 71 & 330，280•87 & 330，280 87 & 29，183 71 \\
\hline 1，381，067．35 & 1，381，067 35 & 38，663－85 & 38，653 85 & 1，342，403．50 & 1，342，403 50 & 38，913 85 \\
\hline 1，022，797．06 & 1，022，797 66 & 209，426．25 & 209，426 25 & 813，370－81 & 813，370 81 & 209，676 25 \\
\hline \｛ \(901 \cdot 05\) & 90105 & \(73 \cdot 40\) & 7340 & 827.65 & 82765 & 19840 \\
\hline \(205 \cdot 89\) & 20589 & 205.89 & 20589 & ．． \(0.0 . . . .0\) & ．\(. . . . . .0 . . . . . . ~\) & 20589 \\
\hline 6，960•17 & 6，066 36 & \(324 \cdot 40\) & 32799 & 5，633 77 & 8，738 37 & 45299 \\
\hline \(8537 \cdot 09\) & 8，537 09 & 2，459•72 & 2，459 72 & 6，077•37 & 6，077 37 & 2，709 72 \\
\hline 14025 & 14025 & 140.25 & 14025 & ．．．．．．．．．．．． & ．．．．．．．．．．．．．．．． & 39025 \\
\hline 2，996，987•15 & 2，997，093 34 & 320，854－31 & 320，857 90 & 2，676，132－84 & 2，676，235 44 & 323，482 90 \\
\hline
\end{tabular}

\section*{A．BRUNEI， \\ Commissioner．}

APPENDIX A-Continued.-SPIRITS.
No. 2.-Comparative Statement of Spirits Manufactured,


Inland Revenue Department, Otrawa, 1st September, 1880.

ERRATUM.
Page 55.-Total of column headed "Duty Collected on Spirits Ex-Manufactory," or \(302,854 \cdot 31\) gallons read \(320,854.31\) gallons.
during the Years ended 30th June, 1879 and 1880.

A. BRUNEL,

Commissioner.

APPENDIX A-Continued-SPIRITN.
Dr.
No. 3.-Spirit Warehouse Return,
\begin{tabular}{|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Spirits remaining in \\
Warebouse from last year.
\end{tabular} & Spirits placed in Warehouse. & Spirits ReWarchoused and Imported. & Spirits received from other Divisions. & Totals. & Revenue Divisions. \\
\hline Gallons. & Gallons. & Gallons. & Gallons. & Gallons. & \\
\hline 1,922.16 & & & 6,479-66 & 8,401 82 & ....... Algoma \\
\hline 32,691.59 & 55,179-45 & ........ ........ & 15,384 90 & 103, \(355 \cdot 94\) & ....... Belleville..... \\
\hline \(839 \cdot 6\) & , & & 12,880 67 & 13,719 93 & .........Cobourg ...... \\
\hline 5) 4 [88 & ......... ........ & & 8,311•35 & \(8.866 \cdot 23\) & .........Vollingwood . \\
\hline 717.48 & ...... ... ...... & & 6,030.56 & 6,748.04 & ........ Cornwall. \\
\hline \(3.498 \cdot 35\) & & & 29,429•85 & 32,928-20 & ........ Goderich .... \\
\hline 29,153.40 & 115,214 81 & & 1,537.76 & 145,935-97 & .........Guelph.... \\
\hline 27,8:5 75 & & \(5.886 \cdot 27\) & 145,60701 & 179,019 03 & .........Hamilton . \\
\hline 8,753 39 & ......... ........ & 287.76 & 128,112.27 & 137,153.42 & -........Kingston... \\
\hline 4,437 93 & ....... ......... & & 91,922-80 & 96,360•73 & ......... London.. \\
\hline 5,174.50 & .......... ...... & ............ ..... & 96,222 03 & 101,396.58 & ........ Ottawa \\
\hline 2,792.14 & & & 40,819 18 & 43,611•32 & .........Paris \\
\hline 18,15891 & 7,11261 & & 19,099 61 & 44,371-13 & ......... Perth. \\
\hline 1,838.93 & & ................ & 25,833•73 & 27,672 66 & ........ Peterborough \\
\hline 105,196.52 & 330,280.87 & & 13,138.28 & 448,615.67 & ..... ...Prescott. \\
\hline 2,431.49 & ..... ........... & & 19,741-54 & 22,173 03 & ........ Sarnia. \\
\hline 2,399-53 & & & 29.490 .67 & 31,890.20 & ....... St. Catharine \\
\hline 507,508.56 & 1,342,403.50 & 76.03 & 105,741.70 & 1,955,729 79 & Toronto \\
\hline 357,557.78 & 813,370.81 & ................. & 650 81 & 1,171,579•40 & Windso \\
\hline 61, 109.7.... & & ................ & 2,46982
\(629,490.47\) & \begin{tabular}{r}
3,297 \\
\hline 690 \\
69060
\end{tabular} & ........ Joliette .. \\
\hline 18,767 66 & & & 237,71850 & 256,486 16 & -.......... Quebec \\
\hline 30.62 & & & 26,635 24 & 26,665 86 & Sherbro \\
\hline ........... & & & 6,463 16 & 6,463'16 & ......... Sorel .... ...... \\
\hline 3,646.82 & & ........... ...... & 21,695 95 & 25,342 77 & ........ St. Hyacinthe \\
\hline 2,917 51 & ......... ......... & & 13,951•16 & 16,868.67 & ......... St. Johns . .... \\
\hline 80544 & & & 10,428•14 & 11,233.58 & .........Three Rivers \\
\hline 594.69 & & |........... ..... & \(664 \cdot 94\) & 1,259•63 & ......... Miramichi, N.B \\
\hline 20,516.42 & j,............... & & 108,257-82 & 128,774 24 & ......... St. Juhn \\
\hline 14,054 68 & 5,635-77 & & 70,032 \(\cdot 81\) & 89,723-26 & j..... ... Halifax, N.S. \\
\hline 412.84
6673 & & & & \[
563 \cdot 67
\]
\[
66 \cdot 73
\] & Pictou \\
\hline 6673
12842 & & & 17........... & \[
\begin{array}{r}
66 \cdot 73 \\
17,546.91
\end{array}
\] & ......... Yarmouth...... Uharlotte \\
\hline 12,750 81 & 6,077-37 & & 31,080-45 & 50,908.63 & ......... Winnipeg, Man \\
\hline 7,109.83 & & & 14,222.89 & 21,332 72 & ....... . Victoria, B.O. \\
\hline 8,612.54 & & & & 8,612.54 & ........Suspense .. \\
\hline 1,265,977-28 & 2,676,132 84 & 5,950.06 & 1,987, 115•10 & 5,935,175 28 & \\
\hline
\end{tabular}

Inland Revenue Department, Ottawa, 1st September, 1880.
for the Year ended 30th June, 1880.
Cr.
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Spirits en Consum at 80 cts, \(\$ 1\). per Gia & tered tor ption .00 and \(\$ 1.03\) llon. & Spirits removed to other Divisions. & Spirits Exported. & \[
\begin{gathered}
\text { Spirits user } \\
\text { in } \\
\text { Bonded } \\
\text { Factories. }
\end{gathered}
\] & Spirit3 written off by authority. & Spirits
remaining
in
Warehouse. & Totals. \\
\hline Gallons. & \$ cts. & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. \\
\hline 6,279 89 & 6,279 89 & & ........ ........ & & & 2,121•931 & 8,401.82 \\
\hline 46,076.93 & 46,076 93 & 33,458.95 & ...... ..... ..... & & ..... .... ... & 23,720.06 & 103,255 91 \\
\hline 12,332 02 & 12,332 02 &  & & & & 1,387.91 & 13,719 93 \\
\hline 8,458.88 & 8.45888 & & & & & 407.35 & 8,866 23 \\
\hline 6,444-41 & 6,444 41 & & & & & \(303 \cdot 63\) & 6,748 04 \\
\hline 28,350 30 & 28,350 30 & & & & & 4,577 90 & 32,928.20 \\
\hline 34,206 90 & 34,206 90 & 83,389-37 & & & & 28,339•70 & 145,935 97 \\
\hline 90,609•42 & 90,609 42 & & \(32 \cdot 01\) & 69,408.90 & .-. & 18,968•70 & 179,019 03 \\
\hline 55,582-76 & 55,682 76 & 3,970 02 & ..... ........... & 66,515 38 & ......... ..... & 11,085•26 & 137,153 42 \\
\hline \(80,775 \cdot 14\) & 80,775 14 & 1,331.83 & .......... ...... & 1,189 06 & ..... ........ & 13,064 70 & 96,360.73 \\
\hline 91,699•40 & 91,699 40 & \(187 \cdot 74\) & & & & 9,509 44 & 101,396.88 \\
\hline 39,310 39 & 39,310 39 & & & & 26293 & \(4038 \cdot 00\) & 43,611-32 \\
\hline 21,690-13 & 21,690 13 & \(136 \cdot 56\) & & & & 22,54.4.44 & \(44,371 \cdot 13\) \\
\hline 25,660.93 & 25,660 93 & & & & & 2,01173 & 27,672 66 \\
\hline 39,687.69 & 39,687 69 & 347,811-16 & & ......... ........ & & 61.11682 & 448,615.67 \\
\hline 20,501•32 & 20,501 32 & & \(30 \cdot 23\) & ......... ........ & ............. & 1,641-48 & 22,173 03 \\
\hline 28,878.32 & 28,878 30 & & & & ........... . & 3,011.88 & 31,890\% \({ }^{\circ}\) \\
\hline 151,664.97 & 151,664 97 & 811,500 11 & 9,408.02 & 47,778.98 & & 935,377 71 & 1,935.729•\%9 \\
\hline \[
145,69+27
\] & 145,694 28 & 612,491.60 & 5,752 66 & 7,805 90 & ............ & 362,834.97 & \(1,171,519 \cdot 40\) \\
\hline 2,255.08 & 2,255 08 & 827.65 & 5,762 6 & 7,808 & & 214.74 & , \(3,297 \cdot+7\) \\
\hline 504,134-55 & 504,135 46 & 51,468.23 & 573.82 & 38,623.91 & 1,867.59 & 93,932 09 & 690,600 19 \\
\hline 231,424•32 & 231,424 32 & 310.05 & & & & 24,751 79 & 256,486 16 \\
\hline 24,338.58 & 24,338 58 & ... & & & ..... .. ..... & 2,3.7.28 & 26,665 \(¢ 6\) \\
\hline 6,278.42 & 6,278 42 & , & & ...... ............ & & \(18+74\) & 6,463 15 \\
\hline 24,570 62 & 24,570 52 & & & & & , 77225 & 25,342.77 \\
\hline 15,108 91 & 15,108 91 & & & . & & 1,759.76 & 16,863 67 \\
\hline 11,169 69 & 11,169 69 & & & & & 6389 & 11,233-58 \\
\hline 1,051-52 & 1,051 52 & & & & & 208111 & 1.259 .63 \\
\hline 97,995 67 & 97,927 59 & 2,169 63 & - & 6,268.05 & ............. & 22,410 89 & 12R,754.24 \\
\hline \(62,621.06\)
563.67 & 62,62931
53190 & 1,062.20 & - \(419 \cdot 75\) & 2,872-41 & & 22,74784 & 89,723 26 \\
\hline \[
\begin{array}{r}
563.67 \\
66.73
\end{array}
\] & 63190
6673 & & ........ & & & & 563.67
66.73 \\
\hline 13,597.71 & 13,697 99 & & & & & 3,949-20 & 17,546.91 \\
\hline 31,114•71 & 31,114 71 & ................. & ........... ..... & & & 19,793.92 & 80,908•63 \\
\hline 9,387 94 & 9,387 94 & & & & & 11.94478 & 21,332. 72 \\
\hline -................. & & & & & & 8,612-54 & 8,612.54 \\
\hline ,969,518•15 & 1,969,491 73 & |1,987,115•10 & \(\cdot 16,216 \cdot 49\) & 240,462 69 & 2,130.52 & 1,719,737•43 & 5,935,175.28 \\
\hline
\end{tabular}

\author{
A. BRUNEI, \\ Commissioner.
}

APPENDIX A-Continued.-SPIRITS.
Dr.
No. 4.-Comparative Seatement of Spirit Warehouse


Inland Revenue Department, Ottawa, Ist September, 1880.

Returns, for the Years ended 30th June, 1879 and 1880.


\section*{A. BRUNEL, \\ Commissioner.}
APPENDIX A-Continued.-MALT.
\begin{tabular}{|c|c|c|}
\hline  &  &  \\
\hline  & 运 0 &  \\
\hline  &  & ¢0: \\
\hline  &  &  \\
\hline  &  &  \\
\hline  &  &  \\
\hline  &  &  \\
\hline  & ¢ & Nomosem \\
\hline  &  & \(-1 \div\) \\
\hline  &  &  \\
\hline
\end{tabular}


\footnotetext{
Inland Rrvenue Department,
Ottawa, 1st September, 1880
}
APPENDIX A-Continued.-MALT.
No. 6.-Comparative Statement of Malt Manufactured, for the Years ended,30th June, 1879 and 1880.

\begin{tabular}{r|r|r}
97,709 \\
34,529 & 105,065 & 1,077 \\
133,976 & 09 \\
3,67529 \\
3,520 & 215,127 & 1,65020 \\
\hline \(5,611,028\) & \(52,563,354\) & 64,68528 \\
\hline
\end{tabular}
A. BRUNEL,
Commissioner.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Island ...... ......... . ........... & 2 & 100 & 11,870 & 263,719 & 12,506 & 202,774 \\
\hline ... & 5 & 250 & 20,851 & 463,513 & 24,850 & 376,505 \\
\hline a. & 6 & 275 & 20,540 & 449,525 & 24,730 & 352,647 \\
\hline Totals.......................... & 115 & 8,575 & 3,312,328 & 74,177,482 & 3,710,881 & 88,174,382 \\
\hline
\end{tabular}
Commissioner.

\section*{APPENDIX A-Continued.-MALT.}

No. 7.-Milt Warehouse Retturn,
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \[
\begin{aligned}
& \text { Remaining } \\
& \text { in } \\
& \text { Warthouse } \\
& \text { from } \\
& \text { last year. }
\end{aligned}
\] & Placed
in
WareLeuse. & Increases. & Received from other Divisions. & Imported. & Totals. & Revenue Divisions. \\
\hline Lbs. & Lbs. & Lbs. & Lbs. & Lbs. & Lbs. & \\
\hline & & & 14,040
\(50,8 \pm 4\) & ............. & 14,040
151,519 & |...Algoma.......................... \\
\hline 142,272 & 401,127 & & & .............. & 513.305 & -...Cobourg ......................... \\
\hline & 8,8y8 & & & & 8,393 & ...Collingwood ............... \\
\hline 235,326 & 307,925 & 11....... & & & 543,251 & .... Goderich .......... .... ..... \\
\hline 2,401.627 & 7,411,404 & 114,031 & & & 9,987,082 & |...Guelph ....................... \\
\hline 1,872,746 & 5,902,702 & 244,444 & & & 8,019,8J2 & |...Hamilton............. ........ \\
\hline 198.969 & 2,498.180 & . ........ & & & 2,897.155 & ...Kingston................ .... \\
\hline 2,903,014 & 7,7\%6,8،3 & 44,230 & 70,200 & 3,23: & 10,757.549 & ...Londun ..... ........ ........ \\
\hline 6i,6j7 & 306,132 & 1,10... & 10,8,0 & ............. & 378,589 & ...Ottawa .............. ........ \\
\hline 182,906 & 370,503 & 1,164 & & & \(55+573\) & |...Paris ........... .............. \\
\hline 36,137 & 18,112 & & & & 221,249 & ...Perth ........ ............ ... . \\
\hline 6t,030 & 2,30,360 & 755 & & & 295,145 & |...Peterborough. .............. \\
\hline 537,364 & 1,490,338 & ...... ........ & 10,080 & ............. & 2,137,782 & ...Prescott ...................... \\
\hline .... ........ & 5,662
416540 & .............. & 23,400 & ........ ..... & 29,062 & ...Sarnia. .............. ........ \\
\hline 308,996
\(5.215,916\) & 416,540
\(13.5,5,58.5\) & & 95,600
813,703 & ................ & 819.136
\(19,851,323\) & ...St. Catharines..... ......... \\
\hline 5.215,916
\(1,875,349\) & \(13.515,58.5\)
\(6,713,443\) & 246,119
\(1.5,420\) & 813,703
50,400 & & \(19,851,3.23\)
\(8,754,612\) & ...Torun vo. ........ .. ............ \\
\hline & 19,591 & 15, & & & 19,594 & ...Joliette ................... ........ \\
\hline 2609,981 & 3,625,304 & .............. & 75,600 & .............. & 6,310,885 & ...Muntreal ...................... \\
\hline 146444 & 304,285 & .............. & & ..... ........ & 450.829 & ...Quebec ........ .............. \\
\hline 117,176 & 314,997 & .............. & & ..... . . . . . & 432.173
57,480 & ...Sherbrocke \\
\hline & 57,480 & ..... ......... & & & 57,480 & ...Teriebunne.. ........ ......... \\
\hline 173,623 & 145,363 & & 25,200 & & 314,186 & 1. St. Jutn, N.B............... \\
\hline 342,403 & 112,964 & & 121,200 & 7,9J0 & 581,467 & ...Halifux, N.S ............... \\
\hline 17,933 & 105.065 & ............. & 10,800 & . & 133,768 & ...Charlottetowa, P.E.I.... \\
\hline 13,505 & 33,976 & ............ & .............. & & 47,481
408, & ...Manitub.a.. .................. \\
\hline 163,699 & 215,127 & & & 89,008 & 408,492 & ...British Culumbia........... \\
\hline 19,907,409 & 52,5¢3,354 & 706,183 & 1,375,8:3 & 100,700 & 74, 7:3,513 & \\
\hline
\end{tabular}

Inland Revenue Department, Ottawa, 1st September, 1830
for the Year ended 30th June, 1880.


\section*{A. BRUNEL, \\ Commissioner.}

APPENDIX A-Continued.-MALT.
No. 8.-Comparative Statement of Malt Warehouse


Inland Revenoe Department, Ottawa, 1st September, 1880.

Returns, for the Years ended 30th June, 1879 and 1880.


\section*{A. BRUNEL, \\ Commissioner.}

\section*{APPENDIX A-Continued.-MALT LIQUOR.}

No. 9.-Return of Malt Liquor Manufactured, for the Year ended 80th: June, 1880


\section*{APPENDIX A-Continued.-MALT LIQUOR.}

No. 10.-Comparative Statement of Malt Liquor Manufactured, for the Years ended 30th June, 1879 and 1880.

- PPENDIX A-Comtinuted.-TOBACCO.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Revenue Divisions.} & \multicolumn{4}{|l|}{Leaf Tobacco and other Materials used.} & \multicolumn{2}{|l|}{Licenses.} & \multicolumn{3}{|l|}{Tobacco, Manufactured.} & \multicolumn{2}{|l|}{Cigara, Manufactured.} \\
\hline & \[
\left|\begin{array}{c}
\text { Produce } \\
\text { of } \\
\text { onade. }
\end{array}\right|
\] & Foreign Produce. & \(\left|\begin{array}{c}\text { Other } \\ \text { Commodi- } \\ \text { ties. }\end{array}\right|\) & Total
Weight of
ant
Matrials
used. & 安 & 㗊 & \[
\left|\begin{array}{r}
\text { At } 20 \mathrm{cta} \\
\text { per } \mathrm{lb} .
\end{array}\right|
\] & At 4 ets. per lib. & Duty. & \[
\begin{aligned}
& \text { At } 40 \text { cts. } \\
& \text { per lb. }
\end{aligned}
\] & Duty. \\
\hline \multirow[t]{11}{*}{} & Lbs. & \[
\text { Lbs. }{ }_{4371}
\] & \[
\text { Lbs. }{ }_{998}
\] & Lbs. 6369 & 2 & & Lbs. & Lbs. & \$ cte. & \({ }_{2200}\) & \$ \({ }^{\text {cts }}\) \\
\hline & & \[
\begin{aligned}
& 4371 \\
& 7516
\end{aligned}
\] & \[
\begin{aligned}
& 998 \\
& 437
\end{aligned}
\] & \[
\begin{aligned}
& 6369 \\
& 753
\end{aligned}
\] & 2
8
8 & 150 & & ................ & 8480
580 & 3557
16310 & 142280
612400 \\
\hline & 301 & \({ }^{35938}\) & 4439
65498 & \begin{tabular}{|c}
40678 \\
1211087
\end{tabular} & \(8{ }_{15}\) & \({ }_{725}^{400}\) & \({ }_{9342429}^{49}\) & -.................. & \(\begin{array}{r}\text { r } \\ 18684885 \\ \hline 850\end{array}\) & \({ }_{3251509}^{1531}\) & 132400
1300600 \\
\hline & 468 & \({ }_{7}^{1145133}{ }_{7}\) & 65496 & \(\begin{array}{r}121087 \\ 7705 \\ \hline\end{array}\) & 1. & & & & 186848 & 3239 & 129560 \\
\hline & & \(13474 \theta\) & 6530 & 141270 & 13 & \({ }^{625}\) & 79 & ...... & 1680 & \({ }_{57843}\) & 2313720 \\
\hline & & 172954 & 8560 & 181514 & 10 & 500 & \({ }_{280303}\) & ................ & 360610
50 & \({ }_{3099} 38040\) & \(\begin{array}{r}14081 \\ 129968 \\ \hline 88\end{array}\) \\
\hline & & \({ }_{1436}\) & 260 & 1438 & 1 & 500 & 250 & & & 777 & 31080 \\
\hline & & 26914 & & 25914' & 4 & 200 & & ... & & 9269 & 370760 \\
\hline & & 244675 & 21213 & 265888 & 21 & 950 & 844983 & ........ ........ & 1689970 & \({ }_{16946} 60849\) & \(\begin{array}{r}2433798 \\ 637840 \\ \hline\end{array}\) \\
\hline & 580 & 130743 & 17495 & 148818 & & 300 & 188501 & ............... & 2170035 & & \\
\hline & 1339 & 1916348 & 125428 & 2043118 & 85 & 4100 & 1195663 & & 23913270 & 23980439 & 9592174 \\
\hline \multirow[t]{4}{*}{} & \(12 \mathrm{Cr5}\) & 6475031 & 1343025 & 7830141 & 34 & 1675 & 57891 & 6888) & 117185294 & 17906650 & 7162680 \\
\hline & 3968 & 569464 & 86860 & \({ }^{6602921} 1\) & & 150 & 439320 & .. & |ri. 87866 00. & \({ }_{6315}^{11250}\) & \(\begin{array}{r}450 \\ 2526 \\ \hline 0\end{array}\) \\
\hline & & 12763
85 & & & & & & & & 34 & 1360 \\
\hline & 16053 & 7057342 & 1429900 & -3295 & 39 & 1900 & \(\overline{6297221}\) & 6\%681] & 125971894 & 186541 & 7461640 \\
\hline New Brunswick-St. John. & & 4 & 206 & 3669 & -1 & 50 & & & & 1679 & 671 60 \\
\hline \multirow[t]{3}{*}{Nova Scotia-Halifax ......... ..........
Pictou ......................... Yarmouth.} & & & 81889 & 398754 & & 100 & & & 6755460 & & \\
\hline & & 36254 & 2600 & 38854 & 2 & 100 & 31447 & ................ & 628340 & & \\
\hline & & 716 & 143 & 859 & & 50 & & .... .......... & & 716 & 28640 \\
\hline \multirow[t]{3}{*}{P. E. Island-Charlottetown Manitoba
\(\qquad\)} & & 35 & 3 & -438467 & 5 & 250 & 369220 & & 7384400 & 716 & 28640 \\
\hline & & 146037 & 4342 & 150979 & 2 & 100 & 107435 & .............. & 2148700 & & \\
\hline & & 784 & 218 & 10 C & & 50 & & & & 426 & 17442 \\
\hline British Columbia...................... & & 17852 & & 17852 & & 50 & & & & 6801 B0 & 272060 \\
\hline & 7392 & 9495661 & 14726 & 11187779 & & 6500 & \(7969539 \frac{1}{2}\) & \(6888 \frac{1}{2}\) & 64 & 43597794 & 174.91 16 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Revence Divisio} & \multicolumn{2}{|l|}{Souff, Manufacturd} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Total Weight Manafactared and Duty accruing.}} & \multicolumn{4}{|l|}{Daty collectod Ex} & \multicolumn{3}{|l|}{Warehoused.} & \multirow[t]{2}{*}{} \\
\hline &  & Daty. & & & \[
\begin{aligned}
& \text { cbacco, } \\
& \text { at } 20 \\
& \text { dit } 4 \text { cts. }
\end{aligned}
\] & Cigars,
at 40 cts . & \[
\begin{gathered}
\text { Snuff, } \\
\text { ant } \\
\text { a cts. }
\end{gathered}
\] & Dut & bacco & Cigars. & Duty & \\
\hline Ontario-Beller & Lbe & 8 cta. & \multicolumn{3}{|l|}{} & & & & L....... & Lbs. & \$ etan. & \multirow[t]{2}{*}{\[
\begin{array}{cc}
\mathrm{s} & \mathrm{cts} \\
980 \\
15790 \\
1509
\end{array}
\]} \\
\hline Goderic & & & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\left.\begin{gathered}
33 \\
252+\sharp \\
292
\end{gathered} \right\rvert\,
\]} &  & & \multirow[t]{2}{*}{} & & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & \\
\hline Guelph & & & & & & \[
\begin{aligned}
& 123845456 \\
& 28814, ~
\end{aligned}
\] & & & 9317184 & & & \\
\hline & & & ( \(\begin{gathered}3239 \\ 57922\end{gathered}\) & 12935 60 & \(\cdots\) & \({ }_{3}^{3239} 1\). & & \multirow[t]{2}{*}{} & ................ & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{17883 60} & \\
\hline \({ }_{\text {Paria }}\) Lo................ & & & 10332390
3349 & (1289760 & \multirow[t]{2}{*}{(} & \(\stackrel{213}{21}\) & & &  & & & \\
\hline Preacoti........... & & & \({ }_{\text {T77 }}\) & 1289
310
80 & & \multirow[t]{2}{*}{- \(\begin{gathered}3699 \\ 7875 \\ 7\end{gathered}\)} & &  & \multirow[t]{2}{*}{\(\cdots\)} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\({ }^{569} 60\)} & \\
\hline St. Cat & & &  & & & & \multirow[t]{2}{*}{} &  & & & & \multirow[t]{2}{*}{} \\
\hline onto & & &  & \[
\begin{aligned}
& 4123768 \\
& 28078 \\
& 75
\end{aligned}
\] & \(\xrightarrow{17762}\) 5331 & \[
\begin{aligned}
& 1449919 \\
& \hline 85010
\end{aligned}
\] & & \[
\begin{array}{r}
8152 \\
1311655 \\
\hline
\end{array}
\] & 72736
65470 &  & 33085
19328
20 & \\
\hline & & & \(1435460^{89}\) & 33505444 & \multirow[t]{2}{*}{} & -1925173 & & \multirow[t]{3}{*}{} & 1127945 & 120559601 & 273869 25 & -65345 19 \\
\hline \multirow[t]{2}{*}{} & \[
\begin{aligned}
& 51599 \\
& 5 i 777
\end{aligned}
\] & 10318
11565
50 & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & & \multirow[t]{2}{*}{\[
\begin{gathered}
12135950 \\
11260 \\
895
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \hline \frac{B 1594}{} \\
& 577772
\end{aligned}
\]} & & \[
\begin{gathered}
5574952 \\
20.704 \\
\hline
\end{gathered}
\] & \multirow[t]{2}{*}{\[
\begin{gathered}
57707 \\
\hdashline \quad 5420 . \\
\hline
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\cdot\left(\begin{array}{r}
113807330 \\
4094080 \\
216800
\end{array}\right.
\]} & \multirow[t]{2}{*}{} \\
\hline & & & & & \multirow[t]{2}{*}{} & & & & & & & \\
\hline & 10937 & 21874 & 6600002- & \({ }^{1356209} 64\) & & 123414 & 1093712 & 17502764 & 577065 & \({ }^{63127}\) & 118118200 & 17 76327 \\
\hline \({ }_{\text {w }}\) Brunswick & & & \multirow[t]{3}{*}{\[
\begin{gathered}
16079 \\
\left.\begin{array}{c}
33773 \\
3147 \\
712
\end{array} \right\rvert\,
\end{gathered}
\]} & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{\(\cdots\)} & - 1679 & \multirow[t]{2}{*}{\(\cdots\)} & \multirow[t]{3}{*}{\[
\left|\begin{array}{rr}
671 & 50 \\
7869 & 0 \\
789
\end{array}\right|
\]} & \multirow[t]{3}{*}{\[
\begin{array}{r}
333828 \\
28800
\end{array}
\]} & \multirow[t]{2}{*}{\(\cdots\)} & \multirow[t]{2}{*}{6676560} & \multirow[t]{3}{*}{} \\
\hline otia-Hal & & & & & & & & & & & & \\
\hline Pictou & & & & & & \({ }^{116}\) &  & & & - &  & \\
\hline & & & \({ }^{769936}\) & - 28840. & \multirow[t]{2}{*}{\[
\left\lvert\, \begin{array}{|c|c|}
\hline 69923 \\
-10393 \\
\hline
\end{array}\right.
\]} & \multirow[t]{2}{*}{\({ }^{716}\)} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\left|\begin{array}{r}
164480 \\
-10796
\end{array}\right|
\]} & \multirow[t]{2}{*}{\[
\begin{array}{r}
362428 \\
-\quad 3452 \\
\hline
\end{array}
\]} & \multirow[t]{2}{*}{} & \multicolumn{2}{|l|}{\multirow[t]{3}{*}{\[
\begin{array}{r}
7248500 \\
\hline \quad 189480 \\
\hline
\end{array}
\]}} \\
\hline P.E. Itand & & & 107435 & \multirow[t]{2}{*}{-2148700|} & & & & & & & & \\
\hline ioba & & & 43606 & & \[
-103983
\] & 4386E &  & \[
\left\lvert\, \begin{array}{r}
20796-90 \\
\hline 17442 \\
\hline
\end{array}\right.
\] & \[
3452
\] & \multirow[t]{2}{*}{\[
\mid=\cdots
\]} & -1........ & \\
\hline h Colun & & & 680150 & \multirow[t]{2}{*}{} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & \multirow[t]{2}{*}{109371} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{-272060,}} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{183679응 152816725,26878085}} \\
\hline & 1693712 & 2187430 & 885217574 & & & & & & & & & \\
\hline \multicolumn{13}{|l|}{\begin{tabular}{l}
Inland Revenue Department, OtTAWA, 1st September, 1880. \\
A.
\end{tabular}} \\
\hline
\end{tabular}

\section*{AI'PENDIX A-Continued.-TOBACCO.}

No. 12.-Comparatife Statement of Manufactures,


\footnotetext{
* 1 paid in previous year.
}
for the Years ended 30th June, 1879 and 1880.


\footnotetext{
(Continued next page.)
}

\section*{APPENDIX A-Continued.-TOBACCO.}

No. 12.-Comparatite Statement of Manufactures, for the Years ended 30th June, 1879 and 1880-Concluded.
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{Provinces.} & \multicolumn{3}{|c|}{Warehoused.} & \multirow[t]{2}{*}{Total Duts collected Ex-Manufactory including Licenses.} \\
\hline & Tobacco. & Oigars. & Duty. \({ }^{\text {d }}\) & \\
\hline 1879. & Lbs. & Lbs. & \$ ots. & \$ cts. \\
\hline Ontario ......... socovo.00 ......... .... & \(1148546 \frac{1}{2}\); & 84365.00 & 26345632 & 6899679 \\
\hline Quebec.......... .......... ......ose ......... ...... & 4861898 \({ }^{\frac{7}{2}}\) & 34547.00 & 98619850 & 16157526 \\
\hline New Brunswick .ocooc. .................... & ...... 0............... & ...................... & \(\bullet\) & 24460 \\
\hline  & 2986331 & .0.0. ... & 5972670 & 429880 \\
\hline Prince Edward Island... ........0 ...o...... & 26344 & & 526880 & 1430780 \\
\hline Manitoba ........ ... ......... .o....... .o....... & & ..... & ... & ............... \\
\hline  & ......... ...... ...... & ....0. ............... & & 178750 \\
\hline  & \(6335422 \frac{1}{2}\) & 118912.00 & 131465032 & 25121075 \\
\hline  & 1127945 & 12055260 & 27380925 & 6534519 \\
\hline  & 5779656 & 63127.00 & 118118200 & 17692764 \\
\hline New Brunswrick ..... .o.... .o....... .o.o-*.0. & & \(\cdots\) & .0.0.0.0.0..... & 72160 \\
\hline Nova Scotia......... & 362428 & ...... ... ...... ..... & 7248560 & 189480 \\
\hline Prince Edward Island....... & 3452 & ..... & 69040 & 2089660 \\
\hline  & ..................... & & .... & 22442 \\
\hline  & - \(\cdot\).......... & -0.00 0.0.0. & .............. ..... & 277060 \\
\hline Totals.0000000...... .e....... & 7273481 & 18367960 & 152816725 & 26878085 \\
\hline
\end{tabular}
A. BRUNEL,

Commissioner.
Inland Revenue Department,
Ottawa, 1st September, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \(\underset{\substack{\text { Bemaining in in } \\ \text { from last }}}{ }\) & \(\underset{\substack{\text { Warehouse } \\ \text { Year．}}}{ }\) & \multicolumn{3}{|l|}{Placed in Warebouse．} & \multicolumn{2}{|l|}{Placed in Warehouse from other Divisions．} &  & Weight & \multirow[b]{2}{*}{Inland} & \multicolumn{3}{|l|}{Ex－Warehoused for Excise Duty．} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { Ex-Warehoused } \\
& \text { for remoral to other } \\
& \text { Dirisions. }
\end{aligned}
\]} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { Ex-Warohoused } \\
& \text { Exportation. }
\end{aligned}
\]} & \[
\left.\begin{gathered}
\text { Writ ben } \\
\text { ont bort. } \\
\text { anthority }
\end{gathered} \right\rvert\,
\] & \multicolumn{2}{|l|}{} & \multicolumn{2}{|l|}{Weight acoounted for．} \\
\hline  & 嵒 & \％ &  &  &  & 发 & \％ & & &  &  & 客 & \％ & & \％ & 閣 & \％ & ¢ & 发 & \％ & 釈 \\
\hline Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & \({ }_{\text {Lbs }}\) & Lbs． & bs． & & Lbs． & Lbs． & ts． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． & Lbs． \\
\hline  & ．．． &  & & & 13，436， & & 20，1112， & ． &  & 882，403 & \(\cdots{ }^{-(. . . . . . . . . . . . . ~}\) &  & \({ }^{-\ldots . . . . . . . . . . . . . . . . .-~}\) & & & & ．．．．． & \％6，9132 \({ }^{\text {3\％，992 }}\) & & 20， 1111 & \\
\hline & & & & &  & …．．．．．．．． &  & － &  & cere & &  & ．．．．．．．．．．．． & & & & & 1,159 & ．．．． &  & \\
\hline ， & & & & &  & & （1， & &  & 14，\({ }^{1,699}\) & &  & ．．． & ．．．．． & & & & \({ }_{2,1812}^{2,186}\) & & 1，888， & \\
\hline 204，986 & \(\cdots 3\) & 931，7184 & 200 & \({ }_{3,70048}\) & －\({ }_{718,341}\) & & 1， \(1,855,4556\) \％ & \({ }_{4,04043}^{2,935}\) &  &  & 3，77029 &  & \({ }_{66,5424}\) & & － & & & 243，6865 & \({ }_{\text {c }}^{1,260}\) &  & \(\xrightarrow{2,995}\) \\
\hline  & \({ }_{5,995}^{4692}\) & & & 42，709 & 300，270 & &  & 48，794 &  &  & \({ }^{27,849}\) & 58,016
85,932
80 & \({ }^{3,656}\)［56 & ．．．．．．．．． & & & & 29，333 \({ }_{4}^{29} 4\) & \({ }_{10,8858}^{1693}\) & come & 4， 4.6681 \\
\hline 41，3836 & & & 355 & & 222，182 & & 3，920 & & －－．．． & & & 40,22622 & 4，736 & & & & & 58，104 & & & \\
\hline 50，223］ & & 68，0202 & & 13，81297 & 150，037 & & \({ }^{26368,281}\) & 13，81222 & ．．．．．．．．．．．．．．．．Paris．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． &  & 9，66593 & 38，109 56 & 64，0351 & & & & & 43，029 & 4，14702 &  & 13，81292 \\
\hline \({ }_{5,392}^{6,68}\) & 느…．．． & ……．．．．．．． & ．．．．．．．．． & － &  & － & \({ }_{21}^{24,7625}\) & ．．．．．． & \(\stackrel{1}{ }\) & & &  & \({ }^{1 . . . . . . . . . . . . . \mid . ~}\) & －1．．．．．．． & \(\ldots\) & － & &  & \(\cdots\) & 24,525 & \\
\hline  & \({ }^{-1 . . . . . . . . . . . . . . ~}\) & & ．．．．． & & 46,531 & & \({ }_{47,4072}\) & & Prescott & \({ }_{43}^{14,018}\) &  &  & 4572 & ．．．． & & & &  & & 47，407t & － \\
\hline \({ }_{630}{ }^{3}\) & 9288 & & & 1，424 & 12，064 & & \({ }_{12,694}^{23,068}\) & 2，35224 &  & cin & 2，35224 & －3，49969 & & & 128 & & & 0，438， & &  & \(2,3522^{24}\) \\
\hline 135，04012 & & 72，736 & & 46，34529］ & 1，078，6012 & & 1，286， \(3777^{68}\) & & －．．．．．．．．．．．．．．Sault Ste．Mar & & & 225,13197 & 7\％，065 & & & & ．．．．． & 159，072 & & & \\
\hline \({ }_{\text {81，}}^{51,895}\) &  & & & 9，59538 & 10，1722， & & \({ }^{1,73,2372}\) & 11，86：59 & ．．．．．．．．．．．．．．．．．．．．Winiosor．．．．．．．．．．． & 1，\({ }^{10,999}\) & 9，26942 & \({ }^{11,9065} 29\) & 30，440 & & & & & \(1,740^{\circ}\) & 2，69322 & \({ }^{1,236,37237^{2}}\) &  \\
\hline  & 12，351 & \({ }_{\text {c，}}^{504,704}\) & & \％1，70\％．．．．． & 1641，988\％ & ．．． & \({ }^{6,439}\) ， \(1855^{\text {a }}\) & &  & \({ }_{\text {123，093 }}^{1,074,499}\) &  & \({ }^{236,605} 84,60\) &  & 188 & \({ }_{4}^{92,1,482}\) & 3，434 & 4，490 &  & \({ }^{13,636} \times{ }^{\text {a }}\) & 6，437， 1185 & 70，058 \\
\hline 283 & & & & & \({ }_{1}^{1,085}\) & & li，085 & & ．－．．．．．．．．．．．．．．．．sherbrooke ．．．．．． & \({ }^{8,0688}\) & － & &  & & ．．．．．．．．．．．．． & －9．．．．．．． & & \(2,870{ }^{2}\) & ．． & 7，9392， & \\
\hline \({ }_{375}^{9666^{9}}\) & & ．．．．．．． & \(\cdots\) & \({ }_{6,420}\) & 1，00 & & \({ }_{9}, 966{ }^{\text {a }}\) & 5，420 & ．．．．．．．．．．．．．．．．．．St．Johns．．．．．．． & \[
\begin{gathered}
385 \\
8851 \\
\hline 8.12
\end{gathered}
\] & 1，993 & 93750 & & 112 & & ．．．． & \(\cdots\) & 105 & 3，345 & \({ }_{966}\) & －．．．．．7，20 \\
\hline 24，648＋ & －－1．．．． & ．．．．．．．．．． & \(\cdots\) & & 81,650 & & & ．－．．．．．．．．．．．．． &  & \({ }_{81,1154}^{125}\) & －1．．．．．． & & & & & & ．．．．． & & & & \\
\hline 149，7999 & － & & & & \({ }_{711,48}\) & － & 861，1972 & ．－．．．．．．． & ．．．．．．．．．．．．．．．．．．．\({ }^{\text {at．}}\) ．Joba ． & 687，244 & & 137，443939 & 9，578 & ．．．．．．．．． & 525 & & & 163，850 & & 861，1972 & \\
\hline 167，8，99］ & & 333，888 & & ．．．．．．．． & 699，35572 & 300 & 1，099，933 & \({ }^{-1 . . . . . . .00 ~}\) &  & 6488，634t & \(\cdots\) & 129，726 90 & 27，388 & ．．．．． & 113.976 & 237 & & 3 39,955 & －…－ 63 & 1，999，953 & －．．．．．．．． 300 \\
\hline \％0，\({ }^{40,932}\) & \(\cdots\) & 28，600 & ．．．．．．．． & & \({ }_{3}^{23.447}\) & & 92，\({ }^{98,800^{2}}\) & & ．．．．．．．．．．．．．．．．Prictou ．．．． & \({ }^{67,4335}\) & ．．．． & 11,50870 & 14，956 & & & & 283 & 20，058 & & 92,840 2 & \\
\hline \(2{ }^{2}\), & & 3，452 & & & \({ }_{27,611}^{2,}\) & －．．．．．．． & 56，9932 & & ．．．．．．．．．．．．．．．．．．．Charlotteto & 33，519 & & 6，7703 80 & \({ }^{346}\) & \(\cdots\) & 1，270 & & & 21，854 & & 66，889\％ & \\
\hline －\({ }_{95,003}^{2,888}\) & \(\cdots\) & & & & 162，7814， & & \({ }_{257,784}\) & & －．．．．．．．．．．．．．．．．．Manmme & \({ }_{138,5633}^{1,297}\) & & \({ }_{27,127}^{209}\) & \({ }_{4,113}^{3,115}\) & & & & 8,185 & 106，922 & & 4，311 & \\
\hline 38，4221 & & & & & \(88,672{ }^{2}\) & ．．．．．．．．． & ceisi，94， & &  & & & 760 & & & & & & 42，720 & & 125，994 & \\
\hline 19，7199 & & & & & & & &  & ．．．．．．．．．．．．．．．．．Sundry Coileetors ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．－．．．．．． & & & & & & & & \(\ldots\) & 19，719 & & 19，719 \({ }^{\text {a }}\) & ． \\
\hline  & 30，5524 & ， & 555 & 3，67989 & ＇5，217，963］ & &  & 24，53164 & &  & 155，634431 & 1，350，490 88 & 5，217，9632 & & －257，229 & 3，671 & 12，958 & 2，585，1993 & 51，92688 & \begin{tabular}{l}
\(14,808,480 \frac{1}{2}\) \\
253 at 4c．
\end{tabular} & 214，5311 \\
\hline
\end{tabular}

No. 14.-Comparafive Statement for the Years ended 30 June, 1879 and 1880.


\section*{AP PENDIX A.-Continued.-TOBACCO, RAW LEAF.}

Dr.
No. 15.-Return for the Year ended 30th June, 1880,
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{Remaining
in
Warehouse
from
last year.} & \multicolumn{2}{|l|}{Placed in Warehouse.} & Placed in Warehouse from other Divisions. & Total We to be accounted & ights d for. & \multirow{2}{*}{Ialand Revenue Divisions.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
Ex- \\
Warehoused for Duty.
\end{tabular}} \\
\hline  &  &  &  &  & E.0.0.0.0 & 哥 & &  &  \\
\hline & & & & 1,587 ......... & 1,587 & & Ontario.
Belleville..... & bs. & Lbs. \\
\hline 281 & & 10,759 & & 1,601 \(\ldots . . . .\). & 12,644 & ........ & .. Guelph... ....... ...... & & \\
\hline 90 & 458 & 250,836 & & & 250,926 & 458 & ..Hamilton. ............ & 270 & \\
\hline - & & 6,692 & & 392 & 7,484 & & .-Kingston .............. & & \\
\hline 104 & & 30,57912 & & 3,613 .... ....| & 34,2962 & 256 & Ottawa ....................es & 405 & 258 \\
\hline & & - \(22 . .10,363\) & & ㄱ..1, 519 ........... & 221,883 & ........ & Paris.....................0. & 121 & \\
\hline & & 9,164 & & 4,435 218 & 13,599 & 218 & ..St. Catharines ...... & 367 & \\
\hline 10,145 & & 72,510, & & 3,273 ........ & 85,928 \({ }^{1}\) & & Toronto. ............. & \(94 \frac{1}{2}\) & \\
\hline & 121,753 & 134,037 \({ }^{2}\) & 12,154 & 1,569 & 135,606 \({ }^{\frac{1}{2}}\) & 133,912 & ..Wiadsor........ ...... & 129 & 6,610 \\
\hline :0,620 & 122,216 & 734,941 \(\frac{1}{2}\) & 12,410 & 17,993 218 & 763,5532 & 34,844 & Quebec. & 1,387 & 6,866 \\
\hline & & & 5,703 & & & & .Joliette ..... ........e & & \\
\hline 2,687 & 13,069 & 211,249 & 2,3024 & 4,970 61,950 & 218,906 & 77,321 & ..Montreal . .............. & 189 & 5,274 \\
\hline & 268 & 110,335 & , & .......|32,665 & 110,335 & 32,0 33 & Quebec. ......... ..... & 110,335 & 25,002 \\
\hline & & 1,049 & .......0. & 100 & 1,149 & ........... & ..Three Rivers.. .....0. & ...0.0...... & . \\
\hline & & 15,237 & & & 15,237 & ............ & ..St. Johns. ............. & ....0. & -..00000. \\
\hline 2,687 & 13,337 & 337,870 & 8,004 & 5,070 91,615 & 345,627 & 115,956 & & 110,524 & 8787 \\
\hline & .......... & ......... ...... & & 932. & & ........ & ..St. John, N. B. ...... & & \\
\hline & .......... & & & 910 & 910 & & Halifax, & & \\
\hline 553 & & & .......... & 673 & 1,236 & & Manito & & \\
\hline & & 350 & & & 350 & . & British Colum & & \\
\hline 13,870 & 135,553| & \[
1,073,161 \frac{1}{2}
\] & 20,414 & 25,567,94,833 & 1,112,5982 & 250,800 & ......... Total. ....o....... & 111,926 & 43,744 \\
\hline
\end{tabular}

Comparative Statement for the Fiscal


Inland Revenue Department, Ottawa, 1at September, 1880.
and Comperative Statement for Years 1879 and 1880.
Cr.


Years ended 30th June, 1879 and 1880.


\section*{44 Victoria.}

\section*{APPENDIX A-Continued.-INSPECTION OF PETROLEUM,}

No. 16.-Return of Fees for Inspection of Petroleum, for the Year ended 30th June, 1880.


\section*{APPENDIXA-Continued.-INSPECTION OF PETROLEUM-Continued.}

No. 16.-Comparative Statement of Petroleum Inspection Fees, for the Years ended 30th June, 1879 and 1880.


\author{
A. BRUNEL, \\ Commissioner.
}

Inland Revenue Department, Ottawa, 1st August, 1880.

\section*{APPENLIX A-Continued.-MANUFACTURES IN BOND.}

No. 17.-Return of Manufactures


Inland Revende Department, Ottawa, 1st September, 1880.
for the Year ended 30th June, 1880.

A. BRUNEL,

\section*{APPEDIX A-Continued.-MANUFACTURES IN BOND.}

No. 18.-Comparative Statement of Manufactures


Inland Revenue Department, Otrawa, 1st September, 1880
for the Years ended 30th June, 1879 and 1880.


\author{
A. BRUNEL, \\ Commissioner
}
APPENDIX A-Continued.-MANUFACTURES IN BOND.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Revenue Divisions.} & \multicolumn{2}{|l|}{Remaining in Warehouse last year.} & \multicolumn{3}{|l|}{Placed in Warehouse.} & \multicolumn{3}{|l|}{Totals.} \\
\hline & Vinegar. & Methylated Spirits. & Vinegar. & Mathylated Spirits. & Varnish. & Vinegar. & Methylated Spirits. & Varnish. \\
\hline \multirow[t]{2}{*}{Hamilton ........................ ...... ....................} & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. & Gallons. \\
\hline & 8,677-30 & 466.78 & 245,950.01 & 9,766-50 & ........ ........ & 254,627.31 & 10,233 28 & ....... ....... \\
\hline Kingston ....... ...... ................. ...... . ............. & 12,204.00 & 2,981-84 & 13,258.00 & 16,313 11 & 28,727•85 & 25,462.00 & 19,294.95 & 28,727.85 \\
\hline \multirow[t]{6}{*}{\begin{tabular}{l}
Toronto \\
Windsor \\
Quebec \\
St. John, N.B. \\
Halifax, N.S.
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)
\end{tabular}} & 11,426.00 & ........ ........ & 163,985-00 & 13,085•87 & ... & 175,411.00 & 13,085.87 & ................ \\
\hline & . ........ & ........ ........ & 29,721•40 & ............. & ..... ........... & 29,721•40 & .... & ........ ........ \\
\hline & 1,966'50 & ............ & ......... & ..... & ..... & 1,966.50 & .............. & ........ ....... \\
\hline & 9,481-16 & .... ........ & 22,716-33 & ......... ... & .... ........ & 32,197•49 & . & .... .......... \\
\hline & 369-40 & .... ..... & 6,880-30 & ...... ......... & .... ......... & 7,249 70 & ................ & . \\
\hline & 44,124 36 & 3,448 62 & 482,511.04 & 39,165-48 & 28,727-85 & 526,635 40 & 42,614 10 & 28,727-85 \\
\hline \multicolumn{9}{|l|}{-} \\
\hline
\end{tabular}
APPENDIX A-Continued.-MANUFACTURES IN BOND.


\section*{APPENDIX A-Continued.-MANUFACTURES IN BOND.}



\section*{CAN ALS .}
APPENDIX A-Continued.-CANALS.
No. 21.-General Statement showing the Quantity of each Article transported on the Welland Canal, and the

44 Victoria. Sessional Sapers (No. 4)

No. 21.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{\[
\underset{\substack{\text { Cromadian to } \\ \text { Canadian } \\ \text { Ports. }}}{\text { Cone }}
\]} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
Ports. \\
From
United States to
United States
Ports
\end{tabular}} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
United States to Canadian Ports.
\end{tabular}} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { A mount } \\
\text { of } \\
\text { Tulls. }
\end{gathered}
\]} \\
\hline & Up. & Do & Up. & Down. & Up. & Down. & Op & Dow & Up. & Down. & & \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Whiting \\
Wool \\
All other Goods and Merchandise not enumerated
\end{tabular}} & \multirow[t]{3}{*}{............} & \multirow[t]{3}{*}{} & \multirow[t]{2}{*}{} & & \multirow[t]{3}{*}{1,........} & \multirow[t]{3}{*}{\begin{tabular}{r}
12 \\
\hline...............\(~\) \\
12
\end{tabular}} & \multirow[t]{2}{*}{…........} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{…......... ..............}} & \multirow[t]{2}{*}{.} & \multirow[t]{2}{*}{.........} & \multirow[t]{3}{*}{….................} \\
\hline & & & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{-............}} & & & & & & & & \\
\hline & & & & & & & .......... & & 2,431 & 383 & 2,819 & \\
\hline \begin{tabular}{l} 
Bark \\
Barrels, empty................................... \\
\hline
\end{tabular} & \multirow[t]{2}{*}{\begin{tabular}{c}
42 \\
\hline
\end{tabular}} & \multirow[t]{2}{*}{-...............} & \multirow[t]{2}{*}{...... 6.} & & \multirow[t]{2}{*}{13} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{.............} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\begin{array}{|c} 
\\
\cdots \\
\cdots . . . . . . . . . . . . . . . ~ \\
\hline
\end{array}
\]} & \multirow[t]{2}{*}{.................} & \multirow[t]{2}{*}{-......120

20} & \multirow[t]{2}{*}{\[
\begin{array}{r}
2366 \\
200
\end{array}
\]} \\
\hline Boat Knees..... & & & & \multirow[t]{3}{*}{} & & & & & & & & \\
\hline Fioats .. .i. .i ................................. & \multirow[t]{2}{*}{4,665} & -1.7.79, & \multirow[t]{2}{*}{1,500} & & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & …........... & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{6, \({ }^{\text {6,165 }}\)} & \multirow[t]{2}{*}{41,189} & \multirow[t]{2}{*}{47,354} & \multirow[t]{2}{*}{-1...1,033 29} \\
\hline re Wood, in vessels.......................
do
rafts........... & & & & & & & ............... & & & & & \\
\hline Hoops................................................... & & & & \multirow[t]{3}{*}{…............} & \multirow[t]{3}{*}{…........} & \multirow[t]{3}{*}{\[
\left\lvert\, \begin{array}{|c|c|c}
\cdots \cdots \\
41,301
\end{array}\right.
\]} & \multirow[t]{2}{*}{} & \multirow[t]{3}{*}{\[
\left.\begin{array}{|c}
\mid \ldots . . . . . . . . . . . . . ~ \\
4,183
\end{array} \right\rvert\,
\]} & .............. & \multirow[t]{3}{*}{\[
\begin{array}{r}
50,971 \\
39
\end{array}
\]} & \multirow[t]{3}{*}{\[
\begin{array}{r}
57,728 \\
88
\end{array}
\]} & \multirow[t]{3}{*}{\[
\begin{array}{r}
1 \ldots \ldots . . . . . . . . \\
9,14544 \\
1343
\end{array}
\]} \\
\hline Hop Poles ............ ................. & \multirow[t]{2}{*}{8,709} & \multirow[t]{3}{*}{\[
\left.\begin{array}{|r|}
\hline 5,321 \\
39
\end{array} \right\rvert\,
\]} & \multirow[t]{2}{*}{1,037} & & & & & & \multirow[t]{2}{*}{6,757
49} & & & \\
\hline Lumber, Sawn, in ressels ......... & & & & & & & ................ & & & & & \\
\hline Maste, Spare and Telegraph Poles, in vessels. & & & \multirow[t]{2}{*}{1,013} & & *** **** & \(\qquad\) &  & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\begin{gathered}
1,013 \\
. . . . . . . . . . . ~
\end{gathered}
\]} & .. ........ & 1,013 & \multirow[t]{2}{*}{15195} \\
\hline Masts, spars and Telegraph Poles, in rafts. & & & & .. ..... .... & ........... & .................... &  & & & \multirow[t]{3}{*}{26
47
7,572} & \multirow[t]{2}{*}{….........
80
47} & \\
\hline  & 54 & \multirow[t]{2}{*}{} & ........... & & & & & & ............ & & & \multirow[t]{4}{*}{\(4 . . . . .188\)
938
29379
055
18037
3256} \\
\hline Saw Logs......................... & 174 & & 707 & 2,615 & & & 963 & 261 & 1,814 & & 9,416 & \\
\hline Staves and Headings, Burrel........ & 11 & & & & & & & 488 & & 962 & 962 & \\
\hline do do \begin{tabular}{l} 
Pipe.......... \\
do \\
do Weat India..
\end{tabular}. & & \(\begin{array}{r}136 \\ 38 \\ \hline\end{array}\) & . & 182
89 & & 15 & & \({ }^{42}\) & & 174 & 174 & \\
\hline Staves, Salt Barrel. .................... & \multirow[t]{2}{*}{} & \multirow[t]{3}{*}{\[
\begin{array}{r}
13 \\
2
\end{array}
\]} & \multirow[t]{2}{*}{.............} & \multirow[t]{2}{*}{................} & \multirow[t]{2}{*}{.............} & \multirow[t]{3}{*}{\({ }_{23}\)} & \multirow[t]{2}{*}{...........} & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{\[
\begin{array}{r}
11 \\
2
\end{array}
\]} & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{\begin{tabular}{l}
53 \\
4
\end{tabular}} & \multirow[t]{3}{*}{2230
018} \\
\hline \begin{tabular}{l}
Shingles. \\
Split Posts and Fence Rails, in vessels
\(\qquad\)
\end{tabular} & & & & & & & & & & & & \\
\hline Split Posts and Fence Rails, in rafts. & & & & & & & & & & & & \\
\hline Timber \({ }^{\text {raftsquare, in vessels.............. }}\) & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & \multirow[t]{2}{*}{|...........} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\begin{tabular}{l} 
…......... \\
\(\cdots . . . . . . . . . . . . . ~\) \\
\hline
\end{tabular}} & \multirow[t]{2}{*}{} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\(\left|\begin{array}{r|r}\ldots . . . . . . . . . .: ~ & 23,284 \\ \hdashline-. . . . . . . . . . \mid & 1,890 \\ \hline . . . . . . . .\end{array}\right|\)}} & & 27,449 & 27,449 & 4,136 90 \\
\hline  & & & & & & & & & & & & \\
\hline
\end{tabular}

APPENDIX A-Continued-CANALS.
No. 22.-Gfeneral Statement showing the Quantity of each Article transported on the St. Lawrence Canals, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { From } \\
\text { Canadian to } \\
\text { Canadian } \\
\text { Ports. }
\end{gathered}
\]} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & \multicolumn{2}{|l|}{From Onited States to United States Ports.} & \multicolumn{2}{|l|}{\[
\begin{array}{|c}
\text { From } \\
\text { United States to } \\
\text { Canadian } \\
\text { Ports. }
\end{array}
\]} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{Amount of Tulis.} \\
\hline & Up. & Dowa. & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & & \\
\hline Ashes, Pot and Pearl .......... & & & & 37 & 8 & 9 & & & 104 & 767 & 871 & 15340 \\
\hline Apples ........ ...................... .... & 48 & 8,297 & & 37 & 8 & 9 & & & 48 & 8,297 & 8,345 & 1,220 90 \\
\hline Agricultural Products not enumerated, Vegetable
\(\qquad\) & 935 & 1,477 & & & 3 & & & & 915 & 1,477 & 2,422 & 28785 \\
\hline Agricultural Producte not enu- & & & & & & & & & & & & \\
\hline merated, A nimal ........ .... .. .... & 154 & 2,489 & & & & & & 1 & 154 & 2,489 & 2,643 & 30431 \\
\hline Agricultural Implements............. & 272 & & & ........... & & & ... & .......... & 272 & & 332 & 3247 \\
\hline Barley ........ ........ ....... ..... .... & \(3 \times 1\) & 8,583 & .... & & 87 & 29 & & & 463 & 8,612 & 9,080 & 63594 \\
\hline Bricks ........ .......... ........ .......... & 3,573 & 618 & 23 & 616 & ........... & ........... & 201 & ..... & 3,796
47 & +618 & 4,414
1,101 & 35816
11586 \\
\hline Baggags ......... ............ ................ & 375 & 46 & & & .... ..... & -......... & ..... ...... & ............. & 375 & 1,616 & \({ }^{1} 991\) & 16490 \\
\hline Beer .. .................................. & 282 & 134 & 43 & ................. & & & ... & & 325 & 124 & 449 & 7912 \\
\hline Brimstone ...W..... ................. & 57 & & & . & & & & & 67 & & 57 & 579 \\
\hline Cement and Water Lime ............. & 1,155 & 2.58 & 5 & & & 1 & & 268 & 1,160 & 527 & 1,687 & 18009 \\
\hline Clay, Lime and Sand. ....... ....... & 2,203 & 2,090 & & & & \({ }^{5}\) & 2,042 & 150 & 4,245 & 2,245 & 6,49) & 26797 \\
\hline Coal ........ ............... ........ ..... & \({ }^{6}\) & 16,504 & & & ....1 & 458 & & 39,440 & 6 & 56,492 & 56,4i8 & 7,917 76 \\
\hline Corn .... ............ ..................... & 478 & 36,743 & & & & 14 & & 28 & 478 & 36,785 & 37,263 & 5,186 65 \\
\hline Catile .............. ............ ........ & 75 & 1,244 & .. & . & 3 & & & ..... & 78 & 1,214 & 1,322 & 9306 \\
\hline Cotton, Raw ............................ & 49 & & ..... & .......... & ........... & .......... & . & .-......... & 49 & & 49 & 185 \\
\hline Coffee ........ ...... ............. ....... & & & ...... & ....... & & & ..... ...... & & & 2 & 4 & 080 \\
\hline Crockery ...................... ....... & 628 & 4 & ........... & ....... ..... & & ..... ..... & ..... & & 628 & 4 & 632 & 11877 \\
\hline Oye Wood and Dye Stuffs .......... & 126
407 & 8 & .......... & .... & & & 51 & ... & 177 & 4 & 185 & 1343 \\
\hline Fish .......................................... & 6:9 & & & .... & & .......... & & & 412 & 4 & 466
660 & \\
\hline Flax and Eemp ................... .....' & 47 & & & & & & 10 & & 57 & \({ }^{6}\) & 62 & 560 \\
\hline Flour . .... .............................. & 1,043 & 9,336 & & 37 & 1 & 6 & & & 1,044 & 9,379 & 10,423 & 1,476 87 \\
\hline Furniture ........ ............. .......... & \({ }^{362}\) & 100 & ........... & .. & 2 & ..... ..... & & & , 364 & 100 & 464 & 4425 \\
\hline Grpsum -...-........................ & 1,522 & & & & & .......... & & & 1,522 & \begin{tabular}{|}
327 \\
36
\end{tabular} & 1,849 & \begin{tabular}{|c}
7137 \\
15219
\end{tabular} \\
\hline
\end{tabular}

No. 22.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.


APPENDIX A-Continued.-CANALS.
No. 23.- General Statement showing the Quantity of each Article transported on the Burlington Bay Year ended 30th June, 1880


\author{
44 Victoria. Sessional Papers (No 4.) \\ A. 1881
}


44 Victoria. Sessional Papers (No.4.) A. 1881
No. 23.-General Statement showing the Quantity of each Article transported, \&c.-Concludpd.


APPENDIX A－Continued．－CANALS．
No．24．－General Statement showing the Quantity of each Article transported on the Ottawa Canals，and the Amount of Rerenue collected，during the Fiscal Year ended 30th June， 1880.
\begin{tabular}{|c|c|c|}
\hline \multicolumn{2}{|l|}{} &  \\
\hline \multicolumn{2}{|l|}{或㬭} &  \\
\hline \multirow[t]{2}{*}{号} & 完 &  \\
\hline & 亩 &  \\
\hline \multirow[t]{2}{*}{} & \(\stackrel{\text { ¢ }}{\text { ¢ }}\) &  \\
\hline & \(\stackrel{\text { ® }}{ }\) &  \\
\hline \multirow[t]{2}{*}{} & 宮 &  \\
\hline & 亩 & （u） \\
\hline \multirow[t]{2}{*}{} & 官 &  \\
\hline & 安 & （\％ \\
\hline \multirow[t]{2}{*}{部品} & 官 &  \\
\hline & － &  \\
\hline 皆 & &  \\
\hline
\end{tabular}

44 Victoria. Sessional Papers (No. 4.) A. 1551

\begin{tabular}{|c|c|c|}
\hline \begin{tabular}{l|l|l} 
¢ \\
\(\sim\)
\end{tabular} &  & 亡゙ \\
\hline  &  &  \\
\hline ヵ｜ 4 ¢ &  & \[
\begin{aligned}
& \text { ar } \\
& \text { A } \\
& \text { \& }
\end{aligned}
\] \\
\hline  &  & \\
\hline  &  & \\
\hline \begin{tabular}{cc|c|c}
\(\square\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & & & \\
\(\vdots\) & \(\vdots\) \\
\hline
\end{tabular} &  & \\
\hline \begin{tabular}{c|c|c|c} 
\\
\hline\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\hline
\end{tabular} &  & \\
\hline \begin{tabular}{c|c|c|c} 
\\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\hline
\end{tabular} & （\％ & \\
\hline  &  & \\
\hline  &  & \[
\begin{aligned}
& \dot{\infty} \\
& \underset{\sim}{\infty} \\
& \underset{\sim}{\circ}
\end{aligned}
\] \\
\hline \(\cdots\) & \(\cdots\) &  \\
\hline  & &  \\
\hline  & &  \\
\hline
\end{tabular}

44 Victoria. Sessional Papers (No. 4.)

\section*{APPENDIX A-Continued.-CANALS.}
No. 25.-General Statement showing the Quantity of each Article transported on the Chambly Canal,



44 Victoria. Sessional Papers (No. 4.)
No. 25.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.


Inland Revenue Drparnment,
Ottawa, 1st September, 1880
No. 26.-General Statement showing the Quantity of each Article transported on the Rideau Canal, and the

44 Victoria. Sessional Papers (No. 4.) A. \(18 \varsigma 1\)


44 Victoria. Sessional Papers (No. 4.)
No. 26.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.


APPENDIX A-Continued.-CANALS.
No. 27.-General Statement showing the Quantity of each Article transported through the St. Peter's Canal, and the Amount of Revenue collected, during the Season of Navigation in 1880.

APPENDIX A-Continued.-CANALS.
No. 28.-General Statement showing the Quantity of each Article transported through the Newcastle District Canals, and the Amount of Revenue collected, during the Fiscal Year ended 30th June, 1880.


No. 29.-Statement of Traffic on the undermentioned Canals, and the
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow{2}{*}{Articles.} & \multicolumn{2}{|l|}{Welland Oanal.} & \multicolumn{2}{|l|}{St. Lawrence Canals.} & \multicolumn{2}{|l|}{Chambly Canal.} \\
\hline & Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. \\
\hline Class No. 1. & & \$ cts. & & \$ cts. & & \$ cts \\
\hline Canadian Vepgels, steam..... & 179,800 & 2,431 25 & 847,469 & 4,959 56 & 103,677 & 35450 \\
\hline United States Vessels, sterm & 17,438 & 25954 & 37,580 & 21315 & 407 & 444 \\
\hline Canadian Vessels, sail.. ..... & 544,109 & 10,696 95 & 957,836 & 10,696 31 & 118,283 & 2,133 93 \\
\hline United States Vessels, sail.. & 202,639 & 4,481 60 & 77,427 & 86314 & 79,795 & 1,073 25. \\
\hline Total, Class No. \(1 . . .\). & 943,686 & 17,869 34 & 1,920,312 & 16,732 16 & 302,162 & 3,566 11 \\
\hline Class No. 2. & No. & & No. & & No. & \\
\hline Passengers......... .............. & 6,395 & 8142 & 71,716 & 3,322 63 & 4,943 & 9101 \\
\hline Class No. 3. & Tons. & & Tons. & & Tons. & \\
\hline Bricks ..... & 11 & 028 & 44,14 & 35816 & 442 & 2901 \\
\hline Crimstoze.. \({ }^{\text {Cement and Water Cime...... }}\) & 1,117 & 13904 & 57
1,697 & 679
18009 & 2 & 035 \\
\hline Clay, Lime and Sand .......... & 4.108 & 46114 & 6,490 & 26797 & 1,818 & 18134 \\
\hline Ooal ..... ......... ..... ..... ...... & 154,475 & 28,834 03 & 56,408 & 7,917 76 & 83, 556 & 8,487 30 \\
\hline Fish ...... ...... ....... ..... ......... & 46 & 920 & 660 & 8396 & .......... & \\
\hline Gypsum ...... .............. ..... & 1,866 & 20100 & 1,849 & 7137 & 268 & 894 \\
\hline Iron, Railway............. ..... & 1,175 & 21750 & 17,006 & 2,529 21 & 300 & 3000 \\
\hline do Pig.............. ........... & \({ }_{6} 63\) & 12823 & 19,043 & 2,729 73 & ............ & ..... \\
\hline do All other..... ............ & 5,902 & 1,15399 & 7,603 & 86655 & 292 & 2920 \\
\hline Salt ......... ............ ........... & 5,443 & 1,087 73 & 25,657 & 3,462 91 & 1,188 & 11885 \\
\hline Stone, for cutting.............. & 3,939 & 74041 & 1,2:8 & 5339 & 1,249 & 11877 \\
\hline Apples ........ ..... ... ...... ...... & 1,705 & 12022 & 8,345 & 1,220 90 & 1,208 & 11435 \\
\hline Barley......... ...... ...... ........ & 4,895 & 90685 & 9,080 & 63594 & 3,187 & 24009 \\
\hline Corn .............. .............. ... & 159,818 & 31,910 70 & 37,263 & 5,186 65 & ... ......... & ....... ......... \\
\hline Cotton, Raw ..... ............... & & & 49 & 185 & ........ ...... & .. .... ......... \\
\hline Flax and Hemp................. & 390 & 6140 & 62 & 560 & ............. &  \\
\hline Flour .... ............. ............ & 10,348 & 34205 & 10,423 & 1,47687 & 26 & 120
11889 \\
\hline Hay, Pressed..... ...... ........ & 400 & 8000 & 1,417 & 9144 & 1,562 & 11887 \\
\hline Meals, all kinds.. ..... ........ & 34 & 680 & \({ }^{6} 616\) & 3561 & 203 & 687 \\
\hline Oil Cake & & & 23 & 327 & .... ......... & ................ \\
\hline Uais ...... ...... ...... ..... ......... & 1,185 & 20683 & 14,261 & 82513 & 6,489 & 44036 \\
\hline Pease...... ... .... ...... ............ & 413 & 8260 & 45,749 & 3,850 69 & 5,005 & 22622 \\
\hline Potatoes...... ... ...... ............ & 2 & 005 & 393 & 3385 & 145 & 1404 \\
\hline Rye ................... ........... & 440 & 8800 & 7,786 & 99222 & .... n...... & ...... \\
\hline Seeds, all kinds..... .. ...... 0 & 24 & 480 & 61 & 719 & 1 & 010 \\
\hline Tobacco, Raw........ - ......... & & 0............ & 44 & 570 & 3 & 030 \\
\hline Wheat ...... . . . . . . . ............ & 286,429 & 66,036 30 & 83,846 & 10,802 80 & ....0 .......... & ................. \\
\hline All other Agriculrural Products, Vegetable. & 1,460 & B5 66 & 2,422 & 28785 & 2,281 & 7627 \\
\hline Bones.. ..... ....... ...... ......... & 38 & 760 & 1,101 & 11586 & 244 & 3440 \\
\hline Cattle................ ........... ... & . ..... & ........ ........ & 1,322 & 9306 & 68 & 200 \\
\hline Hogs ...................... ........ & .... & & 163 & 1429 & & \\
\hline Hides and Sking, Horns and Hoofs & 20 & 064 & 138 & & & \\
\hline Horses ........................ .......... & 5 & 030 & 672 & 5239 & -10.00.0.0 & 010 \\
\hline Lard and Lard Oil. ........... & 77 & 1540 & 251 & 3291 & .....* & \\
\hline Meats, other than Pork...... & & & 14 & 194 & ...... ......... & \\
\hline Pork............. .................... & 624 & 10466 & 1,051 & 12044 & ...... ......... & 5 \\
\hline
\end{tabular}

A-Continued.
Amount of Tolls collected, during the Fiscal Year ended 30th June, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{Burlington Bay Canal.} & \multicolumn{2}{|l|}{Ottawa Canals.} & \multicolumn{2}{|l|}{Rideau Canal.} & \multicolumn{2}{|l|}{'t. Peter's Canal.} & \multicolumn{2}{|l|}{Newcastle District Camals.} \\
\hline Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. \\
\hline & \$ cts, & & \$ cts. & & \$ cts. & & \$ cts. & & \$ cts. \\
\hline 275,513 & 3,050 01 & 196,325 & 72810 & 47,925 & 49061 & & .... & 502 & 500 \\
\hline 65,289 & 65299 & 205,839 & 3,187 10 & 110,080 & 1,123 83 & .............. & & ....7.... & 050 \\
\hline 661 & ¢ 61 & 71,783 & 1,419 78 & 3,161 & +26 36 & .... ..... & & & \\
\hline 341,672 & 3,711 70 & 473,997 & 5,334 98 & 161,216 & 1,641 30 & & & 602 & 550 \\
\hline No. & & No. & & No. & & No. - & & No. & \\
\hline 22,408 & & 19,304 & 37837 & 5,371 & 12384 & & & & \\
\hline Tons. & & Tons. & & Tons. & & Tons. & & Tons. & \\
\hline 49 & ...... ........ & 101 & 733 & 483 & 1233 & ...... & & ............. & \(\cdots\) \\
\hline 64 & & 467 & 1685 & 44 & 113 & ... ..... & & ... & \\
\hline 1,149 & .... & 2,338 & 6313 & 32 & 081 & .......... & & ...... . .... & .. \\
\hline 41,428 & ... & ..... ......... & .... & 2,491 & 11180 & .......... & ..... ...... & ... & ... \\
\hline 428 & & . & ... & 21 & 061 & ......... . & ........... & ........... & ... \\
\hline 4 & & & ........ & 33 & 087 & ..... ...... & .......... & ..... ..... & ... \\
\hline 2,379 & & ...... ......... & ... & .. .... & ..... & ..... ..... & & .......... & ... ...... \\
\hline 5,308 & ...... ....... & & & 62 & 263 & -..... .... & ....0 \(\cdot\)... & ..... & ..o. \\
\hline 2,138 & ............. & 253 & 981 & 405 & 1363 & ............ & ..... & .......... & ..... \\
\hline 167
1,334 & & & & 1,717
490 & 4913
1260 & .......... & & & . \\
\hline 1,334 & - & 1,302
16 & 3728
109 & 490 & 1260 & & & -........... & \\
\hline 1,013 & ................. & 697 & 5219 & \(\cdots\) & -1.7.16 & …… ...... & & & \\
\hline 10 & -..... ...... & .......... & & 220 & 1590 & & & & \\
\hline *-........... & - ....0. ...... & ...... ........ & .......... & .. ........ & .... ...... & .......... & ........... & .... & \\
\hline 1,428 & ...... &  & 010 & 168 & 471 & - & ... .. ....0 & ....0....... & ... \\
\hline -............. & .............. & 177 & 1628 & 3 & 008 & & & & \\
\hline \(\cdots\) & - & 5 & 042 & 57 & 242 & & & & \\
\hline .. & ........ ...... & & & 1 & 003 & \(\cdot\) & & ... ....... & \\
\hline 1 & ......... .- & 2,773 & 19117 & 159 & 863 & ..... ...... & .... ..... & ... & ..... ..... \\
\hline 11 & & 10,306 & 77485 & 97 & 590 & ... & ........... & & \\
\hline *-... ....... & & 72 & \(\begin{array}{r}498 \\ 24235 \\ \hline\end{array}\) & 44 & 307 & - & ...... & & \\
\hline 13 & ......... ..... & 2,705 & 24235
014 & 1,608 & 7117
011 & -1... ..... & -.... & ...... & ........... \\
\hline 22 & ......... ..... & & 014 & & 011 & ........ ....... & ....... & ...... .1... & ........... \\
\hline 6,767 & & 88 & 779 & 353 & 1166 & ........... & & ....0 . 0.1. & \\
\hline 352 & ... & 285 & 2218 & 451 & 1563 & & & & \\
\hline ... & ............. & 64 & \begin{tabular}{l}
1074 \\
\hline 10
\end{tabular} & 14 & 147 & ..... ...... & ...... ..... & ..... & \\
\hline 1 & .............. & 638 & 3635 & 22 & 065 & & ..... & ........... & \\
\hline ..... . . ...... & - & 90 & 623 & ....... & & ..... ..... & ..... & ..... .... & - \\
\hline 2 & & 18 & 115 & 20 & 053 & & & & \\
\hline 20 & & 286 & 1817 & 1
26 & 005
106 & & & ............ & -........o. \\
\hline  & & & & 18 & 106
0
0 & & & |........... & .... ....... \\
\hline 124 & & \begin{tabular}{|r|r|}
5 \\
333
\end{tabular} & 035
2272 & 24
20 & 0
0
0
0 & …1. ..... & |-......... & ........... & |.......... \\
\hline & & & & & & ...... ..... & - & |........... & .......... \\
\hline
\end{tabular}

No 29.-Statement of Traffic on the undermentioned
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow{2}{*}{Articles.} & \multicolumn{2}{|l|}{Welland Canal.} & \multicolumn{2}{|l|}{St. Lawrence Canals.} & \multicolumn{2}{|l|}{Chambly Canal.} \\
\hline & Tons. & Tclis. & Tons. & Tolls. & Tons. & Tolls. \\
\hline Class No. 3-Concluded. & & \$ cts. & & \$ cts. & & \$ cts. \\
\hline Tallow ................. ........... & 3 & 025 & 68 & 944 & & ... \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Woo:..... ...... ..... ..... ......... \\
All other Agricultural Products, Anımal.
\end{tabular}} & ........... & - & 5:0 & \(6 \pm 44\) & .......... & ..... ........ \\
\hline &  & & 2,643 & 30431 & 45 & 150 \\
\hline Total Class No. 3......... & 616,895 & 122,993 56 & 372,198 & 44,576 03 & 111,733 & 10,275 63 \\
\hline Class No. 4. & & & & & & \\
\hline Ashes, Pot and Pearl & 36 & 390 & 871 & 15340 & 697 & 6970 \\
\hline Agricultural Implements.... & ... ..... & ..... .. & 332 & 3247 & 2 & \(\checkmark 20\) \\
\hline Baggage ......... ........ ......... & 7 & 110 & 991 & 16190 & & ..... ........ \\
\hline Beer ......... ........ ...... ........ & ........... & ..... ........ & 449 & 7912 & ... ........ & ....... ......... \\
\hline Coffee ......... ...... .... & .... & .... ......... & 4 & 080 & ... ......... & ............... \\
\hline Urcekery... ............. ........ & 31 & & 612 & 11877 & .......... & ...... ........ \\
\hline Dye Wood and Dye Stuff & 31 & 1240 & 185 & 1243 & 68 & 680 \\
\hline Earthenware............... .... & 13 & 310 & 416 & 8024 & .... ........ & .. .... ....... \\
\hline Furniture......................... & 21 & 825 & 464 & 4425 & 11 & 110 \\
\hline Glassware. .... ..... ........ & 3 & 120 & 307 & 6069 & ..... & .... \\
\hline Glass, Window... .............. & 5 & 200 & 780 & 15219 & .......... & ...... ........ \\
\hline Marble ......... ........ ...... ..... & 31 & 1065 & 167 & 8897 & 48 & 761 \\
\hline Manilla ........... ..... ...... ..... & 49 & 1800 & 60 & 750 & .... .........| & . . ... .......... \\
\hline Molasses ............... ..... ...... & & ........ & 1,047 & 8183 & 1,232 & 12220 \\
\hline Nails. ....... ......... ..... ....... . & 105 & 2030 & 3,710 & 69155 & ... ....... & ................. \\
\hline Oil, in barrels............ ..... & 467 & 18505 & 1,812 & 21564 & 411 & 4024 \\
\hline Paint ...... ............... ....... & 5 & 200 & 465 & 6487 & 34 & 340 \\
\hline Pitch and Tar.. ...... ..... ...... & & & 1,402 & 8653 & 1,317 & 13451 \\
\hline Rags ........ ...................... & 125 & 2580 & 1.119 & 12199 & 1,29 & 290 \\
\hline Rosin ......... ........................ & 25 & 425 & 1,713 & 10217 & 1,785 & 17850 \\
\hline Soda Ash... ......... ......... ..... & 391 & 10330 & 1,373 & 38076 & ............... & ........ ......... \\
\hline Steel...... . . . . . . . . . . . . ......... & & 120 & 97 & 1945 & ...... ........ & ...... ..... ...... \\
\hline Sugar................... ..... ..... & 1,234 & 46805 & 9,921 & 1,099 01 & 6,079 & 60797 \\
\hline Stone, wrought... .............. & 593 & 22965 & 872 & 7547 & ........... & ............... \\
\hline Tin ............... ...... ...... ...... & 40 & 880 & 1,186 & 44626 & ... ........ & ................ \\
\hline Turpentine ..................... & & .......... & 573 & 2955 & 566 & 5660 \\
\hline Vinegar ............................ & . .... & .. ........... & 200 & 3849 & & \\
\hline White Lead. . ........... ......... & & & 165 & 2902 & ..... ......... & \\
\hline Whiting..... & & & 143 & 2679 & ..... . ... & \\
\hline Whiskey and all other Spirits & & & & & & \\
\hline Merchandise, notenamerated & 206
2,819 & 7615
71105 & 13,687 & 2,116 19 & 3,042 & 28776 \\
\hline Total, Class No, 4...... & 6,209 & 1,896 20 & 45,907 & 6,681 45 & 14,341 & 1,419 45 \\
\hline Class No. 6. & & & & & & \\
\hline Bark ...................... ........ & & & 28 & 120 & ........... & ......... ......... \\
\hline Barrels, Empty & 120 & 2366 & 1,744 & 12595 & 1 & 010 \\
\hline Boat Knees & 20 & 200 & -6 & \({ }^{0} 48\) & 1 & \\
\hline Floats. \(\qquad\) & ......... & ............ & 3,832 & 6531 & 1,038 & 6326 \\
\hline Firewood, in vessels. & 47,354 & 2,033 29 & 46,854 & 1,208 96 & 1,836 & 2861 \\
\hline Lumber, Sawn, in ressels ... & 67,728 & \(\stackrel{\square}{9,145} 44\) & 97
41,227 & 2
2,500
2,575 & ...4.7.... & 3,126 42 \\
\hline do rafts ...... & 88 & 1343 & 6,854 & 33621 & .......... & .............. \\
\hline
\end{tabular}

Oanals, and the Amount of Tolls collected, \&c.-Continu:d.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{Burlington Bay Canal.} & \multicolumn{2}{|l|}{Ottava Canals.} & \multicolumn{2}{|l|}{Rideau Canal.} & St. Peter's Canal. & \multicolumn{2}{|l|}{Newcastle District Canals.} \\
\hline Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. & Tons. Tolls. & Tons. & Tolls. \\
\hline & \$ cts. & & \$ cts. & & \(\$\) cts. & \$ cts. & & \$ cts. \\
\hline ……**... & .............. & ................. & & 6 & 017 & ... & & \\
\hline 76 & .......... .. & 422 & 3219 & 1,776 & 13109 & & & ..... ..... \\
\hline 67,210 & . ........ & 23,344 & 1,578 87 & 10,8i7 & 48209 & & ...... & \\
\hline 511 & .............. & 41 & 600 & 73 & 1474 & ............ \(1 . . . .\). ...... & ..... ... & . \\
\hline 25 & ....... ...... & 2 & 020 & 94 & 1042 & .-... ...... ..... ...... & ... ....... & -...0. 0.0 \\
\hline 120 & .............. & 34 & 300 & 21 & 252 & .......... & ......... & ... \\
\hline 44 & . & 30 & 150 & 1 & 009 & ...... ... . ..... ...... & ..... & - \\
\hline 45 & ............... & ..... & I & 26 & 433 & |...... ...... . ............ & -............. & - \\
\hline 9 & ...... ........ & ........... & ..... ... ..... & 6 & 105 & |............. & & \\
\hline 217 & & 1 & 009 & 39 & 343 & …........ ..... ...... & ... & \\
\hline 6 & .... -n........ & 14 & 165 & 21 & 189 & & & \\
\hline 273 & ......... ...... & ... & & .... & ....... & ..... .... ..... & & \\
\hline 275 & ..... ...... & .. & & 19 & 221 & ...... ...... ...... ...... & ........ & \\
\hline 38 & ......... ..... & ..... & ... & 2 & 018 & ..... ..... ...... ...... & |........... & ..... .... \\
\hline 3 & .............. & ...... & \(\cdot\) & 37 & 34. & -7.0 ..... - ....0. .... & \(\cdots\) & \(\cdots\) \\
\hline 1,76.5 & -........ ...... & - \(1 . . .1\). & 009 & 37
80 & 344
876 & ..... & ... & .o. \\
\hline 189 & & & & 96 & 1060 & |............ ........... & & \\
\hline 121 & .. & & & 1 & 009 & .............. | ........... & .... & \\
\hline 20 & .............. & 19 & 357 & 28 & 246 & ...... . .... ...... ...... & .... .... & .. \\
\hline 18 & & 48 & 753 & 32 & 491 & ............ ...... .... . & ..... & \\
\hline 403 & .............. & .......... & . ........ & & & .... ..... \({ }^{\text {-... . ..... }}\) & .. ...... & \\
\hline 290 & ........ ..... & ..... ...... & .......... & & . & ... & ..... & \\
\hline 69 & .............. & .... ...... & -............ & -1... & ......... & ........... ........... & ..... & .. \\
\hline 3,430 & & ......... & 181.10 & 2.4 & 2285
0835 & ........... . .......... & ... & \\
\hline ……...... & .............. & .... & & 5 & 035
0 & ...... ...... & ...... .... & .. \\
\hline 182
6 & ......... ..... & ............. & .... & & ....... & |...... ....... & ............ & \\
\hline 163 & & & & 14 & 158 & ........... ...... & .. .. ...... & \\
\hline 2 & ......... ... .. & ............. & . & 4 & 036 & …….... -.......... & ...... .... & ........... \\
\hline 37 & ......... ...... & ... .... & .............. & 1 & 009 & .... ...... ...... & ...... ...... & \\
\hline 125 & & & & 21 & 188 & ... & & \\
\hline 6,094 & ..... ........ & 404 & 3310 & 646 & 6953 & . & ..... & \\
\hline 13,576 & ......... ...... & 2,667 & 23814 & 1,495 & 16847 & ...... .... |........... & ..... & \\
\hline -............. & ............ & 83 & 2512 & 143 & 358 & . \(\cdot\)......... & . & \\
\hline ............. & ... \(2 . . .0 .0\) & 69 & 1009 & 46 & 230 & ……0. \(\cdot\).r.o..... & ...... ..... & ...0. \\
\hline -1.......... & ... & 1,599 & 2211 & 2,456 & 6563 & ..... ....... & & \\
\hline 300 & & 110,868 & 3,710 63 & 57,909 & 99855 & ............ & 9,012 & 15185 \\
\hline & ........ ...... & 105 & 105 & 261 & 545 & ........... ...... ...... & ........... & ........ \\
\hline ....0. 1,331 & .............. & 375,600 & 36,794 43 & 15,018 & 76695 & & 898 & 516 \\
\hline -...0......... & ....... . ...... & 12,463 & 50515 & 66 & 388 & ........... ............ & ............ & ..... ..... \\
\hline
\end{tabular}

No. 29.-Statement of Traffic on the undermentioned


Inland Revenue Dipartment, Ottawa, 1st September, 1880.

Canals, and the Amount of Tolls collected, \&c.-Concluded.


\author{
A. BRUNEL, \\ Commissioner.
}

No. 30.-Summary Statement of Traffic on the undermentioned Canals, of each description of Property passing through,
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow{2}{*}{Articles.} & \multicolumn{2}{|l|}{Welland Canal.} & \multicolumn{2}{|l|}{St. Lawrence Canals.} & \multicolumn{2}{|l|}{Chambly Canal.} \\
\hline & Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. \\
\hline & 943,636 & \(\begin{array}{cc}\text { \$ } & \text { c } \\ \text { s. } \\ 17,869 & 34\end{array}\) & 1,920,312 & \$ cts.
16,732 & 302,162 & \[
\begin{array}{cc}
\$ \quad \mathrm{cts} \\
3,566 \quad 11
\end{array}
\] \\
\hline Vessels of all kinds . ....... ... & No. & & No. & & No. & \\
\hline Passengers ... ........... ........ & 6,395 & 8142 & 71,716 & 3,322 63 & 4,943 & 9101 \\
\hline Forest, Produce of Wood. & Tons. & & Tons. & & Tons. & \\
\hline \multirow[t]{2}{*}{} & & & 28 & 129 & & \\
\hline & 20 & 200 & 6 & 048 & ............. & ......... \\
\hline \begin{tabular}{l}
Boat Knees. \\
Floats. \(\qquad\)
\end{tabular} & & & 3,832 & 6531 & 1,038 & 6226 \\
\hline \begin{tabular}{l}
Firewood. \\
Hoops and Hop Poles
\end{tabular} & 47,354 & 2,033 29 & 46,930 & 1,210 96 & 1,836 & 2861 \\
\hline Lumber, Sawed... ........ ...... & -......... & 9,159 87 & 69
48,081 & 11135
2,911 & ........... & 3,126 42 \\
\hline Masts, Spars, dc................. & 5, & 9,15195 & 48,081
10,525 & 2,911
26683 & 64,409 & 3,12642
1885 \\
\hline \multirow[t]{2}{*}{Railway Ties .. ...................} & 127 & 1426 & 470 & 1250 & 22 & 213 \\
\hline & 9,416 & 29379 & 9,258 & \(2116)\) & .......... & ... \\
\hline Staves, all kinds. & 1,147 & 21348 & 51 & 230 & ..... .. ...... & ...... ........ \\
\hline Shingles & 53 & 2230 & 165 & 2624 & 5 & 183 \\
\hline \multirow[t]{3}{*}{Split Posts and Rails .........
Timber, Square .............
Traverses . ....................} & 4 & 018 & 3 & 120 & 14 & 188 \\
\hline & 29,588 & 4,593 40 & 17,931 & 67533 & 199 & 1974 \\
\hline & 180 & 056 & 8,091 & 2240 & 55 & 110 \\
\hline Total .................... & 146,718 & 16,483 08 & 145,510 & 6,439 43 & 57.9.5 & 3,262 52 \\
\hline Farm Stock. & & & & & & \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Cattle. \\
Hogs \(\qquad\)
\end{tabular}} & & & 1,322 & 9306 & 58 & 200 \\
\hline & & & \({ }^{1} \mathbf{3} 63\) & 1429 & 58 & .......... \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Horses. \\
Sheep
\(\qquad\)
\(\qquad\)
\end{tabular}} & 5 & 030 & 672 & 5239 & 3 & 010 \\
\hline & ............ & .. ......... & 509 & 3752 & 153 & 520 \\
\hline Total ................... & 5 & 030 & 2,665 & 19726 & 214 & 736 \\
\hline \multicolumn{7}{|l|}{Produce of Animals.} \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Bones \\
Hurns and Hoofs, Hides and Skins, Raw \(\qquad\)
\end{tabular}} & 38 & 760 & 1,101 & 11686 & 244 & 2440 \\
\hline & 20 & 064 & 138 & 1905 & & \\
\hline & 77 & 1540 & 251 & 3294 & . & ........... \\
\hline \begin{tabular}{l}
Lard and Lard Oil ... ........ \\
Meats, other than Pork.......
\end{tabular} & & & 14 & 194 & ............. & .. ........... \\
\hline Pork ..... ........ ...... . ......... & 524 & 10466 & 1,051 & 1204.4 & ... ......... & ........... \\
\hline Tallow ....... ................... & 3 & 025 & 68 & 944 & . & ........... \\
\hline \multirow[t]{2}{*}{Agricultural Products not enumerated, Animal........} & ...... & ......... & 520 & 6444 & ............ & ...... ..... \\
\hline & & & 2,643 & 30431 & 45 & 150 \\
\hline Total........ .......... & 662 & 12855 & 5,786 & 66842 & 289 & 2590 \\
\hline
\end{tabular}

\section*{A.-Continued.}
during the Fiscal Year ended 30th June, 1880, showing the Total Quantity and the Amount of Tolls collected thereon.

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{Welland Canal.} & \multicolumn{2}{|l|}{St. Lawrence Canals.} & \multicolumn{2}{|l|}{Chambly Canals.} \\
\hline & Tons. & Tolls. & Tons. & Tolls. & Tons. & Tolls. \\
\hline Agricultural Products. & & & & & & \\
\hline Agricultural Products & & & & & & \\
\hline enu:nerated, Vegetable.... & 1,460 & 6556 & 2,422 & 28783 & 2,281 & 7627 \\
\hline Apples ........ ................... & 1,715 & 12922 & 8.345 & 1,220 90 & 1,208 & 11435 \\
\hline Barley ...... ..... ......... ........ & 4,893 & 90685 & 9,080 & 63591 & 3,187 & 24009 \\
\hline Cotton, Raw ........ ........... & & & 49 & 185 & ............ & \\
\hline Corn. ............ ...... . ........ & 159,818 & 31,910 70 & 37,263 & 5,186 65 & ........ & . \\
\hline Flax and Hemp.. ....... ........ & 390 & 8140 & 62 & 560 & - & . \\
\hline Flour ........................... & 10,348 & 34205 & 10,423 & 1,476 87 & 26 & 120 \\
\hline Hay, Pressed........ ... ........ & 400 & 8000 & 1,417 & 9144 & 1,562 & 11887 \\
\hline Meals, all kinds. .......... .. .. & 34 & 680 & 516 & 3561 & 203 & 687 \\
\hline Manilla ............. .............. & 49 & 1800 & 60 & 750 & .... & \\
\hline Oats ........ ......... .............. & 1,165 & 20683 & 14, \(¢ 61\) & 82513 & 6,499 & 44036 \\
\hline Pease ..... ........... ............. & 413 & 8260 & 45, 749 & 3,550 59 & 5,005 & 22622 \\
\hline Potatoes ........ ..... ... ......... & 2 & 035 & 392 & 3385 & 145 & 1404 \\
\hline Rye........................... ...... & 440 & 8300 & 7,783 & 99122 & ...... ..... & . ............ \\
\hline Seeds,-Flax, Clover and
Grass & 24 & 480 & 61 & 719 & 1 & 010 \\
\hline Tobac \({ }^{\text {O, }}\) Raw ... .................. & & 48 & 44 & 570 & 3 & 030 \\
\hline \multirow[t]{2}{*}{Wheat ..... ....... ....... ........} & 286,429 & 56,036 30 & 83,846 & 10,802 80 & . ......... & . ........... \\
\hline & 467,573 & 89,910 16 & 221,776 & 25,167 69 & 20,120 & 1,238 67 \\
\hline \multicolumn{7}{|l|}{Manufactures.} \\
\hline Ashes, Pot and Pearl ......... & 36 & 390 & 871 & 15340 & 697 & 6970 \\
\hline Agricultural Implements..... & & & 332 & 3247 & 2 & 020 \\
\hline Barrels, Empty...... ........... & 120 & 2366 & 1,744 & 12595 & 1 & 010 \\
\hline Bricks ..... ....... .. ......... .... & 11 & 028 & 4,414 & 35816 & 442 & 2901 \\
\hline Beer... ......... ........ ....... .. & & & 449 & 7912 & & \\
\hline Oement and Water Lime ... & 1,117 & 13901 & 1,687 & 18009 & 2 & 035 \\
\hline Crockery ........ ........... ...... & & & 632 & 11877 & ...0. ......... & ...... ...... ...... \\
\hline Earthenware .... .............. & 13 & 310 & 416 & 8024 & ..............| & ........ ........ \\
\hline Furniture ..... ...... ........ ..... & 21 & 825 & 464 & 4425 & 11 & 110 \\
\hline Glass, Wi 1dow ......... ......... & 5 & 200 & 78. & 15219 & 11 & ...... ........... \\
\hline Glassware ...... ...... ............ . & 3 & 120 & 307 & 6969 & .............. & ....... -....... \\
\hline Iron, Railway .................. & 1,175 & 21750 & 17,006 & 2,529 21 & 300 & 3000 \\
\hline Iron, Pig ........ ......... .......... & , 663 & 12823 & 19,043 & 2,729 73 & ..... \(\cdots\)...... & \\
\hline do All other ..... ..... ..... & 5,902 & 1,153 99 & 7,608 & 88685 & 293 & 2920 \\
\hline Molasses ......... ........ ........ & & 1,153 & 1,047 & 8183 & 1,222 & 12220 \\
\hline Nails ........ ... ........ ........... & 105 & 2030 & 3,710 & 69455 & & ...... .......... \\
\hline Oil ......... ........ ......... ... . & 467 & 18; 05 & 1,812 & 21534 & 411 & 4024 \\
\hline Oil Cake ......... ................. & & & 23 & 327 & & \\
\hline Paint.................... ...... ...... & 5 & 200 & 465 & 6487 & 34 & 340 \\
\hline Pitch and Tar..................... & & & 1,402 & 8653 & 1,347 & 13454 \\
\hline Rosin. & 25 & ............. & 1,712 & 10217 & 1,783 & 17850 \\
\hline Soda Ash ........ .......... ........ & 391 & 10330 & 1,373 & 38076 & ............. & \\
\hline Spirits, Whiskey, de.. ......... & 206 & 7615 & 764 & 11725 & ............... & ... \\
\hline Steel ............ .... ...... ........ & 3 & 120 & 97 & 1945 & & ......... .. .... \\
\hline Sugar ....... . ........ ...... ..... & 1,234 & 46805 & 9,9:1 & 1,099 01 & 5,079 & 50790 \\
\hline Tin ..... ........ . ......... ......... & 40 & 880 & 1,186 & 44626 & & \\
\hline Turpentine ...... ......... ......... & & & 673 & 2955 & 556 & 5660 \\
\hline Vinegar ............... ............ & & & 200 & 3849 & ........... & .... \\
\hline W bite Lead.. ......... ........... & ... & ... & 165 & 2902 & . ....... .... & ..... ........ \\
\hline Whiting ..... ......... ........... & & & 143 & 2679 & & \\
\hline Woodenware ..................... & 112 & 2345 & 244 & 8325 & ……........ & .... \\
\hline Total ..... ...... ......... & 11,654 & 2,573 70 & 80,591 & 11,052 41 & 12,191 & 1,203 04 \\
\hline
\end{tabular}
the undermentioned Canals, \&c.-Continued.


No. 30.-Summary Sratement of Traffic on


Inland Revenue Department,
Otrpwa, 1st Seplember, 1880.
the undermentioned Canals, \&c.-Concluded.


\section*{A. BRUNEL, \\ Commissioner.}
APPENDIX A.-Continued.
No. 31-Statmenet showing the Amount of Tolls collected each month, during the Fiscal Year ended 30th June, 1880.


No. 32 - Statement showing the Number, Tonnage and Nationality of Vessels passed throurh all the Canals
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Vessels.} & \multirow[t]{2}{*}{Total Number} & \multicolumn{2}{|l|}{From Canadian to Cana ian Ports.} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
United States to United States Ports.
\end{tabular}} & \multicolumn{2}{|l|}{From Uuited States to Canadian Ports} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total
Tons.} & \multirow[t]{2}{*}{Amount of Tolls.} \\
\hline & & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Duwn. & Up. & Down. & & \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Wellan 1 Canal. \\
CanadianVessels,steam! do \\
sail...
\end{tabular}} & & & & & & & & & & & & & \$ cts. \\
\hline & 635
2,703 & 54,215
127,543 & 48,665
72,938 & 24.2711
137,819 & 2,3.37, & 376
1,537 & 250
2,913 & 763
8,461 & \begin{tabular}{|r|}
51,538 \\
190,561
\end{tabular} & 79,627
275,360 & 99,873
268,749 & \[
\begin{aligned}
& 179,500 \\
& 544,109
\end{aligned}
\] & \[
\begin{array}{r}
2,43125 \\
10,69695
\end{array}
\] \\
\hline & 3,338 & 181,758 & 121,003 & 162,09 & 2,337 & 1,913 & 3,163 & 9,233, & 242,119 & 354,987 & 368,622 & 723,609 & 13,128 20 \\
\hline \multirow[t]{2}{*}{```
United States Vessels,
    steam ......................
United States Vessels:
    sail
```} & \[
164
\] & \[
91
\] & & 434 & 724 & 8,192 & 6,981 & 7091 & 119 & 9,526 & 7,912 & 17, 138 & 25954 \\
\hline & & 836 & 2061 & 2,805 & 928 & 98,499 & 67,198 & 1,276 & 30,841 & 103,466 & 92,173 & 202,639 & 4,481 60 \\
\hline & 922| & 1,077 & 294. & 3,229 & 1,632 & 166,691 & 74,179 & 1,985 & 30,9:0 & 112,992 & 107,085 & 2,0,077 & 4,741 14 \\
\hline Grand Total, Welland Canal. & \[
4,260
\] & 182,835 & 121,297 & 165,332 & 3,989 & 103,604 & 77,342 & 11,208 & 273,079 \({ }^{\prime}\) & 467,979 \({ }^{\text {! }}\) & 475,707, & 943,686 & 17,869 34 \\
\hline St. Lanrence Cunals. & & & & & & & & & & & & & \\
\hline CanadianVessels,steam do sail... & \[
\begin{aligned}
& 3,343 \\
& 6,693
\end{aligned}
\] & \[
\begin{aligned}
& 493,320 \\
& 524,680
\end{aligned}
\] & \[
\begin{aligned}
& 331,733 \\
& 408,863
\end{aligned}
\] & 16,108
9,586 & 316
905 & & & 150
1,184 & 5,84
12,618 & \(5 ¢ 9.578\)
635,450 & 337,891
\(422.3 \leqslant 6\) & 847,469
957,836 & 495956 \\
\hline Total Canadian .........' & 9,438 & 1,018,00 & 740,59; & 25,69 \({ }_{\text {t }}\) & 1,221 & & & 1,334 & 18,460 & 1,045,028 & 760,277 & 1,805,305 & 15,685 87 \\
\hline United States Vessels, steam
\(\qquad\) & & 191. & 7 & 6,58 & 269 & 10,871 & 10,518 & 671 & 8,103 & 18,316 & 19,26 & & 21315 \\
\hline \begin{tabular}{l}
United States Vessels, \\
sail
\(\qquad\)
\end{tabular} & 811 & 1,163 & 4,821 & 10,267 & 3,078 & 529 & 16 t & 50,854 & 6,551 & 62,813 & 14,614 & 77,427 & 86314 \\
\hline \multirow[t]{2}{*}{Total United Stites.. Grand Total, St. Lawrence Canals ........} & 1,363 & 1,354 & 5,195 & 16,850 & 3,347 & 11,400 & 10,683 & 51,525 & 14,654 & 81,129 & 33,878 & 115,007 & 1,076 29 \\
\hline & 10,801 & 1,019,354 & 745,791 & 42,544 & 4,568 & 11,400 & 10,682 & 52,859 & 33,114 & 1,126,157 & 794,155 & 1,920,312 & 16,732 16 \\
\hline
\end{tabular}

Vessels.
Rideau Canal.

No. 32.-Statement showing the Number, Tonnage and Nationality of Vessels-Continued.

Canadian Vissels.
Steam and Sail. Welland
 Buambly . Bu lingion Bay Ottawa ...........................
 New castle District ......
Total, Canadian.......
United States Veserls.
Steam and Sail.
 Chambly... ........................... 1,916 Burlingion Bay............. 7 Ridequ.......................... 39 35 .............
4,039

\section*{BRUNEL,}



Inland Revenue Department,
Ottawa, 1st September, 1880.
APPENDIX A-Continued.
No. 33 -Comparative Statement of the Total Movement of Property, Passengers and Vessels on the under-



\section*{APPENDIX A-Conlinued.}
No. 34.-Comparative Statement of the Tonnage of Vessels and Goods passed through the Canals, during the
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Property and Vessels.} & \multicolumn{4}{|l|}{Welland Canal.} & \multicolumn{4}{|l|}{St. Lawrence Canals.} & \multicolumn{4}{|l|}{Chambly Canal.} \\
\hline & 1877. & 1878. & 1879. & 1880. & 1877. & 1878. & 1879. & 1830. & 1877. & 1878. & 1879. & 1880. \\
\hline Tonnage of Property Up..... & 2856431 & 283,878 & 236,000 & 197,356 & 133,909 & 121,365 & 116,0-5 & 160,311 & 62,293 & 54,938 & 69,188 & 67,413 \\
\hline do Down. & 815,206 & 790,361 & 67,518 & 672,518 & 456,092 & 416,497 & 373,561 & 410,507 & 142,468 & 118,047 & 99,797 & 117,585 \\
\hline Up and Down................ & 1,100,849 & 1,079,200 & 907,518 & 863,874 & 590,001 & 537,862 & 489,636 & 570,818 & 204,761 & 172,985 & 153,985 & 184,998 \\
\hline  & \[
\begin{aligned}
& 6 \subset 9,7 \subset 7 \\
& 606,953
\end{aligned}
\] & \[
\begin{aligned}
& 60,551 \\
& 6.9,622
\end{aligned}
\] & 497,921
500,326 & 467,979
475,707 & 797,787
543,379 & \(1,067,979\)
724,288 & \(1,014,095\)
\(715.5 \% 1\) & \(\underset{\substack{1,126,157 \\ 794,155}}{ }\) & 75,465
159,915 & \[
\begin{array}{r}
71,622 \\
149,745
\end{array}
\] & \[
\begin{array}{r}
78,643 \\
171,295
\end{array}
\] & \[
\begin{array}{r}
94,342 \\
207,820
\end{array}
\] \\
\hline Total Tonnage of Vessels
Up and Down.............. & 1,216,659 & 1,240,176 & 998,247 & 913,686 & 1,341,166 & 1,792,267 & 1,729,616 & 1,920,312 & 235,380 & 231,367 & 249,938 & 302,163 \\
\hline Grand Total Tonnage of Property and Vessels Up and Duwn.... ................ & 2,317,508 & 2,319,376 & 1,905,765 & 1,806,550 & 1,931,167 & 2,330,129 & 2,219,252 & 2,491,130 & 440,141 & 394,352 & 408,923 & 487,160 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Property and Vessels.} & \multicolumn{4}{|l|}{Burliogton Bay Canal.} & \multicolumn{4}{|l|}{Ottawa Canals.} & \multicolumn{4}{|l|}{Rideau Canal.} \\
\hline & 1877. & 1878. & 1879. & 1880. & 1877. & 1878. & 1879. & 1880. & 1877. & 1878. & 1879. & 1880. \\
\hline Tonnage of Property \({ }_{\text {do }}\) Up..... & 83,406
32,610 & \begin{tabular}{l}
\[
63,8 i 5
\] \\
19,759
\end{tabular} & 56,463
24,963 & 67,615
24,711 & 1,618
551,907 & 591
\(474,38!\) & 1,300
454,05 & 5,229
527,566 & 100,837
24,256 & 91,412
22,407 & \(\xrightarrow{93,941} 9\) & 85,932
22,071 \\
\hline \begin{tabular}{l}
Total Tonnage of Property \\
Up and Down.................
\end{tabular} & 116,016 & 83,574 & 81,426 & 92,336 & 553,555 & 474,975 & 455,305 & 532,795 & 125,093 & 113,819 & 102,520 & 108,003 \\
\hline \(\underset{\text { To }}{\text { Tonnage }}\) of Vessels \(\underset{\text { Down ....... }}{\text { Up }}\) & \[
\begin{aligned}
& 116,025 \\
& 115,727
\end{aligned}
\] & \[
\begin{aligned}
& 189,951 \\
& 189,573
\end{aligned}
\] & 18,712
180,099 & 171,593
170,079 & 70,227
296,476 & 141,970
360,509 & 106,059
315,835 & \[
\begin{aligned}
& 115,316 \\
& 355,681
\end{aligned}
\] & 67,543
90,832 & 75,084
89,269 & \({ }_{84,766}^{71,171}\) & 72,681
88,535 \\
\hline Total Tonnage of Vessels Up and Down. & 231,753 & 379,524 & 362,811 & 341,672 & 366,703 & 502,4:9 & 421,894 & 473,997 & 158,375 & 161,353 & 155,927 & 161,216 \\
\hline Grand Total Tonnage of Property and Vessels Upi and Down........ .............. & 347,768 & 463,098 & 444,237 & 434,008 & 920,258 & 977,454 & 877,199 & ,006,792 & 283,468 & 278,172 & 258,447 & 269,219 \\
\hline
\end{tabular}
Inland Revenue Department,
Ottawa, 1st September, 1880.
A. BRUNEL,
Commissioner

\section*{APPENDIX A-Continued.}

No. 35.-Comparative Statement showing the Quantity of each Article transported on the Canals during the Fiscal Years ended 30th June, 1879 and 1880, and the Tolls collected thereon.
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow{2}{*}{Articles.} & \multicolumn{2}{|l|}{1879.} & \multicolumn{2}{|c|}{1880.} \\
\hline & Tons. & Tolls. & Tons. & Tolls. \\
\hline & & \$ cts. & & \$ cts. \\
\hline Ashes, Pot and Pearl ........ ........ ........ ........ & 3,265 & 33425 & 2,229 & 24774 \\
\hline Apples ........ ............... ..... ............. ....... & 14,840 & 1,880 70 & 14,008 & 1,456 56 \\
\hline Agricultural Products not enumerated, Vegetable \(\qquad\)
\(\qquad\)
\(\square\)
\(\square\) & 7,100 & 44825 & 7,251 & 45754 \\
\hline Agricultural Products not enumerated, Animal, & 5,020 & 46029 & 4,962 & 46909 \\
\hline Agricultural Implements.. ........................... | & 453 & 4610 & 455 & 4329 \\
\hline Barley ......... ....... ......... ......... .......... ........ & 22,803 & 2,881 97 & 18,878 & 1,835 23 \\
\hline Bricks ......... ......... .... ............... ......... ........... & 5,004 & 30713 & 5,499 & 40711 \\
\hline Bones .. & 800 & 9474 & 1,461 & 16. 07 \\
\hline Baggage ........ ................... ......... ........ ........ & 1,123 & 16789 & 1,173 & 17152 \\
\hline Beer ........ ......... . ....... ......... . .................... & 529 & 10390 & \(5: 4\) & 8071 \\
\hline Brimstone, Crude ....... . ..... ......... ........ .... & 5 & 200 & 59 & 579 \\
\hline Cement and Water Lime . ......... ......... ......... & 1,868 & 17590 & 3,381 & 33746 \\
\hline Olay, Lime and Sand....................... .......... & 10,764 & 67285 & 15,935 & 97442 \\
\hline Coal ...... ................. ........... ......... . ...... ...... & 436,791 & 67,565 19 & 340,321 & 45,350 89 \\
\hline Corn. ........ ..... ...... ..... ....... ...... ........ ....... & 21., 918 & 41,141 49 & 197,311 & 37,113 25 \\
\hline Cattle ........... ...... ...... .... ............ .... . .. ..... & 1,646 & 10796 & 1,941 & 13206 \\
\hline Cution, Raw .... ......... ......... ................. ........ & 53 & 255 & 49 & 185 \\
\hline Coffre. . ..... ....... ... .............. ................. & 30 & 660 & 17 & 080 \\
\hline Crockery.................... ........ ..... ..... ..... ..... & 656 & 12194 & 703 & 12310 \\
\hline Dye Woods and Dye Stuffs ........... ........ ....... & 531 & 13504 & 299 & 3268 \\
\hline  & 734 & 11322 & 686 & 8686 \\
\hline Fish ...... ........ .............. ........ ............ ........ & 2,711 & 34955 & 1,155 & 9377 \\
\hline Plax and Hemp ... .............. ........ .......... ...... & 1,440 & 27159 & 452 & 5700 \\
\hline Flour.................... ... ........ ... ..... ...... ........... & 25,059 & 2,289 51 & 22,395 & 1,824 93 \\
\hline Furniture ........... ..... ...... ..... ........ ............. & 535 & 7764 & 537 & 5714 \\
\hline Gypsum................ ...... ...... ........ ........ ....... & 3,597 & 21244 & 4,020 & 28218 \\
\hline Glase, Window ...... ........................... ........ & 1,214 & 17671 & 1,079 & 15640 \\
\hline Glassware & 1,378 & 16283 & 583 & 6189 \\
\hline Hay, Pressed ...... ...... ..... ......... ........ ........... & 2,369 & 15439 & 3,559 & 30667 \\
\hline Hogs ........... ......... ......... ..... ......... ..... ........ & 23 & 1567 & 253 & 2052 \\
\hline Hurses ...... ... .......... ........ .... .... .... ......... ... & 1,186 & 8948 & 987 & 7101 \\
\hline Hides and Skins, Horns and Hoofs ..... .. ........ & 522 & 6110 & 198 & 2137 \\
\hline Ice. . ........ ........ ........... ..... ...................... & 200 & 1000 & 20,001 & 95420 \\
\hline Irun, Railway ............. ............. ........ ....... & 20,217 & 1,985 32 & 20,850 & 2,776 71 \\
\hline do Pig ...................... ............. ...... ......... & 19,181 & 2,071 50 & 25,076 & 2,860 64 \\
\hline do All other ............ .......... ......... ......... ...... & 18,017
5,779 & 2,37498
27295 & 16,597
32,706 & 2,09320
1,635 \\
\hline Iron Ore. Kryolite or Chemical Ore, and other Ure except & 5,779 & 27295 & 32,706 & 1,635 30 \\
\hline Iron \(\qquad\) & 10,280 & 51400 & 6,3?9 & 43265 \\
\hline Lard and Lard Oil., ......... ......... ........ ........... & 126 & 952 & 283 & 4940 \\
\hline Mrals, all kinds ........ ........ ......... ..... ...... ..... & 2,217 & 18176 & 815 & 5212 \\
\hline Meats, other than Pork. ........ ................. ..... & 123 & 1435 & 32 & 259 \\
\hline Marble.......... .............. ...... ........ ......... .... ... & 1,610 & 58012 & 286 & 4741 \\
\hline Manilla ...... ..... ......... .......... ......... ..... ......... & 574 & 20768 & 112 & 2550 \\
\hline Molasses & 7,565 & 87204 & 2,390 & 20747 \\
\hline Nails ..... ........... ... . .... ........ ..... ...... ........... & 4,788 & 73840 & 5.661 & 72370 \\
\hline Oats .... .......... .... ...... .............. ......... ........ & 12,313 & 1,183 88 & 24,857 & 1,675 11 \\
\hline & 5,500 & 1,616 93 & 2,975 & 45143 \\
\hline Oil Cake. ........ ......... ......... ......... ......... ..........
Pease .............. ......... .... ... ..... ...... ......... & 9
46,932 & \[
\begin{array}{r}
163 \\
3,86377
\end{array}
\] & 24
61,571 & 330
4,64016 \\
\hline Putatoes & 2,188 & 16444 & 609 & 4,64016
5599 \\
\hline Pork. & 716 & 7538 & 1,728 & 22618 \\
\hline Paint ............... ...... ........ ......... . ... .......... & 908 & 22242 & 626 & 7036 \\
\hline Pitch and Tar ............. ......... ......... .............. & 2,468 & 21587 & 2,816 & 22710 \\
\hline Rags ...... ......... ........ ......... ........ ........ ....... & 1,6.31 & 34504 & 1,371 & 16313 \\
\hline Rye......... ..... ................. ...... ..... ...... .......... & 4,724 & 59910 & 12,539 & 1,393 74 \\
\hline Rosin .............. ...... ............ ................. ........ & 3,107 & 21960 & 3,926 & 28192 \\
\hline
\end{tabular}

No. 35.-Comparative Statement showing the Quentity, \&c.-Conlinued-


Inland Revenue Department, Otrawa, 1st September, 1880.

\section*{A. BRONEL, \\ Commissioner.}

44 Victoria.
Sessional Papers (No 4.)
A. 1881


APPENDIX A-Continued

\begin{tabular}{|c|c|c|}
\hline  &  & \multirow[t]{14}{*}{} \\
\hline ¢ ¢ &  & \\
\hline  &  & \\
\hline  &  & \\
\hline  &  & \\
\hline  &  & \\
\hline  &  & \\
\hline  & \[
\underset{\substack{\vec{~} \\ \stackrel{y}{3} \\ \hline}}{ }
\] & \\
\hline  &  & \\
\hline  & \multirow[t]{5}{*}{} & \\
\hline ¢ & & \\
\hline  & & \\
\hline  & & \\
\hline  & & \\
\hline
\end{tabular}

44 Victoria. Sessional Papers (No. 4.)

44 Victoria．Sessional Papers（No．4．）A． 1881
\begin{tabular}{|c|c|}
\hline あ゙ッロン： &  \\
\hline \[
9 \times
\] & Min \\
\hline &  \\
\hline  &  \\
\hline （：OM： &  \\
\hline &  \\
\hline & （1） \\
\hline & （1） \\
\hline \％ & \\
\hline ¢ & （1） \\
\hline  &  \\
\hline 咼: &  \\
\hline  &  \\
\hline
\end{tabular}
APPENDIX. A-Continued.
No. (A) 22.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From Canadian to Canadian Ports.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
Canadian to United States Ports.
\end{tabular}} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
United States to United States Ports.
\end{tabular}} & \multicolumn{2}{|l|}{From United States to Canadian Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { A mount } \\
\text { of } \\
\text { Tolls. }
\end{gathered}
\]} \\
\hline & Up. & Down & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & & \\
\hline Wool.... & 430 & 2 & & & & & & & 430 & 2 & 432 & 5091 \\
\hline All other Goods and Merchandise not enumerated
\(\qquad\) & 9,946 & 2,300 & 234 & 7 & 362 & 775 & 14 & 33 & 10,556 & 3,115
33 & 13,671
33 & 2,22165
142 \\
\hline Bark ........................................... & ....... & 33
288 & 48 & ... & 4 & & & & …........ & 33
288 & 33
1,171 & 1482
92 \\
\hline Barrels, Empty ........................ & 831 & 288 & 48 & & 4 & & & & & & 1,17 & \\
\hline Boat Knees Floats
\(\qquad\) & & & & & & & & & & 3,7.1... & 3,580 & 6090 \\
\hline Floats
\(\qquad\) Firewood, in vessels.
\(\qquad\) & & 3,580
39,394 & 846 & 186 & . 27. & 108 & & & 6,375 & 39,688 & 46,063 & 1,119 79 \\
\hline \begin{tabular}{l}
Firewuod, in vessels..................... \\
do \\
rafts.
\(\qquad\)
\end{tabular} & 5,502 & 39,394
60
74 & 846 & 186 & & 108 & & & ........... & 60
78 & \begin{tabular}{|}
60 \\
82
\end{tabular} & 125
1275 \\
\hline Hoops ..................... ................ & 4 & 74 & ........... & ..... ..... & ... & & & & & & & \\
\hline Hop Poles.......... ......... ............. & & & & & & & & 412 & & & 38,528 & 2,197 23 \\
\hline Lumber, Sawn, in vessels............
do
rafts............ & 15,640 & 19,798
8,120 & 330 & 2,348 & & & & 412 & 16, & 22,508
8,120 & 38,120 & 2, 39629 \\
\hline Masts, Spars and Telegraph Poles, in vessels
\(\qquad\) & 15 & 100 & & .... .......... & & & & & 15 & 100 & 115 & 582 \\
\hline Masts, Spars and Telegraph Poles, in rafts.
\(\qquad\) & & 7,744 & & & & & & & & 7,744 & 7,744
470 & 19360
1250 \\
\hline Railway Ties, in vessels do rafts.
\(\qquad\) & 470 & & & & & & & & 470 & ........... & 470 & \\
\hline Saw Logs... \({ }_{\text {do............................ }}\) & ... & 10,928 & & & & & & & ............ & 10,928 & 10,928 & 24970 \\
\hline Staves and Beadings, Barrels...... & & 3 & & & & ........... & & & …........ & 208 & 232 & 2700 \\
\hline \begin{tabular}{ll} 
do & Pipe.. ........ \\
do & West India..
\end{tabular} & 24 & 208 & & & & & & & & & 24 & 090 \\
\hline Staves, Salt Barrels .................... & & 1 & & & & & & & ........... & ..... \({ }_{24}\) & 175 & 3117 \\
\hline Shingles .................. ................ & 151 & & & 3 & & & & & & & & \\
\hline \multirow[t]{4}{*}{\begin{tabular}{l}
Split Posts and Fence Rails, in in ressels \\
Split Posts and Fence Rails, in \\
羙 rafts
\(\qquad\) Timber, Square, in vessels
\end{tabular}} & \multirow[t]{4}{*}{} & \multirow[t]{4}{*}{} & \multirow[t]{4}{*}{} & \multirow[t]{4}{*}{} & \multicolumn{2}{|l|}{\multirow[t]{4}{*}{\begin{tabular}{|c|}
\(\mid . . . . . . . . . . . . ~\) \\
\(\ldots . . . . . . . . . . . . ~\) \\
\(\ldots . . . . . . . . . . . ~\)
\end{tabular}}} & & & & ... ..... & . & \\
\hline & & & & & & & & & & & & \\
\hline & & & & & & & & 420 & 940 & 5,958 & 6,898 & \[
29138
\] \\
\hline & & & & & & & & & 271 & 10,918 & 11,189 & \\
\hline
\end{tabular}


44 Victoria. \(\quad\) Sessional Papers (No. 4.)
APPENDIX A-Coutinued.
No. (A) 23.-General Statement showing the Quantity of each Article transported through the Burlington Bay

44 Victoria. Sessional Papers (No. 4.) A. 1881


44 Victoria. Sessional \(\mathrm{Pa}_{\mathrm{i}}^{\mathrm{B}} \mathrm{B}\) : (No. 4.)
No. (A.) 23.-General Statement showing the Quantity of each Article transported through the Burlington Bay

44 Victoria. Sessional Papers (No. 4.) A. 1551

44
Victoria. Sessional Papers (No. 4.)
A. 1881
No. (A) 24.-General Statement showing the Quantity of each Article transported through the Ottawa Canals, and


44 Victoria. Sessional Papers (No. 4.) A. \(18 \$ 1\)
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From Canadian to Canadian Ports.} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & \multicolumn{2}{|l|}{From United States to United States Ports.} & \multicolumn{2}{|l|}{From United States to Canadian Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{Amount.} \\
\hline & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & & \\
\hline & \multirow[t]{3}{*}{202} & \multirow[t]{4}{*}{-...........} & \multirow[t]{3}{*}{} & \multirow[t]{2}{*}{.............} & \multirow[t]{2}{*}{-.........} & \multirow[t]{3}{*}{...........} & \multirow[t]{3}{*}{.................} & \multirow[t]{2}{*}{} & \multirow[t]{3}{*}{|-........} & \multirow[t]{2}{*}{- \(\begin{array}{r}\text { …....... } \\ \\ \\ \\ \end{array}\)} & \multirow[t]{2}{*}{........ .....} & \multirow[t]{2}{*}{-..... ........} \\
\hline & & & & & & & & & & & & \\
\hline not enumerated ...................... & & & & ............... & & & &  & & \multirow[t]{2}{*}{\(\begin{array}{r}268 \\ 85 \\ 47 \\ \hline\end{array}\)} & \multirow[t]{2}{*}{85
54
84} & \multirow[t]{2}{*}{} \\
\hline Bark...... . ...... .................................. & …...... & & .......... & ................ & \multirow[t]{2}{*}{............} & -............. & \multirow[t]{2}{*}{|............} & -............ & \multirow[t]{2}{*}{7} & & & \\
\hline Barrels, Empty ......................... & \multirow[t]{2}{*}{40} & \multirow[t]{4}{*}{\[
\begin{array}{r}
1,319 \\
114,103 \\
105 \\
24
\end{array}
\]} & \multirow[t]{2}{*}{..........} & \multirow[t]{2}{*}{...............} & & \multirow[t]{2}{*}{..............} & & \multirow[t]{2}{*}{-..... ......} & & \multirow[t]{2}{*}{1,319} & \multirow[t]{2}{*}{-............} & \multirow[t]{4}{*}{} \\
\hline \multirow[t]{3}{*}{\begin{tabular}{l}
Floats \\
Firewood, in versels.. \\
Hoops \\
do \\
rafts.
\(\qquad\)
\end{tabular}} & & & & &  & & - \(+\infty\) & & \[
\left|\begin{array}{cc}
\cdots \cdots . & \ldots 0 \\
\ldots . . & 40
\end{array}\right|
\] & & & \\
\hline & & & ......... & 312 & -......... & . & ……... & ..... & ............ & 114,415
105 & 114.415
105 & \\
\hline & \multirow[t]{2}{*}{} & & \multirow[t]{2}{*}{..............} & \multirow[t]{2}{*}{…...........} & \multirow[t]{2}{*}{} & & \multirow[t]{2}{*}{..............} & & & 24 & 24 & \\
\hline \multirow[t]{2}{*}{Hop Poles .................. ...............} & & \multirow[t]{3}{*}{144,131 11,854} & & & & \multirow[t]{2}{*}{...............} & & & \multirow[t]{2}{*}{\(\square\)} & \multirow[t]{2}{*}{\[
\begin{array}{r}
331,093 \\
11,854
\end{array}
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
331,108 \\
11,854
\end{gathered}
\]} & \multirow[t]{3}{*}{\[
\begin{array}{r}
33,08837 \\
54262 \\
\hline
\end{array}
\]} \\
\hline & \multirow[t]{2}{*}{\[
\left|\begin{array}{cc}
-\ldots . . . . . . . . . . . . . . ~
\end{array}\right|
\]} & & \multirow[t]{2}{*}{} & 1.7.186,962 &  & & \multirow[t]{2}{*}{} & .............. & & & & \\
\hline Masts, \(\stackrel{\text { do }}{\text { Snars and Telegraph Poles, }}\) in vessels & & & & ............ .. & \multicolumn{2}{|l|}{-.........} & & &  & & & \\
\hline \multicolumn{2}{|l|}{Masts, Spars and Telegraph Poles, in rafts
\(\qquad\)
\(\qquad\)} & -..... & & & \multirow[t]{2}{*}{……...} & .......... & ... ....... &  & ............. ... & 17 & & \begin{tabular}{r}
............ .... \\
223 \\
\hline 188
\end{tabular} \\
\hline & & & \multirow[t]{2}{*}{.............} & \multirow[t]{2}{*}{...................} & & .......... & ........ & & & & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{\(18 . . . . . .\).
188
125} \\
\hline Saw do rafts ............... & ........... & \multirow[t]{2}{*}{\begin{tabular}{|l}
24 \\
22
\end{tabular}} & & & \multirow[t]{3}{*}{} & \multirow[t]{2}{*}{.......} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\mid
\]} & \multirow[t]{2}{*}{.............} & \multirow[t]{2}{*}{\begin{tabular}{r}
24 \\
22 \\
\hline
\end{tabular}} & & \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Saw Lngs ........................... \\
do Pine.. \\
West Indis
\end{tabular}} & \multirow[t]{2}{*}{} & & \multirow[t]{2}{*}{..............} & \multirow[t]{2}{*}{............................} & & & & & & & & \\
\hline & & ................ & & & & & & & ............. & ................ &  & |.................. \\
\hline Staveg, Salt Barrel.. .... ... ..... .... & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{|..... -...." 241} & \multirow[t]{3}{*}{|...........} & \multirow[t]{3}{*}{} & \multirow[t]{2}{*}{\(\square\)} & ............ &  & & 2 & \multirow[t]{3}{*}{241} & 243 & \multirow[t]{2}{*}{7864} \\
\hline \multicolumn{2}{|l|}{\multirow[t]{5}{*}{\begin{tabular}{l}
Split Posts and Fence Rails, in vessels \(\ldots \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~\) \\
rafts.
\(\qquad\) Timber, Square, in vessels. \\
do \\
rafts.
\(\square\)
\(\square\) 80
\end{tabular}}} & & & & & & & & & & \multirow[t]{2}{*}{1} & \\
\hline & & & & & \multicolumn{2}{|l|}{\multirow[t]{4}{*}{\[
\mid
\]}} & & & & & & 180 \\
\hline & & \multirow[t]{3}{*}{\[
\begin{array}{r}
10 \\
40 \\
1,932
\end{array}
\]} & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{} & & & & & & & & \\
\hline & & & & & & & & & & 40 & 40 & \({ }_{0}^{1} 38\) \\
\hline & & & & & & & & & 80 & 1,932 & 2,012 & \\
\hline
\end{tabular}

44 Victoria．Sessional Papers（No．4．）
No．（A）25．－General Statement showing the Quantity ef each Article transported through the Chambly Canal，
\begin{tabular}{|c|c|c|}
\hline \multicolumn{2}{|l|}{} &  \\
\hline \multicolumn{2}{|l|}{} & 上， \\
\hline 号 &  &  \\
\hline  & 号 &  \\
\hline  & 号 &  \\
\hline \multirow[t]{2}{*}{} & 官 &  \\
\hline & 安 &  \\
\hline  & 品 &  \\
\hline （\％ & &  \\
\hline
\end{tabular}

No. (A) 25.-General Statement showing the Quantity of each Article transported, \&c.-Continued.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From Canadian to Canadian Ports.} & \multicolumn{2}{|l|}{From Oanadian to United States Ports.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
United States to United States Ports.
\end{tabular}} & \multicolumn{2}{|l|}{From United States to Canadian Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{Amount. Tolls.} \\
\hline & Up. & Down. & Up. & Down. & Up. & Down. & Op. & Down. & Up. & Down. & & \\
\hline \multicolumn{13}{|l|}{Wool ............. .............. -....} \\
\hline All other Goods and Merchandise, not enumerated & 24 & 45 & 483 & & & & & 1,041 & 507 & 1,086 & 1,593 & 15554 \\
\hline Bark ..... ............................... & & & & & , & & & & & & & \\
\hline Barrels, Empty .........................
Boat Knees. ..................... & ........... & 1 & & & & & & & & 1 & 1 & 010 \\
\hline Floats ....................................... & & & 1,038 & & & & & & 1,038 & ........ & 1,038 & 6226 \\
\hline Firewood, in
do
restesels . .................. & 1,251 & 405 & & & & & & ... ........' & 1,251 & 405 & 1,656 & 2459 \\
\hline do rafts...................................................... & & & & & . & & & .......... & & ..... & ........ & \\
\hline Hoops
Hop Poles. ........................................ & & & & . & & & & - & & & & \\
\hline Lumber, Sawn, in vessels ............. & 1,881 & 26 & 48,938 & ...... & & & & 26 & 50,819 & 52 & 50,871 & 2,924 50 \\
\hline  & & & & & & & & & & & & \\
\hline Masts, Spars and Telegraph Poles, in vessels Masts, Spars and Telegraph Poles, & & & 377 & & & & & & & & 377 & 1885 \\
\hline \multicolumn{13}{|l|}{Masts, Spars and Telegraph Poles, in rafts.} \\
\hline Railway Ties, in vessels................
do
rafts.................. & & & 22 & & & & & & 22 & .......... & 22 & 213 \\
\hline Saw Logs...................................... & & & & & & & & & & & & \\
\hline Staves and Headings, Barrel .. ..... & & & & & & & & & .... & ........ & & \\
\hline \multicolumn{13}{|l|}{\multirow[t]{3}{*}{}} \\
\hline & & & & & & & & & & & & \\
\hline Elhingles .......... ... .................. & .......... & & & & & & & & 8 & ................. & & 203 \\
\hline Split Posts and Fence Rails, in vessels
\(\qquad\) & & & & & & & & & & & & 074 \\
\hline \multicolumn{13}{|l|}{Split Posts and Fence Rails, in} \\
\hline \multicolumn{13}{|l|}{\multirow[t]{2}{*}{}} \\
\hline & & & & & & & & & & & & \\
\hline
\end{tabular}


44 Victoria. Sessional Papers (No. 4.)
A. 1881
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{12}{|l|}{No. (A) 26.-General Statement showing the Quantities of each Article transpo and the Amount of Revenue collected, during the Season of Nav} \\
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From Canadian to Canadian Ports.} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & From United States to United States Ports. & \multicolumn{2}{|l|}{From
United Etates to
Canadian
Ports.} & \multicolumn{2}{|l|}{Tons,} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Amount } \\
& \text { of } \\
& \text { Tolls. }
\end{aligned}
\]} \\
\hline & Up. & Dow. & Up. & Down. & Up. Down. & Up. & Down. & Up. & Down. & & \\
\hline & & & & & & & & & & & \$ cts. \\
\hline Ashes, Pot and Pearl
\(\qquad\) & ......... & 57 & ......... & & .. & & & - & 57 & 57 & 1240 \\
\hline Apples
\(\qquad\) Agricultural Products not enumer- & .... & ........ & ... & - & ... ...... ..... & & & & & & \\
\hline Agricultural Products not enumerated, Vegetable
\(\qquad\) & 93 & & 340 & &  & & & 433 & \(\cdot\) & 433 & 1511 \\
\hline \begin{tabular}{l}
Agricultural Products not enumer- \\
ated, Animal
\(\qquad\)
\end{tabular} & 275 & 1,398 & & & & & & 275 & 1,398 & 1,673 & 12481 \\
\hline Agricultural Implements .............. & 17 & 1,84 & ........... & ................ & ............... & & & 17 & 1,84 & 101 & 1286 \\
\hline Barley .......................... ..... ..... & 15
349 & 1 & .......... & ..... ........ & ... ....... & ...... ..... & \[
\cdots
\] & 15
349 & 1 & 16 & 066
1880 \\
\hline Bricks ......... ..................... ........ & 349 & 232 & ............ &  & ........ ... & ............ & & 349 & 232 & 581 & 1880 \\
\hline Bones ......... .... .. . .. .. ........ & ........... & 15 & ... & 100 & ........ ... & & \[
\cdots
\] & ...... ... & 115 & 115 & 2419 \\
\hline Baggage ................ .............. ..... & 6 & 7 & , & ..... ..... & ... -.......... & & \[
\ldots
\] & 6 & 7 & 13 & 152 \\
\hline & ............ & 1 & & & . ...... ..... & & & .... & 1 & 1 & 009 \\
\hline Brimstone .. & & & & & & & & &  & & \\
\hline Cement and Water Lime............ & 53 & 13 & & . & .......... & & & 53 & 13 & 66 & 171 \\
\hline & 27 & 1
2,504 & & & .. & & & 27 & - 1 & 288 & 073
112 \\
\hline Coal........ ................. ............. & \[
\ldots
\] & 2,504 & & & ... ........... & & & & 2,504 & 2,504 & 11222
10 \\
\hline Corn. .......................................... & 20 & 95 & & & ……... & & & 20 & 95 & 95
20 & 1030
\(0 \quad 59\) \\
\hline Cotton, Raw.......... ................ ....... & & & & & |........... |........... & & & & & & \\
\hline Coffee......................... ...... ........ & & & & & & & & & & & \\
\hline Crockery ........... ..................... & 19 & 1 & & & ..., ............ & & & 19 & 1 & 20 & 344 \\
\hline Dye Wood and Dye Stuffs ........... & 6 & & & & ............ & & & 6
2 & . & 6
2 & \(\begin{array}{ll}1 & 105 \\ 0 & 18\end{array}\) \\
\hline Fish........................................... & \({ }^{2} 8\) & \(\cdots\) & & & .......... & & & \({ }_{18}^{2}\) & - 1 & 19 & \(\begin{array}{ll}1 \\ 0 & 18 \\ 0\end{array}\) \\
\hline Flax and Hemp........ ................ & & & & & & & & & & & \\
\hline Flour........ ...................... ......... & 44 & 80 & . & & & & & 44 & 80 & 124 & 334 \\
\hline Furniture ......... ........ ......... ........ & 5
18 & 5 & & & & & ........... & 5
18 & 5 & 10 & 090
069 \\
\hline Gypsum .................. ................ & 18 & 9 & & & & & & 18 & 9 & 27
18 & 069
230 \\
\hline Glassware & 18 & & & & & & & & - . . .......... & 18 & 230 \\
\hline
\end{tabular}
44 Victoria. Sessional Papers (No 4.) A. 1881

APPENDIX A-Continued.
nセәр!ч
әч


Inland Revenue Department,
Ottawa, 2nd February, 1880.
APPENDIX A-Continued.
No. (A) 27.-GENERAL STATEMENT showing the Quantity of each Article transported through the St. Peter's
Canal, and the Amount of Revenue collected, during the Season of Navigation in 1879.
APPENDIX A-Continued.
No. (A) 28.-a-General Statement showing the Quantity of each Article transported through the Newcastle
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From Canadian to Canadian Ports.} & \multicolumn{2}{|l|}{From Canadian to United States Ports.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
From \\
United States to United States Ports.
\end{tabular}} & \multicolumn{2}{|l|}{From United States to Canadian Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{\begin{tabular}{l}
Total \\
Tons.
\end{tabular}} & \multirow[t]{2}{*}{\[
\begin{gathered}
\Delta \text { mount } \\
\text { of } \\
\text { Tolls. }
\end{gathered}
\]} \\
\hline & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & & \\
\hline \multirow[t]{2}{*}{Bricks........................................} & \multirow[t]{2}{*}{. .........} & & & & & & & & & & & \$ cts. \\
\hline & & \multirow[t]{2}{*}{..................} & ............. & .1.0.0.0..... & ...1. ...0. & , & ...0.0... & , & ........... & .......... & & -........ \\
\hline Bark ........ ................................... & \multirow[t]{2}{*}{…….....} & & .............. & ................ & ................ & .... .......... & ........... & ................. & ..... ...... & ............... & ............... & ................. \\
\hline Firewood, in vessels..................... & & .................. & ................ & ................ & ……....... & ............... & . ............ & ................ & -12,501 & .............. & 1...... 12.1. & -1.... 20797 \\
\hline Lumber, Sawn, in vessels............ & ........... & .1........... 77 & \multirow[t]{2}{*}{…..........} & ......... ...... & ...... ...... & .............. & ............... & ................. & -1,7.... & 77 & -......... & . \(9 . .15\) \\
\hline Railway Ties... ......... ........ ......... & \multirow[t]{2}{*}{1,447
1,475} & \multirow[t]{2}{*}{……} & & -................ & .............. & ........... & ........... & ....... & 1,418 & & 1,447 & 915
2575 \\
\hline Saw Logs......... ......... ............ ..... & & & …......... & ............... & ........... & ............ & ............ & ........... & 1,475 & 450 & 1,925 & 3850 \\
\hline Split Posts, \&c.......... ........... .......... & \multirow[t]{2}{*}{............ 1} & \multirow[t]{2}{*}{…….......} & ............. & ......... ...... & ...... ...... & ….......... & ............. ... & ................ & ............ & ........... & .... ...... 1 & \(\cdots\) \\
\hline Timber, Square.................. ........ & & & ............. & ......... .... & ............ & …….... & ........ & ............ & .. ..... & 25 & 25 & 050 \\
\hline \multirow[t]{2}{*}{Iron Ore
\(\qquad\) Stone, Unwrought
\(\qquad\)} & & ....... & ........... & -.......... ....... & & & & & & & & \\
\hline & \[
38
\] & . ......... & \multicolumn{2}{|l|}{...........} & -.......... & ........... & . & ........... & 38 & ............. & 38 & 025 \\
\hline \multicolumn{2}{|l|}{Total Freight paying Tolls... 16,280} & & ............ & .......... ..... & ........... & ........ . & ........ & ............ & 16,280 & 552 & 16,832 & 28362 \\
\hline \multicolumn{12}{|l|}{\multirow[t]{2}{*}{Total Tolls on Vessels Uther Receipts
\(\qquad\)
\(\qquad\)
\(\qquad\) Total Revenue, exclusive of Hydraulic Rents.
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)}} & 250 \\
\hline & & & & & & & & & & & & 28612 \\
\hline \multicolumn{9}{|l|}{Inlaand Revenue Department, Ottawa, 2nd February, 1880.} & \multicolumn{4}{|l|}{A. BRUNEL, Commissioner.} \\
\hline
\end{tabular}

No. (A) 29.---Statement of Traffic on the undermentioned Canals, and


\section*{A-Continued.}
the Amount of Tolls collected during the Season of Navigation in 1879.


No. (A) 29.-Statement of Traffic on the undermentioned


\section*{A-Continued.}

Canals, and the Amount of Tolls collected, \&c-Continued.


No. (A) 29.-Statement of Traffic on the undermentioned


Inland Revente' Departmfnt, Ottawa, 2nd February, 1880.

APPENDIX A-Continued.
Canals, and the Amount of Tolls collected, \&c.-Continued.

A. BRUNEL,

Commissioner.
the Season of Navigation
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline Canals and Offices. & February. & March. & \(\Delta\) pril. & May. & Jun & July. & August. & September & October. & Norember & cember. & Totals. \\
\hline Wbland Canal. & cts. & \$ cts. & cts & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. & \$ cts. \\
\hline Chippewa ..................
Colborne ............ & 300 & & & [ \(\begin{array}{r}158 \\ 13,616 \\ 75\end{array}\) & 1096
14,873 & \(\begin{array}{r}17,711 \\ \hline 3 \\ \hline 29\end{array}\) & (15866 & [ \(\begin{array}{r}\text { 3 } \\ \\ 23,022 \\ 78\end{array}\) & \begin{tabular}{r} 
r \\
16,353 \\
\hline 24 \\
4
\end{tabular} &  & & 5173
118
502
29 \\
\hline Ualhuusie... ....... & & & ......... & 7,319 34 & 7,179 74 & 5,140 61 & 6,406 32 & 5,931 68 & 4,125 51 & 2,738 36 & \({ }^{116} 74\) & 38,978 30 \\
\hline  & ............ & ... & ........... & 996
201
36 & 11386
214
84 & +2861881 & - 40195 & 205921 & \({ }^{2142} 65\) & \(\begin{array}{r}1322 \\ 7914 \\ \hline 1\end{array}\) & \begin{tabular}{l}
4888 \\
\hline 88
\end{tabular} & \({ }_{1,247} 175\) \\
\hline Kobinson .................... & & & 3530 & 38790 & 25153 & 32609 & 38752 & 43711 & 36815 & 22266 & 7899 & 2,498 25 \\
\hline St. Catharines.. ......... & ............ & ..... ..... & 4042 & 24310 & 34627 & 24181 & 19939 & 23425 & 28823 & \(13997 \mid\) & \(92^{\text {a }}\) & 1,742 66 \\
\hline Total, Welland Canal. & 3000 & ......... & 72 & 21,866 34 & 22,990 64 & 23,655 11 & 30,662 63 & 29,897 08 & 20,485 49 & 12,928 57 & 1,116 64 & 163,708 22 \\
\hline St. Lawhextes Casals. & & & & & & & & & & & & \\
\hline Beauharnois ............... & & & & & & & & 35548 & 1,266 15 & 4484 & & \\
\hline Cornwall..................... & ................. & -........... & &  & \({ }^{2,119} 97\) & \({ }_{\text {1,861 }} 989\) & \({ }^{2,364} 5132\) &  & 2,347 100 & 2,39442 & 1181
400 & 14,220 \({ }^{538} 88\) \\
\hline Eamardiburg & & & 25746 & 5,8054806 & 3,851 & 2,39998 & 3,40198 & 2,815 33 & 3,440 08 & 1,649 61 & & 23,620 51 \\
\hline & & & & 37158 & 32752 & 36998 & 59121 & 936 24 & 65618 & 40302 & & 3,655 73 \\
\hline Montreal & . & & ...... & 3,274 69 & 4,056 73 & 4,866 91 & 4,487 73 & 4,455 23' & 4,853 49 & 3,495 02 & ... & 29,479 80 \\
\hline \begin{tabular}{c} 
Total, \(\begin{array}{c}\text { St. Lawrence } \\
\text { Canals................. }\end{array}\) \\
\hline
\end{tabular} & & & 25746 & 11,260 01 & 10,603 89 & 9,941 23 & 11,118 93 & 10,108 75 & 12,663 07 & 8,457 54 & 1581 & 74,426 \\
\hline Ceambly Canal. & & & & & & & & & & & & \\
\hline Chambly. & & & & & & & & & & & & \\
\hline St. Johu's & & & & 1,930 & 1,73184 & 1,92888 & 1,60170 & 2,514 63 & 2,102 21 & 1,16376 & & 13,023 32 \\
\hline St. Uurs. & & & 670 & 6271 & 8105 & 8306 & 8303 & 7245 & 16195 & 19390 & ............ & \\
\hline Total Chambly Canal.. & & & 670 & 2,395 47 & 2,27742 & 2,664 30 & 2,266 30 & 3,143 50 & 2,985 20 & 2,163 12 & ...... ...... & 17,901 01 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline \[
\begin{aligned}
& \approx \\
& \stackrel{\sim}{e} \\
& \underset{\sim}{6}
\end{aligned}
\] &  &  &  &  & む̀ む̀ \\
\hline \begin{tabular}{l} 
N \\
\hline 0 \\
\hline
\end{tabular} &  &  & \(\vdots\)
\(\vdots\)
\(\vdots\) &  &  \\
\hline  &  &  & \begin{tabular}{l|l}
\hline\(\vdots\) & 8 \\
\(\vdots\) & 0 \\
\(\vdots\) & \\
\(\vdots\)
\end{tabular} &  & 囫号 \\
\hline  &  &  &  &  & － \\
\hline  &  &  &  &  & \\
\hline 产 &  &  & \begin{tabular}{|l|l|}
\(\vdots\) \\
\(\vdots\) \\
\(\vdots\) & － \\
\(\vdots\)
\end{tabular} &  & \\
\hline 8
80
80 &  &  & \begin{tabular}{c|c}
\(\vdots\) & 8 \\
\(\vdots\) & 8 \\
\(\vdots\) & \\
\(\vdots\)
\end{tabular} &  & \\
\hline －－ &  &  & \begin{tabular}{c|c}
\(\vdots\) \\
\(\vdots\) \\
\(\vdots\)
\end{tabular} &  & \\
\hline \begin{tabular}{l} 
¢ \\
¢ \\
\hline
\end{tabular} &  &  &  &  & \(\infty\)
\(\infty\)
\(\infty\)
\(\cdots\)
\(\sim\) \\
\hline \(\stackrel{\square}{\sim}\) & \(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\) &  & \begin{tabular}{|l|l|}
\(\vdots\) \\
\(\vdots\) \\
\(\vdots\) \\
\(\vdots\)
\end{tabular} &  &  \\
\hline &  &  & \(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\) & （1） &  \\
\hline &  &  & \(\vdots\)
\(\vdots\)
\(\vdots\)
\(\vdots\) &  &  \\
\hline  &  &  &  &  &  \\
\hline
\end{tabular}
No. (A) 32.-General Staetment showing the Number, Tonnage and Nationality of Vessels passed through the Canals during the Season of Navigation ended 31st December, 1879, and the Tolls collected thereon.


No. (A) 32.-General Statement showing the Number, Tonnage and Nationality of Vessels, \&c.-Continued.

RECAPITULATION.

No. (A) 32 \(\frac{1}{2}\)-Comparative Statement of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation, 1878-79, with the amount of Tolls collected on the same, including Tolls on
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Canals.} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { Frcm } \\
\substack{\text { Cnadian to } \\
\text { Canadian } \\
\text { Ports. }}
\end{gathered}
\]} & \multicolumn{2}{|l|}{\(\xrightarrow[\text { From }]{\text { Ganadian to }}\) United States Ports.} & \multicolumn{2}{|l|}{From United States to United States Ports.} & \multicolumn{2}{|l|}{From United States to Canarian Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total Tons.} & \multirow[t]{2}{*}{\[
\begin{gathered}
\begin{array}{c}
\text { Amnunt } \\
\text { of } \\
\text { Tolls. }
\end{array}
\end{gathered}
\]} \\
\hline & Up. & Down. & \({ }_{0} \mathrm{p}\). & Down. & Up. & Down. & Up. & Down. & Up. & Down. & & \\
\hline 1878 & \multirow[t]{3}{*}{23752
125,397} & \multirow[t]{3}{*}{92,950
\(\mathbf{5 7 3 , 5 4 6}\)} & \multirow[t]{3}{*}{29,224
9,288} & \multirow[t]{3}{*}{3,742
3,112} & \multirow[t]{2}{*}{206,432} & \multirow[t]{3}{*}{167, \({ }_{996}\)} & \multirow[t]{3}{*}{8,329
46,902} & \multirow[t]{3}{*}{\begin{tabular}{|c}
437,023 \\
44,921 \\
81,261
\end{tabular}} & \multirow[t]{2}{*}{267,737} & \multirow[t]{2}{*}{701,021} & \multirow[t]{2}{*}{968,758} & \$ c.s. \\
\hline Welland Oanal ........... & & & & & & & & & & & & 196,038 26 \\
\hline St. Lawrence Uanals..... & & & & & & & & & 182,185 & 622,575 & 804,760 & 66,380 52 \\
\hline Chambly Usnal ........... & 6,967 & 9,936
12,402 & 59,133 & - .... .. & ............ & ............. & ......... & 81,256 & 66,106 & 91,182 & \({ }_{1}^{157,288} 1\) & \(\begin{array}{r}15,370 \\ 489 \\ 489 \\ \hline 85\end{array}\) \\
\hline Ridean Canai.............. & \({ }_{1} 91,662\) & 272, 310 & & 180,727 & ................ & ....... & 94 & ............ & 1,756 & 453,037 & 4E1, 193 & 38,658 57 \\
\hline Barlington Bay Ganal... & 21,264 & 22,068 & ........... & 1,524 & ............. & ..... & 43,846 & ............. & 65,110 & 23,593 & 88,702 & 3,936 28 \\
\hline Newcastle Dist. Canals. & 10,138 & 350 & & ........ & ........... & ... & ............ & ............... & 10,138 & 350 & 10,488 & 15231 \\
\hline \multicolumn{13}{|l|}{1879.} \\
\hline \multirow[t]{2}{*}{Welland Canal'...........
St. Lawrence Uanals.} & \multirow[t]{2}{*}{27,688
142,287} & \multirow[t]{2}{*}{125,524
\(671,6.6\)} & \multirow[t]{2}{*}{25,756
11,128} & \multirow[t]{2}{*}{1,713
2,952} & \multirow[t]{2}{*}{\(\begin{array}{r}150,409 \\ 504 \\ \hline\end{array}\)} & \multirow[t]{2}{*}{133,634 1,471} & \multirow[t]{2}{*}{- \(\begin{aligned} & 11,693 \\ & 64,738\end{aligned}\)} & \multirow[t]{2}{*}{389,217
48,952} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l|l}
215,546 \\
\(218,6 \div 7\) & 650,118 \\
\(7<5,001\) \\
\hline
\end{tabular}}} & \multirow[t]{2}{*}{\[
865,66!
\]} & \multirow[t]{2}{*}{\(\begin{array}{r}163,708 \\ 74,426 \\ \hline 29\end{array}\)} \\
\hline & & & & & & & & & & & & \\
\hline Chambly Canal............ & 11,828 & 10,670 & 52,690 & & .............. & .......... & -64, & 105,391 & 218,608
64,508 & \[
116,061
\] & \[
\begin{aligned}
& 943,658 \\
& 180,569
\end{aligned}
\] & \multirow[t]{2}{*}{17,901
4,861
4
4} \\
\hline Rideau Canal ....... ..... & 91,212 & 15,455 & \multirow[t]{2}{*}{2,6+8} & \multirow[t]{2}{*}{187,408} & \multirow[t]{2}{*}{................} & \multirow[t]{2}{*}{...............} & .......... & .......... & \multirow[t]{2}{*}{\(\begin{array}{r}93,860 \\ 4,582 \\ \hline\end{array}\)} & \multirow[t]{3}{*}{\[
\begin{array}{r}
481,870 \\
23,057
\end{array}
\]} & \multirow[t]{2}{*}{\begin{tabular}{l}
109,415 \\
485 \\
\hline 8722
\end{tabular}} & \\
\hline Ottawa Oanals.. ........ & 4,852 & 294,462 & & & & & & & & & & \multirow[t]{2}{*}{} \\
\hline Burlington Bay Canal... & 20,6ıv & 21,153 & & 1,904 & ........... & ....... & 44,214 & & 64,820 & & 87,877 & \\
\hline \multirow[t]{2}{*}{- St. Peter's Canal ........} & 16, 280 & \multirow[t]{2}{*}{\({ }^{5}\).} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{|.... .....| \(\cdot\)..........}} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{……........ 16.1 180}} & \multirow[t]{2}{*}{……… 5} & \multirow[t]{2}{*}{16,832} & \multirow[t]{2}{*}{-1.72612} \\
\hline & 1f,280 & & & & & & & & & & & \\
\hline \multicolumn{13}{|l|}{- This Sanal being closed for enlargement, no business has been done on it during the years 1878 and 1879.} \\
\hline \multicolumn{5}{|l|}{Inland Revenue Department, Ottawa, 2nd February, 1880.} & \multicolumn{4}{|l|}{} & \multicolumn{4}{|l|}{A. BRUNEL, Commissioner.} \\
\hline
\end{tabular}

\section*{APPEXDIX A.-Continued.}

No. 36.-Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1879.
welland and st. lawrence canals.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Canajian.} & \multicolumn{4}{|c|}{United States.} \\
\hline \multicolumn{3}{|c|}{Stcam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} & \multicolumn{2}{|l|}{Steam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} \\
\hline Tonnage. & Number. & Total Tonnage. & Number. & Total Tonnage. & Number. 1 & Total Tonuage. & Number. & Total Tonnage. \\
\hline 8 & 10 & 80 & 14 & 112 & 3 & 24 & 1 & 8 \\
\hline 10 & 7 & 70 & 4 & 40 & 1 & 10 & 3 & 30 \\
\hline 12 & 7 & 84 & 2 & 24 & 4 & 48 & 1 & 12 \\
\hline 15 & 7 & 105 & 5 & 75 & 3 & 45 & 1 & 15 \\
\hline 20 & 16 & 320 & 7 & 140 & 2 & 40 & 1 & 20 \\
\hline 25 & 17 & 425 & 10 & 250 & 4 & 100 & ............ & ............ \\
\hline 30 & 12 & 360 & 11 & 330 & 1 & 30 & 1 & 30 \\
\hline 35 & 8 & 280 & 2 & 70 & ..... & ............... & 1 & 35 \\
\hline 40 & 4 & 160 & 16 & 640 & ............. & ......... ...... & 6 & 240 \\
\hline 45 & 5 & 225 & 8 & 360 & ..... & ...... ........ & 1 & 45 \\
\hline 50 & 1 & 50 & 8 & 400 & .... & .............. & 4 & 200 \\
\hline 55 & 2 & 110 & 5 & 275 & ...... & ..... ......... & 3 & 165 \\
\hline 60 & 6 & 360 & 11 & 660 & ..... & ............... & 21 & 1,260 \\
\hline 65 & 3 & 193 & 11 & 715 & 2 & 130 & 26 & 1,690 \\
\hline 70 & 1 & 70 & 9 & 630 & 1 & 70 & 17 & 1,190 \\
\hline 75 & 5 & 375 & 8 & 600 & 3 & 225 & 11 & 825 \\
\hline 80 & -.... & 505 & 1.4 & 1,120 & ...... & .............. & 8 & 640 \\
\hline 85 & 7 & 395 & 24 & 2,040 & ....... ..... & ...... ......... & 3 & 255 \\
\hline 90 & 1 & 90 & 3 i & 2,700 & ..... & 1.............. & 10 & 900 \\
\hline 95 & 2 & 190 & 50 & 4,750 & 1 & 95 & 19 & 1,805 \\
\hline 100 & 5 & 500 & 35 & 3,500 & .............. & ...... .i...0. & 82 & 3,200 \\
\hline 105 & 1 & 105 & 60 & 6,300 & 1 & 105 & 24 & 2,520 \\
\hline 110 & 1 & 110 & 26 & 2,860 & ... & .............. & 26 & 2,860 \\
\hline 115 & 3 & 345 & 10 & 1,150 & . & ...... ......... & 8 & 920 \\
\hline 120 & 2 & 240 & 15 & 1,800 & .............. & ............ & 4 & 480 \\
\hline 125 & 2 & 250 & 6 & 750 & & .. .0. .. ...... & 1 & 125 \\
\hline 130 & & & 11 & 1,430 & 1 & 130 & 1 & 130 \\
\hline 135 & 2 & 270 & 13 & 1,755 & & .... & 1 & 135 \\
\hline 140 & 2 & 280 & 7 & 980 & . & ............... & 1 & 140 \\
\hline 145 & ............... & 1..... & 7 & 1,015 & ...... ......... & ..... & .1.7. & .... \\
\hline 150 & 1 & 150 & 8 & 1,200 & ....... & ...... ........ & |........ ... & ............... \\
\hline 155 & 2 & 310 & 16 & 2,480 & 1 & 155 & ....... ...... & ...... \\
\hline 160 & 2 & 320 & 9 & 1,440 & & ............... & .............. & ....o.. ......... \\
\hline 165 & 1 & 165 & 10 & 1,650 & & |................ & ................. & ............... \\
\hline 270 & ...... & -7.... & 3 & 510 & & & - 3 & 810 \\
\hline 175 & 1 & 175 & 4 & 700 & 1 & 175 & 1 & 175 \\
\hline 180 & 1 & 180 & 4 & 720 & 1 & 180 & ... ........... & ...... ........ \\
\hline 185 & ......... & .............. & 9 & 1,665 & ...... ........ & ......... ..... & .............. & ............... \\
\hline 190 & ..... & . ............. & 5 & 950 & ......... ..... & ...... ......... & 1 & 190 \\
\hline 195 & ...... & .............. & 7 & 1,365 & .... . ....... & ......... ..... & | 2 & 390 \\
\hline 200 & 2 & 400 & 3 & 600 & \(\cdots\) & ...... ........ & 3 & 600 \\
\hline 205 & ............. & ............... & 8 & 1,640 & 1 & 205 & ............... & .............. \\
\hline 210 & ........ & . ...... ......... & 4 & 840 & ...... ......... & .............. & 2 & 430 \\
\hline 215 & ............... & ............. & 2 & 430 & ........ ...... & . ............. & 4 & \begin{tabular}{|l|}
860 \\
\hline 220
\end{tabular} \\
\hline 228 & & . & 6 & 1,540
1,250 & ............... & |........ ..... & 1 & 225 \\
\hline 230 & ............... & ...... & 5 & 1,350 & ................ & . ............... & . 2 & 469 \\
\hline 235 & & .............. & 3 & 705 & ......... ...... & . ...... ......... & ! 5 & 1,175 \\
\hline 240 & ...... - ...... & . ...... ......... & 5 & 1,200 & ............... & . & 11 & 240 \\
\hline 245 & 2 & 490
800 & 4 & 930 & ............. & - \(1 . .0\). ........ & 1 & 245 \\
\hline 250 & 2 & 800 & 4 & 1,000 & ............... & . ... ........... & ...... ........0 & .....0.0.7.... \\
\hline 260 & ........ & ...... ........ & 3 & 780 & \(\cdots\) & \(\underline{260}\) & - 1 & 260 \\
\hline 265 & ...... ........ & .. ......... ..... & 5 & 1,325 & 1 & 265 & \begin{tabular}{|l}
1 \\
\hline
\end{tabular} & 795 \\
\hline
\end{tabular}

APPENDIX A.-Continued.
No. 36.-Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals, \&c.-Continued.
WELLAND AND ST. LAWRENCE CANALS.-Continued.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Canadian.} & \multicolumn{4}{|c|}{United States.} \\
\hline \multicolumn{3}{|c|}{Steam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} & \multicolumn{2}{|l|}{Steam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} \\
\hline Tonnage. & Number. & Tootal & Number. & Total Tonnage. & Number. & Total Tonnage. & Number. & Total Tonnage. \\
\hline 270 & .... & & 1 & 270 & ............. & . \(\cdot .\). & 3 & 810 \\
\hline 275 & 1 & 275 & 3 & 825 & ...... ........ & .............. & 3 & 825 \\
\hline 280 & ...... ......... & ......... ..... & 1 & 280 & ............. & .............. & 6 & 1,689 \\
\hline 285
290 & …… \({ }^{\text {c.... }}\) & ............. & 5
3 & 1,440
870 & .................. & ............... & 5 & 1,425
1,740 \\
\hline 295 & 1 & 295 & 5 & 1,475 & ........ ...... & ........ ...... & 8 & 2,360 \\
\hline 300 & ........ & ...a.... ..... & 6 & 1,800 & 1 & 300 & 8 & 2,400 \\
\hline 305 & 2 & 610 & 8 & 2,440 & 2 & 610 & 6 & 1,830 \\
\hline 310 & ...... ........ & ...... ........ & 1 & 310 & ............ & .............' & 4 & 1,240 \\
\hline 315 & ...... ......... & ......... ..... & 2 & 630 & .............. & ..... ......... & 6 & 1,890 \\
\hline 320 & .............. & ..... ......... & 8 & 2,560 & ........... & ............. & 10 & 3,200 \\
\hline 325 & ............... & ........ ..... & 5 & 1,625 & 1 & 325 & 4 & 1,300 \\
\hline 330 & 1 & 330 & 6 & 1,980 & . & ............. & 7 & 2,310 \\
\hline 335 & 1 & 335 & 6 & 2,010 & ... & ............. & 6 & 2,010 \\
\hline 340 & ......... . ... & . -... .... & 3 & 1,020 & ........... ... & .............. & 2 & 680 \\
\hline 345 & 2 & 690 & 3 & 1,035 & ...... & ...... ........ & 5 & 1,725 \\
\hline 350 & ....... & ............. & 3 & 1,050 & ...... ..... ... & .............. & 5 & 1,750 \\
\hline 355 & 1 & 355 & 7 & 2,485 & .............. & .... ......... & 2 & 710 \\
\hline 360 & 1 & 360 & 4 & 1,440
3,285 & \(\cdot\) & ............ & 2 & :20 \\
\hline 365
370 & …........... & ................| & 2 & -740 & , & ...... ......... & \(\cdots\) & 370 \\
\hline 375 & 2 & 750 & 6 & 2,250 & .............. & ...... ......... & 1 & 375 \\
\hline 380 & .... & .............. & \(\ldots\) & & ..... ........ & ............. & ..... & .......... \\
\hline 385 & ..... & ............. 390 & 4 & 1,510
390 & ... & .............. & ...... & ............ \\
\hline 390
395 & 4 & 1,580 & 4 & 1,580 & ................. & ................. & \({ }^{1}\). & \({ }^{-1 . . . . . . . . . . ~}\) \\
\hline 400 & .............. & ............. & , & & .. ........ & .............. & .... & ............. \\
\hline 405 & 3 & 1,215
1,230 & .. ........ & ........ & ........... & ...... ........ & ..... .... & ...... . ..... \\
\hline 415 & 1 & 1,415 & ..... & ............... & 1 & -1.7.1.... & ........... & ............. \\
\hline 4:2 & ......... & ............ & ....... & .... ....... & . - ..... & .......... ... & ...... & ................ \\
\hline 423 & 1 & 425 & 2 & 450 & ...... ........ & .............. & & \\
\hline 430
435 & ... & ....... ..... & .......... & & ............. & ..... ... & ............. & .......... \\
\hline 440 & 4 & 1,760 & & .. . ........ & 3 & 1,320 & .............. & .............. \\
\hline 460 & 1 & 460 & .............. & ............ & 1 & 460 & & \\
\hline 479 & 1 & 479 & .......... & ........... & ............. & ......... ..... & .......... & \\
\hline 504 & 1 & 504 & 1 & 50.4 & ............ & ..... ........ & & \\
\hline 550 & 1 & 550 & & & ............... & .............. & ............. & ....... \\
\hline 555 & 1 & 555 & ... & ............ & & & & \\
\hline 575 & 1 & 575 & ............. & ............ & \(\cdots\) & ............. & ............. & \\
\hline 590 & 1 & 590 & ......... & ........... & . ........... & ..... ........ & ...... ...... & ............ \\
\hline 615 & 1 & 615 & ...... & ......... & ........... & ............ & ........... & ......... ...... \\
\hline 678
640 & 1 & 678
690 & ...... & ..... ....... & & .... ........ & ............. & - \\
\hline 716 & 1 & 716 & ....... & & & & & \\
\hline Total... & 197 & 27,607 & 686 & 101,193 & 42 & 5, 722 & 371 & 50,150 \\
\hline
\end{tabular}

\section*{APPENDIXA-Continued.-CANALS.}

No. 36.--Statement of the Number and Tonnage of all kinds of Vessels passed through the Canals, \&c.-Continued.

RIDEAU, OTTAWA AND CBAMBLY CANALS.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{3}{|c|}{Steam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} & \multicolumn{2}{|l|}{Steam Vessels.} & \multicolumn{2}{|l|}{Sailing Vessels.} \\
\hline Tonnage. & Number. & Total Tonnage. & Number. & Total Tonnage. & Number. & Total Tonnage. & Number. & Total Tonnage. \\
\hline 8 & 12 & 96 & 92 & 736 & & & 2 & 16 \\
\hline 10 & 7 & 70 & 25 & 250 & 2 & 20 & 4 & 40 \\
\hline 12 & 4 & 48 & 2 & 24 & ... ...... & ......... & .......... & ........ \\
\hline 15 & 4 & 80 & 34 & 680 & .. & ..... & - & ...... \(\cdot . . . . .\). \\
\hline 25 & 7 & 175 & 8 & 200 & 1 & 25 & ........ ...... & ............... \\
\hline 30 & 6 & 180 & 12 & 360 & - & \(\cdots\) & ..... ....... & . \\
\hline 35 & 4 & 140 & 7 & 245 & . ......... & \({ }^{-1}{ }^{\circ}\) & ...v & .............. \\
\hline 40 & 5 & & 10 & 400
180 & 1 & 40 & \(\cdots\) & …... \({ }^{\text {. }}\) 45.... \\
\hline 45 & 5 & 225 & 4 & 180 & .... & \(\cdots\) & 2 & \(\begin{array}{r}45 \\ 100 \\ \hline\end{array}\) \\
\hline 50 & 6
4 & 300
220 & 14 & 440 & ................. & -............... & 6 & 330 \\
\hline 55 & 4
3 & 220 & 8 & 440
300 & .............. & -.............. & 27 & 330
1,620 \\
\hline 65 & 2 & 130 & 3 & 190 & ................. & ......... ..... & 35 & 2,340 \\
\hline 70 & 1 & 70 & 12 & 810 & . & ......... ..... & 26 & 1,830 \\
\hline 75 & 2 & 150 & 10 & 750 & . & ... & 17 & - 1,275 \\
\hline 80 & 1 & 80 & 17 & 1,360 & ...... ........ & .............. & 6 & . 480 \\
\hline 85 & 2 & 170 & 19 & 1,615 & ............... & ........ ...... & 3 & 255 \\
\hline 90 & 2 & 180 & 26 & 2,340 & .............. & ..... ........0. & 10 & 900 \\
\hline 95 & 1 & 95 & 54 & 5,130 & ............ & ..... ........ & 24 & 2,280 \\
\hline 100 & 2 & 210 & 37 & 3,700 & ...... ......... & & 41 & 4,100 \\
\hline 105 & 3 & 315 & 46 & 4,830 & .... & ..... ........ & 36 & 3,780 \\
\hline 110 & 4 & 440 & 17 & 1,870 & . & ......... ..... & 32 & 3,5\% \\
\hline 115 & 1 & 115 & 8 & 920 & ....... ...... & ..... .... .... 1 & 13 & 1,495 \\
\hline 120 & 2 & 240 & 8 & 960 & ...... ........ & .............. & 6 & 720 \\
\hline 125 & 3 & 375 & 6 & 750 & .............. & .............. & ...... ......... & ...... ........ \\
\hline 130 & .... & ... & 8 & 1,040 & ...... ......... & ..... ......... & - & ... \\
\hline 135 & \(\ldots\) & & 7 & 945 & ...... ... .... & . & ......... ..... & ...... \\
\hline 140 & 1 & 140 & 6 & 840 & ...... ...... & . & ......... ..... & ...... \\
\hline 145 & 2 & 290 & 2 & 290 & ........ ..... & ...... . ...... & ...... ........ & .............. \\
\hline 158 & .............. & ............. & 6 & 900 & ..... & ... & ............. & \\
\hline 155 & ...... ......... & ...... ... & 5 & 775 & ..... & \(\cdot \cdot\) & ........ .... & \\
\hline 163 & 2 & 320 & 2 & 320 & ..... ........ & ........ ...... & ..... ......... & \\
\hline 165 & ........... & .............. & 3 & 495 & ....... & ... & ............ & ............... \\
\hline 170 & .......... .... & ….......... 1 & 1 & 170 & \(\cdots\) & & & \\
\hline 175 & 2 & 350 & 1 & 175 & 1 & 175 & ........ ..... & .............. \\
\hline 200 & 2 & 400 & .......... & .......... & ............ & ...... ..... & ..... ........ & .............. \\
\hline 245 & 1 & 245 & .. ......... & ............. & ... & \(\cdot\) & ...... ........ & ...... ........ \\
\hline 317 & 1 & 317 & ..... ....... & ......... .... & ... ........ & & ..... ......... & \\
\hline 332 & 1 & 332 & ............. & ............. & ........... & .... & ... & .............. \\
\hline 3 :4 & 1 & 344 & . ........ & ........ & ..... & ..... ........ & ..... ........ & \\
\hline 437 & 1 & 437 & & . & & ..... ....... & , & \\
\hline Total... & 106 & 7,51,9 & 527 & 35,750 & 5 & 260 & 292 & 25,116 \\
\hline
\end{tabular}
A. BRUNEL,

Commissioner.
Inland Revenue Department,
Ottawa, 2nd February, 1880.


No. 38.-The Canals of the Dominion of Canada, 1879-80.
RATES OF TOLL.


No. 38-Continued.
RATES OF TOLL-Concluded.


\section*{No. 38-Continued. \\ standard for estimating weights.}


\section*{No. 38-Continued. \\ Notice.}

THE following Way Rates to be levied on Vessels and Property passing the several Sut-Divisions of the Canals.


\section*{Otrama and Rideat Canals.}

The Navigation of these Canals is civided irto fonr sections, riz: "Carillon and Grenville," "Ottawa," "Smith's Falls," and "Kingston Mills." Vessels and Freight passing one section to be charged one-fuurth; two sections, one-half, and so on.

\section*{Genrral.}

Notr.--Any fraction of a ton freight to be charged one ton, and portions of sections to be charged as a whole section on all the above Canals.

The passing of Saw loggs or other Lumber through any of the Canals or sections thereof, is to be at all times governed by the regulations fur their management.

\section*{Harbour Does.}

Vessels receiving or discharging freight at the premises of the Welland Railway, at Ports Colhorne or Dalhousie, are to be free from Harbour Dues; but all other Vessels discbarging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of treight so received or discharged-Two cents.

\section*{APPENDIX A-Continued-SLIDES AND BOOMS.}

No. 39. -Statement showing the Revenue accrued on the undermentioned Works, for Slides and Booms, during the year ended 30th June, 1880.
\begin{tabular}{|c|c|c|c|}
\hline \multirow{2}{*}{From} & \multicolumn{2}{|l|}{Amount of Slide and Boom Dues accrued on Timber and Saw Logs.} & \multirow{2}{*}{Total.} \\
\hline & On River to Junction with the Ottawa. & Further through Ottawa Works. & \\
\hline & \$ cts. & \$ cts. & \$ cts. \\
\hline Madawaska ......... ...... ......... ........ ...... ...... . . 0. . & 10,039 01 & 2,517 19 & \\
\hline Petewawa.............. ......... ........... ......... ........ & 7,055 73 & 4,037 42 & \\
\hline Coulonge ...... ...... ...... ........e. ........ ...... ...... ...... & 2,201 24 & 1,706 16 & \\
\hline Black River......... ........... ......... ...... ...... ......o.. & 63660 & 52237 & \\
\hline Dumoine ......... ...... ......... ............ .. ....... ......... & 45739 & 41976 & \\
\hline Gatineau \(\qquad\) & 6,317 66 & ..... ................. & \\
\hline ment improvements................ . . . . . . . . . . . . & \(\cdots\) & 14,102 57 & \\
\hline & 26,737 63 & 23,305 47 & 50.04310 \\
\hline
\end{tabular}
A. BRUNEL,

Commissioner.

Inland Revenue Department, Ottawa, 1st September, 1880.

\section*{APPENDIX A-Continued-SLIDES AND BOOMS.}

No. 40.-Statement of the number of pieces of Timber and Sa w Logs that passed through the Government Slides and Booms on the Ottawa and its tributaries, during the undermentioned years.


Analysis of Square and Flatted Timber, 1879-80.
\begin{tabular}{|c|c|}
\hline - & No. of Pieces. \\
\hline White Pine... & \\
\hline Red Pine .......... .......................................... ..................................................................................... & 23,631 \\
\hline Dimension Timber .................. ........................ -........ ..... ........ ........ ............. & 7,601 \\
\hline Tramarac ..... ...... .............................................................................................. ...... ....... & 2,134 \\
\hline 0ak................................................................................................................................................... & 181 \\
\hline Ash ............................................................................... ..................... . & 184 \\
\hline Oedars ............ ... ......................... ..................................................... .... & 58 \\
\hline Hemlock ..... ..... .................................................................................................................. & 39 \\
\hline Birch .......................................................................................................................... & 36 \\
\hline Baspwood ...... ........ ..... ................ ....... ........ ....................................................... & 7 \\
\hline Maple ......... ..... ............. ........ ................................................................. & 3 \\
\hline Spruce ................. ........ ........ ........ & \\
\hline Total. \(\qquad\) 24 Cribs Traverses. & 83,154 \\
\hline
\end{tabular}
A. BRUNEL, Commissioner.

\author{
Inland Revenue Department, Ottawa, 1st September, 1880.
}
APPENDIX A-Continued.
No. 41.-Statement of Lnmber, \&c., Measured, Culled or Counted, at the Port of Quebec, during the Year ended

APPENDIX A-Continued.
No. 41.-Statement of Lumber, \&c., Measured, Culled or Counted, at the Port of Quebec, \&c.-Concluded.

\begin{tabular}{|c|c|c|c|}
\hline \begin{tabular}{l}
 \\

\end{tabular} &  & ¢ & \multirow[t]{10}{*}{} \\
\hline \begin{tabular}{l}
 \\

\end{tabular} & \[
\begin{array}{|ll|ll}
\hline \infty & 0 & \infty & 8 \\
0 & 0 & 0 & 8 \\
0 & 0 & 0 \\
& & 8 \\
& & 0 & \\
\hline
\end{array}
\] &  & \\
\hline  &  & ¢ & \\
\hline  &  & & \\
\hline  & 亠 & & \\
\hline  & \# & & \\
\hline  & (1) & & \\
\hline  & (1) & & \\
\hline  &  & & \\
\hline \begin{tabular}{l}
 \\
Fiontiono \\
-
\end{tabular} & & & \\
\hline
\end{tabular}

APPENDIX A-Continued.


\section*{APPENDIX B.}

\section*{DETAILS OF EXPENDITURE.}

APPENDIX B.
No. 1.-Details of Excise Expenditure, 1879-80.


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80-Continued.


Appendix B.--No. 1.--Details of Excise Expenditure, 1879-80-Continued.


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80—Continued.


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80-Continued.


\section*{Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80—Continued.}


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80—Continued.


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80—Continued.


Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80—Continued.


\section*{Appendix B.-No. 1 -Details of Excise Expenditure, 1879--80-Continued.}




Appendix B.-No. 1.-Details of Excise Expenditure, 1879-80-Concluded.


\section*{APPENDIX B.}

No. 2.-Detains of Canal Expenditure, 1879-80.


Appendix B.-No. 2.-Details of Canal Expenditure, 1879-80—Continued
\begin{tabular}{|c|c|c|c|c|c|}
\hline : Canals. & Names of Employés. &  & Amounts Paid. & Total. & \begin{tabular}{l}
Grand \\
Total.
\end{tabular} \\
\hline \multicolumn{6}{|l|}{St. Latorence Canals-} \\
\hline \[
\begin{aligned}
& \text { Lachine.................. } \\
& \text { do } \begin{array}{l}
\text { do } \\
\text {.................... }
\end{array}
\end{aligned}
\] &  & 19 16961 & \begin{tabular}{ll}
980 & 04 \\
783 & 96 \\
368 & 00
\end{tabular} & & \\
\hline & Salaries \(\qquad\) Contingencies. \(\qquad\) & 3600 & \[
\begin{array}{cc}
2,132 & 00 \\
662 & 11
\end{array}
\] & & \\
\hline Edwardsburgh...... & McMillan, R. P., Collector for the
Jear
Reid, J., Clerk for the jear................ & 1500
496 & \begin{tabular}{l}
735 \\
39500 \\
\hline 1
\end{tabular} & & \\
\hline & Salariea .......................... & 1996 & 1,130 04 & 1,130 04 & \\
\hline \multicolumn{6}{|l|}{Chambly Canab.} \\
\hline \multirow[t]{2}{*}{Chambly ...... .........} & Jodoin, A. P., Oollector for the year
Berger, N., Clerk for the jear. ......... & \[
\begin{array}{r}
1996 \\
632
\end{array}
\] & \[
\begin{aligned}
& 98004 \\
& 49368
\end{aligned}
\] & & \\
\hline & \begin{tabular}{|c} 
Saliries .................. . . . . \\
Contingencies..........
\end{tabular} & 2628 & \[
\begin{array}{r}
1,47372 \\
2500
\end{array}
\] & & \\
\hline \multirow[t]{2}{*}{St. John's..... . ......} & Quesnel, J., Collector for the year... Pournier, J A., Assistant Oollector for the year............................... & 1200
404 & 58800
19696 & & \\
\hline & Salaries \(\qquad\) Contingencies \(\qquad\) & 16041 & \[
\begin{aligned}
& 78396 \\
& 16485
\end{aligned}
\] & & \\
\hline \multirow[t]{2}{*}{8t. Ours Lock.. ...} &  & 1200 & \[
\left.\begin{array}{r}
588 \\
12 \\
12
\end{array} \right\rvert\,
\] & 948 & \\
\hline & Total, Chambly Canal ......... & . . ..... & ............... & & 3,047 23 \\
\hline \multicolumn{6}{|l|}{Rideau Canal.} \\
\hline Ottawa.......... ......... & Carman, G. A., Collector from 1st July to 30th September ........ .... Farley, Jas. F., Collector from 8th Ocl.sber to 30th June.. \(\qquad\) Battle, T., Clerk for the year \(\qquad\) & \[
\left|\begin{array}{r}
3 \\
3 \\
11 \\
11
\end{array}\right|
\] & \[
\begin{aligned}
& 19399 \\
& 57322 \\
& 76300
\end{aligned}
\] & & \\
\hline & Salaries ... Oontıngencies & 1566 & \[
\begin{array}{r}
1,53221 \\
57 \quad 39
\end{array}
\] & & \\
\hline Kingston Mills.. ...... & Deane, J., Collector for the year...... Contingencies \(\qquad\) & \[
\begin{array}{r}
248 \\
\ldots . . . . . . . .
\end{array}
\] & 197
54
46 & 1,689 60 & \\
\hline \multirow[t]{2}{*}{Smith's Falls.........} & jRichey, W. M., Collector for the year Contingencies. & 248 & \[
\begin{array}{r}
19752 \\
1895
\end{array}
\] & \[
21647
\] & \\
\hline & Total, Rideau Canal... ......... & -0.0.....0. & ......... ..... & ........ & 2,057 99 \\
\hline
\end{tabular}

\section*{Appendix B.-No. 2.-Details of Canal Expenditure, 1879-80.—Concluded.}

APPENDIX B-Continued.
No. 3.-Slides and Booms' Service.-Details of Expenditure for the Fiscal Year ended 30th Jure, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Offices. & Names. & Nature of Service. & \[
\begin{aligned}
& \text { Dedncted } \\
& \text { for } \\
& \text { Superan- } \\
& \text { nuation. }
\end{aligned}
\] & \[
\begin{gathered}
\text { Amounts } \\
\text { Paid. }
\end{gathered}
\] & Total. & \(\underset{\text { Trand }}{\text { Grand. }}\) \\
\hline \multirow[t]{17}{*}{Otrata .....} & \multirow[t]{9}{*}{} & \multirow[t]{8}{*}{} & \multirow[t]{4}{*}{\[
\begin{array}{cc}
\$ & \text { cts } \\
52 & 04 \\
36 & 04 \\
28 & 00 \\
28 & 04 \\
24 & 00 \\
9 & 32
\end{array}
\]} & \multirow[t]{2}{*}{} & \$ cts. & \$ cto. \\
\hline & & & & & & \\
\hline & & & & \(\begin{array}{r}1,176 \\ 850 \\ \hline 80\end{array}\) & & \\
\hline & & & &  & & \\
\hline & & &  & \(\begin{array}{r}73200 \\ 83 \\ \hline 88\end{array}\) & & \\
\hline & & & & \begin{tabular}{l}
46815 \\
44615 \\
\hline
\end{tabular} & & \\
\hline & & & 496 & 39504 & & \\
\hline & & & 15608 & & 11,29391 & \\
\hline & & Contingencies. & & & & \\
\hline & Russell, \(\mathbf{A}\). J.........................
Post 0 (ces &  & ............. & \begin{tabular}{l}
450 \\
13500 \\
\hline 15
\end{tabular} & & \\
\hline & Telegraph Company ................... &  & & (72 \({ }^{725}\) & & \\
\hline & Mirby Thomas............... ......... &  & & \(\begin{array}{r}817 \\ \hline 17\end{array}\) & & \\
\hline & City Corporation...... ............. & Water raio eli............... ................................. & ......... & 16
400
400 & & \\
\hline &  & Quebee Gazellt ....................................................... & & 1000 & & \\
\hline &  &  & & 400
1200 & & \\
\hline & Smittell \({ }^{\text {amee }}\) O............................. & \(\mid\) Free Press do ................................................... & & 600
87 & & \\
\hline & (\%erae \& Co........................... & & & & & \\
\hline
\end{tabular}
44 Victoria. Sessional Papers (No. 4.) A. 1881

44 Victoria. Sessional Papers (No 4.) A. 1881
1880.-Concluded.


\section*{No. 4.-Details of Fees paid to Cullers for the Fiscal Year ended 30th June, 1880.}

Apprndix B.-No. 4.-Details of Fees paid to Callers for the Fiscal Year ended 80th June, 1880.-Concluded.

APPENDIX B:-Continued.
No. 5.-Details of Cullers' Expenditure for the Fiscal Year ended 30th June, 1880.
\begin{tabular}{|c|c|c|}
\hline  & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { :் } \\
& \text { © }
\end{aligned}
\]} \\
\hline \% & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { ت} \\
& \text { ت} \\
&
\end{aligned}
\]} \\
\hline  & (104888\%888888\% &  \\
\hline  &  & (1) \\
\hline Nature of Service. &  &  \\
\hline 宫 &  &  \\
\hline \% ¢ \% &  & \\
\hline
\end{tabular}
Appendix.B.-No. 5.-Details of Callers' Expenditure for the Fiseal year ended 30th June, 1880—Continued




\section*{APPENDIX B.-Continued.}

No. 6.-Distribution of Seizures.


Appendix B-No. 6-Distribution of Seizares-Concluded.


\section*{APPENDIX B.-Continued.}

No. 7.-Details of Departmental Expenditure.


\section*{APPENDIX B.-Contimued.}

No. 8.-Details of Sundry Minor Expenditures.


Appendix B.-No. 8.-Details of Sundry Minor Expenditures - Concluded.


\section*{APPENDIX B.-Continued.}

No. 9 (a).-Details of Weights and Measures' Expenditure.



\author{
A BRUNEL, \\ Commissioner:
}

Inland Revenue Department, Ottawa, 1st September, 1880.

\section*{APPENDIX B.-Continued.}

No. 9 (b).-Details of Weights and Measures' Expenditare.


\section*{Appendix B.-No. 9 (b).-Details of Weights and Measures' ExpenditureContinued.}


Appendix B.-No. 9 (b).-Details of Weights and Measures' ExpenditureConlinued.


Appendix B.-No. 9 (b).-l)etails of Weights and Measures' ExpenditureContinued.


\section*{Appendix B.-No. 9 (b).-Details of Weights and Measures' ExpenditureContinued.}


Appendix B.-No. 9 (b).-Details of Weights and Measures' ExpenditureConcluded.


\author{
A. BRUNEL, \\ Commissioner.
}

Inland Revenue Department, Ottawa, 1st September, 1880.

\section*{APPENDIX B.-Continued.}

No. 10.---Details of Gas Inspection Expenditure.


Appendix B.-No. 10.-Details of Gas Inspection Expenditure-Concluded.


\section*{APPENDIX B.-Continued.}

No. 11.-Statement of Amounts which were deducted from the Salaries of the undermentioned Ex-Deputy Inspectors of Weights and Measures, on account of Superannuation, and hare now been refunded to them because their offices have been abolished.


Appendix B.-No. 11.-Statement of Amounts which were deducted from the Salaries of Ex-Deputy lnspectors, \&c.-Concluded.


\author{
A. BRUNEL, \\ Commissioner.
}

\author{
Inland Revenue Department, Utrawa, 1st September, 1880.
}

\section*{APPENDIX C.}

IIYDRAULIC AND OTIIER RENTS

Dr.


\section*{DIX C}

Lessees' Accounts, 1879--80.
Cr.


Dr.
Hydraulic and other Rents, \&c.-


Lessees' Accounts, 1879-80.


\section*{APPENDIX}

Ur.
Hydraulic and other Rents, \&xc.,


\section*{O.-Continued.}

Lessees' Accounts, 1879-80.—Continued.
Cr.


C.-Continued.

Lessees' Accounts, 1879-80 - Continued.
\begin{tabular}{|c|c|c|c|c|}
\hline Description of Property. &  & [8эs!d sumap p!ed & 픙 & Tutal. \\
\hline Wharf Lot, St. Timothy &  & \$ cts & \begin{tabular}{l}
\(\$\) cts. \\
260 \\
\hline 00
\end{tabular} & \(\$ \mathrm{cts}\).
26000 \\
\hline do St. Cecile. & May 1, 1830 & 2000 & 2000 & 4000 \\
\hline do do & do ... & 2000 & 6000 & 8000 \\
\hline do St do above Guard Lock...... & do \(\ldots\) & 2000 & & 2000 \\
\hline do St. Timothy ............... ........... & ov. 9, \(1869 .\). & & 9000 & 9000 \\
\hline \begin{tabular}{l}
Paper Mill, Lots 1, 2 and 3, and Building Lot, \\
\(V_{a}\) :leyfield
\end{tabular} & June 30, 1880 \(\square\) & 71700 & 35850 & 1,075 50 \\
\hline Grist Mill, Lot 5, Valleyfield ..... ............ ..... & do ...|... ...... & 12000 & 6000 & 18000 \\
\hline Saw Mill, Lot l, and Building Lot, Valiey field & do ... \(\cdot\)..... ..... & 12000 & 6000 & 18000 \\
\hline Woollen Frctory, Lot 2, and Building Lot, Vallevfield &  & 12000 & 6000 & 18000 \\
\hline Flour Mill, Lot at Lock No. 7, Beauharnois. ... & வ̀ ... & & 48000 & 48000 \\
\hline Lots 3, 4. 5, 6 and 7, at the head of the Canal.. & do & & 1,800 00 & 1,800 00 \\
\hline Wharf Lot at upper entrance of the Canal..... & May 1, 1880 .. & \[
\cdots
\] & 24000 & 24000 \\
\hline Wharf and Shed above Guard Lock ............. & do & & 3500 & 3500 \\
\hline Lot above Guard Lock for Wharf and Storebouse \(\qquad\)
\(\qquad\) & & 2300 & & 2300 \\
\hline do do do & Julv 1, i830.. & 2300 & & 2300 \\
\hline Lot above Guard Lock for Coal Shed. ........... & Nov. 1, 1830 & 2000 & & 2000 \\
\hline & & 1,203 00 & 3,663 50 & 86650 \\
\hline Spike and Nail Factory, & June 30,1880 ............ & 28665 & 21500 & 50166 \\
\hline Oil and Cement Factory, Lot 17 & do ... & 28666 & 21500 & 50166 \\
\hline Rolling Mill, Lot 6 ................ .................... & do ...| ........... & 28666 & 21500 & 50166 \\
\hline Flour Nill, Lots 18 and 19................ ......... & do ...|.......... & 57332 & 43000 & 1,003 32 \\
\hline do Lot 11 ........... .i.................... & do ... ........... & 39116 & & \(39+16\) \\
\hline Nail Factory and Rolling Mill, Lot No. 10 and east half of Lot 9 & April 1, 1880 & 61416 & & 61416 \\
\hline Water Power, St Gabriel Lock ...... ............ & June 20, 1880 ........... & 1,120 00 & 81000 & 1:960 00 \\
\hline Ground fur Freight Shed, Basin No. I........... 1 & Nay 1, 1880 .... ...... & 4000 & & 4000 \\
\hline do do do .......... & do ...1 .......... & 7500 & .. ........ 1 & 7500 \\
\hline Farm, 1:oté St. Paul...... ............ ........ ..... & Jnne 30, 1880 ........... & & 38000 & 28000 \\
\hline Water Supply at Grand Trunk Crossing ....... & Oct. 1, 1880 & 1000 & 280 & 1009 \\
\hline Ground near Tait's Dock ...................... ..... & Feb. 1, 1880 .. . .... & & 28000 & 28000 \\
\hline Mills, \& c, on part of Lot 2 and Lots 3, 4, 5, 6 and 7, Basin No. 2 \(\qquad\) & June 30, 1880, ........... & & 31,742 00 & 31,742 00 \\
\hline Freight Shed, Basin No. 1 & May 1, 1880 & 3000 & & 3000 \\
\hline & & 6000 & .... \(\cdot .\). & 6000 \\
\hline Water Lot in front of his Dry Dock ...... ........ & April 1, 1880|...........' & 100 & & 100 \\
\hline Lumber Yard near St. Gabriel's Locks........... & June 30, 1880 ..... ..... & & 80000 & 80000 \\
\hline Flour Mill and Lots 12, 13 and 14.................. & April 1, 18<0 .... ..... & 1,188 00 & 1,512 00 & 2,700 00 \\
\hline Lot at Lock No. 4, Cote St. Paul. & June 30, 1880 ........ ... & 1,067 32 & 2,330 50 & 3,397 82 \\
\hline Uffice on Canal Bank, Lach & do ...|...........| & 100 & & 100 \\
\hline Dry Dock and Ship Yard......... .................. & do ... \({ }^{\text {do........ }}\) & 66666 & 7,000 00 & 7,666 66 \\
\hline Warehouse and Coal Yard, Lot 1, Basin No. 2. & do ... .... ....... & 39200 & 19600 & 68800 \\
\hline Grain Elevator and Dryer, \(\frac{1}{2}\) Lot No. 2.. ........ & do \(\quad\)... \(\ldots\)......... & 26400 & 13200 & 39800 \\
\hline do do Lot No. 8 ............. & May 22, 1880 ........... & 39116 & & 39116 \\
\hline Marine Slip, Island No. 5 ............................ & June 30, 18301........... & & 25000 ! & 25000 \\
\hline Land on Basin No. 4............. ............. ........ & Aug. 1, 1880|.......... & 70000 & .... & 700 co \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline  &  & Total. & Name of Work. & Present Occupant. & Original Lessee. \\
\hline \$ cts. & \$ cts. & \$ cts. & & & \\
\hline 70000 & . & 70000 & ne Ca & & John Ostell \\
\hline 28800 & .............. & 28800 & do & ....... .................... ....... & Francis Dore....... ...... \\
\hline 2,896 67 & .............. & 2,896
30
30 & do & ............. ... ................... & Wm. Tait. .... ...... .... \\
\hline  & & 3000 & do & Lake st. Francis Naviga-
tion Co.. ...... ...... ....... & \\
\hline & 10000 & 10000 & do & St. Lawrence Sugar Refin- & \\
\hline 45,919 93 & 13,083 00 & 69,002 93 & & & \\
\hline 5000 & 5000 & 10000 & Chamb!y Canul & M. S. Willett........... ........ & Willett \& McPherson... \\
\hline 500
20 & .............. & 509 & do .. & J. A. Maurice............. .... & -.................... ....... \\
\hline 250
100 & ......... ..... & 250
10000 & do & St. John's Stone Chinaware & ................. ........... \\
\hline 25000 & 10000 & 35000 & do & J. C. Pierce \& Sons. .......... & \\
\hline 40750 & 17000 & 57750 & & & \\
\hline 56190 & 18730 & 74920 & Welland Canal. & R. \& J. Laurie. ................ & R. Laurie \\
\hline 36000 & 24000 & 60000 & do & .S. Neelan ... & R. \& J. Laurie....... .... \\
\hline 3000 & 2000 & 5000 & do & - do & 1 do ........... \\
\hline 64000 & 8000 & 72000 & do & G. A. Clark.... ........ ........ & \\
\hline 17000 & 2000 & 19000 & do & . do & \\
\hline 35200 & 17600 & 52800 & do & . Alexander Muir................... & \\
\hline 80000 & 10000 & 90000 & do & . Andrews \& Son.. ............... & Donaldson, Andrews Ross \\
\hline 96800 & 12100 & 1,089 00 & do & Donsldson, Andrews \& Ross & \\
\hline 17000 & 2000 & 19000 & do & .. G. A. Clark.. .................. & James Mavor. ... ....... \\
\hline 3,505 00 & 26000 & 3,765 00 & do & .. Tuttle, Date \& Rodden...... & J. L. Ranney \\
\hline 22500 & 15000 & 37500 & do & .. S. Neelan........ ................ & Calvin Phelps............. \\
\hline 6000 & 4000 & 10000 & do & Norris \& Neelan............... & do \\
\hline 33532 & 1000
167 & 1000 & do & Michael Kerrins. ......... ..... & \\
\hline 33532
\(E 6000\) & 16766 & 50298 & do & .. Gillespie \& Simpson.......... & R. Collier. ....... ........ \\
\hline 1,120 00 & 160 & 70000
1,280 & do & ...Jas. Willcor ... ............... & Thos. Powers ............ \\
\hline 2,353 00 & 18100 & \begin{tabular}{l}
1,280 \\
2,534 \\
\hline
\end{tabular} & do & .. King \& Dolan .... .... .. .... & John Brown. \\
\hline 43200 & 21610 & 64800 & do & .. Gillespie \& McLean... ....... & Wm. Beatty. \\
\hline 3180 & 6360 & 9540 & do & .. MrPherson \& Weir... ......... & do \\
\hline 5000 & 5000 & 10000 & do & .. J. McDonagh...... .. .. ......... & (W. H. Ward........... .. \\
\hline 72400 & 11600 & 87000 & 10 & .. do . \({ }^{\text {d }}\) d....... ......... & \begin{tabular}{l}
do \\
...........
\end{tabular} \\
\hline 96000 & 240
2500 & 1,200
2500
25 & do & .- Gord on \& McKay ......... ..... & \\
\hline 40 00 & 2500
80 & 2500
12000 & do & \begin{tabular}{l}
John dattle. \\
do
\end{tabular} & \\
\hline 1,665 00 & 22200 & 1,887 00 & do & .. Peleg Howland & Jacob Keefer \\
\hline 1,170 00 & 13000 & 1,300 00 & do & .. Band \& McArthur..... ........ & |Brown \& Ross ........... \\
\hline 3,040 00 & 16000 & 3,20r 00 & do & .. Woodward Estate ............. & A. Cbristie ................. \\
\hline 1,667 40 & 7920 & 1,746 60 & do & .. J. \& I A bbey. ......... ......... & McFarland \& Abbey... \\
\hline 94000 & & 940 00 & do & .. do ........... .......... & McFariand \& Lemon... \\
\hline 8.850 & 8600 & 92450 & do & ..|F. McVahon............. ........... & HeFarland \& Donaldson \\
\hline 4,330 78 & 27067 & 4,66,1 45 & do & .. Norrs .s Veelan................... & \(W_{\text {right }}\) \& Duncan.. .... \\
\hline 91800 & 6600 & 981 00 & do & . Vausel Wiluams............... & Wm. Pennock. ... \\
\hline
\end{tabular}

\section*{C.-Conlinued.}

Lessees' Accounts, 1879-80—Continued.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Description of Property. &  &  &  &  & Total. \\
\hline & & & \$ cts. & \$ cts. & \(\$\) cts. \\
\hline Lumber Basin, Island...... ....e. ......... .............. & & & & 70000 & 70000 \\
\hline Wharf and Land, Lachine ................... ......... & June 3, 1861 & & ... & 28800 & 288.00 \\
\hline Three old Locks .......0...... ............... ............ & Feb., 1861 & & ..... & 2,896 67 & 2,896 67 \\
\hline Freight Sheds on Basin No. 1 .0.0.0. ................. & May 1, 1880 & & 3000 & & 3000 \\
\hline Water supply at Basin No. 1. & June 30, 1880 & & 10000 & & 10000 \\
\hline & & & 8,580 76 & 50,422 17 & 59,002 93 \\
\hline Wharf Lot and Store at Lock No. 4................ & June 30,1830 & & & 10000 & 10000 \\
\hline Lot near upper entrance to Lock No. 7.. ........ & do ... & & & 500 & 500
250 \\
\hline Lot for Store House at St. Johns................... & June 30,1877 & ............ & ......... & 10000 & 10000 \\
\hline Wharf Lot at St. Johns....................... ........ & do 1879 & ........... & & 35000 & 35000 \\
\hline Lot opposite Lock No. 7, Chambly................ & May 1, 1881 & ............ & 2000 & & 20 co \\
\hline & & & 2000 & 55750 & 57750 \\
\hline Grist Mill, Waste Weir No. 1...... ................ & June 30,1880 & … ........ & & 74920 & 74920 \\
\hline Merchants Mill do ............... ........ & do ... & . & 24000 & 36000 & 60000 \\
\hline Lot of Land do & do ... & & 2000 & 3000 & 5000 \\
\hline Wharf Lot, Port Dalhousie. & Jan. 1, 1880 & & & 82000 & 72000 \\
\hline Wood Yard do .......................e.. & June 30,1880 & & & 19000 & 190.00 \\
\hline Docks do & do . & & 35200 & 17600 & 52800 \\
\hline Dry Dock do & & & & 90000 & 90000 \\
\hline Saw Mill do ........................... & do & . & ..... & 1,089 00 & 1,089 00 \\
\hline Lot do ..aco.................... & do & ........... & & 19000 & 19000 \\
\hline Union sill, St. Oatharines.......................... & do ... & ........... & 26000 & 3,505 00 & 3,765 00 \\
\hline Merchants' Red Mill, St. Catharines...... ........ & do ... & ..... & 30000 & 7500 & 37500 \\
\hline Wharf Lot at Lock No. 4 do .............. & do ... & ...... & 8000 & 2000 & 10000 \\
\hline Lot at Lock No. 2.. .......... .............. ........... & do ... & ............ & 500 & 600 & 1000 \\
\hline Saw Mill at Lock No. \({ }^{\text {s }}\)..... ................ ........ & do ... & ........... & 16766 & 33532 & 50298 \\
\hline Grist Mill at new Lock No. 10.................... & do ... & ........... & 66000 & 14000 & 70000 \\
\hline Cement Mill aud Stave Factory at Lock No. 15 & do & & & 1,280 00 & 1,280 00 \\
\hline Saw Mill opposite Lock No. 29............. ........ & do & & & 2,534 00 & 2,534 00 \\
\hline do at do 21................... . & do ... & ............ & & 64800 & 64800 \\
\hline Tannery do 22...-................ & & ........... ' & 6360 & 3180 & 9540 \\
\hline Factory do 23..................... & do ... & .... & ...... ........ & 10000 & 10000 \\
\hline Saw Mill do 23. ................... & do & ..... .... & .............. & 87000 & 87000 \\
\hline Cotton Factory, Locks Nos. 12, 13 and 14...... & do & ........... & & 1,200 00 & 1,200 00 \\
\hline Wharf near Lock No. 25....... .............. ....... & do ... & ........... & 2500
80 & & 2500
120 \\
\hline Plaster Mills ....... & do \(\begin{array}{ll}\text { do } & \text {... } \\ \end{array}\) & ... ......... & 8000 & \(\begin{array}{r}40 \\ 1,887 \\ \hline\end{array}\) & 12000
1,83700 \\
\hline Merchants Mill do 24................................ & & & & 1,300 00 & 1,300 00 \\
\hline Grist, Mill do 25.. & do ... & ........... & ...... ........ & 3,200 00 & 3,200 00 \\
\hline Dry Dock, Port Robinson ......... ..... ............. & do ... & & & 1,746 60 & 1,746 60 \\
\hline Saw Mill do \({ }_{\text {Grist Mill }}\) do ....... ................... & Feb 7, 1876 & & & 94000 & 94000 \\
\hline Grist Mill
do do
Allanburgh ... ................... ............
do...... & June 30,1880 & & & 93450 & \(92+80\) \\
\hline do Allanburgh ... ....... ............. ........ & do ... & ...... .... & ...... ........ & 4,601 45 & 4,601 45 \\
\hline Shingie Factory, Allanburgh...................... & & & ...... ........ & 93400 & 98٪ 00 \\
\hline
\end{tabular}


\section*{C.-Continued.}

Lessees' Accounts, 1879-80—Continued.
Cr.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Description of Property. &  &  &  & 蓇 & Total. \\
\hline & \$ cts. & \$ cts. & \$ cts. & \(\$ \mathrm{cts}\). & \$ cts. \\
\hline Grist Mill Port Robinson \(\qquad\) do do & April 1, 1880 & & 2000 & & 2000
653
56 \\
\hline Baw Mill, Merrittsville.. ................................... & June 30,1880 & & & 65236
41600 & \begin{tabular}{l}
65236 \\
41600 \\
\hline
\end{tabular} \\
\hline Grist Mill do & do ... & & & 67200 & 67200 \\
\hline Store House and Wharf, Merrittsville.. & do ... & & & 22000 & 22000 \\
\hline Grist Mill, Merrittsville. & do ... & & & 35734 & 35734 \\
\hline Wharf Lot, Port Colborne & do & & 2500 & 1250 & 3750 \\
\hline Second Elevator, Port Colborne & Jan. 1, 1880 & .. & 2000 & & 2000 \\
\hline Wood Yard do & June 30, 1080 & & 2500 & 1250 & 3750 \\
\hline Grist Mill, Marshville & do ... & ...... ...... & ..... ........ & 32000 & 32000 \\
\hline Saw Mill, Broad Ureek. .......i. ....... ............. & do ... & ...... .... & & 67529 & 67529 \\
\hline Grist and Saw Mill, Dunnville........ .............. & do ... & & ........ ..... & 69000 & 69000 \\
\hline Wharf Lot, Merrittsville..... ........ ......... ......... & Dec 31, 1866 & & .............. & 14115 & 14115 \\
\hline do do ........ ..................... & do … & ........... & ............ . & 15130 & 15130 \\
\hline Two Wharf Lots do .......... ................. & June 30,1878 & ...... ...... & ......... ..... & 30000 & 30000 \\
\hline Grist Mill, Dunnville & June 30,1880 & & ........ ..... & 24555 & 24555 \\
\hline Uarding Mill do & do ... & & ........ ..... & 15113 & 15113 \\
\hline Saw Mills do ........................ . ...... & do ... & & ....... ..... & 35060 & 35060 \\
\hline do ' Haldimand ..... .............. ...... ........ & do ... & & ............. & 4,166 95 & 4.16695 \\
\hline Merchants' Mill, Thorold............... .. ............ & do ... & & & 3,120 00 & 3,120 00 \\
\hline Saw Mill, Dunnville.......... ........ ................) & do & & & 63333 & 63333 \\
\hline Plaster Mill do & do & & & 32013 & 32013 \\
\hline Grist Mill, Haldimand & do & & ......... ..... & 40889 & 40889 \\
\hline Ground near G. A. Clark' & do & & .. ...... ..... & 20000 & 20000 \\
\hline Saw Mill, Dunnville....... & do & & .............. & 53156 & 53186 \\
\hline Cotton Factory, Thorold. & do & & & 1,200 00 & 1,200 00 \\
\hline Water-power, Locks 3 to 11 & do & & \(500 \sim 0\) & 25000 & 75000 \\
\hline Saw and Grist Mill, Allanburg & do & & & 2,700 00 & 2,700 00 \\
\hline Paper Factory at Lock No. 17...................... & & & & 30000 & 30000 \\
\hline Machine Shop do 22...... ............... & do & & & 36000 & 36000 \\
\hline do do 23............... ..... & & .... ..... & 11000 & 5500 & 16500 \\
\hline Lot at Aqueduct, Welland ....... ................... & do & & & 1,330 C0 & 1,330 00 \\
\hline Store House, Port Robinson & do & ..... ... & 800 & 400 & 1200 \\
\hline Wharf Lot at Lock No. 3 & do & & 2000 & & 2000 \\
\hline Water to float vessels, Port Robinson............ & do & & 81000 & 77000 & 1,610 00 \\
\hline & do \(\quad \ldots\) & & 32000 & 24000 & \({ }^{5} 56000\) \\
\hline Wharf Lot, Welland & May 11, 1868 & 950 & .............. & 8675 & 9625 \\
\hline Lot near Lock No. 5, St. Catharines................ & Oct 1, 1880 & & 1500 & & 7500 \\
\hline Grist Mill, Port Maitland ... ........ ......... ......... & June 30,1863 & .......... & & 82800 & 82800 \\
\hline Grist Mill, Durnville.... ........ ...................... & Jan. 1, 1862 & & & 1,200 00 & 1,200 00 \\
\hline Wharf Lot at Junction Lock....... ........ ........ & do 1, 1863 & & & 12500 & 125 co \\
\hline Pail Factory, Allanburg & June 30,1872 & & - & 1,166 00 & 1,166 00 \\
\hline Saw Mill, Merrittsville.. & do 30,1875 & & & 4,601 00 & 4,601 00 \\
\hline Wharf Lot, Port Dalhousie & do 30,1880 & & & 35000 & 35000 \\
\hline Wharf Lot, Grand River, Dannville...... ......... & Jan. 1, 1889 & & & 5000 & 5000 \\
\hline Pleasure Grounds, Port Dalhousie .. ..... ........ & June 30, 1880 & & & 10000 & 10000 \\
\hline Part of Lot No. 17 at Lock No. 24. & Oct. 1, 1880 & & 500 & & 500 \\
\hline Water Lot, Thorold, in connection with bia Cement Mill \(\qquad\) & \[
\text { June 30, } 1880
\] & & 8400 & 6000 & 14400 \\
\hline & & 950 & 4,205 26 & 61,296 20 & 65,51096 \\
\hline
\end{tabular}

Dr.
Hydraulic and other Rents, \&c.

C.-Continued.

Lessees' Accounts, 1879-80.-Conlinued.
Cr.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Description of Property. &  &  &  & 気 & Total. \\
\hline & & \$ cts.1 & \$ cts. & \$ cts. & \$ cts. \\
\hline & & & & 12000 & 12000 \\
\hline Lot at Lock, Chisholm's Rapids......... ....... ... & June 30,1880 & & 4000 & ........ .... & 4000 \\
\hline Reserve on Beach........... ..... .............. ........ & Jan. 1, 1881 & & 10000 & ........ ..... & 10000 \\
\hline do ...... ...... ........... ................. & do .. & ..... ...... & 10000 & & 10000 : \\
\hline do ......... ................. ......... & do & & 1000 & & 1000 \\
\hline Roadway from Pier to Côtean Landing ......... & June 30,1880 & & 2500 & & 2500 \\
\hline Office at Rivière du Loup...... .......os...... ،........ & - & .... & ............... & 200 & 200 \\
\hline Small parcel of land near Custom House, Quebec & .... & & & 100 & 100 \\
\hline Permission to erect a pole on Recollect Bridge & .... & & 600 & .............. & 600 \\
\hline do do St. Anne's Lock & - & & 200 & ............. & 200 \\
\hline Wharf Lot............................................. & . \(\cdot\) & ..... ...... & 2000 & ............... & 2000 \\
\hline Reserve on Beach at mouth of Maitland River. & & ........... & 100 & ......... ..... & 100 \\
\hline Three sheds at the Camp and Cottage, New Westminster \(\qquad\)
\(\qquad\) & June 30,1880 & & & 18000 & 18000 \\
\hline Part of A ssay Office, New Westminster........... & do .. & & & 10500 & 10500 \\
\hline do do ........... & do & & & 5400 & 5400 \\
\hline Part of Old Hospital, do .......... & & 7000 & 2000 & ............. & 9000 \\
\hline Old Barracks............. & ..... & & 600 & & \\
\hline & & 7000 & 33000 & 46200 & 86200 \\
\hline
\end{tabular}

Dr.
\begin{tabular}{|c|c|c|c|c|}
\hline  &  & Total. & Name of Work. & Name of Proprietor. \\
\hline \$ cts. & \$ cts. & \$ cts. & & Land Sales.-Principal Account. \\
\hline 2,536 87 & & 2,536 87 & Lachine Canal............ & Estate Philıp Turcotte, now R. A. R. Hubert \\
\hline 43334 & ... ...... & 43331 & Bonner's Rents, Quebec & Timothy Sullivan, now Michael Murphy..... \\
\hline 33334 & .............. & 33334 & do do. & John Bailey, now Alex. Powell ................. \\
\hline 30000 & ............. & 30000 & do do. & Abraham Thompson. ........ ........ ............. \\
\hline 14780 & ..... ........ & 14780 & do do. & John Boomer ...... ................ ....... . .. ..... \\
\hline 24840 & ...... ...... & 24840 & do do & John Garbatz, now J. C. Nolan........ ........ \\
\hline 15480 & ..... ......... & 15480 & ............. ........ ..... & N. H. Bowen........................................ \\
\hline 60000 & .... ......... & 60000 & ........ . ...... ............... & Estate Robert Reed ......................... ...... \\
\hline 33333 & .............. & 33333 & ..... ........ ....... .......... & Jean Chevalier ...... ............... ........ ........ \\
\hline 6300 & & 6300 & ......... ... ...... ............ & 'rhomas Mc.Idam ..... ............. ................ \\
\hline 63333 & ....... ..... & 53333 & ........ ..... & Daniel Hulden ................... ..... ....... ..... \\
\hline \(\left\lvert\, \begin{array}{r}333 \\ 12,092 \\ 13\end{array}\right.\) & ................... & 33333
12,09283 & Hamilton and Port Duver Road............ & \(\left\lvert\, \begin{aligned} & \text { George Creeley ...... ......... ........ ..... ....... } \\ & \text { Choat \& Kern (matured) ..... . ........ ....... ... }\end{aligned}\right.\) \\
\hline & 36000 & 36020 & Briti:h Columbia......... & J. K. Sutcr........... ................ ........ ....... . \\
\hline 18,110 37 & 36000 & 18,470 37 & & \\
\hline 2,039 89 & 15222 & 2,242 11 & Lachine Canal.......... & Estate Philip Turcotte, now R. A. R. Hubert \\
\hline \(5 \% 200\) & 2600 & 55800 & Bunner's Rents, Quebec & Timothy Sullivan, now Michael Murpby .... \\
\hline 16000 & 2000 & 18000 & ......... .... .... ... ......... & John Briley, now llex. Powell ................ \\
\hline 12600 & 1800 & 14400 & ......... . ... ................... & A brabam Thompson ...... ........ ....... ........ \\
\hline 6652 & 887 & 7539 & ... & John Hoomer...... . ..... ......................... \\
\hline 12672 & 1491 & 14163 & & Joho Garbatz, now J. C. Nolan.. .... ......... \\
\hline 11605 & 929 & 12534 & & ( H H. liowen \\
\hline 46800 & 3600 & 50400 & .. & E taie Robert Reed................................. \\
\hline 19000 & & 19000 & ......... ..... ....... ......... & Jern Chevalier . \\
\hline 3591
90 & & 3591 & ...... ..................... .. . & Thomas McAdam .................. ................ \\
\hline 29868 & & ¢93 68 & ...... ........ . ............... & Daniel Holden ..................................... \\
\hline 10000 & & 10000 & ........ .. .... .......... & (riorge Oreeley. .................... .............. \\
\hline 10 C 00
6,29825 & ............. & 1060
6,29825 & & Joseph Brook (tenant) ...................... .. . \\
\hline 6,298 25 & ...... ....... & 6,298 25 & Duver Road..... ...... & Choat \& Kern. \\
\hline 210 & 8138 & 8348 & British Columbia. ........ & J. K. Sutor. ........ ...... ........ .................. \\
\hline 10,710 12 & 36667 & 11,076 79 & & \\
\hline
\end{tabular}

Inlani Revenue Department, Ottawa, 1st September, 1880.

\section*{C.-Concluded.}

Lessees' Accounts, 1879-80 - Concluded.
Cr.


\author{
A. BRUNEL, \\ Commissioner.
}

\section*{IN DEX.}
\begin{tabular}{|c|c|}
\hline Abbey, J. \& J. Le & Lessees ........ -..... ............... ...... .......................... 250, 250 \\
\hline Abboit, Francis Le & Leessee ........................................................................... \\
\hline Adains, G. S. Salder & Salary .......... ..... ..... .................. ..... ..... ............ 200 \\
\hline Adams, P. E. Le & Lessee ......... ........ .... .......... ....... ....... ..... ..... .. .. \({ }^{2 \ddagger 6}\) \\
\hline Adams, W. \({ }_{\text {a }}\) Sa & Salary .... .....7........ ....... ....... ..... . ...... .......... 233 \\
\hline Adulteration of Food, Expen & nditure, Page 19. Detailz of............................ ...... 226 \\
\hline Aikens, W. Re & Refund ........................................................................... \\
\hline Allan, John, & do ................................................. ........................... 23. \\
\hline Allen, W. \(T\) & do ........................................................... \({ }^{34}\) \\
\hline Alexander, T . Sa & Salary ...... ....... . ... ...... ...................... ........ ........ 198, 200 \\
\hline Allison, Clariles & do ........ ....... ........ .... . .......................... ..... \({ }_{30}^{233}\) \\
\hline Ambrose, J. R. Re & Refund ............... ............. ..... ..................... ....... \({ }^{30}\) \\
\hline Amiorson, Alex. Le & Lessee....... ................................................................... ..... \\
\hline Anderson, Geo. & do ........ ....... ...................... ........ ........ ... ........ 246 \\
\hline Anderson, James & do ....................... ......................... ................ 248 \\
\hline Anderson \& Wattie & do ............... ....... ............... ....... ......... ........ \({ }_{2}^{218}\) \\
\hline Andrews \& Son Le & Lessees ........... ............. ......... ... ..... ................ \({ }^{250}\) \\
\hline Anglin, William Le & Lesse9 ........ ........ ......... .................... . ......... ....... 242 \\
\hline Arabill, John Sa & Salary .................. ....... ........ ............................ 211 \\
\hline Archambault, L. & do .......... ...... ....... ................. ...................... 204 \\
\hline Archambault, R . & do . ........ ........................... ................. 225 \\
\hline do Co & Contingencies ..... ........... ....... ........... ..... ............ \({ }^{234}\) \\
\hline Arkell, R. \({ }_{\text {Armstrong, }}\) W. H. . \({ }_{\text {S }}\) & Refund ................................... ............................... 31 \\
\hline Armytage, J. W. G. Re & Refund ......................................................................... \({ }^{\text {a }}\) 30 \\
\hline Arnold, John C & Contingencies .... ............. ........ ........ ..................... 219 \\
\hline Arnold, Thomas & do ..... ......................... ......................... \({ }^{220}\) \\
\hline Atherton, R. Sa & Salary ............................................. ..... ........... \({ }^{236}{ }_{2} 205\) \\
\hline Anbin,
Audet,
A. &  \\
\hline Auger, J. B. \& Co. L & Lessees ........ ......................................................... .... 243 \\
\hline Auger Shipping Co. \(\quad\) e & Refund............. ....... .......... ......... ................... \(3^{31}\) \\
\hline Aglmer Times & Soatingencies ...... ............. ............ ......... ......... \({ }_{2}^{234}\) \\
\hline Baby, Hon. G S & Salary ...... ............. ... ......................... ........... 215 \\
\hline Babs, J. J C. T & Travelling expenses. ..... ................................................................... \({ }^{234}\) \\
\hline Baby, W. A. D. & do .................................................................. ............. 198, 202 \\
\hline Bailes, John L & Lessee ........ .... ........... ..... .............. ..... ......... ... 250, 256 \\
\hline Eailey \& Nill3 \(\quad t\) & tessees........ ........ ....... ....... ....... ......... ............. 216 \\
\hline Ball, John K & Kefund ................. . ....... ........... ............. . ........ 1 \\
\hline band \& Mcarthur L & Lessees...... ............ ................ ..... ..... ... .. .... ..... 250 \\
\hline Barber, J. S. Sa & Salary ........... .... ..... ................ . ....................... 202 \\
\hline Earker, C . & do ............ ........ ......... .... ............ ............... 204 \\
\hline Barrett, J. & do ..... ................. .................... ....... .. .... 213 \\
\hline Barrett, J K. & Cullers fees ............ ...... .................. ...... .......... \({ }_{211}^{212}\) \\
\hline Barsalo, Edward, \({ }_{\text {Bartler, }}\) Peck \& NcDougall &  \\
\hline Battle, James &  \\
\hline Buttle, John & Lessee... .............. .................. ..... ............ .... 250, 250, 352 \\
\hline Buttle, M. Ė & Salary ..... ........ ............ ........ ....... ........ ............ \({ }^{200}\) \\
\hline - do & Seizures . ..... ........ ........ . ....... ........ .... ..... .... ...... 223 \\
\hline Battle, T. T S & Sulary ...... ........ ..... ....... .. ..... ....... ...... ............. 212 \\
\hline Baxter, R. W. L & Lessee ........ ....... ... ............ ....... .............. ....... 244 \\
\hline Baxier, W. L. & Retiund ...... ............ . ....... ...... .... ........ ......... \({ }^{238}\) \\
\hline Beasley, R. Sil & Salury .... .............. ... ... .... ..... .................... 203, 203 \\
\hline Reattie, T 'humas & do ........ ....... ..... .... ... ......... ........... . ....... 230 \\
\hline Beal1y, Stephen L & Lessee ...... ...... ..................... .......... ............... \({ }^{251}\) \\
\hline Reancharup, J P. & Sulary ............. . ....... ....... ....... .. ........ ........ ...... 204 \\
\hline Benularnois Steam Navigat & ation CO.-Leasees .... .... .... ... .... ........ ........... ... 2,8 \\
\hline Peaupré, Nuel bér & Cullers' fues ............. ........ .................... ...... ..... \({ }_{217}^{7}\) \\
\hline & Cullers unnuity ............ . ....... ........................ . ........ \({ }^{2}\) 21 \\
\hline
\end{tabular}
\(4-17\)

I N D E X - Continued.


\section*{I N D E X - Continued.}


I N D E X - Continued.


I N D E X - Continued.


\section*{I N D E X - Continued.}


\section*{I N D E X - Continued.}
pagk

Expenditure-Minor Public Works, Page 19. Details of

Expenditure-Minor Public Works, Page 19. Details of ..... 226 ..... 226
तo Slides and Booms..... do 13 do ..... 214
d \(\quad\) Votes for. ..... 51
do Weights and Measures, Page 43. Details of ..... 218
Express Company Contingencies ..... 215
Fahey, Edward Salary ..... 193
Falconer, James do ..... 199, 199
Fanning, John Lessee ..... 252
Farley, Jas. F. Salary ..... 212
Farmer, John Commission ..... 209
Fielding \& Co. Contingencies ..... 220
Feore, J. H. Culiers' Annuity ..... 221
Ferguson, A. Refund ..... 239
Ferguson, D. H. do ..... 32
Ferguson, John Salary ..... 201
Ferland, Pierre Uuller's Fees. ..... 217
Ferries Revenue ..... 15
Fischel, Gustave Refund ..... 3.
Fisher, F do ..... 30
Fletcher, C. H. do ..... 31
Fletcher, Geo. do ..... 3:
Foley, James Salary ..... 219
Food, Adulteration of-Expenditure, Page 19. Details of ..... 226
Foote, John Contingencies ..... 215, 220
Ford, John Salary. ..... 201
Forman, T. C. Refund ..... \(2 \varepsilon 8\)
Fortier, C. G. ..... 199, 203
Fortier, J. E.
Salary
Salary ..... \(2: 3\) ..... \(2: 3\)
Fortier, J. M. ..... 32
kefund
Fortier, T . ..... 265
Salary
Fournier, C ..... 33
Refund
Fournier, J. A. ..... 212
Salary
Fowler, Geo. ..... 
225 ..... 
225
Contingencies ..... 235
Fowler, G. D. do ..... 234
Fowler, John Salary ..... 2.5
Fox, J. J.
Contingencies ..... 23t, 234
Fox, Thos. do ..... 206 ..... 204
Foy, J. J. Contingencies
Fraser, Alex. Salary ..... 219
Fraser, R. G. Food Analyst ..... 226
Frederick, Antoine Cullers' fees. ..... 217
Frederick, Joseph do ..... 217
Frederick, T. Contingencies ..... 218
Frederickson, J. Salary ..... 206
Freeze, E. O. do ..... 233
Frenatte, Joseph Cullers' fees ..... 217
Frothingham \& Workman Lessees ..... 248
Frothingbam, Estate J. do ..... 244
Fullerton, A. Commission ..... 210
Fulton, J. Refund ..... \(3 t\)
Galbraith, T. J. Salary ..... 211
Garbatz, John ..... 256, 256
Ganong, J. E. ..... 20 万
Gas Inspection-Expenditure, Page 48. Details of ..... 236
do do do Vote fur ..... 5) ..... 5)
do Revenue ..... 37
do do Monthly Deposits ..... 2.
Stamps, Distributors' A ccount
Stamps, Distributors' A ccount ..... 41
do A. Gault, A. F Lessee ..... 246 ..... 246
Gaurreau, Olivier
Gaurreau, Olivier Cullers' fees Cullers' fees ..... 217 ..... 217
Gerald, Chas Salar ..... 201
Gerald, W.
Gerald, W. ..... 201 ..... 201
Gerald, W. J. do ..... 201, 202
Gibbons, Michael 
Cullers fees 
Cullers fees .....  ..... 217 .....  ..... 217
Cullers' annuity ..... 221 ..... 221
Giblin, John Contingencies ..... 219

\section*{I N D E X - Continued.}
Gibson, Wm. Lessee ........... ........... ... .............. ......... ..................... 246 ..... PAGEGiffen, Wm.Gilbert \& BurkeGilchen, Thos.Gildert, M.Gill, W.Gillespie, J. C. \& J.Gillespie \& McLeanGillespie \& SimpsonGingras, J. G.Girard, J.Girdlestone, R. J.Girouard, A.Gudson, H.do
Goellert \& DormanGood, H. B.dododo
Gooderham \& Worts
Salary
230
230
Refund
31
31
Cullers' fees
217
217
Seizures
Seizures ..... 224 ..... 224
Salary.
Salary. ..... 200, 203 ..... 200, 203
Less"es ..... 252
do ..... 250
do
250
250
Contingencies ..... 220
Salary
203
203
do ..... 103
do
232
232
do ..... 208
Cortingencies
231, 237
231, 237
Kefund ..... 32
Salary ..... 297
liefund ..... \& 39
Seizure
Seizure ..... 24
Contiagencies
234
234
liefund ..... 30, 32
Goron, D.
Goron, D.
Gordon \& McKay Salary ..... 204
Gordon, Woodworth \& Co.Refund ..... 250 ..... 250 ..... 33
Gooles, E. do
Gorman, M. ..... \(3 t\)
Salary
Salary
Gorrie, W. M. ..... 230
do
Gosnell, T. S. ..... 203
Gouin, W. F.Gould, Estate IraGould, Ira \& SonGould, J. H.Gow, JamesGowen, 0 .
Gowen, EdmondGraham, JohnGraham, W. J.Grant, H. H.Grant \& Leith
Grant, PeterGrant, R.
Grant, T.Graveley, \(W\).Grees, S .
Gréguire, JosephGrier, J. \& B.Griftin, J. J., \& SonsGriffin, J. T.Griffith, \(J\).do
Grogan, T. P.
Grothé, L. 0.Haddow, R. B.Hagarty, P .Hall, C. R.Hall, F. W.Hall, J. J.
Hamel, A. F.doHamel, JosephHamel, MichelHamilton, J.
Hamilton, S .
Hamilton, W. Ldo
Haney, S. \& J.Hanfurd, Thos.do
do
do
do ..... 190, 203
Lessees ..... 208 ..... 208
do ..... 248
Refund ..... 238
Salary
203
203
Refund ..... 30, 31
Salary
219
219
Lessee ..... 214
Salary ..... 193
do
202
202
Lessees ..... 248
Refund
29
29
Commission
210
210
Contingencies
215
215
Sulary ..... 194
do ..... 148
Refund ..... 231
Refund............
Contingencies ..... 3i ..... 3i
Salary ..... 203, 237
do ..... 205
Sezures ..... 205
Salary ..... 219
Refund ..... 3:
Commission
209
209
Salar ..... 206
do ..... 225
Fefund ..... 233
Salary
201
201
Cullers' Fees
218
218
do Anncity ..... 221
do Fees
218
218
do Annuity ..... 221
Refund.
31
31
do ..... 33
Salary
193
193
Contingencies
234
234
Lessees
253, 252
253, 252
Salary ..... \(2 r 8\)
Contingencies ..... 23 k

\section*{I N D E X - Continued.}

Jagoe, J. F'.
James, Henry Salar
Lesse PAGE ..... 199Jeannetot, C.Jeannetot, T.Jennest, P.Jesmer, JohnJobin, JacquesJobin, JacquesJodoin, A. P.Johnson, C.Johnson, \(\dot{W}\).doJohnstone, W. J.
doJones, C. A.Kane, Ann, Estate ofKeilty, ThomasKeilty, ThomasKeith, D. G.Keith, A., \& SonKellock, D.Kelly, EdwardKelly, MichaelKennedy, J. D.Kennedy, J. H.Kenaedy, PhilipKenning, J. H.Keogh, P . Mr.
Kerr, D., \& Co.Kerr, ©. G.Kerrins, MichaelKilroe, MichaelKing, 'T. D.King, T. D.
King \& DolanKing, R. M.doKingşton, ThomasKinnear, JamesKinnear, JamesKinnee, Daniel
Kirbs, T. H
Knson, R.Knowlson, J. B.
Kranz, HugoB.Kranz, Hug
Lessee
Ressee ..... 34
do ..... 33
Cullers' annuity ..... 221
Refund ..... \(3: 3\)
Cullers' annuity. ..... 221
Salary ..... 212
Lessee ..... 252
Salary ..... 230
Contingencies ..... 237
Salary ..... 225
Contingencies. ..... 234
Salary ..... 201
Contingencies ..... 220
Salary ..... 201
Refund. ..... 32, 32
do ..... 30
Salary ..... 201
Cullers' fees ..... 217
217
Salary ..... 193
207
Lessee ..... 24:
Salary ..... 199
do ..... 200, 201
Contingencies ..... 226
Refund ..... 239
Lessee ..... 250
do ..... \(24 t\)
Salary. ..... 231
Lessees ..... 251
Salary ..... \(2: 33\)
Contingencies ..... 234
Lessee ..... 24.4
Salary ..... 203
do ..... 231
Contingencies ..... 214
Salary ..... 232
do ..... 237
do ..... 201
31La Cie d'Imprimerie Canadienne, Contingencies. ..... 231
Laflamme, Joseph
Laflamme, Joseph Cullers' fees. Cullers' fees.
Laird, W. H. Refund. ..... 218
Lake St. Francis Navigation Co. Lessees. ..... 248, 250
Laliberté, D. Contingencies ..... 220
Lamb, T. Refund. ..... 238
Lambert, Patrick Salary ..... 219
Lambert, Stephen
Lambert, Stephen Cullers' annuity Cullers' annuity ..... 221 ..... 221
Lamontagne, \(F\). Refund ..... 238
Lamothe, H. G.
Salary
Salary ..... 225 ..... 225
Refund ..... 238Lang, V.
Langlois, C. F.Langlois, ElizabethLanier, J. M.Lapierre, E. A.
Salary ..... 198
Contingencies. ..... 214
Refund ..... 219 ..... 238
Larkin, P.
do ..... 238
Laroche, M.
do
do
Contingencies ..... 215
Laroche, W. H. do ..... 220Larocque, H .
Larose, Joseph
Lessee ..... 248
Larose, S. C. Cullers' fees. ..... 217
LaRue, F. A. H. Salary ..........
Food Analyst. ..... 214 ..... 214 ..... 226
LaRue, Geo.
do
Salary
Salary
Contingencies. ..... 205 ..... 205 ..... 227

\section*{I N D E X - Contiuued.}


\section*{I N D E X - Continued.}
Malone, James C. Cullers' Fees ..... AGA
Malone, Jeffrey do ..... 18 ..... 18
Malone, Thos. do ..... 218
Malt-License Fees ..... 22
do Licenses issued, Grain used, Quantity produced ..... 60
do do do Comparative for 1878-79 and 1879-'80. ..... 62
do Quantity taken for Consumption ..... 22
do Refunds ..... ©0 ..... ©0
do Revenue ..... 4
do do Comparative Statement showing monthly increase or decrease for 1878-' 79 and 1879-'80 ..... 28
do Warehouse transactions ..... 64
do do do Comparative for 1878-'79 and 1879-'80 ..... 66
Mailhot, N . Refund ..... 33
Malt Liquor-License Fees ..... 22
do Licenses issued, Material used, Quantity produced ..... 68
do do do do Comparative for 1878-'79 and 1879-'80 ... ................................................................. ..... 69
do Quantity taken for Consumption ..... 22
do Revenue ..... 4
do do Comparative Statement showirg monthly increase or decrease for 1878-' 79 and 1879-'80
28
28
Manning, J. Salary ..... 204
Manufactures in Bord-License Fees ..... 22
do do Licenses issued, Materials used, Quautity produced
do do Licenses issued, Materials used, Quautity produced ..... 82 ..... 82
do do \(\quad \begin{gathered}\text { tive for 1878-'79 and 1879.'80 } \\ \text { Quantity taken for Consumption }\end{gathered}\) ..... 84 ..... 84
do do Kevenue ..... 22 ..... 22
do do do Comparative Statement showing monthly increase
or decrease for 1878-' 79 and 1879-'80
or decrease for 1878-' 79 and 1879-'80 ..... 28 ..... 28
do do Warehouse transactions ..... 86
do do
Marçon, (Moreau) 0. Contingencies ..... 83 ..... 83
Marcotte, Siméon ..... 221
Marentette, A. Salary ..... 220
Marks, James J.essee ..... 24Marshall, F.Marter, W. P.Martin, H.Mason, F .Mason, James
Maurice, J. A.May, George
May, ThomasMeasam, F.
Meloche, J.
Sulary ..... 201
do ..... 201
Refund ..... 34
Salary ..... 198, 204
do ..... 206
Lessee ..... 250, 250
do ..... 244
do ..... 242
Salary ..... 225
Meloche, R. A.
Lessee ..... 248
Salary ..... 203
Mćnard, 0.
Mercier, J, B.
Refund
Refund ..... 33 ..... 33
do ..... 238
Mercier, Z .
Merrill, S. B. Salary. ..... 201du
Merryfield, Stafford Seizures
Lessee ..... 242223
Metcalf, W. F.
Miall, E., jun.
Salary
Salary ..... 200, 203 ..... 200, 203
Travelling Expenses ..... 208, 234
Miles, Williams \& Co. Refund ..... 30
Miller, A. Salary Salary ..... 237
Contingencies ..... 234
Miller, AlfredCullers \({ }^{5}\) Fees
217
Miller, George do ..... 217
Miller, JohnCullers' Annuity221
Miller, Pierre
Niller, W.F.
Salary ..... 215 ..... 203
Miller \& Son Contingencies ..... 215,215
Millier, E. 1 Salary
Milliken, E. do ..... 204
202

\section*{I N D E X - Continued.}


I N D E X - Continued.


I N D E X - Continued.
Oldfield, John, \& Co. Lessers
Page
Olivier, J. L. Salary ..... 200
O Neil, J. Salary ..... 211
Ormiston, John Commission ..... 09
Osler, G wynn
Ottawa Canals, See Tabu!ar Index, Page VI
Ottawa City Corporation. Contingencies ..... 214
Uttawa Merald ..... 226
Ottawa River Navigation Co. do ..... \(2: 5\)
Owen, C. Comm ..... 210
Paget, Thos. do ..... 242
246
Park, R. A. Salary ..... 230
Park, W. W. Refund. ..... 32
Parker, F. J. Seizur ..... 223
Patterson, Mrs. Hannah Contingencies ..... 244
Patterson, W. J. Sontin ..... 226
Peck, Benny \& Co. Lessee ..... 201
Peel, A. Lessee ..... 254
Pennoyer, H. J.
do ..... 232
Perkins, L. A. ..... 205
Perley, Pattec \& Brown Lessees ..... 242
Lessee ..... 254
Perry, \(G\). L. Salary ..... 204
Seizures ..... 223
Peterson, H. W. Law costs ..... 204
Petit, J. B. ..... 232
Petrie, Mrs.
Petroleum-Inspection Fees. ..... 242
do \(\quad\) Number of Pa
do do Comparative Statement of Inspection Fees for 1878-'79 and 1879-'80. ..... 80
do Revenue ..... 81
do do Comparative Monthly Statement showing increase or decrease for 1878-' 79 and 1879-'80 ..... 28
Phelan, J. A. Salary ..... 211
Phelps, Bros. Lefund ..... 2E0
Piche, E. \({ }_{\text {Pierce, J. C., \& Sons }}\) ..... 250
Pillow, Hersey, \& Co. ..... 248, \(2+8\)
Pinard, J. A. ..... 200
Pinette, John ..... 211
Piper, Harry ..... 231
Poliquin, F . ..... 219
Pominville, L ..... 211
Pooley, H., \& Son ..... 234
Post Office 214, ..... 221
Potter, C. ..... 199
Powell, Wm. ..... 223
Powell \& Dawson ..... 234
Powell, Richard ..... 218
Power, Thomas ..... 199
Preventive Service-Expenditure ..... 6
Pridham, A. ..... 213
Pritchard \& Mingard Contingencies ..... 237
Pruneau, Hector Refund ..... 242
Pryor, Jas. dofun ..... 239
Quackenbush, A Lessee ..... 33
252 ..... 2
Quain, R . do ..... 226

\section*{I N D E X - Continued.}


\section*{I N D E X - Continued.}
\begin{tabular}{|c|c|c|}
\hline Ross, J. H. & Lessee ... & PAGE \\
\hline Ross, S. F. & Salary ........ ................................... ....... ............ .......... & 199 \\
\hline Ross, W. 0. & do ...... ........ .n ..... ...... ........ .......... ......................... & 202 \\
\hline Ross, Stuart \& Stuart & Law costs...... ...... ........ ..... ....... .......... .......................... & 222 \\
\hline Ross, W. T. & Commission ........ ......... .............. ................................... & 209 \\
\hline Rouillard, Eug. & Contingencies ..... ...... ... .. ........... ................................ ... & 220 \\
\hline Rouleau, J. & Salary ...... ................... ........ ........ .................... ......... & 205 \\
\hline do & Seizures .............. ........ ..... ...... ........ ..... ..................... & 223 \\
\hline Rourk, John & Lessee...... ........... ........ ......................................... .............. & 242 \\
\hline Rowan, A. & Salary ............................................................ .................. & 237 \\
\hline Rowe, M. & Commission... ........ ........ ..... ............. ...... ..... ...... & 210 \\
\hline Rowland, E. & Salary.................... ........ ......... ..... ................. ......... & 200 \\
\hline Rowland, F. & do ....... ...... .. ........ ..... ........ ........ ..... :........ ...... & 199 \\
\hline Rowland, Wm. & Lessee...... ........ ......... ........ ........ . ..... ..... . ........ ...... & \(2 \stackrel{4}{4}\) \\
\hline Roy, A. & Salary ....... ........ ........ ... ........ ........ ........ ......... & 204, 205 \\
\hline Roy, J. A. & Refund ...... ..... ......... ......... ........ ........ ..... ...... ...... ..... & , 31 \\
\hline Roy, L. N. F. & do ...... ......... ........ ....... ..... ...... ......... ....... ... & 238 \\
\hline Russell, A. J. & Contingencies........................ ..... .............. ............... & 214, 215 \\
\hline do J inn & Salary ........ ............ .................. ......................... ......... & 214 \\
\hline Russell, A. J., jun. & do ...... .... ...... ..... ...... ................... ........ ...... .. .. & 214 \\
\hline Rymal, Jacob & Refund ........... ........ ........ ...... ..... .......... ........... ..... & 238 \\
\hline Sanford, S. M. & Salary .............. ........ ......... . ......... ....... ....r ......... & 202 \\
\hline Sansom, C. B. & do ........ ........ ................. ... .... .......... ............... & 225 \\
\hline Scholfield, J. S. & do ....... .............. ........ ......... ... ........ .............. & 211 \\
\hline Scholfield, W. & Lessee & 252 \\
\hline Schram, B. & Salary ........ ...... ..... ........ ... ...... ........ ....... ........... & 199, 202 \\
\hline \({ }^{\text {do }}\) & Seizures ..... ........ ........ ..... ...... ........ ...................... & 223 \\
\hline Schwartz, Jno. & Refund ....... ......... ...... ................... ...... . ........... . ... & 32 \\
\hline Scott, J. P. & do & 30, 31 \\
\hline Scotte, P. & do ................... ......... ..... ...... ................... ........ & 34 \\
\hline Scovil, W. B. & Salary ....... ...... ........ ............ ...... ................. ........ & 232 \\
\hline Seizures (Excise)-Dis & ution of ................ ........ ........ ........ ........ ........ ........ & 223 \\
\hline do \(\operatorname{Re}\) & .. .. ............ .......... ....... ....... .......................... & 4 \\
\hline & Comparative Monthly Statement, showing increase or rease for 1878-79, and 1879-80 & 28 \\
\hline Serviss, W. & Refund ................. .............. ................................................. & 33 \\
\hline Severn, J. & do ... ..... ..... ....... . ......... ...... ..... .............. ..... ...... & 30 \\
\hline Sovern, W. & do ........ ......... ................ ...... ........ ........... . ...... & 31 \\
\hline Seymour, James & Salary ....... ................ ...... ................... ....................... & 202 \\
\hline Shannon, S L. & Contingencies ...... ............................ ..................... & 209 \\
\hline Sharpe, James & Refund .... ...................... ........ ........ ...................... & 238 \\
\hline Shaw, James & Lessee...... ......... ........ ............ . ...... .................... ..... & 24: \\
\hline Shaw, J. F. & Salary ...... ........ ....................... .. ................ ........... & 225 \\
\hline Shaw \& Co. & Contingencies..... ......... ...... .................. ..... .......... .... & 220 \\
\hline Shepherd, Geo. & Lessee ........ .............. ........ .................. ........ ........... & 244 \\
\hline Sheppard, H. & Refund ............. ...... ...................... .............. ............ & 238 \\
\hline Shore, Thos., \& Co. & Contingencies ..... .............................. ..................... & 234 \\
\hline Sills, G. W. B. & Refund ..... ..... ............. ...... ............. .......... ........... & 238 \\
\hline Silverwood, W. A. & do ..... ........................................... ..... .. .......... & 238 \\
\hline Simard, H. & Salary ..... ....... . ............. ................ ....................... & 232 \\
\hline Simpson, T. W. & Refund ........ ......... ....... ............................................ & 31 \\
\hline Skead, Hon. Jas. & Lessee .... ..... ........ ........ ...... ........ ...... . ................. & 242, 242 \\
\hline Slater, James & Salary ...... ........ ................... .............. ................... & 214 \\
\hline Slides and do Booms-Ex & diture, Page 13. Details of................. ...................... & 214 \\
\hline do & o Vote for... ..... .......... ................. ...... ............. & 50 \\
\hline do Ref & ds ....... ...... ........ ...... ................... ...... ................. ...... & 34 \\
\hline do Re & ue ....... ....... ........ .................. ........ ........ ...... ........ & 12 \\
\hline do & Monthly Deposits ..... .............. ...................... ........ & 24 \\
\hline do & Showing on what rivers accrued ................ ........... & 189 \\
\hline & r passed through.. .............. ......... ............................... & 190 \\
\hline Slipp, W. O. & Refund ...... ......... ...... ......... ...... ...a .... ............... ..... ...... & 239 \\
\hline Smith, E. T. & Salary ...... ........ ......... ......... ..... . ..... .................... ..... & 214 \\
\hline Smith, James & Contingencies ............ ................. ....................................... & 214 \\
\hline Smith, H. D. & Balary ..... ..... ........... .................... ....................................... & 202 \\
\hline Smith, M. A. & Lessee .................................................................... .......... ....... & 252 \\
\hline Smith, Peter & Salary ...................................... ...... ...... ............... ......... & 232 \\
\hline Smith, T. & Refund ...................... ....................................................... & 238 \\
\hline Smith's Falls Ourling & b, Lessees.. ............... ....... ............................................... & 246 \\
\hline \multicolumn{3}{|c|}{4} \\
\hline
\end{tabular}

\section*{I N DEX—Continued.}
Snell, T. Snell, T.
Refund
Snuff-Taken for Consumption.. ..... 31
Snuff-Taken for Consumption ..... 22
Spearman, Salary ..... 200, 203
Spence, J. ..... 200
Spirits-License Fees
Seizures ..... 223
 ..... 22 ..... 22
do do do do do Comparative for 1878- 79 and 1879-80
54
54
do Quantity taken for Consumption. ..... 22
do Refunds ..... 30
do Revenue ..... 4
do Comparatite Statement, showing monthly increase or decrease for 1878- 79 and 187980 ..... 28
do Warehouse Traneactions ..... 56
do do Comparative, for 1878-79 and 1879-80 ..... 58
Steen, J. Salary ..... 214 Lessee
Stephen, Geo.
Stephen, Geo. ..... 246, 246 ..... 246, 246
Stevens, C. B. Kefund ..... 238
Stewart, James do ..... 238
Stewart, McL. Salary ..... 215
Stewart, N. do ..... 225
Stirling, Geo. Refund ..... 30
Strang, Robt. ..... 242
RefundLessee.
Stratton, W. C. ..... 31
Balary ..... 202
Striker, E. H. do ..... 202
Strong, C. W.
Stuart, A.
Commission ..... 210 ..... 199
Salary
Salary
Stuart \& Keast
Stuart \& Keast
Sullivan, D.
Refund ..... 31
do ..... 30
Sullivan, Timothy ..... 256, 256
Sutherland, Geo. Salary
Sutor, J. K. ..... 256, 256
Lessee.
St Amour \& Co.
St. Andrews Church Temporal Committee. Lessees ..... 244
St. Uatharines Water Power Co., Lessees. ..... 252
St. Catharines and Welland Canal Gas-Light Co., Lessees. ..... 252
St. Denis, S. Refund ..... 33
St. John's Stone Chinaware Co. Lessees ..... 250
St. Lawrence Canals. See Tabular Index, Page VI.
St. Lawrence \& Chicago Forwarding Co., Refund. ..... 33, 33
St. Lawrence \& Ottawa Railway. Lessees ..... 42
do do do Contingencies ..... 208, 234
St. Lawrence Sugar Refining Co. Lessees ..... 250
St. Louis, A. D. Salary ..... 2114
St. Louis, J. do ..... 211
Ste. Marie, J. B. F. do ..... 204
Ste. Marie, L. O. A. ..... 204
St. Peter's Oanal. See Tabular Index, Page VI
Swain, \(\mathbf{H}\) Refund ..... 32
Tabb, H. N. Salary ..... 231
Tait, Mrs. Lessee ..... 246
Tansey, J. P. Salary ..... 204 ..... 204
Tariff-Canals ..... 185
Taylor, Charles Seizures ..... 224
Taylor, James Refund ..... 30
Taylor, John Lessee ..... 252
Taylor, J. F. Salary ..... 200
Taylor, R.
Refund ..... 31, 31
Teakles, B. H. Salary ..... 225
Telegraph Co. 
Oontingencies 
Oontingencies .....  ..... 214 .....  ..... 214
Refand ..... 34
Terrien, \(L\).
Tett, Benjamin Lessee ..... 242
Têtu, E .
Commission ..... 209
Thindall, J. F. Refund ..... 31
Thompson, Abraham Lessee ..... 258, 256
Thompson, Estate D. ..... 252

\section*{I N D E X - Continued.}


\section*{I N D E X - Continued.}
\begin{tabular}{|c|c|c|}
\hline & & PAGE \\
\hline Weatherby, W. L. & Law costs...... ..... ......... .................... ............ ........... & 209 \\
\hline Webster, W. J. & Lessee ...... ........ ........... ...... ......... ...... ... ..... ...... ........ & 244 \\
\hline Weeks, O. S. & Law costs........ ...... .................. .... ........ ..... ..... ...... & 209 \\
\hline Weights and Measures-E & Expenditure, Page 43. Details of .................. ........ ........ & 228 \\
\hline do D & Deputy Inspectors' accounts ........ .................. ................ & 40 \\
\hline do In & Inspectors' accounts ..... ........ ..... ........ ........ ........ . ..... & 38 \\
\hline & Refund to ex-Deputy Inspectors of deduction for saperannuation & 50 \\
\hline do \(\quad\) R & Revenue ........ ....... ................................................................... & 37 \\
\hline do & do Monthly Deposits......... ................ ........ ......... & 24 \\
\hline dọ \(\quad\) V & Vote for .............. ........ ......... ......... . .... ......... .............. & 50 \\
\hline Welland Canal-See Tabu & bular Index, Page VI. & \\
\hline Welland Dry Dock Co. & Lessees......... ......... .................. ........ ......... ......... ...... & 252 \\
\hline Welland Railway Oo. & do & 252 \\
\hline Wells, G. W. & Seizures .. . . ... ........ ........ ...... ................................ & 224 \\
\hline Weyms, C . & Salary ...... ........ . ...... ....... ......... ........ ........... ........ & 202 \\
\hline Whelan, W. F. & do ..... .................... ........ ........ ...... .................. & 219 \\
\hline White, A. C. & Lessee ......... ...... . ......... . ........ ..... ........... ......... ........ & 244 \\
\hline White, F. F. & Refund ........ ........ ......... ......... ........ . ........ .............. & 30 \\
\hline White, George & do ........ ........ .......... ...... ........................... ...... & 30 \\
\hline Whittemarsh, E. H. & Lessee ....... ........ ..... ................. . ............... .......... & 244 \\
\hline Whitteker, William & Salary ............ ......... ........................... ........ ......... & 230 \\
\hline Whitton: A. J. & do ...... ...... ........ ......................... ........ ........ & 231 \\
\hline Whyte, J. G. & Lessee .... ........ ........ ......... ................. .......... ...... & 244 \\
\hline Wilkin :on, J. A. & Salary ...... .............. ........ ............... .............. ..... & 230 \\
\hline do & Contingencies ......... ........ ........ ......... . .... ............ ...... & 237 \\
\hline Willcos, James & Lessee ...................... . .. . .. ...... .. . ...... ......... ........... & 250 \\
\hline Willet, M. \({ }_{\text {W }}\) & do ........ . ..... ......... ............................ ...... ........ & 250 \\
\hline Williams, Daniel & do ........ ........ ......... ........ ........... ...... ................ & 250 \\
\hline Willongbby, J. H. & Refund ......... ......... ........ ........ ............. ......... ........... & 238 \\
\hline Wilmot, John S. & Salary ......... ..... ........ ......... ......... ...... . .... ................ & 233 \\
\hline Wilson, Charles E. & Leяsее... .... ............... . ...... ............. ........ ..... ........ & 248 \\
\hline Wilson, G. & Salary .......... .... ........... . ...... ........ . ... ... ........ ......... & 211 \\
\hline Wilson, Joseph & Commission ........s ...... .... .... ......... ........ ............... ...... & 209 \\
\hline Wilson, R. & Salary ....... ........ ......... . ........ .................. ........ ..... & 202 \\
\hline Wilson, Paterson \& Co. & Kefund ......... ......... ........ ......... ......... ..... ........... ........ & 33 \\
\hline Wilton, H. B. & Salary ................. ................. . ........ ...... ......... ........ & 213 \\
\hline Winchester, -L. D. & Refund ........ ....... ........ ................... ...... ................. & 238 \\
\hline Wingfield, J. M. & do ........ ..... ...... ....... ........ .................. .... ........ & 238 \\
\hline Wood, J. \& O. H. & Lessees ........ ...... ............................. ............. ........ & 46, 216 \\
\hline Woodward, Estate & do ........ ........ ........ ........ ......... ....................... & 250 \\
\hline Weodward, G. W. & Salary ........ ........ ........ ........ ........ ......... ................. & 199 \\
\hline Workman, A. & Contingencies...... ......... ........ ....... ..... ........ ................. & 215 \\
\hline Wright, Alex, \& Oo. & do .............. ......... ................. .................. & 237 \\
\hline Wright, A. P. & do ........ ....... ...... ....... ........ ........ ........... & 34, 237 \\
\hline do 1 & \ Salary...... ........ ........ ........ . ........ ..... .............. ........ & 237 \\
\hline do B & Travelling expenses .............. ............... ....... ..... ...... & 234 \\
\hline Wright, G. B. & Lessee ......... ......... ..... ......... ......... .... .... .......... ............ & 254 \\
\hline Wright, Joshua & Salary ........ ......... .............. ............. .............................. & 231 \\
\hline Yates, J. M. & do ........ ........ ........ ......... ......... ....... .................... & 203 \\
\hline Yong, Alexander & do .............................................. ....... .......................... & 230 \\
\hline Young, Levi & Lessee ......... ................ ......... ............... ..................... & 42, 242 \\
\hline
\end{tabular}

\section*{SUPPLEMENT No. 1.}

\section*{TO T章}

\section*{INLAND REVENUE REPORT}

FOR THE YEAR ENDED 30th JUNE, 1880.

\section*{CANAL STATISTICS}

FOR THE SEASON OF NAVIGATION, 1880.


OTTAWA:
Printed by maclean, ROGER \& Co., WELLington street, 1881.

\section*{CONTENTS.}

\author{
Report of the Comınissioner of Inland Revenue for the Soason of Navigation ended 31st December, 1880.
}
Statistics of Canal Traffic ..... 1 to 40
No. or
Btatiminet.Pagn
21 Welland Canal, Details of Traffic arranged Alphabetically ..... 2
22 St. Lawrence Canals do ..... do ..... 6
23 Burlington Bay Canal do do ..... 10
24 Ottawa Canals ..... do
do ..... 14
25 Chambly Canal ..... do
do ..... 18
26 Rideau Canal do do ..... 22
27 St. Peter's Canal do do ..... 26
28 Newcastle District Canals do do ..... 27
29 Statement of Traffic on the above-mentioned Canals arranged according to Classes ..... 28
31 Statement of the amount of Tolls accrued each month on all the Canals ..... 34
32 Statement of the Number, Tonnage and Nationality of Vessels passed through allothe Canals. ..... 36
\(32 \frac{1}{2}\) Comparative Statement of Grand Total Freight passed through all the Canals, , for the Season of Navigation 1879, 1880 ..... 40

\section*{SUPPLEMENT No. i.}

TO TH:
REPORT

OF 7 HR

\section*{COMMISSIONER OF INLAND REVENUE}

\section*{To the Honorable}

The Minister of Inland Revenue.
Sir, - I have now the honor to submit my Report on the Canal Statistics for the season of navigation of 1880 :-
1. The statistics of the season of 1879 are printed with the lnarease of Annual Report of the Department; and comparing them with those Revenje for now submitted, it will be seen that the aggregate revenue has increased in 1880 by \(\$ 17,517.30\). This increase is accounted for as follows:-
\begin{tabular}{|c|c|c|c|}
\hline & & Increase. \(\$\) cts. & Decrease. \$ cts. \\
\hline On the & Welland :Canal............ & & 16,252 47 \\
\hline do & St. Lawrence Canals.... & 16,713.75 & \\
\hline do & Burlington Bay Canal... & 17681 & .... \\
\hline do & Chambly Canal............ & 2,158 24 & ............... \\
\hline do & Rideau Canal............... & 36071 & .............. \\
\hline do & Ottawa Canals............. & 14,243 10 & - \\
\hline do & St. Peter's Canal.......... & 18509 & ............... \\
\hline do & Newcastle Dist. Canals. & ............... & 6793 \\
\hline & & \$33,837 70 & \$16,320 40 \\
\hline
\end{tabular}

Showing an increase of...... \$17,517 30
Or about 5•49 per cent.

Comparison
with New 2. In continuation of the statistical comparisons which were York Canals. given last year of the quantities of the principal articles carried through the Welland Canal, with the quantities of similar articles carried over the routes in the United States in competition with that work, similar statements will be found printed herewith.

Vegetable
food.
3. The increase or decrease in the tonnage of flour, wheat, barley, corn, oats, rye and other vegetable food moved through the Welland Canal, and through the Erie Canal, as compared with the movement of 1869 -the year before the reduction of tolls on the Erie Canal took place-may be summarized as follows:-

4. The movement of Heavy Goods, including iron, salt, coal and Heary goods. won ore, shows the following result :-


Fegetable
Food cleared downwards.
5. Making a similar comparison of the tonnage of similar articles of Vegetable Food cleared downwards at Buffalo and Tonawanda, with the quantities cleared eastward at Port Colborne, we have the following result:-


The quantities of Vegetable Food passed through the Welland Goods in Canal in transit between ports in the United States has largely tween ports decreased, as will be seen by the following statement, and the in the States. decrease in 1880 is greater as compared with 1869, than in any preceding year, as it also is in the quantities of heavy goods.



The total quantity of freight carried by the canals and railways was greater in 1880 , by three million one hundred and fifteen thousand eight hundred and twenty tons than the quantity carried in 1879.
The proportion carried by canals shows an increase as compared with the previous year.
The quantitios carried are as follows:-
\begin{tabular}{|c|c|c|}
\hline In 1859. & Total Tonnage. 5,485,076 & Proportion by Canals. -6890 \\
\hline 1869. & 12,453,174 & \(\cdot 4705\) \\
\hline 1870. & 15,148,274 & -3895 \\
\hline 1871. & 15,844,152 & -3896 \\
\hline 1872. & 16,631,609 & -4012 \\
\hline 1873. & 18,200,208 & -3497 \\
\hline 1874. & 18,283,547 & -3174 \\
\hline 1875. & 17,101,758 & . 2841 \\
\hline 1876. & 16,9.18,627 & \(\cdot 2462\) \\
\hline 1877. & 17,489,770 & \(\cdot 2833\) \\
\hline 1878. & 19,017,301 & -2719 \\
\hline 1879. & 22,590,766 & -2373 \\
\hline 1880. & 25,706,586 & -2512 \\
\hline
\end{tabular}

By reference to the figures in Statement \(H\) as to the quantity of Vegetable Food carried to tide-water it will be observed that the quantity carried by Canals has increased oighty-two per cent. as compared with 1869, and an increase of twenty-nine andjonethird per cent. as compared with the previous year; and the quantity carried by railways has increased three hundred and thirty-five
per cent. as compared with 1869 , and a little over eight per cent. as compared with the previous year.
8. The following figures are an abstract of the quantities for twelve years of Vegetable Food carried to tide-water by the canals and railways of the State of New York :
\begin{tabular}{|c|c|c|c|c|}
\hline - & Canals. & Railways.\% & Total. & Proportion by Canals. \\
\hline 1869......... ...... . ................. & 1,302,613 & 1,087,809 & 2,390,422 & -545 \\
\hline 1870......... ................. ........ & 1,295,010 & 1,766,457 & 3,061,467 & \(\cdot 423\) \\
\hline 1871......... ........ ........ ........ & 1,850,198 & 2,205,589 & 4,055,787 & -456 \\
\hline 1872 ........ ......... ........ ........ & 1,674,320 & 1,870,614 & 3,544,934 & \(\cdot 472\) \\
\hline 1873......... ........ ................. & 1,745,171 & 2,036,992 & 3,782,163 & \(\cdot 461\) \\
\hline 1874.......................... . ...... & 1,767,598 & 2,791,517 & 4,559,115 & -387 \\
\hline 1875......... ................. ........ & 1,305,550 & 2,343,241 & 3,648,791 & -357 \\
\hline 1876................. ......... ........ & 1,064,293 & 2,875,803 & 3,910,096 & \(\cdot 270\) \\
\hline 1877 ............ .... ........ ...... & 1,498,984 & 2,493,683 & 3,992,667 & -375 \\
\hline 1878......... ................ ....... & 1,912,734 & 3,695,764 & 5,608,498 & -341 \\
\hline 1879 ................. ........ ......... & 1,833,399 & 4,353,617 & 6,187,016 & -296 \\
\hline 1880 ........ ................. ........ & 2,371,090 & 4,732,385 & 7,103,475 & -333 \\
\hline
\end{tabular}

From which it appears that the proportion of the total volume of freight of the description mentioned, carried by the railways, has increased from \(\cdot \mathbf{4 4 5}\) in 1869, to \(\cdot 704\) in 1879 , while in 1880 there has been a decrease, the proportion for the year being. 667 in 1880.

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

\section*{Inland Revenue Department, \\ 2nd February, 1881.}
A. BRUNEL,

Commissioner.
C. -Table showing the Tonnage of the undermentioned Articles, moved on all the Canals in the State of New York during a series of Twelve Years.


\footnotetext{
Nots.-In 1872 there was a change made in the rate of tolls, by which the tariff on flour, wheat, barley, rye, anthracite coal and iron ore was reduced one-half; on corn and oats, two-fiftha; and on railway iron, domestic salt and bituminous cosl one-third.
}

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \({ }^{8}\) ¢． 65 & 19． 89 & 12．99 & 19．29 & \[
\angle 49 \cdot z 9 .
\] & \[
129.89
\] & & & & \[
1 . . .
\] & & &  \\
\hline 018＇get & \(89 \mathrm{I}^{2} 281\) & 65 I ＇ 6 & \(68^{\text {² }} 971\) & ， \(9266^{\text {c }} 6\) & ｜89＇971 & \({ }^{28 \varepsilon^{\prime} \text { ¢ } ¢ 6}\) &  & 8：8＇691 & \({ }^{\text {²F }}{ }^{\text {d }}\) L6z & 181 ＇886 & 918＇29\％ & ．．．．．．．．．．．．．．．．．．．．－｜870L \\
\hline \({ }_{966}{ }^{6} \mathrm{~g}\) \(869^{\prime} \mathrm{z}\) &  &  &  & \[
\left\{\begin{array}{l}
889^{\circ} 9 \\
\varepsilon_{4 I I} 9
\end{array}\right.
\] &  &  & \[
\begin{aligned}
& 6 E \varepsilon_{4}^{401} \\
& 610^{\prime} 9
\end{aligned}
\]
\[
j 029
\] &  &  & \begin{tabular}{l}
 \\
\({ }_{8}^{6} 66^{4}\)
ع96
\end{tabular} & ع80＇\({ }^{\circ} \mathrm{D}\) \(669{ }^{6}\) \＆II＇ &  \\
\hline  &  &  &  & \begin{tabular}{l}
\({ }_{98 \varepsilon}^{21 \varepsilon^{t}}\) \\
 \\
\({ }^{068}\)＇1Z \\
296
\end{tabular} &  &  &  &  &  & \begin{tabular}{l}
\(9066^{6}\) \\
 0所＇II
\end{tabular} &  &  \\
\hline \multicolumn{13}{|l|}{} \\
\hline 9.791 & & ｜80．601 & & & & & & & & & &  \\
\hline  &  & 108＇tr9 \({ }^{\text {c }}\) & 001＇Ezz＇t & İ\＆ 1884 & \(69^{\circ} \mathrm{Cl} 10^{\circ} \mathrm{T}\) &  & FLi \(28 ¢^{\text {c }}\) T & 927＇LIE＇t & ع69＇я18＇t & \(269^{\prime} 708\) & \(988^{\prime 9} 9\) &  \\
\hline \begin{tabular}{l}
99\％＇\({ }^{\prime}\) \\
\(2 \varepsilon \operatorname{lig}^{2}\) \\
 \\
498＇181＇I \\
ع09＇268 \\
\(\varepsilon+2^{\prime} \mathrm{Z}\)
\end{tabular} &  & 899＇9 －790＇19 G99＇ 12 －TIL＇812 \({ }_{1866} 86\) 286 &  &  &  & \begin{tabular}{l}
288 \\
i 21 \\
\({ }_{661}{ }^{620}\)＇\％ \\
882684 \\
191099
\end{tabular} &  & \begin{tabular}{l}
88 \\
\(1005^{9} 9\) \\
\({ }^{419}\) \\
\({ }^{691} 9\) \\
ze0 08
\end{tabular} &  & \begin{tabular}{l}
\(906^{\prime} 9\) \\
E69 01 \\
－576＇61 \\
849＇691 \\
89，＇8
\end{tabular} & \begin{tabular}{l}
\({ }^{801}{ }^{\prime}\)＇ \\
891 \(826^{\prime} \mathrm{I}\) \({ }^{+28 \times 61 z}\) \(609{ }^{\circ} \mathrm{g}\)
\end{tabular} &  \\
\hline \({ }^{\text {suOL }}\) & \({ }^{8 u 0}{ }^{4}\) & \({ }^{\text {suood }}\) & \({ }^{\text {snool }}\) & \(\stackrel{\text { roid }}{ }\) & \({ }^{\text {gro．i．}}\) & \({ }^{\text {suou }}\) & \(\xrightarrow{8001}\) & & \(\stackrel{\text {－804 }}{ }\) & \({ }^{\text {eroal }}\) & \(\stackrel{8004}{ }\) & \\
\hline 0881 & 6281 & ＇8881 & \(\stackrel{4281}{ }\) & \({ }^{9281}\) & 9281 & TL28 & & 8 I & & 0281 & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline & \(\stackrel{1869 .}{\text { Tons. }}\) & \(\stackrel{1870 .}{\text { l'ons. }}\) & \(\stackrel{1871 .}{\text { Tons. }}\) & \(\frac{1872}{\text { Tons. }}\) & \(\stackrel{1873 .}{\square}\) & \begin{tabular}{c}
1874. \\
\hdashline \\
\hline Tuns.
\end{tabular} & \(\stackrel{1875 .}{\text { Tons. }}\) & \({ }_{\text {c }}^{1876 .}\) & \(\stackrel{1877 .}{\text { Tons. }}\) & \begin{tabular}{c}
1878. \\
\hline Tous,
\end{tabular} & 1879.
Tons. & \(\stackrel{1880 .}{\text { Tons. }}\) \\
\hline Vegetable Food. & & & & & & & & & & & & \\
\hline Flour ....... . .................. ..... & 44,119 & 41;694 & 45,867 & 27,138 & 29,775 & 29,358 & 17,645 & 15,759 & 14,928 & 11,060 & \({ }^{10,548}\) & 10,226 \\
\hline Wheat ....................... .... .... & 310,090 & 428,749 & 418,917 & 290,859 & 292,148 & 370,091 & 333,903 & 254, 283 & 175,018 & 234,577 & 207,574 & 283,404 \\
\hline Corn ........ ........................ & 119,541 & 83,418 & 163,104 & 262,643 & 191,9,0 & 197,873 & 127,665 & 119,23+ & 169,233 & 166,790 & 184,617 & 159,059 \\
\hline Barley .............. ........ ...... & 3,920 & 6,500 & 7,366 & 8,543 & 2965 & 2,147 & 37\% & - 813 & 5,426 & 6,436 & 631
3 & -803 \\
\hline Oats ......... .............. ........
Rye ............... & \(\cdots{ }_{680}\) & 757 & 804 & \begin{tabular}{l}
7,561 \\
3,695 \\
\hline
\end{tabular} & 3,257 & 3,019 \({ }_{3}\) & 4,191 & 14,553
643 & 13,066
1,497 & 2,810
2,219 & & 1,131 \\
\hline Other Articles......................... & 1,541 & 1,081 & 3,635 & 7,175 & 2,166 & 3,425 & 3,100 & 5,285 & 2,076 & 2,606 & 1,445 & 2,152 \\
\hline Total. .................... & 479882 & 562,199 & 639.69 : & 607,614 & 525,261 & 605,916 & 486,881 & 411,115 & 381,244 & 426,498 & 408,173 & 456,775 \\
\hline \[
\left.\begin{array}{c}
\mathcal{\text { Increase }} \\
\text { Decrease }
\end{array}\right\} \begin{gathered}
\text { per cent. as com- } \\
\text { pared with } 1869 . .
\end{gathered}
\] & \(\left\{\begin{array}{l}\text {.......... } \\ \ldots \ldots .0\end{array}\right.\) & \(17 \cdot 15\) & \(33 \cdot 3\) & 2661 & 9.45 & 26.26 & 1....45 & 14.33 & 2587 & 1112 & 1492 & \({ }^{1.7 .8181}\) \\
\hline
\end{tabular}
G. -Tabis showing the Tonnage of the undermentioned Articles passed through the Welland Canal in transit between Porta 30th June, 1880.

H.-Table showing the Tonnage of Vegetable Food carried on each of the Lines of Canals, and on the two Principal Railways competing for the Carrying Trade between Lake Erie and Tidewater, for a series of Twelve Years ended 30th June, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline & 1869.
Tons. & \(\frac{1870 .}{\text { Tons. }}\) & \(\stackrel{1871 .}{ }\) & 1872.
Tons. & \(\stackrel{1873 .}{\text { Tons. }}\) & 1874.
Tons. & 1875.
Tons. & \(\xrightarrow{1876 .}\) & 1877.
Tons. & 1878.
Tons. & \(\stackrel{1879 .}{\text { Tons. }}\) & \(\frac{1880 .}{\text { Tons. }}\) \\
\hline Total on New York Canals.............. & 1,302,613 & 1,295,010 & 1,850,198 & 1,674,320 & 1,745,171 & 1,767,598 & 1,305,550 & 1,064,293 & 1,408,984 & 1,912,734 & 1,833, 299 & 2,371,0 \\
\hline \[
\underset{\text { Decrease }}{\text { Increase }}\} \underset{\text { with } 1869 .}{\text { per cent. as }} \text { compared }\{
\] & & & \(2 \cdot 03\) & 28.531 & 33 & 35.69 & & 18.29 & 7 & \(46.83^{\circ}\) & 40.74 & 2 \\
\hline Total on Welland Canal......... ........ & 503,860 & 749 & 668,076 & 623,448 & 540,050 & 622,558 & 511,990 & 455,022 & 406,567 & 438,889 & 422,735 & 465,249 \\
\hline \(\underset{\text { Decrease }}{\text { Increase }}\} \begin{gathered}\text { per cent. as compared } \\ \text { with } 1869 .\end{gathered}\) & ..... & \(18 \cdot 43\) & \(2 \cdot 69\) & 23.73 & \(7 \cdot 18\) & & & 9.69 & 3 & 12.89 & 16.10 & 7 \\
\hline Total on New York Central and Erie Railways.................................. & 1,087,809 & 1,766,457 & 2,206,589 & , 770,614 & 2,036,992 & 2,791,517 & 2,343,241 & 875,803 & 2,493,683 & 3,695,764 & 4,? 23,617 & 4,732,385 \\
\hline \[
\left.\begin{array}{l}
\text { Increase } \\
:=\text { Decrease }
\end{array}\right\}_{\text {por cent. as compared }}^{\text {prith } 1869 .} \mid
\] & ............ & 36 & 10275 & \(1 \cdot 96\) & \(87 \cdot 25\) & \(156 \cdot 62\) & 115.04 & 40 & 129.23 & 239.74 & 022 & 3 \\
\hline Quantity cleared at Buffalo and Tonawanda by Erie Canal. .. ...... & 786,436 & 802,592 & 1,3\%,683 & \[
1,317,276
\] & \[
32,174
\] & 57,509 & 1,017,559 & 783,331 & 1,223,100 & 644,301 & 1,566,543 & 2,065,184 \\
\hline \[
\underset{\text { Decreaseat }}{\text { Increase }}\} \begin{gathered}
\text { per cent. as } \\
\text { with } 1869 .
\end{gathered}
\] & & 2.05 & 67.29 & ........... & 82.01 & \[
47 \cdot 18
\] & 29. & \[
0 . .
\] & 52 & 109 08. & 99.07 & 162.60 \\
\hline Quantity oleared at Oswego by & 267,815 & 238,181 & 297,424 & 169,818 & 131,765 & 243,325 & 126,763 & 99,975 & 126,899 & 93,149 & 127,168 & 135,410 \\
\hline \[
\left.\begin{array}{c}
\text { Increase } \\
\text { Decrease }
\end{array}\right\} \underset{\text { with } 1869 .}{\text { per cont. as compared }}\{\text {. }
\] & & \[
\theta 6
\] & 1.05 & \(36 \cdot 69\) & 50.08 & \(9 \cdot 14\) & 62.71 & 62.67 & 52.61 & \(65 \cdot 21\) & \(52 \cdot 21\) & ........... 4 \\
\hline Quantity cleared through the Welland Canal in transit between ports in the United States........... & \[
337,530
\] & 337,384 & 384.58 & 316,619 & 236,743 & 290,1 & 291,4 & 181, & 69, & 1,117 & 126,4 & 78,8 \\
\hline \(\xrightarrow[\text { Decrease }]{\substack{\text { Increase } \\ \text { per cent. as } \\ \text { with } 1869 .}} \underline{ }\) &  & \[
0.04
\] & 13.94 & \[
6.19
\] & \[
29 \cdot 86
\] & \[
14.04
\] & \[
13 \cdot 60
\] & 46.11 & 49.68 & 52.26 & \(62 \cdot 64\) & \(78 \cdot 60\) \\
\hline
\end{tabular}


REVENUE.
onded 31st December, 1879 and 1880.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Burlington Bay Canal ................................... \(\left\{\begin{array}{l}1879 \\ 1880\end{array}\right.\) & \({ }_{1}^{1,243} \mathbf{1 , 4 9}\) & \(\underset{9,385}{11,811}\) & 768 & 6 & ................. & ................ & 3,440
6,348 & 1,760
663 & \(\xrightarrow{18,254} 17.667\) \\
\hline \begin{tabular}{l} 
Increase, 1880 ....... ......... ............................. \\
Decressee \\
\hline
\end{tabular} & 258 & 2,428 & 766 & 6 & & & 1,008 & 1,097 & 687 \\
\hline * St. Peter's Canal...................................... \(\left\{\begin{array}{l}1879 \\ 1880\end{array}\right.\) & 261 & …..... & & ............. & -........... & ..... ....... & & 165 & 416 \\
\hline Increase, 1880 ..... ...................... ............ & 251 & .... & & & & & & 185 & 416 \\
\hline \multirow[t]{2}{*}{Newoastle Dtatrict Canalam.... ......... .............. \(\left\{\begin{array}{l}1879 \\ 1880\end{array}\right.\).} & & ......... & & & .... ........ & --......... & - & & \\
\hline & \(\cdots\) & \(\ldots\) & \(\cdots\) & ,-............ & .... & ............ & \(\ldots\) & 1,495 & 1,495 \\
\hline Increase, 18 & & .......... & .."...... & ............ & ...... & ........... & .... & & \\
\hline Docrease, 18 & & & & & - & \(\cdots\) & & 1,031 & 1,031 \\
\hline  & 3,509 & -7.7.1.071 & 107,860 & 15,883 & 9,019 & 4,630 & 13,688 & 170,603 & 268,521 \\
\hline \multicolumn{9}{|l|}{\multirow[t]{2}{*}{}} & \\
\hline & & & & & & & & & 1,788,562 \\
\hline
\end{tabular}

\title{
CANAL STATISTICS
}

TOR

\author{
SEASON OF NAVIGATION
}

\section*{1880}

4-1*

\section*{SUPPLEMENTARY APPENDIX A}
No. (A) 21.-General Statement showing the Quantity of each Article transported through the Welland Canal,

44 Victoria. Sessional Papers (No. 4.) A. 1891

SUPPLEMENTARY APPENDIX A-Concluded.
No. (A) 21.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.


SUPPLEMENTARY APPENDIX A.-Continued.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{\begin{tabular}{l}
\(\underset{\substack{\text { From } \\ \text { Canadian }}}{\text { and }}\) \\
\(\underset{\text { Canadian }}{\text { to }}\) \\
Ports.
\end{tabular}} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { From } \\
\text { Canadian } \\
\text { Cnited oftates } \\
\text { Ports. }
\end{gathered}
\]} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { From } \\
\text { United States } \\
\text { Unitod States } \\
\text { Ports. }
\end{gathered}
\]} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { From } \\
\text { United States } \\
\text { Canadian } \\
\text { Carts. } \\
\text { Por }
\end{gathered}
\]} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{\({ }_{\text {Total }}^{\text {Tons. }}\)} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Amount } \\
\text { of } \\
\text { ofls. }
\end{gathered}
\]} \\
\hline & Up. & Down. & Up. & Down. & Up. & Down. & Up. & Down. & \(\mathrm{U}_{\mathrm{p}}\). & Down. & & \\
\hline & \(\mathrm{T}_{2}\) & & & 83 & 10 & & & & \({ }_{22}^{82}\) & \({ }_{12,422}^{918}\) & \(\xrightarrow{12,480}\) &  \\
\hline  & 22 & ,031 & & & & & & 391 & & & & \\
\hline Agricalural Products not cnu- & 1,043 & 1,512 & 8 & & 5 & 5 & 7 & & 1,063 & 1,517 & 2,580 & 44 \\
\hline A gricultural Products not enu-
merated, Animal. & 207 & 1,700 & & 150 & & & 37 & 575 & 244 & 2,435 & 2,669 & \\
\hline Agriculural Implements............ & 252 & & & & & .... & .... & & \({ }_{913}^{252}\) & & \(\begin{array}{r}299 \\ 8,586 \\ \hline\end{array}\) & - 25.37 \\
\hline  & - 1.578 & \({ }_{6,866}^{116}\) & \({ }_{1}^{125}\) & 817 & 19 & ............. & 228 & \({ }^{3}\) & 1,807 & -119 & \({ }_{1}^{1,926}\) & \({ }_{172} 52\) \\
\hline Bones ............................... ............. & 1, 78 & 407 & & 755 & …...... & -........ & & & 78
363 & \({ }_{\text {1, }}^{1,162}\) & 1,240 & \begin{tabular}{l}
1496 \\
175 \\
175 \\
\hline 185
\end{tabular} \\
\hline \({ }_{\text {Bagrage }}^{\text {Beer }}\)............................. & 363
437 & \({ }_{216}^{672}\) & 25 & ...... & & …........ & & & \({ }_{462}\) & \({ }_{216}\) & \({ }^{1}\) & 1328 \\
\hline  & \({ }_{48}^{437}\) & & 25 & & & & & & 48 & & 48 & 44 \\
\hline Cement and Water Lime .............. & 769 & 22 & - 5 & ............. & & & & 125 & [ 774 &  & & - \({ }_{305}^{124} 768\) \\
\hline Clay, Lime and Sand ................. & 2,637 & 3,044
17,326 & & & & 171 & 1,971 & 48,554 & &  & -7, 6 6,621 &  \\
\hline Corn ....... & 299 & 69,415 & & & & & ......... & & \({ }_{81}^{299}\) & 69,493
1,365 & & 9,467 \({ }^{\text {che }}\) \\
\hline Cattle.................................. & 78 & 1,365 & & & 3 & & & & \({ }_{27}^{81}\) & 1,365 & & \\
\hline  & 27
12 & ... \({ }_{2}\) & \(\ldots\) & ............ & ........... & & & & 12 & 2 & 14 & 280 \\
\hline Crockery....... & \({ }^{730}\) & 8 & .... & ... & .... & & & & & 8 & \(\begin{array}{r}738 \\ \hline 35 \\ \hline 8\end{array}\) & 13565 \\
\hline Dye Wood and Dye Stuff ........... & \({ }_{462}^{182}\) & 1 & 2 & & & & 202 & & - 364 & \({ }_{8}^{1}\) & - & 3110
89 \\
\hline \({ }_{\text {Fish }}\).............. & 799 & 62 & & & & & ........... & ..... & 799 & 63 & \({ }_{861}\) & 10254 \\
\hline Flax and Hemp. & & & & & & \(\cdots\) & & \(\cdots\) & & 0,411 & 12,151 & \\
\hline Flour..... & \({ }^{1,740}\) & 10,469
209 & & & 4 & & & & \({ }^{1,410}\) & 209 & \({ }_{6} 1219\) & \({ }_{60} 81\) \\
\hline Gypsum ................................... & 4,048 & 768 & & .......... & & & & & - 4,048 & 168
68
68 & \begin{tabular}{|c}
4,816 \\
1,359
\end{tabular} & 20440
26685 \\
\hline Glasg, Window .................. .... & \({ }^{1,288}\) & -631 241 & 9 & & & & ............. & ..... & \({ }_{257}\) & 241 & \({ }_{498}\) & 9794 \\
\hline
\end{tabular}

SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 22.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.


No．（A）23．－General Statement showing the Quantity of each Article transported through the Burlington Bay
\begin{tabular}{|c|c|c|}
\hline \multicolumn{2}{|l|}{} &  \\
\hline \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { ⿹ㅡㅇ 븜 } \\
& \text { E }
\end{aligned}
\]} &  \\
\hline \multirow[t]{2}{*}{} & 号 &  \\
\hline & 官 &  \\
\hline \multirow[t]{2}{*}{} & 厌 &  \\
\hline & \[
\dot{\Delta}
\] &  \\
\hline \multirow[t]{2}{*}{} & － &  \\
\hline & \[
\dot{\square}
\] &  \\
\hline \multirow[t]{2}{*}{} & \[
\begin{aligned}
& \text { 白 } \\
& \stackrel{\text { B }}{\circ}
\end{aligned}
\] &  \\
\hline & \(\dot{\sim}\) & \begin{tabular}{llll}
\hline\(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\)
\end{tabular} \\
\hline \multirow[t]{2}{*}{要:} & 号 &  \\
\hline & \(\dot{\square}\) &  \\
\hline ¢
¢
d
\＃
4
4 & &  \\
\hline
\end{tabular}

SUPPLEMENTARY APPENDIX A.-Continued.

\begin{tabular}{|c|c|c|c|}
\hline 44 Victoria． & & Sessional Papers（No．4．） & A．18SI \\
\hline & \[
\begin{aligned}
& \infty \\
& \infty \\
& \infty \\
& \infty \\
& \infty \\
& \infty
\end{aligned}
\] & & \\
\hline  & ¢ & 気 & \\
\hline  & ¢ & \[
\underset{\sim}{\mu}
\] & \\
\hline \(\because \vdots\) & \(\stackrel{\vdots}{\square}\) & & \\
\hline  & （1） & & \\
\hline （1） & 息 & & \\
\hline \[
\begin{array}{|l|l}
\vdots & \stackrel{\rightharpoonup}{\infty} \\
\vdots & \\
\vdots & \infty \\
\hline
\end{array}
\] &  & & \\
\hline （1） & ¢ & & \\
\hline （1） & － & & \\
\hline  &  & & \\
\hline （e：cc｜c &  & \[
\underset{\substack{\infty \\ \sim \\ \sim}}{\infty}
\] & \\
\hline  & & 会 & \\
\hline  & & 灾岕岕 & \\
\hline  & & \[
\begin{gathered}
\text { Revenve De } \\
\text { Ottawa, }
\end{gathered}
\] & \\
\hline  & & 足 & \\
\hline
\end{tabular}
No. (A) 24.-General Statement showing the Quantity of each Article transported through the Ottawa Canals, and the Amount of Revenue collected during the Season of Navigation in 1880.


SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 24.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{From
Canadian
to
Canadian
Ports.} & \multicolumn{2}{|l|}{From
Canadian
to
United States
Ports.} & \multicolumn{2}{|l|}{From
United States
United States
Ports.} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { Fiom } \\
& \text { United States } \\
& \text { to } \\
& \text { Canadian } \\
& \text { Ports. }
\end{aligned}
\]} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Tatal Tuns.} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { A mount } \\
\text { of } \\
\text { Tolls. }
\end{gathered}
\]} \\
\hline & Up. & wa. & Up. & Dcwn. & Up. & Down. & Up. & Down & Up. & Down. & & \\
\hline All other Goods and Merchandise & & \multirow[t]{2}{*}{} & . & \multirow[t]{2}{*}{...........} & \multirow[t]{2}{*}{............} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{.........
326} & \multirow[t]{3}{*}{105
108
106} & \multirow[t]{3}{*}{431
108
106} & \multirow[t]{3}{*}{\(\begin{array}{r}3405 \\ 93 \\ 9316 \\ \hline 506\end{array}\)} \\
\hline not enumerated............ ......... & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{105
108
106}} & \multirow[t]{2}{*}{.............} & & & & & & & & & \\
\hline Bark ...................................... & & & & ............... & &  & in.......... & ............... & 326
\(\ldots . . . . . . . . .\).
\(\ldots . . . . .\). & & & \\
\hline Boat Knees..... & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & …........ & \multirow[t]{2}{*}{....世*** 4***} & ............... &  & \multicolumn{2}{|l|}{-.........1...... ....} & \multicolumn{2}{|l|}{} & & 1516 \\
\hline Floats... ......... ........... .......... & & & \multirow[t]{2}{*}{\(\square\)} & & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & |…......... & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{..............} & \multirow[t]{2}{*}{\begin{tabular}{|c}
\(1,3, \ldots 4\) \\
93,282 \\
\hline
\end{tabular}} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{\[
\begin{array}{r}
2641 \\
3,14040
\end{array}
\]} \\
\hline Firewood, in Vessels ..... ...... .... & (............ & \[
\begin{array}{r}
1,334 \\
93,282
\end{array}
\] & & . .................. & & & \multirow[t]{2}{*}{} & & & & & \\
\hline Hoops...................................... & ............. & - 36 &  & ............... & &  & & |............. & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} \\
\hline \multirow[t]{3}{*}{Hop Poles ................................
Lumber, Sawn in Vessels .......
Rats .......} & \multirow[t]{3}{*}{(1.....1.} & \multirow[t]{3}{*}{\[
\begin{array}{r}
261,946 \\
16,578
\end{array}
\]} & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{226,127} & \multirow[t]{2}{*}{} & ............. & \multicolumn{2}{|l|}{...........|.............} & & & & \\
\hline & & & & & & \multirow[t]{2}{*}{............} & \multirow[t]{2}{*}{:-...........} & \multirow[t]{2}{*}{..................} & \multirow[t]{2}{*}{\begin{tabular}{lll}
1.7 .1. \\
1 & 91 \\
& 14
\end{tabular}} & \multirow[t]{2}{*}{\begin{tabular}{|c}
488,073 \\
16,578 \\
\hline
\end{tabular}} & \multirow[t]{2}{*}{\[
\begin{gathered}
488,164 \\
16,592
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{array}{r}
45,78085 \\
71540
\end{array}
\]} \\
\hline & & & & & \multirow[t]{2}{*}{} & & & & & & & \\
\hline Masts, Spars and Telegraph Poles, in Veasels
\(\qquad\) & \multirow[t]{3}{*}{..........} & & \multicolumn{2}{|l|}{................} & & & .......... & \multirow[t]{3}{*}{\(\square\)} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{|.......................}} & \multirow[t]{3}{*}{............ \({ }^{13}\)} & \multirow[t]{3}{*}{-..............} \\
\hline Maste, Spars and Telegraph Poles, & & \multirow[t]{2}{*}{} & \multicolumn{2}{|l|}{\multirow[t]{2}{*}{}} & \multicolumn{2}{|l|}{.......... .........} & \multirow[t]{2}{*}{...........} & & & & & \\
\hline in Rafts ........ & & & & & \multirow[t]{2}{*}{.} & \multirow[t]{2}{*}{} & & & ...... .... & 13 & & \\
\hline Railway Ties, in Vessels............. & & \multirow[t]{2}{*}{} & .............. & ............... & & & \multirow[t]{2}{*}{...............} & \multirow[t]{2}{*}{..............} & \multirow[t]{2}{*}{..............} & \multirow[t]{2}{*}{} & -.. 13. & \multirow[t]{2}{*}{...................} \\
\hline Saw Logs.. ......... ....... & ...... & & \multirow[t]{3}{*}{} & \multirow[t]{3}{*}{|..............} & \multirow[t]{2}{*}{-.............} & .............. & & & & &  & \\
\hline Staves and Headings, Barrel....... & \multirow[t]{2}{*}{...............} & \multirow[t]{2}{*}{} & & & & \multirow[t]{2}{*}{\(\qquad\)} & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & \multirow[t]{3}{*}{} & \multirow[t]{2}{*}{-..............} & \multirow[t]{2}{*}{} & \multirow[t]{3}{*}{...................} \\
\hline " \({ }^{\text {a }}\) " \({ }^{\text {Pripe.. }}\)....... & & & & & ............. & & & & & & & \\
\hline Staves, Salt Barrel.................. & \multirow[t]{6}{*}{} &  & \(\square\) & .................. & \multirow[t]{6}{*}{} & \multirow[t]{6}{*}{} & \multirow[t]{6}{*}{\(|\)\begin{tabular}{c}
\(\left|\begin{array}{c}. . . . . . . . . . ~ \\
\ldots . . . . . . . . . . . . ~ \\
\hline . . . . . . . . . . ~ \\
. . . . . . . ~ \\
200\end{array}\right|\)
\end{tabular}} & \multirow[t]{6}{*}{} & & & & \\
\hline Shinglos ........................ ....... & & \multirow[t]{5}{*}{323
5
1
1
1,598} & \multirow[t]{2}{*}{-...........} & \multirow[t]{5}{*}{} & & & & & \multirow[t]{5}{*}{} & \multirow[t]{5}{*}{|rin 323} & \multirow[t]{5}{*}{333
5
1
2,146
2,151} & \multirow[t]{5}{*}{\begin{tabular}{r}
11016 \\
120 \\
0 \\
3 \\
3 \\
3 \\
3 \\
\hline 18 \\
18
\end{tabular}} \\
\hline Split Posts and Fence Rails, in
Vessels................................... & & & & & & & & & & & & \\
\hline Split Posts and Fence Rails, in & & & & & & & & & & & & \\
\hline Rafts ............... ...... ....... & & & & & & & & & & & & \\
\hline Timber, Square, in Vessels.......... & & & & & & & & & & & & \\
\hline
\end{tabular}

A. BRUNEL,
Commissioner.
Inland Revenue Department,
Ottawa, 2nd February, 1881
SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 25.-General Statement showing the Quantity of each Article transported through the Chambly Canal,

44 Victoria. Sessional Papers (No. 4.) A. 1881

SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 25.-General Statement showing the Quantity of each Article transported, \&c.-Concluded.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{Articles.} & \multicolumn{2}{|l|}{\[
\begin{gathered}
\text { From } \\
\text { Oanadian } \\
\text { to } \\
\text { tonadian } \\
\text { Ports. }
\end{gathered}
\]} & \multicolumn{2}{|l|}{From
Canadian
to
United States
Ports.} & \multicolumn{2}{|l|}{\[
\begin{aligned}
& \text { From } \\
& \text { United States } \\
& \text { to } \\
& \text { Unitod States } \\
& \text { Porta. }
\end{aligned}
\]} & \multicolumn{2}{|l|}{From
United States
to
Onandian
Ports.} & \multicolumn{2}{|l|}{Tons.} & \multirow[t]{2}{*}{Total
Tons.} & \multirow[t]{2}{*}{Amount.} \\
\hline & Up. & Down. & \({ }_{\text {Jp. }}\) & Down. & \(\mathbf{U P}_{\mathrm{p}}\). & Down. & Up. & Down. & Up. & Down. & & \\
\hline & & & & & & & & & & & & \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Wool. \\
All other Goods and Merchandise not enrmerated
\(\qquad\)
\end{tabular}} & & & & & & & & & & & & \\
\hline & 795 & 294 & 2,832 & & & & & 1,122 & 3,687 & 1,416 & 5,103 & 47625 \\
\hline \multirow[t]{2}{*}{Barrele, Empty.....................................} & & & & & .......... & & & & & & & \\
\hline & .......... & ........ .... & .......... & & & & & & & ... & ............. & \\
\hline \begin{tabular}{l}
Boat Knees ............. .................. \\
Floats
\end{tabular} & 140 & & & & & & & ........... & 4,196 & & & \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Floats \\
Firewood, in Vessels \\
in Rafte
\(\qquad\)
\end{tabular}} & & 468 & 4,058 & & & & & ..... & & 468 & \({ }^{468}\) & \({ }^{246} 112\) \\
\hline & .......... & 46 & & & & & & & & & & \\
\hline \multirow[t]{2}{*}{\begin{tabular}{l}
Hoops \\
Hop Poles
\(\qquad\)
\end{tabular}} & ..... ..... & & .... & ............. & & & & .. & ......... & .............. & ............. & \\
\hline & & & & & & & & & & & & \\
\hline Hop Poles Lumber, sawn in Vessels............. in Rafts.. & 2,603 & ............ & 66,493 & 423 & ... & & & & 69,096 & 428 & 69,534 & 4,054 22 \\
\hline \begin{tabular}{l}
Masts, Spars and Telegraph Poles, \\
in Vessels .......... ............
\end{tabular} & & & & & & & & & & & & \\
\hline Masts, Spars and Telegraph Poles, in Rafts & & & & & & & & & & & & \\
\hline \multirow[t]{2}{*}{Railway Ties, in
in Vessels
a} & & & ............ & & & . & ........... & ............ & ............ & . & . & \\
\hline & & & & & & & & & & & .... ......... & \\
\hline & ... & & & ........ .... & ... ....... & & .......... & .......... & & & .............. & ................ \\
\hline \multirow[t]{2}{*}{} & & & & & & & ..... ..... & & .......... & & ............. & \(\cdots\) \\
\hline & ........... & & ............ & & ............. & & & & & & & \\
\hline \multirow[t]{2}{*}{Staves, Salt Barrel Shingles
\(\qquad\)} & & & & & & & & & & & & \\
\hline & 53 & & & & & & & & 53 & & 53 & 296 \\
\hline Split Posts and Ferce Rails, in & 28 & & & & & & & & & & 28 & 260 \\
\hline \multirow[t]{2}{*}{Split Posts and Fonce Rails, in Rafts.} & & & & & & & & & & & & \\
\hline & & & & & & ...... .... & & & & & & \\
\hline \begin{tabular}{l}
Timber, square, in Vessels ...... ..... \\
in Rafts................
\end{tabular} & & & & .1.7.744 & & & & & & & 744 & 2 \\
\hline
\end{tabular}

SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 26.-General Statement showing the Quantity of each Article transported through the Rideau Canal,


SUPPLEMENTARY APPENDIX A.-Continued.
No. (A)_26.-General Statement showing the Quantity of each Article transported, \&c.-Continued.


SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 27.-General Statement showing the Quantity of each Article transported through the St. Peter's

SUPPLEMENTARY APPENDIX A.-Conlinued.
No. (A) 28.-General Statement showing the Quantity of each Article transported through the Newcastle


No. (A) 29. Statement of Traffic on the undermentioned Canals, and


\section*{APPENDIX A-Continued.}
the Amount of Tolls collected during the Season of Navigation in 1880.


No. (A) 29.-Statrment of Traffic on the undermentioned


APPENDIX A.-Continued.
Canals, and the Amount of Tolls Collected, \&c.-Continued.


No. (A) 29.-Statement of Traffic on the undermentioned


\author{
Inland Revenue Department, Ottawa, 2nd February, 1881.
}

\section*{APPENDIX A.-Continued.}

Canals, and the Amount of Tolls collected, \&c.-Continued.

A. BRUNEL,
Commissioner.
SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 31.-Statement showing the Amount of Tolls collected each Month during the Season of Navigation
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline Canals and Offices. & February. & March. & April. & May. & June. & July. & August. & September & ctober. & November & December. & - Totals. \\
\hline Wrluasd Canal. & \$ cts. & \$ cts & \$ cts. & \$ cts. & \$ cts. & 5 cts. & \$ cts. & \$ cts. & \$ cts. & \(\$\) cts. & \$ cts & \$ cts \\
\hline \begin{tabular}{l}
Cbippawa \\
Coborne
\(\qquad\)
\(\qquad\)
\end{tabular} & & & & \(\begin{array}{r}26 \\ 14,7988 \\ \hline 88\end{array}\) & \(\begin{array}{r}32 \\ 17,414 \\ \hline 18\end{array}\) & 20,657 \({ }_{29}^{198}\) &  &  & (12,528 \({ }^{27} 4^{3}\) & \[
\begin{gathered}
7,508 \\
7,50 \\
7
\end{gathered} \mathbf{0} 9
\] & & \[
\begin{array}{r}
16839 \\
112,055
\end{array}
\] \\
\hline Dalhousie...................... & & \({ }^{\text {an......... }}\) & 86117 & \({ }_{4,522}^{1429}\) & \({ }_{3,288} 11\) & 4,678 & \({ }_{5,847} 5\) &  &  & - & & \begin{tabular}{l}
29,73030 \\
1,700 \\
30 \\
\hline
\end{tabular} \\
\hline Dunville & & -........... & 3699
151
86 & 1435
2375
7 & 6486
6190 & - 11065 & \({ }_{130}^{69} 71\) & \({ }_{7366}\) & \({ }_{152} 156\) & \({ }^{152} 20\) & & \({ }^{1,960} 88\) \\
\hline Robinson... & & \(0{ }^{\circ} \mathrm{F}\) & 20557 & \(40977{ }^{\text {c }}\) & 24629 & 30819 & 26702 & 32524 & \begin{tabular}{l}
322 \\
\hline 25 \\
\hline 1
\end{tabular} & 20526 & & \({ }^{2,280} 91\) \\
\hline St. Catharinee & & & 7193 & 11186 & 16051 & 18029 & 14137 & 12923 & 25475 & 5167 & & 1,101 61 \\
\hline Total, Welland Canal. & & 050 & 2,392 & 20,24132 & 21,26896 & 25,988 31 & 26,599 71 & 22,006 69 & 18,828 46 & 10,038 41 & 250 & 147,367 68 \\
\hline St. Lambricg Canals. & & & & & & & & & & & & \\
\hline & & & 2370 & 355 57, & & & & & & & & \\
\hline Cornwall & & & 15690 & 1,986 \({ }_{86} 18\) & \({ }^{2,132}{ }_{54} 86\) & 2,649
7
7
48 & 2,248 \({ }_{95} 96\) & \begin{tabular}{|c}
2,885 \\
4481 \\
\hline 81
\end{tabular} &  & \({ }^{3,182}{ }_{97}^{989} 8\) & \[
\begin{aligned}
& 1 \\
& 3 \\
& 3
\end{aligned} 085^{\prime}
\] & 18,110
554
56
11 \\
\hline Kdwardsburg .............. & & ......... & \({ }_{1,53644}^{11}{ }^{10}\) & 3,245 87 & 3,481 04 & 4,14950 & 6,250 90 & 3,18484 & 3,132 941 & 1,134 34 & & 26,115 87 \\
\hline Lachine........ ........ & & & & -403 51, & - \({ }^{323} 24\) & & -813 \({ }^{58}\) & & \({ }^{696}\) & 247 & & 3,970 67 \\
\hline Montraal .................. & & & 25032 & 4,518 28 & 6,001 81 & 5,332 81 & 6,592 28 & 5,497 79 & 5,32202 & 2,890 & & \({ }^{36,405} 78\) \\
\hline Total, St. Lawrence
Canale.................... & & & 1,992 45 & 10,590 34 & 12,271 02 & 13,022 42 & 16,38 & 13,399 18 & 13,110 57 & 26 & 413 & 88,890 72 \\
\hline Caxably Canal. & & & & & & & & & & & & \\
\hline Chambly & & & & & & & & & & & & \\
\hline st. Johns
\(\qquad\) & & & \(\begin{array}{r}41694 \\ 1294 \\ \hline\end{array}\) & \[
\begin{aligned}
& 1,83551 \\
& 83 \\
& 46
\end{aligned}
\] & \[
\begin{aligned}
& 1,725 \\
& 127 \\
& 123 \\
& 128
\end{aligned}
\] & \[
\begin{aligned}
& 1,76596 \\
& 1,72565
\end{aligned}
\] & \[
\begin{aligned}
& 1,83745 \\
& 6565 \\
& 65
\end{aligned}
\] & \[
\begin{array}{r}
2,506 \\
91 \\
\hline 96 \\
\hline 76
\end{array}
\] & \[
\begin{array}{r}
2,200 \\
136 \\
186
\end{array}
\] & \(\begin{array}{r}9219 \\ 128 \\ \hline 18\end{array}\) & & \[
\begin{array}{r}
1321052 \\
71458 \\
7
\end{array}
\] \\
\hline & & & 43369 & 2,495 64 & 2.51222 & 2,942 72 & 2,811 13 & 3,607 17 & 3,688 85 & 1.94943 & & 20,340 85 \\
\hline Total, Chambly Canal. & & & & & & & & & & & & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline \[
\begin{aligned}
& \mathscr{\infty} \\
& \underset{\infty}{\infty} \\
& \underset{\sim}{\infty}
\end{aligned}
\] &  &  & \begin{tabular}{l}
8 \\
8 \\
\(\stackrel{10}{2}\) \\
\hline
\end{tabular} &  & \[
\begin{aligned}
& \stackrel{\circ}{⿺ ⿻} 𠃍 冖 又 丶 ~
\end{aligned}
\] \\
\hline （ &  &  & 12
10
10 &  &  \\
\hline \[
\begin{aligned}
& 0 \\
& \infty \\
& 0
\end{aligned}
\] &  &  & \(\xrightarrow{\circ}\) &  & 召 \\
\hline － &  &  & ＂ & ［ & － \\
\hline ［8 &  &  & &  & \\
\hline \begin{tabular}{l}
\(\square\) \\
\hline
\end{tabular} &  &  & &  & \\
\hline \begin{tabular}{l}
28 \\
0 \\
0 \\
\hline 8
\end{tabular} &  &  & &  & \\
\hline 28 &  &  & &  & \(\underset{\infty}{\infty}\) \\
\hline 8
0
8
8 &  &  & &  & 尓 \\
\hline \begin{tabular}{l}
\(\square\) \\
\hline 6
\end{tabular} &  &  & &  &  \\
\hline \(\vdots\)
\(\vdots\)
\(\vdots\) & \begin{tabular}{ccc|c|c|}
\(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \(\vdots\) \\
\(\vdots\) & \(\vdots\) & \\
\(\vdots\) & \(\vdots\) & \(\vdots\) & \\
\(\vdots\)
\end{tabular} & \(\begin{array}{cc:c}\vdots & \vdots & \vdots \\ \vdots & \vdots & \vdots \\ \vdots & \vdots & \vdots \\ & & \\ & \\ & \end{array}\) & &  &  \\
\hline &  &  & &  &  \\
\hline  &  &  &  &  &  \\
\hline
\end{tabular}
No. (A) 32-General Statement showing the Number, Tonnage and Nationality of Vessels passed through the



44 Victoria. Sessional Papers (No. 4.)
SUPPLEMENTARY APPENDIX A.-Continued.
No. (A) 32.-General Statement showing the Number, Tonnage and Nationality of Vessels, \&c.-Continued.

REOAPITULATION.


\section*{SUPPLEMENTARY APPENDIX A.-Concluded.}
No. (A) 321.-Comparative Statement of Grand Total Freight passed through the andermentioned Canals


\section*{SEVENTH REPORT}

\section*{WEIGHTS AND MEASURES,}

\author{
SUPPLEMENT No. II
}

\author{
TO THE REPORT
}

\title{
DEPARTMENT OF INLAND REVENUE, 1880.
}
*aninted by ©order of farliament.


OTTAWA:
PRINTED BY MACLEAN, ROGER \& CO., WELLINGTON STREET. 1881.

\section*{COMMISSIONER'S REPORT.}

\section*{CONTENTS}

\section*{INDEX TO OOMMISSIONRR'S REPORT.}

PAGE
Section 1.-Dates at which Inspection under Act of 1879 commenced in the several Divisions ..... V
" 2.-Completion of first Inspection ..... v
" 3.-The Law requires continuous Inspection ..... V1
" 4.-Importance to the general public of continuous Inspection ..... vi
" 5.-Inspection at irregular periods ..... vi
" 6.-Not much Revenue to be expected from Inspection at irregular periods ..... Vi
" 7.-Comparison of revenue with expenses ..... vi
" 8.-Summary of articles inspected ..... vii
" 9.-Percentage of rejections ..... vii
. 10.-Large proportion of articles unfit for verification when first presented ..... vii
، 11.-Return of first rejections not provided for ..... vii
، 12.-Difficulties in relation to adjustments in rural Districts ..... vii
" 13.-The " Red Stamp System" ..... viii
" 14. -Loss of revenue from red stamps. ..... viii
4 15.-Loss greater than was foreseen ..... viii
"16.-Prosecution of parties for infraction of the Law and use of "grain testers" ..... Viii
" 17.-Importance to farmers of correctly determining the weight of grain per bushel ..... 1X
INBPECTION OF GAS.
Section 18.-Comparison of number of meters inspected with previous year.. ..... ix
" 19.-Percentage of rejections ..... ix
Illuminating Power,Section 20.-Generally up to the standard.ix
44 Victoria. Sessional Papers (No. 4.)PURITY.PAGE
Section 21.-Only tested at certain places ..... \(x\)
" 22.-Result in Montreal ..... \(\mathbf{x}\)
" 23.- " Toronto ..... \(\mathbf{x}\)
" 24.- " Quebec ..... \(x\)
" 25.- " St. John, N.B. ..... \(\mathbf{x}\)
" 26.- " Halifax ..... x
" 27.- " Ottawa ..... xi
" 28.-Tests for sulphuretted hydrogen ..... xi
" 29.-Receipts and Expenditure. ..... xi

\section*{SEVENTH REPORT}
of the

\title{
COMMISSIONER OF INLAND REFENUE
}

ON

\author{
WEIGHTS, MEASURES AND GAS.
}

To the Honorable the Minister of Inland Revenue:
Sir,-Herewith I have the honor to submit my Seventh Report on the inspection of weights, measures and gas, with the usual statistical statements in relation thereto.
1. Although the Act was in force, during the whole of the gear to which these returns relate, many of the Inspectors did not comDates at Which inspec mence their inspection until sometime after the commencement of the year. The dates at which the inspection was commenced at tion, under Act 1879,
commenced the several places, are as follows:-
in the several divisione.

At Hamilton, in August, 1879; at Montreal and Quebec, September, 1879 ; at Sherbrooke and Three Rivers, October, 1879 ; at Kingston, London, Belleville, Ottawa, Toronto, St. John, N.B., Charlottetown, P.E.I., Pictou, N.S , and Winnipeg, in November, 1879; at Fredericton, N.B., Halifax, N.S., and Windsor, Ont., in December, 1879 ; in Cape Breton, in January, 1800 ; in King's Division, N.B., in February, 1880 ; at Yarmouth, N.S., in April, 1880, and in British Columbia. The inspection had not commenced at the close of the fiscal years. From the above it follows the inspection has not continued orel more than an average of eight months of the twelve.
2. It is probable that in the inspection divisions, in which the Completion of Inspectors have been most active, the first inspection will be nearly first inspeccompleted within the current half-year, while in other divisions the first inspection will extend over the whole year. This inequality in the progress of finspection is due to various causes: partly to the varying quantity of work in proportion to the number of Inspectors, but largely to the greater degree of energy displayed by some

Inspectors as compared with others. The first mentioned cause may be modified by requiring the Inspectors in the divisions where the work is first completed, to assist in the completion of the work in these divisions where it is greater.

The law requires continuous inspection.

Importance to the general public of continuous inspection.

Inspection at irregular periods.
3. But, as will be seen on reference to the Forty-first Section of the Act, the law requires the Inspertor not only to visit places of business subject to his inspection from time to time without previous notice, so as best to insure compliance with the Act and discorer and punish any infractions of it ; he is also required to attend at any reasonable time and place when required to do so for inspection purposes. Hence it cannot properly be said that the inspection of any division is at any time completed. New appliances for weighing and measuring are being constantly brought into use, and those inspected are liable at any time to become inaccurate.
4. The importance to the public of the provisions of the law above cited is obvious, for if the visits of the inspectors were to occur only once in two years, and then at a time which could be foreseen within narrow limits, any trader, who might be inclined to dishonesty, could use illegal or unjust appliances with little chance of detection. It is essential, therefore, to a proper execution of the law, that the visits of the inspectors should be so distributed over the whole of every year, that the traders can never know when to expect them.
5. During these irregular visits the Inspectors will vorify and collect fees on any apparatus be may discover, whether new or old, that had not been previously inspected, and it will also be his duty to prosecute any one who may be found using fraudulent appliances for weighing or measuring.
6. It is not likely that these subsidiary tours will produce much

Not much
revenue to be expected from inspections at irregular periods.

\section*{Comparison of revenue withexpenses.}
revenue, but it is so clearly the intention of the law that there should be a continuous inspection, that the Department would fail in its duty if it were not provided for.
7. The total revenue colleeted during the year for the inspection of weights and measures was \(\$ 17,080.04\). The expenses were \(\$ 37,332.86\). This can hardly be accepted as a fair indication of the future relation of the cost of inspections to revenue, but I think it very likely that, under the present tariff, the cost will generally be more than double the revenue.
8. In Appendix \(B\) will be found a detailed statement of the Weights, Measures and Weighing-Machines presented tor verification, verified and rejected during the fiscal year. The number of all descriptions may be summarily stated as follows:-
\begin{tabular}{|c|c|c|c|c|}
\hline - & Presented. & Verified. & Rejected. & Percentage of Rejections. \\
\hline Weights-Dominion ...... ..... & 44,413 & 44,009 & 344 & -775 \\
\hline Measures-Dominion.... ........ & 50,385 & 50,110 & 275 & - 545 \\
\hline Measures of Length............ & 2,083 & 1,997 & 86 & \(4 \cdot 128\) \\
\hline Balances, \&c.-Equal A rms... & 6,355 & 6,235 & 120 & 1.88 \\
\hline Steelyards........ & 792 & 771 & 21 & \(2 \cdot 62\) \\
\hline Platform-Scales & 8,170 & 8,043 & - 127 & 1.55 \\
\hline Irregular Weights ..... ..... ... & 6,124 & 6,081 & 43 & \(\cdot 702\) \\
\hline Irregular Measures..... ........ & 76 & 76 & ................ & ............... \\
\hline
\end{tabular}
9. The above abstract is given for the purpose of showing the percentage of articles ultimately rejected, but is far from giving the full number of such articles that were refused verification when first presented. It only gives the number which were so bad that they could not be so adjusted as to bring them within the requirements of the law.
10. It would not be an exaggeration to say that fully one-third of the articles presented are then so much in error that they have to be refused until the owner has had them adjusted. In one of the Inspector's diaries we find a reference to weights having been presented to him which were light to the extent of half an ounce on the pound, and another states in an official communication that "there is not one scale in ten in a fit condition to pass inspection in the country districts, and nearly the whole of the weights \{require adjusting."
11. Had arrangements been made at the outset for obtaining a return of all weights, measures and weighing-machines that were rejected when first tested, the necessity for inspection would

Return of first rejections not provided for. have been presented in a very forcible manner, but the means necessary for obtaining such a return were not at the disposal of the Department.
12. In a previous report I had occasion to refer to the difficulties Difficulty in experienced in the rural districts in relation to the adjustment of \(\underset{\text { adjustments }}{\text { relation }}\) such articles as were found unfit for verification. Representations
in rural districts.
on this subject still reach the Department, and there, undoubtedly, are many circumstances in that connection which embarrass the Inspectors in the performance of their work; but the objections to authorizing the lnspectors to act as adjusters are so great as to far outweigh everything that has been urged in favor of granting such authority. The experiment was made in 1877 ; but it was soon discovered that the arrangement gave rise to so much dissatisfac tion that it became necessary to direct the Inspectors to discontinue it.

The red stamp system.

Loss of revenue from red stamp system.
13. Severai manufacturers made complaints as to the payment of verification fees, stating that they had to pay them in advance of the time at which they could collect them fiom their customers, and that, as a rule, they could not add them to the price of their goods. It was decided to grant the relief the manufacturers asked for. This was effected by what has been technically known as the "red stamp system." That is, instead of collecting the verification fees from the manufacturer, the certificates are stamped, in red, "Fees un naid." The articles verified under this arrangement are then allowed to go into use, but when met with in use by the Inspectors, it becomes their duty to reverify them at once and collect the fees.
14. It was foreseen that the privilege thas granted would result in the loss of considerable revenue, and that a very large proportion of the fees accruing would never be collected. But it was considered that the main object of the law-the inspection of the articles and the prevention of the use of unjust or fraudulent weighty, measures and weighing machines-would be accomplished.

Loss greater than was oreseen.
15. The loss of revenue under this system has been even greater than was foreseen, and there has been hardly any cases so far in which the fees on the " red stamp" certificates buve been collected. Piactically, therefore, both the manufacturer of the articles and his customers have escaped payment. It has thus become necessary to consider whether some other method can be devised, whereby the object aimed at may be attained without loss to the revenue.
16. In Appendix \(J\). there will be found the particulars of several

Prosecution of parties for infroction of the law and use of "grain testers.'"
cares in which parties have been prosecuted for violation of the law. The case against certain grain dealers, at Belleville, for the use of an instrunent known as a grain tester, was intended to be a test case, with a view to determining whether such instruments were
within the meaning of the Weights and Measures Act. As will be seen the contention of the Department was fully sustained by the decision of the Police Magistrates, which will be found at page 47.
17. The statement as to the exports of barley from the several Importance ports in his division, given in the letter of Mr. Inspector Johnson, at page 58, show how important it is that the instruments used for determining the price per bushel should not only be entirely accurate as to their construction and adjustment, but that they should be used in a perfectly correct and uniform manner; a result which cannot be insured while they are exclusively used by those who are interested in the result. For it will depend on the method of filling the cup whether the true weight per bushel is represented by the result of the test. It would, therefore, be a great protection to the seller of grain by this test if an automatic arrangement for filling the cup were adopted, as has been done in those countries in Europe, where it is the custom to value grain by the weight of a given measure.

Inspection of Gas.
18. The details of the inspection of gas meters will be found in oomparison Appendices \(F\) and \(G\). The general result as compared with the of number of previous year, with reference to the inspection of meters, may be spected with stated as follows:-

19. The percentage of meters rejected in \(1878-79\) was \(4 \frac{3}{4}\) per cent., Percentage of and in 1879-80 not quite \(3 \frac{3}{4}\) per cent.

Illuminating Power.
20. A statement of the illuminating power and purity of gas Generally up inspected during the year will be found in Appendix H. The \({ }^{\text {to standard. }}\) illuminating power where inspection has been made, has, with only two exceptions, been up to and over the legal standard. The exceptions are once each in Brantford and Pictou, thus indicating a very great improvement in the illuminating power as compared with the previous year, especially with reference to St. John, N.B., and Picton, N.S.

\section*{Purity.}

\section*{Only tested for purity at certain places,}
21. Gas has only been regularly tested for purity at Montreal, Toronto, Quebec, St. John, Halifax and Ottawa. At the three last named places no regular tests were made previous to 1st January, 1880.

\section*{Result in} Montreal.

In Toronto.

In Quebec.

In St. John, N. B.
22. In Montreal the total number of tests taken was :-

For Sulphur, 38 tests. In excess of quantity allowed by law, 13 times.
For Ammonia, 38 tests. In excess of quantity allowed by law, 8 times.

For Sulphuretted Hydrogen, 30 tests. None found on any occasion.
23. In Toronto:-

For Sulphur, 52 tests. Not on any occasion in excess of quantity allowed by law.
For Ammonia, 48 tests. In excess of quantity allowed by raw, 11 times.
For Sulphuretted Hydrogen, 96 tests. Found present, 7 times.
24. In Quebec:-

For Sulphur, 32 tests. In excess of quantity allowed by law, 15 times.
For Ammonia, 31 tests. In excess of quantity allowed by law, 31 times.
For Sulphuretted Hydrogen,' 80 tests. Found present, 36 times
25. In St. John, N.B.:-

For Sulphur, 32 tests. In excess of quantity allowed by law, 13 times.

For Ammonia, 19 tests: In excess of quantity allowed by law, 10 times.

For Sulphuretted Hydrogen, 167 tests. None found on any, occasion.

In Halifax.: 26. In Halifax :-
For Sulphur, 21 tests. In excess of quantity allowed by law, 16 times.
For Ammonia, 17 tests. In excess of quantity allowed by law, once.
For Sulphuretted Hydrogen, 47 tests. None found on any occasion.
27. In Ottawa:-

In Ottawa.
For Sulphur, 48 tests. In excess of quantity allowed by law, 42 times.
For Ammonia, 24 tests. In excess of quartity allowed by law, 5 times.
For Sulphuretted Hydrogen, 92 tests. Found present, 39 times.
28. The test for Sulphuretted Hydrogen has been made at each of Test for Salthe places where illuminating power has been tested, and in addition phuretted Hydrogen. to what is stated above, with the following results:-
\begin{tabular}{|c|c|c|}
\hline & No. Tests. & Present. \\
\hline At Fredericton, N.B. & 106 & 15 \\
\hline Charlottetown, P.E.I. & 51 & 0 \\
\hline Hamilton, Ont & 45 & 0 \\
\hline Brantford, Ont. & - 5 & 1 \\
\hline Cobourg, Ont. & 3 & 0 \\
\hline Port Hope, _Ont... & 3 & 1 \\
\hline Pictou, N.S.......... & 44 & 12 \\
\hline
\end{tabular}
29. The receipts for inspection of gas for \(1879-80\), were \(\$ 2,478.00\); Receipts and while the expenses were \(\$ 10,071.05\). The excessive cost as com. pared with the revenue is due to defects in the law, in consequence of which the Department cannot recover fees for the inspection of the gas but only for inspection of meters. There does not appear to be any sufficient reason for making the cost of this insjection, which can only benefit the residents of places where gas is used, so large a charge on the consolidated revenue. I submit, therefore, that the law should be amended with a view to obtaining a sufficient revenue from the inspection to defray its cost.

All of which is respectfully submitted.
I have the honour to be, Sir,
Your obedient servant,
A. BRUNEL,

Commissioner.
Ottana, 31st December, 1880.

\section*{APPENDICES.}

\section*{CONTENTS.}
Page
1
Appendix A.--Statement of expenditure and receipts for year ended 30th June, 1890.
Appendix B - Return of the weights and measures inspected during fiscal year ending 30th June, 1880, showing total number brought for verification, verified and rejected for each division, for each Province, and for the whole Dominion ..... 4
Appendix C.-Return showing number of Dominion weights and lineal measures of each denomination inspected, brought for verifi- cation in each inspection division during the fiscal year ending 30th June, 1880. ..... 8
App \(n\) ndix D.-Return showing the number of Dominion measures of capacity, balances and weighing machines of each denomination, brought for verification in each inspection division during fiscal year ending 30th June, 1880 ..... 14
Appendix E.-Statement showing total number of gas inspection standards received and how distributed ..... 20
Appendix F.-Statement of gas inspection, expenditure and receipts for the year ending 30th June, 1880 ..... 21
Appendix G.-Return of gas meters presented for verification, verified, rejected and verified after firet rejection, during the year ending 30th June, 1880 ..... 22
Appendix H.-Return of the illuminating power and purity of gas inspected for the year ending 30th June, 1880 ..... 24
Appendix I.-Statement showing disposal of 100 sets weights and measures standards ..... 33
Appendix J.-Cases of Inspectors of Weights and Measures vs. parties for violation of the Weights and Measures Act of 1879. ..... 34
Case Inspector Weights and Neasures, Toronto, against James Park, butcher, Toronto ..... 34
Case James Park vs. James Bowman, Assistant Inspector Weights and Measures, Toronto, for perjury ..... 36
Case Inspector Weights and Measures, Toronto vs. R. G. Playter, milk dealer, Toronto, for having in his possession an unjust gallon measure ..... 39
Page
Case Inspector Weights and Measures, Belleville vs. C. E. Hall, grain dealer, in reference to the use of grain testers ..... 42
Description of grain tester ..... 42
Plate of grain tester ..... 42
Case Inspector Weights and Measures, Belleville vs. W. D. Fuller, for using grain tester. ..... 48
Case Inspector Weights and Measures, Belleville vs. George Downey, for using grain tester. ..... 50
Case Inspector Weights and Measures, Belleville vs. J. A. Phippen, for having in his possession unstamped measures of capacity ..... 51
Case Inspector Weights and Measures, Belleville vs. C. E. Hall, for using a false and unjust half-bushel measure ..... 52
Case Inspector Weights and Measures, Belleville vs. Wm. D. Fuller, for using in trade a false and unjust half-bushel measure ..... 54
Statement showing the number of bushels of barley received at Oswego, from ports in the Belleville weights and measures division, from 1st August up to 20th December, 1880 ..... 59
Action taken by Inspector Weights and Measures, Belleville, against Mr. Phippen, dealpr in ashes, for using illegal measure of capacity ..... 59

\section*{ERRATTA:}

Inspector Johnson's letter on page 59, should be dated January 20th, and should precede case against Phippen, on page 51.

\section*{APPENDIX A.}

Statement of Expenditure and Receipts for Year ending 3ith June, 18 c 0.


\section*{APPENDIX A-Continued.}

Statement of Expenditure and Receipts for Year ending 30th June, 1880-Continued.


\section*{APPENDIX A-Concluded.}

Statement of Expenditure and Receipts for Year ending 30th June, 1880—Concluded.


REGAPITULATION.


\section*{APPENDIX}

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


\section*{B.}

3uth June, 1880, showing the Total Number brought for Verification, Verified and Province, and for the whole Dominion.


\section*{APPENDIX}

Return of the Weights and Measures Inspected during the Fiscal Year ended Rejected for each Division, for each Province,


\section*{B.-Concluded.}

30th June, 1880, showing the Total Number brought for Verification, Verified and. and for the whole Dominion-Concluded.


\section*{Lation.}
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 3271 & 3194 & 77 & 413 & 401 & 12 & 5713 & 5629 & 81 & 3423 & 3411 & 12 & 27 & & \\
\hline 2429 & 2406 & 23 & 278 & 273 & 5 & 1568: & 1555 & 13 & 1923 & 1897 & 26 & 25 & & ........ \\
\hline 441 & 435 & 6 & 49 & 48 & 1 & \(530 \mid\) & 518 & 12 & 415 & 412 & 3 & 2 & & ........ \\
\hline 182 & 168 & 14 & 49 & \(46^{\prime}\) & 3 & 3131 & 295 & 18 & 360 & 358 & 2 & 3 & & ........ \\
\hline 21 & 21. & & 1 & 1 & & 25 & 25 & & 3 & , & & 19 & & ....... \\
\hline 11 & 11 & & 2 & 2 & & 21 & 21 & & & & & & & \\
\hline 6365 & 6235 & & 792 & 771 & 21 & 8170 & 8043 & 127 & 6124 & 6081 & & 76 & & , ...... \\
\hline
\end{tabular}

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

C.

Denomination, Inspected, brought for Verification in each Inspection Division during 30th June, 1880.


\section*{APPENDIX}

Return showing the Number of Dominion Weights and Lineal Measures of each Year ended


\section*{C-Continued.}

Denomination. Inspected and Verified in each Inspection Division, during the Fiscal. 30th June, 1:80.


APPENDIX
Return showing the Number of Dominion Weights and Lineal Measures of each Year ended


\section*{C-Concluded.}

Denomination Inspected and Rejected in each Inspection Division during the Fiscal 30th June, 1880.


Return showing the Number of Dominion Measures of Capacity, Balances and Division, during the Fiscal

D.

Weighing Machines of each Denomination brought for Verification in each Inspection year endud 30th June, 1880.


\section*{APPENDIX}

Return showing the Number of Dominion Measures of Capacity, Balances and Division, during the Fiscal


\section*{D-Continued.}

Weighing Machines of each Denomination, Inspected and Verified in each Inspection Year ended 30th June, 1880.


\section*{APPENDIX}

Return showing the Number of Dominion Measures of Capacity, Balances and Division, during the Fiscal


D-Conctuded.
Weighing Machines of each Denomination Inspected and Rejected in each Inspection Year crided 30th June, 1880.


\section*{APPENDIX E.}

Statement showing Total Number of Gas Inspection Standards received and how distributed.


\section*{APPENDIX F.}

Statement of Gas Inspection Expenditure and Receipts for the Year ended 30th June, 1880.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow{2}{*}{Inspection Districts.} & \multirow{2}{*}{Inspectors.} & \multicolumn{4}{|c|}{Expenditure.} & Receipts. \\
\hline & & Office Rents. & Contingencies & Salaries. & Total. & Fees Collected. \\
\hline & & \$ cts. & \$ cts. & \$ cts. & \(\$ \mathrm{cts}\). & \$ cts. \\
\hline Toronto............ ......... & G. Sutherland............. & & 19820 & 99896 & 1,198 16 & 53950 \\
\hline Hamilton ...... .... ......... & D. McPhie.......... ........ & 15000 & 870 & 69996 & 85866 & 7375 \\
\hline Brantford.................. & do & 15000 & 2455 & & 17455 & 6650 \\
\hline Ottawr ...................... & H. J. Hubertus ..... ..... & 9797 & 7951 & 70000 & 87748 & 6425 \\
\hline Belleville................ ) & & \{ ........... & 2500 & ........ ...... & 2500 & 1875 \\
\hline Cobourg . ................ & & 6000 & 5651 & ......... ...... & 11651 & - \\
\hline Port Hope & and Assistant Inspectors of W. \& M... & \(\{6000\) & 1550 & ......... .....0 & 7550 & 1650 \\
\hline Peterboro' .............. & & ...... ...... & ..... & .............. & - & 150 \\
\hline London. ......... ......... J & & ( ........... & 3325 & .............. & 3325 & ..............0 \\
\hline Montreal ........... ........ & N. Aubin ............ ........ & .............. & 14655 & 2,000 00 & 2,146 55 & 81000 \\
\hline Quebec .................... & N. Levasseur......... ...... & & 33835 & 1,000 00 & 1,338 35 & 25925 \\
\hline *St. John .... ..............* & A. Rowan .................. & 37500 & 7483 & 99996 & 1,449 79 & 9350 \\
\hline Fredericton............... & R. Atherton... ....... .... & ..... ......... & 2537 & .............. & 2537 & 6550 \\
\hline Chatham.. ............ & \(\cdot\) & ............. & .... & ............. & .............. & ........0. \\
\hline Newcastle ... ........ ...... & & 6000 & & & 6000 & . \\
\hline Halifax ..................... & A. Miller............ ........ & 20000 & 5797 & 99996 & 1,257 93 & 41650 \\
\hline Pictou...................... & G. Hepbarn.. . ............ & ............. & 1120 & 20000 & 21120 & 5250 \\
\hline Yarmouth & & & - ......... & ......... & ... & .........0. ..... \\
\hline *St. Hyacinthe... ........* & & 6794 & & & 5794 & \\
\hline Victoria, , B.O..... ........ & .... ........ & 15000 & 1481 & .............. & 16481 & ...........0. \\
\hline & & 1,360 91 & 1,110 30 & 7,599 84 & 10,071 05 & 2,478 00 \\
\hline
\end{tabular}
Verified. Rejected, and Verified after First Rejection, during the Year ended 30 ch June, 1880.



\section*{APPENDIX}

Return of the Illuminating Power and Purity of Gas
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow{3}{*}{Inspection Districts.} & \multicolumn{6}{|c|}{lluminating Power.} & \multicolumn{3}{|r|}{Sulphur per 100} \\
\hline & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{Lowest.} & \multirow[t]{2}{*}{\begin{tabular}{l}
Average. \\
Candles.
\end{tabular}} & Standard & \multirow[t]{2}{*}{} & \multirow[t]{2}{*}{} & Sighest. & Lowest. & Average. \\
\hline & & & & Candles. & & & Grains. & Grains. & Grains. \\
\hline \multicolumn{10}{|l|}{Montreal:-} \\
\hline July .......... ... .... .... & 18.44 & 1698 & 17.60 & 14.00 & 0 & 4 & 13.20 & 11.34 & 12.75 \\
\hline August......... ......... & 18.50 & 1683 & 1762 & 14.00 & 0 & 4 & \(30 \cdot 81\) & 1099 & \(18 \cdot 38\) \\
\hline September ..... ........ & 1732 & 17.00 & 17.20 & 14.00 & 0 & 3 & 26.85 & 21.03 & 23.28 \\
\hline October ......... ......... & 18.20 & 1727 & 17.69 & \(14 \cdot 00\) & 0 & 5 & \(27 \cdot 18\) & \(16 \cdot 14\) & 2157 \\
\hline November ...... ......... & 17.94 & 17.06 & \(17 \cdot 56\) & 14.00 & 0 & 5 & 24.60 & 1698 & 20.06 \\
\hline December............... & \(19 \cdot 25\) & 1459 & 16.36 & 1400 & 0 & 5 & 29.39 & 1885 & \(24 \cdot 24\) \\
\hline January.................. & 17.63 & 16.45 & \(17 \cdot 12\) & 14.00 & 0 & 4 & 29.47 & \(9 \cdot 21\) & 20.57 \\
\hline February.. ............. & 1741 & 16.32 & 1690 & 14.00 & 0 & 5 & 20.05 & \(17 \cdot 52\) & 18.86 \\
\hline March . .......... ....... & 17.33 & 1568 & 1631 & 1400 & 0 & 6 & 13.78 & 737 & 11.38 \\
\hline April..................... & \(18 \cdot 24\) & 1656 & 17.25 & 14.00 & 0 & 4 & 1924 & 17.51 & 18.60 \\
\hline May ........ .............. & 19.24 & 15.72 & 1725 & 14.00 & 0 & 5 & \(34 \cdot 11\) & 17.05 & 23.62 \\
\hline June ........... ........ ... & 17.97 & 16.08 & 1687 & 14.00 & 0 & 5 & 3301 & 13.77 & 21.37 \\
\hline \multicolumn{10}{|l|}{Toronto :-} \\
\hline August...................... & \(15 \cdot 36\)
15.17 & 1332
14.01 & 14.72
14.74 & 12.00 & 0 & 4 & 10.87
11.74 & 8.27
5.66 & 933
8.89 \\
\hline September............. & 15.76 & 14.67 & 1523 & 12.00 & 0 & 8 & 10.28 & \(8 \cdot 42\) & 972 \\
\hline October ................. & 15.05 & \(13 \cdot 18\) & 1425 & 12.00 & 0 & 4 & 15.05 & \(8 \cdot 36\) & 11.89 \\
\hline November ............... & \(15 \cdot 35\) & 13.89 & 14.49 & 1200 & 0 & 8 & 13.82 & \(9 \cdot 69\) & 10.91 \\
\hline December............... & \(16 \cdot 33\) & 13.93 & 14.91 & 12.00 & 0 & 9 & 14.32 & 8.85 & 11.74 \\
\hline January..... ... ........ & 17.65 & 14.62 & 16.09 & 12.00 & 0 & 9 & 12.50 & \(8 \cdot 30\) & 10.53 \\
\hline February ................ & 16.54 & 14.74 & 15.90 & 12.00 & 0 & 12 & 1219 & 751 & \(9 \cdot 60\) \\
\hline March .................... & 16.46 & 1452 & 15.71 & 1200 & 0 & 14 & \(10 \cdot 50\) & 9.21 & \(10 \cdot 02\) \\
\hline April ........ .... .. ..... & 1698 & 15.12 & 16.06 & 12.00 & 0 & 8 & 17.49 & 11.28 & \(14 \cdot 14\) \\
\hline May ....... ............... & 1684 & 1467 & 15.76 & 12.00 & 0 & 8 & \(13 \cdot 10\) & \(7 \cdot 61\) & \(10 \cdot 37\) \\
\hline June .. ................... & 1681 & \(15 \cdot 16\) & 16.11 & 32.00 & 0 & 8 & \(13 \cdot 14\) & \(9 \cdot 41\) & \(11 \cdot 15\) \\
\hline \multicolumn{10}{|l|}{Quebec:-} \\
\hline August ....................... & 17.54 & 16.58 & 17.20 & 14.00 & 0 & 3 & 63.44 & 13.53 & 3677 \\
\hline September.............. & 18.74 & 17.01 & 17.65 & 14.00 & 0 & 3 & 16.88 & 16.88 & 1688 \\
\hline October................... & 20.03 & 16.81 & 18.95 & 1400 & 0 & 12 & 2467 & \(19 \cdot 22\) & 21.94 \\
\hline November ........ ...... & 18.46 & 15.63 & \(17 \cdot 13\) & 14.00 & 0 & 12 & 2450 & 16.25 & \(20 \cdot 12\) \\
\hline  & 17.95 & 1551 & 16.82 & 14.00 & 0 & 12 & 31.13 & \(2{ }^{\text {' }} 95\) & 29-02 \\
\hline January ................. & 17.63 & 1557 & 16.71 & 14.00 & 0 & 6 & \(37 \cdot 12\) & 3554 & 36.33 \\
\hline February ............... & 18.61 & 1594 & \(17 \cdot 20\) & 14.00 & 0 & 6 & 21.44 & 1872 & \(20 \cdot 16\) \\
\hline March . ................... & 17.94 & 14.88 & 16.42 & 1400 & 0 & 6 & 27.76 & 16.88 & 2272 \\
\hline April ..................... & 1806 & 1671 & 17.30 & 14.00 & 0 & 6 & 26.71 & 11.51 & 17.71 \\
\hline May .............. .. ...... & 17.96 & 16.83 & 1750 & 14.00 & 0 & 6 & 16.42 & 16.42 & 16.42 \\
\hline June ......... ......... ... & \(18 \cdot 59\) & 17.29 & 18.04 & 14.00 & 0 & 3 & 1653 & 1296 & 1513 \\
\hline
\end{tabular}
H.

Inspected, for the Year ended 30th June, 1880.


Return of the Illuminating Power and Purity of Gas


H-Continued.
Inspected, for the Year ended 30th June, 1880-Continued.


H.-Continued.

Inspected, for the Year ended 30th June, 1880.-Continued.


APPENDIX
Return of the Illuminating Power and Purity of Gas

H. -Concluded.

Inspected, for the Year ended 30th June, 1880-Concluded.


\section*{APPENDIX I.}

Statement showing disposal of 114 Sets Weights and Measures Standards.


\section*{APPENDIX \(J\).}

CASES OF INSPECTORS OF WEIGHTS AND MEASURES vs. PARTIES FOR. VIOLATION OF THE WEIGHTS AND MEASURES ACT OF 1879.

\title{
Case of Inspector of Weights and Measures, Toronto, vs.
}

James Park, Butcher.
Before the Police Court, 22nd October, 1880.
Weights and Measures Case.
Canada, Province of Ontario, ) The information and complaint of George I. County of York, Bolster, of the City of Toronto, Inspector of Weights and Measures, taken on oath before me, George
To Wit: JTaylor Denison, Esquire, Police Magistrate in and for the said city, the sixteenth day of October, in the year of our Lord one thousand eight hundred and eighty.

The said informant, upon his oath, saith he is informed and believes that James Park, on the ninth day of October, in the year of our Lord one thousand eight hundred and eighty, at the City of Toronto, in the County of York, being a trader and not a manufacturer of, or dealer in weights, unlawfully did have in his possession three unstamped weights, contrary to the form of the Statute in such case made and provided.

Complainant prays that a summons may issue and justice be done in the premises.
Sworn before me this 16th day of
October, 1880.

\author{
GEO. I. BOLSTER.
}
G. T. Denison, P.M. )
15. 10. 80.-Adjourned by consent till 21 st instant.

22nd October, 1880.-The Defendant pleads not guilty.
George I. Bolster, sworn, states: I know the Defendant, he is a trader in the St. Lawrence market in this city; he is a butcher. I searched his shop on the 9 th October and found three weights, two of them unstamped and one that had been stamped, but was subsequently tampered with, so.that it is light.
Sworn before me,
G. 'T. Denison, P.M. \(\}\)

GEO. I. BOLSTER.
James Bowman, sworn, states: I inspected Mr. Park's weights some months ago; I found some correct and some incorrect; I stamped them all that were shown me.
Sworn before me,
G.'T. Denibon, P.m. \(\}\)

JAS. BOWMAN.
Mr. Park's evidence tendered and refused. Fined \(\$ 25\) and costs or thirty days. G. T. DENISON, P.M.
(Aanada, Province of Ontario, Be it remembered, that on the twenty-second
County of York, day of October, in the year of our Lord one City or Toronto, thousand eight hundred and eighty, at the said To Wit: \(\quad\) City of Toronto, in the County of York, James Park, of the said city, is convicted before me, George Taylor Denison, Esquire, Police Magistrate in and for the said City of Toronto. For that he ihe said James Park, on the ninth day of October, in the year of our Lord one thousand eight
hundred and eighty, at the City of Toronto, in the County of York, being a trader and not a manufacturer of, or dealer in werghts, unlawfully did have in his possession three unstamped weights, contrary to the form of the Statute in such case made and provided:

George I. Bolster, Inspector of Weights and Measures, for the inspection district of Toronto, being the complainant:

And I adjudge the said James Park for his said offence, to forfuit and pay the sum of twenty-five dollars, to be paid and applied according to law; and also to pay to the said George I. Bolster the sum of two dollars and eighty-five cents, for his costs in this behalf, and if the said several sums be not paid forthwith, then 1 order that the same be levied by distress, and sale of goods and chattels of the said James Park, and in default of sufficient distress, I adjudge the said James Park to be imprisoned in the common jail of the said City of Toronto and County of York, at Toronto, in the County of York, and there be kept at hard labor for the space of thirty days, unless the said sums and the costs and charges of conveying of the said James Park to the said jail shall be sooner paid.

Given under my hand and seal, the day and year first above mentioned, at Toronto, aforesaid.
G. T. DENISON,

Police Magistrate. [L.S.]

\section*{Weigits and Measures Inspector's Office, Toronto, 17th November, 1880.}

Sir,-I beg to report that in the case of the prosecution of James Park, before the Police Magistrate on the \(\because\) 2nd of October ultimo, for having unstamped weights in his possession, I was asked by Mr. Park's counsel if his (Park's) scales and weights had been examined before. I replied that they had about four months ago.
"By whom were they examined?"
By one of my assistants, Bowman.
"How did he find them?"
According to his report to me, not at all satisfactory.
"What was his report?"
That the large scales and weights, on which provisions coming in were weighed, were all right, and that the whole of the small scales, on which provisions going out were weighed, were wrong.

Bowman was then sworn and confirmed the above report made to me. In consequence of the report made to me by Bowman: Park has laid an information against him for perjury.

The case was before the Police Magistrate yesterday, and quashed, as the information was not in proper form. I have no doubt but it will be brought on again.

Bowman is confident he can prove the correctness of his statement to me.
A man named Andrews, who was with and assisted Bowman when he first inspected Park's scales, told me yesterday that be can swear that every one of the weights on Park's small scales was light; and J. G. White, scule manufacturer, of this city, telle me that at the time of the first inspection Park sent him a whole basketful of weights and all of them were light.

I enclose the Telegram's report of yesterday's proceedings.

\section*{"Perjury.}
"James Bowman, Deputy Inspector of Weights and Measures, was charged by James Park, butcher in the St. Lawrence Market, with having committed a perjury in the Police Court, in swearing that when he inspected Mr. Park's weights and measures all those weights used for weighing in goods were correct, and that those used for weighing out goods were all incorrect.
"Mr. Marphy and Mr. J. A. Macdonell, for Mr. Bowman, asked that the information be quashed as it was not properly laid, not showing that the alleged oath had been administered by any one competent to administer it. The information
merely said that the oath had been administered by G. T. Denison, and not by G.T. Denison, Police Magistrate ; further, that it was not properly traversed.
" Dr. McMichael, Q.C., for Mr. Park, contended that the information was properly laid.
"His Worship sustained the objection raised by Mr. Murphy and Mr. J. A. Macdonell, and a new summons had to be issued.
"His Worship stated that Mr. Nudel, the Police Court clerk, was not responsible for the loose manner in which the information was drawn, as it was Mr. Park's lawyers who drew it out.

I am, Sir, Your obedient servant,
G. I. BOLSTER,

Inspector of Weights and Measures.
The Commissioner of Inland. Revenue, Ottawa.
Case of Jas. Park, butcher, vs. Jas. Bowman, for perjury.
Canada, Province of Ontario, ) The information and complaint of James Park, County of York, City of Toronto, \(\}\) merchant, as taken on oath before me, George To Wit: J Taylor Denison, Esquire, Police Magistrate in and for the said city, the sixteenth day of November, in the year of our Lord one thousand eight hundred and eighty.

The said informant, upon his oath, saith he is informed and believes that at the sittings of the Police Court, of the City of Toronto, in the County of York, on the twenty-second day of October, in the year of our Lord one thousand eight hundred and eighty, before George Taylor Denison, Esquire, the Police Magistrate for the said City of Toronto, a certain charge made against the said James Park, for being a trader and not a manufacturer or dealer in weights, and having in his possession three unstamped weights, was tried, upon which trial James Bowman appeared as a witness for and on behalf of the prosecution therein, and was then and there duly sworn before the said George Taylor Denison, Esq., Police Magistrate for the said City of Toronto, and did then and there upon his oath aforesaid, falsely, wilfully and corruptly depose and swear in substance and to the effect following: "That the weights the said James Park had for weighing in with were. correct, and the weights the said James Park had for weighing out with were wrong." Whereas in truth the said James Park had not different sets of weights for weighing in and weighing ont, but used the same sets for both weighing in and weighing out; and the said James Park did not have weights for weighing in with that were correct and weights for weighing out with that were wrong, and the said James Bowman did thereby commit wilful and corrupt perjury.
Sworn before me.
G. T. Denison, P.M. \(\}\)

JAMES PARK.
24th November, 1880.-The defendent pleads not guilty.
William Macdonald sworn, states : I live in Toronto ; I was present when Mr. Park was tried here in the Police Court, on the 22nd October last, I believe for having unstamped weights in his possession. I heard defendant, Bowman, examined as a witness; he was sworn; he stated that sometime prior he had examined Mr. Park's weights and that he had found the weights Mr. Park had for weighing in with were correct and that those he had for weighing out with were wrong; I do not think the statement was made in answer to any direct question as to that point; I believe that Mr. Bowman was called for the defence. Mr. Bowman did not say at that time that he bad reported to Mr. Bolster that the weights.for weighing in were correct and the weights for weighing out were wrong, that also was said in the course of the examination but not at the same time; I presume he was referring to last February when he made the statement. He explained also that the large weights and scalen, on which defendant would buy in stuff with, were correct, and that the small weights
which he would use in weighing out were wrong. Mr. Bolster stated that Bowman had reported to him in the same words as in the information, or to same effect.
Sworn before me \(\underset{G}{\text { G. T. Denison, P.M. }\} \text { W. MaCDONALD. }}\)
Thomas II. Noble sworn, states: I was present at the trial referred to in the information; Bowman was sworn and examined as a witness; he sivore that Mr. Park kept two sets of weights, one for weighing in and one for weighing out ; the set for weighing in were correct and the set for weighing out were wrong. I have known Mr. Park and dealt with him; I have bought out from Mr. Park on the large scales; I have never sold to him; I have bought on the small scales as well; I have seen him buying in, it was weighed on the large scales; I cannot remember his buying in on the small scales.

\section*{To Mr. Murphy :}

I was fined the same day as the trial referred to. I deal wholesale with Mr. Park. I have bought as little as 10 lbs . on the large scales. I cannot say anything about the weights in February. I remember Mr. Bowman explained that the large scales on which Park would weigh in were correct, and the small scales on which he would weigh out wore wrong.
Sworn before me,

\author{
G. T. Denison, P.M. \(\}\)
}

\section*{THOMAS NOBLE.}

James Park, sworn, states:-I am a provision merchant, wholesalo and retail, in the St. Lawrence Market in this city. I heard Bowman say that the weights I had for weighing in with were correct, and the weights I had for weighing out with were wrong. This statement is false as far as keeping particular sets for that particular purpose. I have different sets of scales-four or five altogether in the market-two scales inside; one a small counter scale, the other a platform scale; two counter scales outside, and a third one not in use. The largest scalo is inside. I am in the habit of buying and selling. I buy butter, cheese, pork, etc. I weigh the great bulk of what I buy in on the platform scale-tubs of butter, pigs, etc.-anything small we buy in on the small scale. In selling we usually use the small scales, unless selling in large quantities, when we use the large scales; we use the large scales to buy and sell in large quantities, and wo use the small scales to buy and sell in small quantities; up to 30 lbs . we use the small scales, above 30 lbs. wo use the large scales. The wholesale warehouse was not mentioned on the trial. I rarely, if ever, buy in from the Arcade, or use the small scales in the Arcade for that purpose. We had our weights stamped in February, and they were all correct then, 1 presume. I had none others in my shop than those which had been stamped in February. When Bowman came in October, I had no weights except those which had been stamped in Februaryall were stamped then. In October I missed two of the weights after Mr. Bolster ana Mr. Bowman left; they were weights that had been stamped in February. I had done nothing with them in the samo time. I had sold and bought all that time with the same weights-the two that were missed belonged to the counter scales in the inside; it was used for buying and selling; the weights taken away were \(4-\mathrm{lb}\). weights.

\section*{To Mr. Murphy:}

I do a large retail and wholesale business; I generally sell by rotail; we always use the small scales for retailing to consumers. About three-fourths of what I buy in is bought in on the large scales. I think the statement Bowman made referred to February last. I sent all the weights belonging to the small scales to the office to be stamped in February. I cannot say whether the weights of the scales were correct in February or not. The weights for the large scales were not taken away in February last. The most of the small scale weights were taken away to be stamped.

I have used the same weights for ten years back; they had been stamped every fear. I was not aware they were light at any time, and they had stamps on each year.
Sworn before me,
G. T. Denison, P.M. \(\}\)

JAMES PARK.
John Kirbey, sworn, states:-I am employed by Mr. Park; I have been five years with him. I weigh all the goods that come in ; I weigh both out and in. I use the platform scale for weighing in and out the heavy goods. I use the small scales to weigh in and out in small quantities; each scale has got its own weights. There is no distinction made in buying or selling other than weight; we use the same weights on the small scalo for buying and selling; the same way with the large scales. The same weights have been used in the shop since I have been in the shop; they have been stamped several times, twice to my knowledge. New weights have not been used. I did not know any of the weights were light.

\section*{To Mr. Macdonnell :}

I have known articles bought in on the large scale and parts sold out on the small scale. I have never known things bought in on the small scale and sold out on the large scale. About five times as much would be bought in on the large scale as on the small.


\section*{JOHN KIRBEY.}

Henry Wm. Cuff, sworn, states:-I live on Jarvis street. I deal with Mr. Park; I have a stall next door. I see them using the scales; I buy wholesale from him ; the goods were weighed on the platform scales, sometimes on the small scales. I am in the same business as Mr. Park, and his mode of buying and selling would be about the same; we buy in generally by the large scales and weigh oftenest on the small scales in selling out; the greater bulk goes over the large scales, both buying and selling.
Sworn before me,

> me, G. T. Denison, P. M.
H. Wm. CUFF.

James Lenoox, sworn, states:-I was present when Mr. Yark's came case up. I heard Mr. Bowman give his evidence. He said the weights Mr. Park had for weighing in on were correct, and those he had for weighing out on were incorrect.

\section*{To Mr. Murphy:}

I do not remember what time Mr . Bowman reterred to.
Sworn before me,
G. T. Denison, P.M. \(\}\)

JAMES LENNOX.
W. J. Collins, sworn, states:-I was present at Mr. Park's trial. Mr. Bowman was sworn; he stated that the large scales that Mr. Park had for weighing in on were correct, and and those inside for selling out on were not correct.
\(\left.\begin{array}{r}\text { Sworn before me, } \\ \text { G.T. Denison, P.M. }\end{array}\right\} \quad\) W. J. COLLINS.
E. K. Scholey, swo:n, states :-I have a place of business near Mr. Park. I am a grocer and provision dealer. I do not know what scales he has. I have bought cheese, butter and lard, wholesale and retail. He has used the platform scales generally, sometimes the small scales. I have dealt with Mr. Park for 18 or 20 years; I dealt with him in February last. I do not know if he is buying on one scale and selling on another.
Sworn before me,
G. T. Denison, P.M. \(\}\)
E. K. SCHOLEY.

John Buck, sworn, states:-I have been in Mr. Park's employment for eight years back; I work inside; I send goods out. I occasionally buy. We have large and small scales; we use the large scale for large quantitios and the small scale for small articles; I do most of the selling; I sell mostly large articles and use the large scale the oftenest; I have no interest in the matter, I use whichever is the most convenient. We do not have one scale for buying and one for selling. The weights had often been taken away to be repaired; we sent them up sometimes ourselves. I do not know of our using any weights of not proper weight to my knowledge. The most of the retail selling is on the small scales.
Sworn before me, G.T. Denison, P.M. \(\}\)

\section*{J. BUCK.}

Joseph Bailey, sworn, states:-I am in Mr. Park's employment; I sell on the outside. I have bought sometimes and, used Mr. Fee's scales; we usually sell on the small scales, but in large quantities I used Mr. Fee's scales to sell. The Inspector took away some weights in October from inside, but took none from me. I do not remember any fault being found with the weights in February; they were not taken away from me in February; they were sent to be stampod. I did the most of the retail business; the buying in was mostly done on the big scales inside. We never tested our weights in any way.
Sworn before me,
G. T. Denison, P.M.

\author{
JOSEPH BAILEY.
}

\section*{For Defence.}

Walter A. Andrews, sworn, states:-I was with defendant when we went to Mr. Park's in February last. We found the large scale was corroct and its weights; the weights of all the small scales were incorrect; I do not think there was one correct; they varied so much that we fixed half-a-dozen, and the rest we took away, they were so bad; it was one of the worst cases we had. We calculated that if he bought in on the large scale and sold at the same price on the small scales he would make money. I brought the weights from Mr. Park's to the office. There were probably 20 to 30 weights, which were all wrong; I think the old stamp was on some of them;
could not tell whether they were right or wrong unless they were tested.
Sworn before me,
G.T. Denison, P.M. \(\}\)

\section*{WALTER A. ANDREWS.}

James G. White, sworn, states:-I am a scale-maker. I worked for Mr. Park last winter; I adjusted some weights; there were about 15 or 20 ; they wero all light; they were not a great deal out. I have corrected Mr. Park's weights several times when he has sent them. There was one \(4-\mathrm{Hb}\) weight that the lead had fallen out, probably about quarter of an ounce.
Sworn before me, G.T. Denison, P.M. \(\}\) JAMES G. White.
Dismissed.
G. T. DENISON, P.M.

Case of Inspector of Weights and Measures, Toronto, vs. Richard G. Playter, for having in his possession an unjust Gallon Measure.

Weights and Measures Inspection Office, Toronto, 4th December, 1880.
Sir,- I beg to enclose the information and the ovidence taken in the case of Richard G. Playter, as asked for in your telegram of the 3rd inst.

I have the honor to be, Sir,

\author{
The Commissioner \\ Inland Revenue, Ottawa.
}

Your obedient servant,
G. I. BOLSTER.

Canada, Province of Ontario, County of York, City of Toronto,

\section*{Tue Information and Complaint of \\ GEORGE I. BOLSTER,} To Wit : ) of the City of Toronto, Inspector of Weights and Measures for the Inspection Distriet of Toronto, taken on oath before me, Neil C. Love, one of Her Majesty's Justices of the Peaco in and for the said city, the thirtyfirst day of August, in the ycar of our Lord one thousand eight bundred and eighty.

The said informant, upon his oath saith, ho is informod and believes that Richard G. Playter, on the first day of July, in the year of our Lord one thousand eight hundred and eighty, at the City of Toronto, in the County of York, did unlawfully and wilfully cause to be made a falso and unjust one gallon measure, contrary to the statute in such case made and provided.
Sworn before me at Toronto,
on the day and year first aforesaid.

> Neil C. Love, J.P.
> 3rd Sept., 1880.

The defendant pleads not guilty.
Michael Scanlon, sworn, states:-I have seen a measure like the one produced; I put a new bottom in it-it was leaking. I cut it down shorter. Defendant said he wanted it to go under the seat of his waggon. I told him it would not measure full measure. He said he was not going to use it to measure. This was done about two months ago.
Sworn before me,
G. T. Denison, P.M. \(\}\)

Fined \(\$ 5.00\) and costs.
G. T. DENISON, P.M.
"Canada, Province of Ontario, Be it remembered, that on the third day of Septem-
County of York, City of Toronto, To Wit: \(\int\) Toronto, in the County of York, Richard G. Playter, of the said city, is convicted before me, George Taylor Denison, Esquire, Police Magistrate in and for the said City of Toronto. For that he, the said Richard G. Playter, on the first day of July, in the year of our Lord one thousand eight hundred and eighty, at and in the said City of Toronto, in the County of York, did unlawfully and wilfully cause to be made a false and unjust one gallon measure, contrary to the form of the Statute in such case made and provided:

George I. Bolster, Inspector of Weights and Measures for the Inspection District of Toronto, being the complainant:

And I adjudge the said Richard G. Playter for his said offence, to forfeit and pay the sum of five dollars, to be paid and applied according to law; and also to pay to the said George I. Bolster the sum of \(\$ 2.85\), for his costs in this behalf, and if the said several sums be not paid forthwith, then I order that the same be levied by distress and sale of the goods and chattels of the said Richard G. Playter, and in default of sufficient distress, I adjudge the said Richard G. Playter to be imprisoned in the common jail of the said City of Toronto and County of York, at Toronto, in the County of York, and there be kept at hard labor for the space of thirty days, unless the said sums and the costs and charges of conveging of the said Richard G. Playter to the said jail shall be sooner paid.
\(\left.\begin{array}{l}\text { Given under my hand and seal, the day and year } \\ \text { first above mentioned, at Toronto, aforesaid. }\end{array}\right\} \quad\) G. T. DENISON, P.M.
Canada, Province of Ontario,) The information and complaint of George I. Bolster, County or York, \(\quad\) of the City of Toronto, Inspector of Weights and City of Toronto, \(\} \quad\) Measures for the Inspection District of Toronto, To Wit: \(\quad\) taken on oath before me, Neil C. Love, one of Her Majesty's Justices of the Peace in and for the said city, the thirty-first day of August, in the year of our Lord one thousand eight hundred and eighty.

The said informant, upon his oath, saith be is informed and believes that Richard G. Playter, on the thirtieth day of August, in the year of our Lord one thousand eight hundred and eighty, at the City of Toronto, in the County of York, did unlawfully have in his possession for use in trade a one gallon measure which is false and unjust, contrary to tho Statute in such case made and provided.
Sworn befcre me at Toronto, the day and)
year first aforesaid,
Neil C. Love, J.P., 3rd Sopt., 1880.

GEO. I. BOLSTER.

The defendant pleads not guilty.
Geo. I. Bolster, sworn, states: I am the Inspector of Weights and Measures for this city; I went to the Orphan's Home, on Gerrard street, in this city, on the 30th August last; I waited till defendant came up to deliver his milk in the ordinary course of his trade; I examined a measure purporting to be a gallon measure, Imperial stamped measure with the Government stamps; it had been shortened so as to hold a pint and over, less than a gallon; he said he did not use it but it had remains of milk in it when I examined it; he said he had a bottom put in it; he had a quart measure all right, but no other gallon measure; I did not see him measuring milk with the measure produced; the stamp is not under the new Act; the Act has been notified in the papers.
Sworn before me,
G. T. Denison, P.M. \(\}\)

\section*{GEO. I. BOLSTER.}

Jobn Playter, sworn, states: I was with defendant on the 30th August; I drove into town with him; I left him at Shelbourne street; he was delivering milk; he delivered with a quart measure; the gallon measure is only used for carrying it.
Sworn before me, G. T. Denison, P.M. \(\}\)

JOHN FLAYTER.
Fined \(\$ 20\) and costs.
G. T. DENISON, P.M.

Canada, Province of Ontario, Be it remembered that on the third day of
County of York, City of Toronto, To Wit : September, in the year of our Lord one thousand eight hundred and seventy-eight, at the said City of Toronto, in the County of York.
Richard G. Playter, of the said city, is convicted before me, George Taylor Denison, Esquire, Police Magistrate in and for the said City of Toronto. For that he, the said Richard G. Playter, on the E0th day of August, in the year of our Lord one thousand eight hundred and eighty, at and in the said City of Toronto, in the County of York, did unlawfully have in his possession for use in trade, a one gallon measure which is false ond unjust, contrary to the form of the Statute in such case made and provided :

George I. Boister, Inspector of Weights and Measures for the Inspection District of Toronto, being the complainant:

And I adjudge the said Richard G. Playter, for his said offence, to forfeit and to pay the sum of twenty dollars, to be paid and applied according to law, and also to pay to the said George I. Bolstor the sum of \(\$ 2.85\) for his costs in this behalf; and if the said several sums be not paid forthwith, then I order that the same be levied by distress and sale of the goods and chattels of the said Richard G. Playter, and in default of sufficient distress, I adjudge the said Richard G. Playter to be imprisoned in the common jail of the said City of Toronto and County of York, at Toronto, in the County of York, and there be kept at hard labor for the space of thirty days, unless the said sums and the costs and charges of conveying of the said Richard G. Playter to the said jail shall be sooner paid.
Given undor my hand and seal, the day and year \(\}\)
first above mentioned, at Toronto, aforesaid. \(\}\)

\author{
G. T. DENISON, P.M.
}

\title{
Case of Inspector of Weights and Measures, Belleville, vs. Chas. Edward Hall, Grain Merchant, in reference to the use of Grain Testers.
}

\section*{Description of Grain Testers.}

As will be seen by the accompanying plate, this instrument is construeted and works on the principle of a steelyard. , The arm is graduated to indicate the weight of the grain in lbs. per busbel, and is supplied with a sliding weight which is some definite proportion of a pound avoirdupois; and the pan or measure, which is suspended immediately below the fulcrums, as the load on a steelyard, is made to contain a definite part of a bushel in corrospondence with the sliding weight.

By this instrument grain buyers determine the weight and price per bushel of the grain they purchase from farmers.

For further description of this instrument, of its uses and abuses, read the following correspondence in reference thereto:-

\section*{Illegality of unverified and unstamped " Grain Testers."}

Correspondence between Weights and Measures Inspector, Belleville, and the Department.

\section*{Weights and Measures Inspection Office, Belleville, 29th October, 1880.}

Sir,-1st. As considerable dissatisfaction exists amongst the farming community in this vicinity owing to the grain buyers here using "Grain Testers," I will thank you for an opinion as to whether their use comes within the meaning of section 28, Weights and Measures Act of 1879.

2nd. They are used by the grain buyers to ascertain the weight of the grain they are buying; thus, if it weighs say 46 lbs. to the bushel, the seller is allowed a certain price for it; if it weighs more than that weight more is given for it, and if less a less price is obtained.

Commissioner Inland Revenue, Ottawa.

I am, Sir, your obedient servant, WM. JOHNSON, Inspector of Weights and Measures.

\author{
Inland Revenue Department, Ottawa, 1st November, 1880.
}

Sir, -I beg to acknowledge receipt of your letter of 29 th alt., enquiring whether an instrument known as a "Grain Tester," of which you send a small cut, comes within the meaning of the Weights and Measures Inspection Act.

1st. In reply I beg to inform you that, if it is used for the purpose of regulating or determining either the quantity or price of the grain weighed by it, it clearly comes within the meaning of the law both as regards a measure of capacity and a weighing machine.

2rd. I take it that the measure of capacity attached to the apparatus is some definite proportion of a bushel, and that the beam and weight are of the nature of a steelyard divided in a corresponding ratio. If this is the case the owner must have legibly marked on the measure what proportion of a bushel it represents, and also on the weight what proportion of a pound.

3rd. As this is a very nice operation, I think it would be well if the owner of these instruments were to send at least one of them to the Department, in order that it may be accurately tested here as a verification of the correctness of your method of testing.
Wm. Johnson, Esq.,
I am Sir, your obedient servant,
Inspector Weights and Measures,
Belleville.


\section*{Weigits and Measures Inspection Office, Belleville, 4th November, 1880.}

Sir,-1st. Acting on the opinion expressed in your letter of 1st instant, No. \(\mathbf{2 5 , 0 0 0}\), I have seized five grain testers from two firms of grain merchants, and laid information against them for a violation of section 28 of Weights and Measures Act of 1879 .

2nd. The cases will be brought before the Police Magistrate in this city on Monday next.

3rd. I have taken the course above referred to for the purpose of making a test case, and because I am convinced that I shall be able to prove that great injustice is being done to the farming community by the use of these "grain testers.", The injustice will appear when I state the following case-which is one of hundreds. A has barley for sale, which, before leaving home, he teated by his Imperial busbel and found it to weigh 49 lbs. to the bushel ; it is of a bright color and clean-cleanneas, color and weight being the qualities sought for. \(B\) offers to buy it from him, agreeing to pay him 63c. if it weighs \(47 \mathrm{lbs} ., 65 \mathrm{c}\). if it weighs 48 lbs ., and 67 c . if it weighs 49 lbs. to the bushel. B weighs it with his "grain tester," which, being adjusted to the Winchester measurement, does not contain as much grain as if adjusted to "Imperial measurement, and A's grain, which at home weighed 49 lbs. to the bushel, weighs only 47 lbs ., and he has to take 4 c . a bushel less for his barley than its market value.

4th. I will send you by express, in the morning, two of the "grain testers" I Thave seized. I do so because the persons from whom I seized them say "everybody uses them," and if so, that the attention of Inspectors elsewhere may be called to this illegality.

> I have the honor to be, Sir, Your obedient servant, WM. JOHNSON,
> Inspector of Weights and Measures.

Commissioner Inland Revenue, Ottawa.

\section*{Weights and Measures Inspection Office, Belleville, 8th November, 1880.}

Sir,-1st. On receipt of your telegram of the 6th instant, authorizing me to engage counsel in suits brought by me against certain grain busers, I engaged the services of the Hon. Lewis Wallbridge, Q.C.

2nd. On the court opening this morning we askod for an enlargement of all the cases. This request, however, was very strongly opposed by counsel opposite, on the ground that his clients were suffer:ng great inconvenience at the very busiest season of the year by being deprived of the use of the "testers," and he insisted on the cases being proceeded with at once, so that his clients might get back the "testors" which I had seized. After consultation amongst counsel, the court enlarged the cases until to-morrow-Tuesday-morning.

> I am, Sir,
> Your obedient servant, WM. JOHNSON, Inspector Weights and Measures.

\section*{Inland Revenue Department, Ottawa, 15th November, 1880.}

Sir,-1st. I am surprised at not having any report as to what has been done in reference to the "grain testers," especially whether the cases were postponed, and on what conditions.

2nd. A careful verification of the instruments received from you shows that they have been made on the basis of the Winchester bushel, as is indeed obvious from the inscription on the instruments themselves, but, even for the Winchester bushel, they are not absolutely correct, though the larger one is sufficiently near for practical purposes. The smaller one has too large an error.

3 rd . Of course, it is quite clear that instrumonts of this kind, made on the basis of the Winchester bushel, ought not to be admitted to use in Canada. * * *

4th. It may, however, be well to observe, and you may mention the fact to the farmers, that the accuracy of the "testers" depends very much upon the method used for running the grain into them, which ought to be uniform, inasmuch as the buyer can make the result suit his parpose, by letting the grain run in from the scoop held in his hand at a greater or less elevation above the ineasure.

5th. I have ascertained that these "grain testers" are very largely used on the * continent of Europe, especially in Germany, where there are very stringent regulations as to their application. In so far as we are concerned, it may be sufficient that, if in your intercourse with farmers, you point out to them the method by which error can be produced. If some of the local papers would also mention it, it might be beneficial.

6th. As soon as I am advised of the result of the te3t, I shall decide as to what disfcsition is to be made of the measures.

I remain, Sir,
Your obedient servant,
A. BRUNEL,

Commissioner.

\author{
Wm. Johnson, Esq., \\ Inspector of Weights and Measures, Belleville.
}

\section*{Weights and Measures Inspection Office, Belleville, 16th November, 1880.}

Sir,-I beg to enclose the full text of decision given by the Police Magistrate yesterday morning re Inspector of Weights and Measures vs. Hall. You will observe that the decision is a very clear one, and is not likely to le appealed. As I was not in Court, I cannot say why the other cases, involving the same question were not prcceeded with. It was probably owing to the absence of counsel for the defence ; it was understood, however, when the case of Hall was heard and argued that the decision in one case would bind all.

In reference to the way these "grain testers" are used, and the ease with which they can be manipulated in favor of the buyer, every farmer knows this, and that is the reason why the farmers have so long objected to their use; and even if made to conform to the Dominion standard, they are so capable of being fradulently used that I am quite satisfied their use will continue to give great dissatisfaction. My experience of any weighing machine in the shape of a steelyard is, that it takes the most scrupulously honest man to use it. Permit me, therefore, to express the opinion that, from the difficulty of testing them and the ease with which they can be fraudulently manipulated, their use should be entirely prohibited; in doing so, you will
doubtless displease the fow grain buyers, but you will do a most popular thing in the eyes of the thousands of sellers.

> I am, Sir,
> \(\quad\) Your obedient servant,

WILLIAM JOHNSON, Inspector of Weights and Measures.
The Commissioner of Inland Revenue, Ottawa.

\section*{INFORMATION.}

Canada, Province of Ontario, The information and complaint of William Johnson, Countr of Hastings, \(\}\) Inspector of Weights and Measures, taken City of Belleville, this fifth day of November, in the year of Our

To Wit: Lord 1880, before the undersigned, Thomas Holden, Police Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace, in and for the County of Hastings, who saith that C. E. Hall, grain buyer at the City of Bellville, in the County of Hastings, on or about the fourth day of November, A.D., 1880, did use a grain tester which was not duly inspected and stamped as provided, the same being illegal and contrary to the 28 th section of the Weights and Measures Act of \(1 \delta 79\), as he is informed and believes.
Sworn before me at Belleville, the day and
year above mentioned.
Revised this 9th November, A.D., 1880.
THOS. HOLDEN, P.M.

\section*{SUMMONS TO DEFENDANT.}

Canada, Province of Ontario, , To Cbarles Edward Hall:-Whereas, information

County of Hastings,
City of Belleville, To Wit: \(\}\) hath this day been laid before the undersigned, Police Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace, in the said City of Belleville, and for the said County of Hastings, for that you, Charles Edward Hall, Grain Buyer, at the City of Belleville, in the County of Hastings, on or about the fourth day of November, A.D., 1880, did use a grain tester which was not duly inspected, and the same being illegal, contrary, as provided by Weights and Measures Act of 1879, to the 28th section of the Weights and Measures Act of 1879.

These are therefore to command you in Her Majesty's name to be and appear on Monday the eighth day of November, in the year of our Lord one thousand eight hundred and eighty, at ten o'clock in the forenoon, at the Police Office, Belleville, before me or such other Justices of the Peace having jurisdiction, as may then be there, to answer to the said complaint, and to be further dealt with according to law.
Given under my hand and seal this 5th day of
November, in the year of our Lord one thousand oight hundred and eighty, at Belleville, aforesaid.

\author{
Police Court, Belleville, 9th Novembor, 1880.
}

\section*{William Johnson, \(v s\). Charles Edward Hall.}

The defendant appears to answer to the charge of having at the City of Belleville, on or about the fourth day of November, A.D., 1880, used a grain tester which was. not duly inspected and stamped as provided by the Weights and Measures Act of 1879, the same being illegal contrary to the 28th section of said Act.

I amend the information and summons by adding words "which was not duly inspected and stamped as provided by the Weights and Measures Act of 1879," and swear the complainant.

The defendant in answer to the charge as amended pleads not guilty.
It is agreed between the parties that the facts shall be admitted and the case decided on admissions made as if facts were proven by evidence.

It is admitted by the defendant and complainant that on the fifteenth day of September, in the year of our Lord one thousand eight hundred and eighty, at the City of Belleville, in the County of Hastings-the defendant, a grain buyer, used a weighing machine, known as a grain tester, to ascertain the weight per bushel of fifty bushels of barley purchased by him that day from John Smith, to guide him, the defendant, in determining the price to be paid by him per bushel for said barley, the said grain tester then being not duly inspected and stamped as required by the Weights and Measures Act of 1879.

The barley was bought by the standard busbel of forty-eight pounds; the defendant weighed the barley on a duly inspected and stamped soale and paid for it by the weight as shown by said scales.

The defendant is not within the exception of section 28. The price paid was 60 cts per bushel of 48 lbs . The defendant did not agree to pay any price per bushel, nor did he pay any until he knew the result of the testing of said barley by said grain tester.

Mr. Dickson for defendant.
The unstamped article must be used for buying, selling or ascertaining quantity to ascertain price.

Said section must be read as if words between "or, of and therefor" were struck ont.

Mr. Wallbridge for prosecution.
Judgment reserved.
15th November, 1880.
I find the defendant guilty, and impose a fine of \(\$ 5\) and costs, payable forthwith, default of payment to le levied by distress of defendant's goods and chattels, and convict him, for that at the City of Belleville, in the County of Hastings, on the fifteenth day of September, A.D., 1880, he, the said Charles Edward Hall, did unlawfully use a certain weighing machine, known as a grain tester, in the buying of fifty bushels of barley from one John Smith, for the purpose of ascertaining the price to be paid per bushel by the said Charles Edward Hall for said barley, which weighing machine was not then duly inspected and stamped as provided by the Weights and Measures Act of 1879, contrary to the provisions of section 28 of said Act, and. adjudge him or his said office to pay a fine of five dollars and costs forthwith, and in. default of payment to be levied by distress of the defendant's goods and chattels.

Police Magistrate's decision in case of Inspector of W.\& M., Belleville, vs. C. E. Hall.

\section*{Johnson vs. Hall.}

The information in this case was laid on the 5 th November instant.
No objection was taken by the defendant to the form of the information, and admissions are made by the parties which are to be taken instead of evidence under oath.

The facts on which I am to decide are:-That on the 15th September last, at Belleville, the defendant, a grain buyer, used a weighing machine known as a grain tester, to ascertain the weight per bushel of fifty bushels of barley, purchased that day by him from John Smith, to guide the defendant in determining the price to be paid by him per bushel for the barley.

The grain tester had never been duly inspected and stamped as required by the Weights and Measures Act of 1879.

The defendant did not agree to pay any price per bushel, nor did he pay any until he knew the result of the testing of the barley by the grain tester.

The price paid was 60 c . per bushel of 48 lbs .
The barley was bought by the standard weight of 48 lbs . The scales on which the barley was weighed were duly inspected and stamped and the defendant paid for it by the weight as shown thereby.

The defendant is not within the exceptions of Sec. 28.
Sec. 28 of the "Weights and Measures Act of 1879 " is as follows:-
" Every trader,manufacturer, carrier, public weigher, gauger-measurer, or surveyor or other person who uses for any purpose of buying, selling or charging for the carriage of any goods, wares, merchandise or things, or of measuring any land, goods, materials or other thing for the purpose of charging for or ascertaining the price to be paid, or the charge to be made therefor, any weight or measure, or weighing machine which has not been duly inspected and stamped according to this Act, \&c."

The question is-does the section require that a weighing machine, used for the purpose this grain tester was used by the defendant, shall be duly inspected and stamped in accordance with the Act?

There is no complaint made against the tester, on account of unfairness or inaccuracy, but it is contended that it, being a weighing machine used in the manner and for the purpose above set forth, should, like any weighing machine used in buying and selling, pass the necessary inspection and receive the necessary stamp from the proper official before being used.
. The defendant in the purchase of this barley used two weighing machines, one to ascertain the price to be paid per bushel, the other to determine the weight or number of bushels.

Accuracy is as necessary in the weighing machine which determines the price as it is in that which determines the weight.

In my opinion the purpose for which the defendant used this weighing machine is a purpose for which, under Section 28, it could not be lawfully used until duly inspected and stamped. I think Section 28 applies to it when used as it was by the defendant, and I must find that the defendant has been guilty of an offence against the Act and rendered himself liable to the penalty.

\title{
Weights and Measures Inspection Office, Belleville, 26th November, 1880.
}

Sir,--On Monday last the suits brought by me against certain grain buyers were, at the request of counsel for the defence, enlarged for another week. Yesterday, Mr. Wallbridge informed me that the defendants proposed to plead guilty, so I expect they will be finally disposed of on Monday next.
* * * * * * * * * * * *

I shall thank you for instructions as to disposal. of "Grain Testers."
\[
\begin{aligned}
& \text { I am, Sir, } \\
& \quad \text { Your obedient servant, } \\
& \quad \text { WM. JOHNSON, }
\end{aligned}
\] Inspector of Weights and Measures.
Commissioner Inland Revenue, Ottawa.

\section*{Weights and Measures Inspection Ofrice, Bellevilie, 30th November, 1880.}

Sir,-I beg to report that the end of the actions brought by me against the grain buyers of this city, was reached yesterday-the defendants in each case acknowledging the same facts as in the first case that was tried, and the Police Magistrate delivered similar judgments and inflicted similar fines.

I have the bonor to be, Sir,
Your obedient servant,
WM. JOHNSON, Inspector of Weights and Measures.
Commissioner of Inland Revenue, Ottara.

\section*{Case vs. W. D. Fuller, for using Grain Testers.}

\section*{INFORMATION.}

Canada, Province of Ontario, The information and complaint of William County of Hastings, Johnson, Inspector of Weights and Measures; taken City of Belleville. this fifth day of November, in the year of our To Wit: \(\quad\) Lord 1880, before the undersigned, Thomas Holden, Police Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace, in and for the County of Hastings, who saith that William D. Fuller, Grain Merchant, at the City of Belleville, on or about the fourth day of November, A:D. 1880, did use a grain tester, the same being illegal, contrary to the 28th Section of the Weights and Measures Act of 1879, as he is informed and believes. And the complainant prays that such Justice or Justices do proceed summarily in the matter, in pursuance of any Statute in that behalf, or in and with any city, township or county by-law relating thereto.
Sworn before me at Belleville, the day and
year above mentioned.
Thomas Holden, P.M.

SUMMONS TO DEFENDANT.
Canada, Province of Ontario, ) Te William D. Fuller:-Whereas information

County of Hastings,
City of Belleyille, To Wit :
hath this day been laid before the undersigned, Police Magistrate of the City of Belleville, and one of Her Majesty's Justice: of the Peace in the said City of Belleville, and for the said County of Hastings, for that you William D. Fuller, Grain Merchant, of the City of Belleville, on or about the fourth day of November, A.D. 1880, did use a grain tester the same being illegal, contrary to the 28th Section of the Weights and Measures Act of 1879.

These are therefore to command you in Her Majesty's name to be and appear on Monday the eighth day of November, in the year of our Lord one thousand eight hundred and eighty, at ten o'clock in the forenoon, at the Police Office, Belleville, before me or such other Justices of the Peace having jurisdiction, as may then be there, to answer to the said complaint, and to be further dealt with according to law.
Given under my hand and seal this 5th day of November, in the year of our Lord one thousand eight hunded and eighty, at Belleville, aforesaid.

\section*{THOMAS HOLDEN, \({ }^{\mathbf{P} . M .}\)}

It is agreed between the parties that the facts shall be admitted and the ease decided on admissions made as if facts were proven by evidence.

It is admitted that on the fourth day of November, 1880, at the City of Belleville, the defendant, a grain buyer, used a weighing machine known as a grain tester, to ascertain the weight per bushel of fifty bushels of barley, purchased by him that day from John Smith to guide him the defendent in determining the price to be paid by him per bushel for said barley. The price paid was 60 cts. per bushel of 48 lbs., the said grain tester then not being duly inspected and stamped as required by the Weights and Measures Act of 1879.

The barley was bought by the standard bushel of forty-pounds. The defendant weighed the barley on a duly inspected and stamped scale, and paid for it by the weight as shown by said scales ; the defendant is not within the exceptions of Section 28. The defendant did not agree to pay any price per bushel nor did he pay any until he knew the result by said grain tester.

\section*{Belleville Police Court, 29th November, 1880.}
\(\left.\begin{array}{c}\text { William Jounson. } \\ \text { vs. } \\ \text { William D. Fuller. }\end{array}\right\}\)
The defendant appears by Mr. Pope, and admits the same facts to exist in this case as were admitted in the case of Hall.

It is agreed that the admission shall be admitted as if taken under oath. It is also agreed by defendant that information shall be amended to meet the facts.

I find the defendant guilty of offence and fine him \(\$ 5\) and cost payable forthwith, default payment to be levied by distress.
T. HOLDEN, P.M.

R

Case cs. Geo. Downey and J. H. Preston, for using Grain Testers.

\section*{INFORMATION.}

Canada, Province of Ontario,
County of Hastings,
City of Belleville, To Wit:

The information and complaint of William Johnson, Inspoctor of Weights and Moasures, taken this 4th day of November, in the year of our Lord 1880, bofore the undersignod, Thomay Holden,
Belleville, and one of IIer Majesty's Justices of the Police Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace, in and for the County of Hastings, who saith that George Downey and J. H. Preston of the City of Belleville, trading under the name and style of Downoy and Preston, Grain Merchants and Warehousemen, did have and uso three Grain Testers the same being illegal and contrary to the twenty-eighth section of the Weights and Measures Act of 1879. And the complaiuant prays that such Justice or Justices do procecd summarily in the matter, in pursuance of any Statute in that behalf, or in and with any City, Township or Country By-law relating thereto.
Sworn before me at Belleville, the day and year above mentioned.

Thomas Holden, P.M.

\section*{SUMMONS TO DEFENDANT.}

Canada, Provinge of Ontario, County of ihastings, City of Beleeville, To Wit:

To George Downey and J. H. Preston.-Whereas, information hath this day been laid before the undersigned, Police Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace in the said City or Belleville, and for the said County of Hastings, for that you, Georgo Dowrey and J. H. Preston, of the City of Belleville, trading under tho name and style of Downey and Preston, Grain Merchants and Warehousemen, at the City of Belleville, on or about the fourth November, 1880, did have and use three Grain Testers, the same being illegal and contrary to the Weights and Measures Act of 1879 :

These are therefore to command you in Her Majesty's name to be and appear on Monday the eighth day of November in the yegr of our Lord one thousand eight hundred and eighty, at ten o'clock in the forenoon, at the Police Office, Bolleville, before me or such other Justices of the Peace having jurisdiction, as may then be there, to answer to the said complaint, and to be fur ther dealt with according to law. Given under my hand and seal this 5th day of

Novomber in the year of our Lord one
thousand eight hundred and eighty, at \}
Belleville, aforesaid.
THOMAS HOLDEN., P.M.

Belleville Polioe Court, 29th November, 1880.
William Johnson, vs.
Grorge H. Downey. )
(Case continued.)
Mr. Porter appears for defendant and admits the same facts as were admitted in case of Hall.

The defendant makes no objection to the information, and proceedings being amendod with the admission and I amend the same.

I find the defondant guilty, and fine him \(\$ 5\) and costs payable forthwith, default of payment to be levied by distress.

THOMAS HOLDEN, P.M.

Case vs. John A. Phippen, for having in his possession Unstamped Measures of Capacity, he being a Trader, not a Manufacturer of or Dealer in Weights and Measures.

\section*{INFORMATION.}

Canada, Province of Ontario, The information and complaint of William Johnson, Cocnty or Hastings, Inspector of Weights and Measures, taken this City of Belleville. \(\}\) nineteenth day of January, in the year of Our To Wit: \(\int\) Jord 1881, before the undersigned Thomas Holden, Police Magistrate of the City of Belleville, and one of her Majesty's Justices of the Peace, in and for the County of Hastings, who saith that John A. Phippen, at the City of Belleville, in the County of Hastings, on the eighteenth day of January, one thousand eight hundred and eighty-one, did have in his possossion eight measures which were not stamped as required by the Weights and Measures Act of 1879, the said John A Phippen being a trader, not being a manufacturer of or dealer in weights measures or weighing machines.
Sworn before me at Belleville, the day and year above mentioned.

Thomas Holden, P.M. \(\}\)

\section*{SUMMONS TO DEFENDANT.}

Canada, Province of Ontario, 7 To John A. Phippen.-Whereas, information hath

County nf Hastings,
City of Belleville.
To Wit :

\author{
WM. JOHNSON.
} this day been laid before the undersigned, Police Magistrate, of the City of Belleville, and one of Her Majesty's Justices of the Peace, in the City of Belleville, and for the said County of Hastings, for that you, John A. Phippen, at the City of Belleville, in the County of Hastings, on the eighteenth day of January, A.D, 1881, did have in your possession eight measures, which were unstamped as required by the Weights and Measures Act of 1879, the said John A Phippen, being a trader, not being a manufacturer of or dealer in weights and measures and weighing machines:

There are therefore to command you in Her Majenty's name to be and appear on Wednesday, the ninetcenth day of Jannary, in the year of Our Lord one thousand eight hundrod and eighty-one, at ten o'clock in the forenoon, at the Police Office, Belleville, before me or such other Justices of the Peace having jurisdiction, as may then be there, to answer to the said complaint, and to be further dealt with according to law.
Given under my hand and seal this nineteenth) day of January, in the year of Our Lord one

THOMAS HOLDEN, P.M. thousand eight hundred and eighty-one, at Belleville, aforesaid.

\section*{SUMMARY TRIAL.}

Canada; Province of Ontario, The defendant, John A. Phippen, on the eighteenth Police Court, day of January, in the year of Our Lord one City of Belleville. \(\quad\) thousand eight hundred and eighty-one, at tho To Wit: \(\quad\) City of Belleville, in the County of Hastings. charged before me, Thomas Holden, Esquire, Police Magistrate, in and for the said City of Belleville, by Wm. Johnson, of the City of Belleville, for that the said John A. Phippen, did, on the eighteenth day of January, in the year of our Lord one thousand eight hundred and eighty-one, have in his possession eight moasures which were unstamped as required by the Weights and Measures Act of 1879, the said John. A. Phippen being a trader, not being a manufacturer of or dealer in weights and measures and weighing machines.

And the said John A. Phippen, consenting to my deciding upon the charge summarily, on the charge being read to him, pleaded guiity to such charge.

I impose a fine of \(\$ 25\) with costs, payable forthwith, or to be lovied by distress, default distress 20 days in gaol.

THOMAS HOLDEN, P.M.

Case vs. C. E. Hall, for usina an Unjust and False Half-Bushel Measures.

> Weights and Measures Inspector's Office, Bellevilie, 9th February, 1881.

Sir, -1 st. I beg to report that the actions taken by me against W. D. Fuller, of this city, "for having in his possession for use in trade a half-bushel measure which was false and unjust," and against C. E. Hall "for knowingly using a half-bushel measure, which had been diminished by placing a false bottom in it," were concluded this morning-the Police Magistrate finding both parties guilty and inflicting a fine of \(\$ 1.00\) and coste in each case.

2nd. In compliance with request contained in your letter of the 5th inst. (No. 26,984), I am getting certified copies prepared of the evidence taken in the several actions referred to and expect to forward them to you during this week.

I am, Sir,
Your obedient sorvant,
W. JOHNSON,

Inspector W. \& M.

\author{
A. Brunel, Esq., \\ Coommissiner of Inland Revenue, Ottawa.
}

\section*{INFORMATION.}

Canada, Province of Ontario, The information and complaint of William John County of Hastings, City of Belleville, To Wit: Thomas Holden, Esquire, Police Magistrate, in and for the City of Belleville aforesaid, and one of Her Majesty's Justices of the Peace in and for the County of Hastings, at the said City of Belleville, this thirty-first day of Januarv, in the year of Lord one thousand eight hundred and eighty-one, who saith that Charles E. Hall, at the City of Belleville, in the County of Hastings, within the space of three months, to wit: on the fourth day of November, A.D. 18ぇ0, knowingly did use at the Grain Warehouse or Elevator in Belleville known as Beeman \& Vandewoort's Elevator a half-bushel measure which had been duly stamperd in pursitance of the Statute in that behalf as an Imperial half-bushel measure, and which at the time it was so knowingly used had been diminished by placing therein a false bottom, contrary to section 30 of the Weights and Measures Act of 1879, as he the said informant hath just cause to suspect and believe and doth suspect and believe.
\(\left.\begin{array}{c}\text { Siworn before mo, at Belleville, the } \\ \text { day and year aforessid. } \\ \text { Thos. Holden, P.M. }\end{array}\right\} \quad\) W.. JOHNSON.

Belleville, 7 th'February,';1881.
The defendant appears personally, and on charge being read to him pleads not guilty.

It was agreed by Mr. Wallbridge for prosecution, and Mr. G. D Dickson for defence, that the evidence given in the case of Johnson \(v\) s. W. D. Fuller this day shall be read in this case as if given in this case.

Orlean Phillips, sworn, says :-I sold barley to the defendant Hall on the fourth November last in the forenoon. I delivered it at West Belleville Elevator. Dafoe was there when I delivered it. I made a bargain with Hall; if it weighed 49 lbs. I was to get 62 cents. My grain was pat in a hopper. Dafoe took a half-bushel full and weighed it. Dafoe graded it at 46 lbs . ; I got 58 cents. Hall doniol the bargain. I made the bargain with Hall the same day. I am pretty sure it was before eleven in the forenoon. I had my dinner after I was at the Elevator. I got dinner at Arkle's. I was early in Belleville that morning. I was in a hurry to get to Rawdon. I was at the Storehuase before Collins was. I sold a load to Hall on 5th November also.

\author{
G. PHILLIPS.
}

Thos. Holden, P.M.
Archibald Collins, sworn, says:-I remember seeing Phillips, the last witnesc, at the West Belleville Elevator on 4th November last. It was a quarter to eleven when I drove up; he was then coming away from Elevator. I saw persons in there. I saw him going and coming from warehouse; he had a grain toster when ho was coming away.

\author{
ARCHIBALD COLLINS.
}

Thos. Holden, P.M.
Peter Mather, sworn, says:-I sold to Hall on 29th October and on 30th, and a load the following week, between the 30th October and the 4 th November. Monday was the 1st November, and the load was sold to Hall on the 2nd November. It was tested at Elevator with half-bushel measure. 49 lbs . was put on my bill. Was to get 68 cents if barley weighed 49 lbs. to bushel. That bargain was made with Hall, the defendant. I made a complaint to the Inspector on 4th. My barley had been sold to Hall between that day and the 1st November. I made a bargain with Hall about the load I drew on 2nd November on that day. The bargain was, if it graded less than 48 lbs. I was to get a less price. Mr. Dafoe was the person who tested it with half-bushel measure.

\section*{PETER MATHER.}

Thos. Holden, P.M.
Charles D. Fuller, sworn, says:-I was engaged in grain buying last fall; I was acting for W. D. Fuller. Dafoe was employed at the Elevator; he was to grade barley at Elevator. He was furnished with half-bushel measure for that purpose. We wished to have a Winchester half-bushel. Mr. Hall, defendant, and I gave the measure to Dafoe. Hall and I made the calculution, and after that an addition was made to the bottom. A bottom was put in and found incorrect, and this was put in. Hall and I delivered it to Dafoe the first time and there was an additional bottom in it then. I have seen it used there I never noticed whether the half-bushel measure was stamped or not. I tried to get a Winchester half bushel in the city. We made a calculation to sce how much addition would be made. The alteration was made. Mr. Hall knew the first alteration was made. I do not know if he knew of a second alteration or not. Grain was bought by weight; 43 lbs per bushel. The object in changing measure was to grade the grain subject to Winchester measure. It is sold in Oswero market by that test. I always understood a Winchester bushel of barley weighed 48 lbs . A standard busbel of barley in States is 48 lbs . In changing the half-bushel I did not know I was violating the law.

Mr. Hall and I went to Harold to get the alteration mad in the measure; we then went to Thompson's Factory where the bottom was made. Dafoe was employed by the defendant, Hall, and by W. D. Fuller and Pbippen \& Graham.
C. D. FULLER.

Thomas Holden, P.M.

William Johnson, sworn, says:-I first saw this measure on the 4th November last, it then had the stamp of the Government on it. It was stamped under Act of 1873 ; it was stamped before year 1879. The measures are stamped before leaving the factory, as a rule. From the peculiar stamping on the measure produced, it was put on betore 1879 ; the stamping on the half-bushel measure might have been done in the fall of 1880 , but to do it then the stamps must havo been wrongfully obtained from the Government Inspector. That stamp on the measure was not in use in 1880.

The stamps in use in Belleville came into my possession in November, 1879 ; they were forwarded to Ottawa shortly after.

Wм. JOIINSON.

\section*{FOR DEFENCE.}

Edward Harris, sworn, says:-The signature to contract in book is mine; my brother-in-law came to my house on 24th October, Sunday; I made delivery on the following Thursday; I drew 203 bushels in four loads.

\section*{EDWARD HARRIS.}

\section*{Thomas Holden, P.M.}
D. Brennan, sworn, says:-I kept the warehouse; I issued receipt taken from book and retained the stub. I do not find any stub for grain received from one Phillips on 1st, 2nd and 3rd. I should think it was in the neighborhood of ten when Johnson mado seizure. Hall'told me to go to Walker's and get another measure; the seizure was before Phillips was there on 4th; I was not there when Phillips delivered his load on 4th.

There is stub with a + in the book; I did not make that cross; I did not see the ticket destroyed; I know it was destroyel, because that is the way of doing. On looking at the book I say I did make the cross.

There was no other book but the one kept thore at that time, the:e were no other grain receipts.

I look at stub No. 2058, 4th November. I see \(46 \frac{1}{2}\) is grading; on \(4 \frac{1}{2}\), on stub 2059, means grading-so on 2061, 2062 and others; the figutes in corwer show grading; they are in Dafoe's handwriting. Wo commence receiving barley about eight o'clock in morning; every load that was brought in was tested; and to time of seizure, testing was by the half-bushel measure which Johnson seized.
Thos. Holden, P.M.
D. BRENNAN.
W. I. Hamilton, sororn, says:-I am Collector of Inland Fevenue; in testing strength of spirits no defined quantity is necessary, except that there shall be enough to float the instrument.

Defence cloaed.
I adjourn the hearing of case for judgment until the 9 th February, at 10 a.m.

> T. HOLDEN, P.M.

9th February, 1881:
I convict the defendant and fine him \(\$ 1\) and costs, \(\$ 13.90\), payable forthwith; default of payment to be levied by distress; default of distress, 20 days in gaol.
T. HOLDEN, P.M.

Case vs. Wm. D. Fuller, for using in trade a False and Unjust Halff-Bushel Measure.

\section*{INFORMATION.}

Canada, Province of Ontario, The information and complaint of William Johnson, County of Hastings, of the City of Belleville, in the County of Hastings, City of Bellevilife, Inspector: of Weights and Measures, taken To Wit: \(\int\) upon oath beforeme the undersigned Thomas Holden, Esquire, Police Magistrate, in and for the City of Belleville aforesaid, and
one of Uler Majesty's Justices of the Peace in and for the County of Hastings, at the said City of Belleville, this twenty-sixth-day of January, in the year of our Lord one thousand eight hundred and eighty-one, who saith that: William D. Fuller, at the City of Belleville, in the Comnty of Hastings, on the fourth day of November, in the year of our Lord one thousand eight hundred and eighty, unlawfully did have in his possession for use in his trade as a grain buyer, a false half bushel measure, contrary to section twenty-four of the "Weights and Measures Act of 1879," as he is informed and rerily believes.
Sworn before me at Belleville, the day and year above mentioned.

\author{
Wm. JOHNSON.
}

Thomas Holden, P.M.
27 th January, 1881.
Tho hearing of complaint adjourned until 31st January inst., at 10 a.m.
31st January, 1881.
The hearing of complaint adjourned by consent until 7th February, 1881.
T. HOLDEN.

7th February, 1881.
The defendant appears personally, and on charge being read to him, pleads not guilty.

\section*{SUMMONS TO DEFENDANT.}

Dominion of Canada,
Province of Ontario, County of Hastings, City of Belleville, To Wit:
) To William D. Fuller:-Whereas, information hath this day been laid before the undersigned, Police
\} Magistrate of the City of Belleville, and one of Her Majesty's Justices of the Peace in the said City of Bellerille, and for the said County of Hastings, for that you William D. Fuller, at the City of Belleville, in the County of Hastings, on the fourth day of November, A.D. 1880, unlawfully did have in your possession for use in your trade as a grain buyer, a false half bushel measure, contrary to section twenty-four of the "Weights and Measures Act of 1879 :"

These are therefore to command you in Her Majesty's name to be and appear on Thursday, the twenty-seventh day of January, in the year of our Lord one thousand eight hundred and eighty-one, at ten o'clock in the forenoon, at the Police Office, Belleville, before me or such other Justices of the Peace having jurisdiction, as may then be there, to answer to the said complaint, and to be further dealt with according to law.
Given under my hand and seal this 26th day of January, \(\left.\begin{array}{l}\text { in the year of our Lord one thousand eight hundred } \\ \text { and eighty-one, at Belleville, aforesaid. }\end{array}\right\}\) THOS. HOLDEN, P.M.

\section*{\(\left.\begin{array}{l}\text { Johnson } \\ \text { vs. } \\ \text { D. Fuller. }\end{array}\right\}\)}

William Johnson, sworn, says:-I am Inspector of Weights and Measures. I soized the half-bushel measure produced, on the 4 th November last, at Breanan \& Vandewoort's warehouse, in ponsession of one Dafoe; I believe he is in the employ of W. D. Fuller and ©. E. Hall. The measure is stamped as an Imperial half-busbel; it has a false bottom; without the false bottom it is a correot Imperial half bushel measure; with the false bottom there is a difference of \(1 \frac{1}{2}\) lbs. in weight and one quart difference in quantity; measure marked A, and bottom B; the false bottom was fastened in with putty. I made seizure on the 4th November; information on the 26th January, 1881. The bottom was skilfully put in. I saw Mr, Dafoe using
the measure; he was annoyed at my seizure; when I seized it he had it on the scales; he was using it for grading barley. Dafue said to me, "Remember we use that as a Winchester half-bushel;" there was no other half bushel there ; I took it away with me; the first time I was there; Dafoe suid it was the only one; the place is called West Belleville Elevator; using this measure would make a difference of three pounds from weight by Inperial half bushel; it would be less by this measure ; the use of this measure would affect the price, if barley was sold by grade. When I went there Dafee was using the measure for grading; it was nearly twelve when I went there.
Thos. Holden, P.M.
Wm. JOHNSON.
David Brennan, sworn, says:-I had a storehouse in West Belleville last fall; it is cilled the West Belleville Elevator. I rented it from Flint \& Holton; I stored for W. D. Fuller ; I furnished the warehouse; Dafoe did the grading for them; he was not in my employ; I saw a half-bushel measure there; I did not furnish it. The grain bought was graded at the storehouse by Dafoe. The grading I understood was to keep each quality by itself in separate bins. I saw the half bushel used; Dafoe came there about three weeks after the markzt opened; grain market continued up to 4th November, the date of the seizure; I had something to do with weighing, not with the grading ; Dafoe put grade on the bills; I put the weight on ; I furnished no half-bushel measure. Mr. Dafoe graded the grain; the number of bushels was ascertained by weighing on scales after ascertaining the number of bushels by weight. Dafoe took the measure and graded it, and directed which bins it should be put in ; Dafoe kept the key of the storehouse ; grain could not be taken in or out without Dafoe being there. The grading was entirely the act of tho buyers. The ticket put in by Mr. Dickinson was signed by me; the figures 47 are Dafoe's writing; they mean that a bushel of the barley by measure would weigh 47 lbs . as tested by Dafoe ; that is Winchester?measure as I understood.
Thos. Holden, P.M. D. BRENNAN.
John R. Dafoe, sworn, says:-I was employed last by W. D. Fuller and C. E Hall; Mr. Fuller engaged me; I was to inspect grain at West Belleville Elevator. Mr. Hall and Mr. Fuller, Charles Fuller, gave me a half bushel measure to use for that purpose. Johnson, the Inspector, got it from me; they gave it to me to inspect grain, that is grade it ; I was certain how many pounds it weighed to the bushel; I did not know the false bottom was in the measure; I used it about one month; I did not notice the stamp; I filled the measure with grain and weighod; I entered the grade thus ascertained on the receipts; I remember Johnson seizing the half bushel ; I told Johnson it was a Winchester half busbel ; I did not know whether it was an Imperial or Winchester measure; I told him it was a Winchester measure after he tested it; he told me it was too small; I then told him it was a Winchester measure; the grade was put on the receipts because that was the way I was directed to do; I continued grading and putting the grade on tickets up to the close of the season. When I graded grain I did not know who it was sold to, that is to what buyer; we had separate bins in the storehouse into which the different grades were put; on the ticket dated 19th Oetober, 1880, the figures 48 lbs . are mine; they indicate that a bushel by Winchester bushel would weigh 48 lbs. I have seen C. D. Fuller acting for defendant in the grain business, paying for grain. W. D. Fuller told me where to go to work. At the Elevator C. D. Fuller and Hall brought me the measure; I cannot say the date. I saw C. D. Fuller paying for grain receipts.
Thos. Holden, P.M.

\author{
J. B. DAFOE.
}

Henry O. Foster, sworn, says :-I live in Huntingdon. I sold barley last fall. I delivered the grain at the West Belleville Elevator. I sold grain on the 4th November Jast; I delivered it at the Wost Belleville Elevator. Charles Fuller paid me; it was in the office. I frequently saw defendant in. A man took a quantity out of the hopper where my load was being weighed; he filled a half-bushel measure and weighed it; be put a
grade on my ticket; the grade made a difference in the price I was to get for the barley. I was to get 68c. if the barley weighed 48 tbs., and Găc. if it weighed any other weight. The man said my barley did not quite hold out, but he marked it 48 Itbs. as he said it was vice barley. I did not notice whether the measure was stamped or not. I got a receipt; the grade was put on it; this was after dinner. I understood it was Hall's buyer that inade the bargain with me. About half the load was emptied into the hopper before the man tested it.
Thos. Holden, P. M.

\section*{HENRY O. FOSTER.}
O. Phillips sworn, says:-1 live in Tyendinaga. I sold barley on the 3rd November last at West Belleville Elevator. My barley was tested. I also sold on the 4th. The price I was to get was decided by testing. Dafoe tested the barley. I got my pay from Hall. My load on the 4th was tested in the forenoon; the bargain was, I was to get 62c. if the barley weighed 46 ths., or I was to get 68c. if it weighed 48 ths. It was along in the forenoon I delivered my grain, to the best of my knowledge it was before 12; I won't swear positively. The testing on 3rd November was with a grain tester; the same man tested it on both occasions. I made the bargain with Hall personally. The man used a half-bushel measure to test the barley on the 4th.
Thos. Holden, P.M.

\section*{O. PHILLIPS.}

Edward Harris, sworn, says:-I sold barley last fall to West Belleville Elevator on 28th October. I sold to Hall. It was tested at the elevator by half-busbel; it was put on the ticket. The following week I delivered a second load; on the following Monday, I think there was less than a weok between the first and second loads. The second load was tested by half-bushel measure. Hall was to give me 68 c . if it weighed 49 Itbs . to the bushel; this bargain was made after I delivered the first load on the 28th. I tested the grain at home; there was a difference against me of about three pounds. Nothing was said when I told about it being tested by Winchester measure.
Thos. Holden, P.M.

\section*{EDWARD HARRIS.}

Peter Mather, sworn, says:-I reside in Thurlow. I sold grain last fall. I delivered it at West Belleville Elevator. The first w:as on the 29th October; the next was on the following Saturday; I sold it to Hall; it was tested at the elevator; the testin \(r\) had an effect on the price; I was to get 68c. if it weighed \(49 \mathrm{Ibs.}\), or I was to get 66c. if it weighed less; it was tested in half-bushel measure; I tested it at home at 51 Itss .; the first load was tested at the elevator at 49 fbs . I made no complaint. The second load was tested; the man Dafoe said it went 47 tbs.; I said to bim how was that, when the first load was 491 bs s? I asked him what sort of half-bushel he had? I went to look at it; he said "Get out, he was only codding"; he then marked the tickets 49 Ibs.; when he told me 47 1bss, at first I thought he was in earnest; he had not marked the tickets at that time.
Thos. Holden, P.M.
PETER MATHER.
Mathew Robinson, sworn, says:-I sold grain last fall to Hall. I delivered at West Belleville Elevator. I sold one load on 4th November; I sold a load before that, I think before 25 th October.

Anson Latta, sworn, says:-I sold grain last fall to Mr. Fuller and to Mr. Hall ; I cannot say exactly the time between 20 th and 30 th October last, it was delivered at West Belleville Elevator; it was tested there by a half bushel; the testing affected the price. Faller told me if my barley weighed 47 lbs . he would pay me 55 c . W. D. Fuller made the bargain ; C. D. Fuller paid me; Dafoe was the man who tested.

I cannot fix the date exactly.
The first-load I drew was on 19th October; the next load was the load I spoke of as sold to Fuller; it was once a week from the first load on 19th October. The
barley was marked as graded at 45 lbs. ; Fuller paid me 52c. on account of its grade being reduced.

Fuller told me if the barley weighed 47 lbs. he would give me 55c. I a m sure it was more than a week after 19th October, I delivered the load to Fuller. I know it was more than a week; I do not remember the day of the week I sold it on the load on 19th. I cannot say the day of the week; there was a Sunday betw een the two loads. I do not recollect what I was doing that Saturday from my recollection of lapse of time. I am satisfied it was more than a week; I am protty well satisfied it was a week or more after the first load that I delivered the second to Fuller.
Thos. Holden, P.M.
ANSON LATTA.
James Bennett, sworn, says :-I sold grain last fall at West Belleville Elevator sometime in October. I cannot fix date.

Robert Hamilton, sworn, says :-I live in Belleville. I bought grain for Downey and Preston.
J. B. Dafoe :-I think Johnson seized the measure about eleven; Brennan got another in about half an hour.

Case closed.
Defendant calls no witnesses.
Judgment reserved until 9th February, at 11 a.m.
T. HOLDEN, P.M.

February 9th, 1881.
I convict the defendant and fine him \(\$ 1\) and costs \(\$ 14.75\), payable forthwith; default of payment to be levied by distress ; default distress 20 days in gaol.
T. HOLDEN, P.M.

\section*{Weights and Measures Inspector's Office, \\ Belleville, 2nd February, 1881.}

SIr,-1. In compliance with your request, I beg to submit the following statements, relative to the purchase and sale of barley in this Weights and Measures Division.
2. Barley is graded in this Belleville market into three grades: No. 1 Grade weighing 48 lbs. to the bushel, and bright color; No. 2 Grade weighing from 46 to 47 lbs. to the bushel, and fair color; No. 3 Grade weighing from 44 .to 45 lbs . to the bushel, color not good.
3. The prices paid for the various grades differ very much during the season, a fair average, however, would be 5 cents per busbel between each grade, taking the average No. 1 Grade would be, say, 70 cents per bushel; No. 2, 65 cents, and No. 3, 60 cents.
4. The difference in weight between barley as tested with a Winchester halfbushel, or a grain tester based on Winchester measurement, and an imperial halfbushel is \(1 \frac{1}{2}\) lbs., or 3 lbs. to the bushel; it is obvious, therefore, that barley which would be graded No. 1, viz. : 48 lbs. to the bushel, when tested by an imperial halfbushel, would only be graded No. 2 or No. 3, viz.: 45 lbs. to the bushel, when tested by Winchester half bushel, and the farmer would lose the difference, viz.: 5 cents, or 10 cents a bushel.
5. Almost the entire crop of barley raised in this Division is shipped to Oswego and as this year prices ranged high in the latter part of the season comparatively little has been held over. So that the statement which I give below, represents nearly the whole of this season's crop.

Statement showing the number of bushels of barley received at Oswego, from Ports in the Belleville Weights and Measures Division, up to 20th Iecember, 1880.
\begin{tabular}{|c|c|}
\hline Ports. & Nomber of Bushels. \\
\hline Belleville............... ......... ............................ & 427,900 \\
\hline Newcastle........................ . ......................... & 113,152 \\
\hline Port Hope................. ........ ........ ...... ........... & 716,794 \\
\hline Cobourg................................ ...... ................. & 243,581 \\
\hline Grafton............................... ........................ & 35,900 \\
\hline Colborne.................................... ................ & 60,643 \\
\hline Brighton................. ......... ........................... & 91,284 \\
\hline Wellington.......... & 163,782 \\
\hline Mill Point.. & 46,730 \\
\hline Ferry Point. & 9,924 \\
\hline Cressey....... ................ .............................. & 24,029 \\
\hline Consecon............................. ....................... & 56,215 \\
\hline Northport.................................................... & 34,468 \\
\hline Yicton................................... ....................| & 91,141 \\
\hline Shannonville......................... ...... ... .............. & 51,669 \\
\hline Trenton...................................................... & 173,059 \\
\hline Total....... & 2,340,262 \\
\hline
\end{tabular}

I have the honor to be, Sir, your obedient servant, Wm. JOHNSON,

Inspector of W. and \(M\).

\author{
A. Brunel, Esq., \\ Commissioner of Inland Revenue, Ottawa.
}

\section*{Illegal measures used by dealers in Ashes. \\ Weights and Measures Inspector's Office, Belleville, 20th February, 1881.}

Sir,-1. Repeated complaints having been made to me, especially by poor people, of the measures used by the ashmen in the employment of Mr. John A. Phippen of this city, and having made enquiries and received such information as convinced me an injustice was being done to the public, I wert to Mr. Phippen's ashery on Tuesday evening the 18th inst. and seized six square-shaped measures made of sheet-iron, and two large wooden measures; the sheet-iron ones being called halt-bushels, and the wooden ones one bushel.
2. Mr. Phippen's mode of doing business is this: be engages A. to buy ashes for him, agreeing to give him so much for each bushel he may procure; he furnishes A. with horse, sleigh (or wag gon), measures, \&c., and each day A. returns these to Mr. Phippen's premises.
3. A. calls the measure, Mr. Pbippen has supplied him with, a half-bushel, and agrees to give those from whom he purchases ten cents a bushel for their ashes; he fills his so-called half-bushel measure twice, heaping it each time, and gives ten cents for what he has taken.
4. When A. returns to Mr. Phippen's premises in the evening the ashes be has gathered are measured in the so-called bushel measure kept at the factory.
5. I have tested the measures I seized, with the following results: the so-called half-bushel measure, square sheet-iron ones, carried and used by the ashmen, contains thirteen gallons; anl the so-calle i bushel measures, round wooden ones, kept at the factory to measure the ashes githe ed by the mon contain twenty gallons and one quart.
6. I laid information against Mr. Phippen yesterday morning for a violation of Sub-Section 3 of Section 28 Weights and Measures Act, 1879. A summons was immediatedly issuod by the polico magistrate; Mr. Phippen appeared, pleaded guilty and was fine \(\$ \$ 25\) and costs.
7. Mr. Phippen was very anxious to get the case settled as quietly and quickly as possible, and told me I need not call any witnesses (I hal the namos of a score if it had been necessary to call them) as he would plead guilty.
8. Mr. Phippen's only justification is that every other buyer of ashes uses the same kind of measures that he does.

I am, Sir, your obedient servant,
Wm. JOHNSON, Inspector of W. and .M.
A. Brumel, Esq.,

Commissioner of Inland Revenue, Ottawa.

\section*{REPORT}

\title{
ADULTERATION OF FOOD
}

BEING

\author{
SUPPLEMENT No. III
}

TO THE REPORT

\section*{OF THE}

DEPARTMENT OF INLAND REVENUE

\section*{1880}
farinted by corder of farliament.


OTTAWA:

\section*{ADULTERATION OF FOOD.}

\section*{COMMISSIONER'S REPORT.}

\section*{CONTENTS.}
P10)
Section 1. Appointment ..... -
" 2. Summary of results of analysis ..... V
" 3. Proportion of samples adulterated ..... *
" 4. Percentage of adulteration. ..... Ti
" 5. Bread ..... vi
" 6. Butter. ..... vi
(4 7. Canned fruit ..... vi
" 8. Condiments. Percentage of adulteration of condimentes. ..... vi
" 9. Cocoa and chocolate ..... vi
" 10. Coffée ..... ni
" 11. Milk ..... vii
" 12. Potted meats. ..... vii
" 13. Sugar ..... vii
" 14. Swects. ..... vii
" 15. Tea ..... vii

\section*{INSPECTION OF FOOD.}

To the Honourable
The Minister of Inland Revenue.
Sir,-I have the honour to submit my Fifth Report respecting the analysis of Food, also the reports of the analysts appointed under the Act, together with tabulated statements prepared in this Department of the results of the analysis of the various samples submitied to them.
1. By Order in Council of the 2nd October, 1879, Mr. W. F. Best Appointment. was appointed a Public Analyst for the City of St. John, N.B. Of one hundred and-twenty-six samples of food analysed at St. John nearly fifty per cont, were adulterated, showing the nocessity of having the Act carriod out in that locality.
2. The following statement is a summary of the whole number of samples analysed by the Dominion analysts.

Summary of resulte of analysis.

3. From the foregoing table it will be scen that out of one thousand Proportion and forty-three samples analysed, two hundred and ninety-five, or of samples a little more than twenty-eight per cent., were adulterated, and twenty returned as doubtful.

Percentage of adulteration. the five years.
\begin{tabular}{c|c|c|c|c|c}
\hline \hline Year. & Genuine. & Adalterated & Doubtful. & \begin{tabular}{c} 
Total \\
Tumber \\
Analysed.
\end{tabular} & \begin{tabular}{c} 
Percentage \\
of
\end{tabular} \\
\hline & & & & \\
Adalteration
\end{tabular}

Bread.

Butter.

Oanned fruit.
7. Thirty samples of canned fruit were analysed, of which only one was found to be adulterated. This was totally unfit for food.

Condiments.
8. One hundred and forty samples of condiments were analysed, of which serenty-four, or a little over fifty-two per cent., were adulterated. The following table shows the percentage of adulteration in this class of food for the past fire years, and indicates a continuous improvement in purity, which may fairly be attributed to the operation of the law, and the publication of the names of the partios from whom adulterated samples have been taken.

\section*{Percentage of adulteration of condiments.}
5. Thirty-three samples of bread were analysed; two were adulterated and one was returned as doubtful.
6. Of two hundred and fifty-one samples of butter analysed, eighty were adulterated and six returned as doubtful. The majority of adulterations are caused by the addition of too much salt and wate:, and not from the addition of foreign fats.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Year. & Genuine. & Adulterated & Doubtful. & Total Number Analysed. & Percentage of Adulteration \\
\hline 1876.................. & 5 & 39 & & 44 & 88.63 \\
\hline 1877 ................. & 24 & 83 & ................. & 107 & 77.67 \\
\hline 1878.... ............. & 26 & 108 & ...... ........ & 134 & 80.59 \\
\hline 1879.................. & 51 & 64 & 2 & 117 & 84-70 \\
\hline 1880.................. & \(6{ }^{6}\) & 74 & & 140 & 52.85 \\
\hline
\end{tabular}

Cocos and
chocolate.
9. Of ninety samples of cocoa and chocolate analysed, nineteen were adulterated. The adulterations were principally sugar and flour. Thirteen of the adulterated cases were reported from Halifax Dirision.

Coffee.
10. Coffee continues to be largely adulterated; out of sixty-one samples analysed, thirty-five were found to be adulterated.
11. Two hundred and fifty-one samplos of milk were analysed; Milk. seventy-two were adalterated and eight were classed as doubtful. The improvement in quality is but slight. The reports of the analysts on this article must be read in order fully to appreciate the importance of this part of their work.
12. Out of fourteen samples of potted meats analysed, there were potted meata. but two adulterated; one of these was unfit for food.
13. Fifty-five samples of sugar were analysed, and all were free sugar. from adulteration, unless an excess of glucose, which may be considered as a debasoment of quality, is also counted as an adulteration.
14. Of fifty two samples of sweets analysed but four were sweeta. adulterated.
15. Sixty-three samples of tea were analysed; six were found to Tea. be adulterated and three returned as doubtful. The adulterations were principally in the facings, and a few samples were worthless and used only to adulterate other teas.

Respectfully submitted, A. BRUNEL, Commissioner of Inland Revenue.

Drpartmpet of Inland Revenue, 15th November, 1880.

\section*{CONTENTS.}
APPENDIX A.PAGE
Analysts' Reports ..... 1-16
APPENDIX B.
Memorandum of instructions given to the Collectors of Inland Revenue, as to the number of samples to be submitted to the various public analysts, showing total cost of analysis. ..... 17
APPENDIX C.
Tabulated Statement of the results of analysis of articles of food, for the fiscal year ending 30th June, 1880 ..... 18-66

\section*{APPENDIX A.}

\section*{INSPECTION OF FOOD AND DRUGS.}

\section*{REPORTS OF PUBLIC ANALYSTS.}

\section*{1.-TORONTO DIVISION.}

To the Commissioner of Inland Revenue,
Ottawa, Canada.
Toronto, 3rd July, 1880.
Sir,-I have the honor to submit to you my report for the past year.

I have analysed 226 samples of articles of food and drink, of Number of which I found 58 adulterated and 168 pure. Samples ana-
I append a tabular statement of my results :-
\begin{tabular}{|c|c|c|c|c|}
\hline Description. &  & \[
\begin{gathered}
\dot{0} \\
\dot{0} \\
\hline \mathbf{0}
\end{gathered}
\] & 䔍 & Nature of Adulteration. \\
\hline Allapice... ......... .... ...... & 3 & 1 & 2 & Flour and pea meal. \\
\hline Bread...... ...... .............. & 12 & 12 & 0 & None. \\
\hline Bulter............ ..... ......... & 53 & 43 & 10 & Salt and water. \\
\hline Canned Fruits.. . ..... .... & 8 & 8 & 0 & None. \\
\hline Oinnamon.. . ................ & 3 & 0 & 3 & Cassia and flour. \\
\hline Cloves........'.............. & 5 & 1 & 4 & Flour and pea meal. \\
\hline Cocos and Chocolate ..... & 20 & 20 & 0 & None reported. \\
\hline Ooffee...... .................... & 10 & 0 & 10 & Chicory, peas and flour. \\
\hline Ginger.. ........... ...... .... & 3 & 1 & 2 & Flour. \\
\hline Kaoka. ....................... & 3 & 3 & 0 & None. \\
\hline Milk ....... ..... .............. & 53 & 36 & 17 & Skimmed and watered. \\
\hline Mustard..... . . ...... ........ & 3 & 0 & 3 & Flour and turmeric. \\
\hline Pepper.......... ...... ......... & 8 & 4 & 5 & Flour. \\
\hline Sugar ......... ........ ........ & 13 & 13 & 0 & None. \\
\hline Sweets................ ........ & 16 & 15 & 1 & Plaster of Paris. \\
\hline Tea....... .................... & 12 & 11 & 1 & Sand and spent leaves. \\
\hline Total .............. & 226 & 168 & 68 & \\
\hline
\end{tabular}

\section*{Bread.}

The bread was all unadulterated and of good quality.
Eread.

\section*{Butter.}

The only adulterations I have found in butter have been excess Batte:of salt or of water, or both; of 53 samples examined, 10, or 19 per cent., were adulterated in this respect.

I found no case of admisturo with foreign fats, although these were specially looked for by the fatty acid process when the sacific gravity was low.

The specific gravities at \(100^{\circ} \mathrm{F}\). ranged in these samples between \(\cdot 9100\) and 9142 .

I append a table showing my results :-
4-1***

Anaifysis of 53 Samples of Butter．
Butter．
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline \[
\begin{aligned}
& \dot{4} \\
& \text { 莫 } \\
& \underset{Z}{z}
\end{aligned}
\] &  &  & 它 & 䔍 & 安 & Dat & & －Remarks． \\
\hline 2，862 & ． 9119 & 84.4 & \(1 \cdot 7\) & 0.7 & 132 & Jan． & 23．．． & Unadulterated． \\
\hline 2，563 & －9141 & ir 9 & 1.7 & \(5 \cdot 5\) & 139 & do & 23．．． & Adulterated． \\
\hline 2，564 & －9125 & 91－7 & 1.0 & \(2 \cdot 0\) & \(4 \cdot 3\) & do & 23．．． & Unadulterated． \\
\hline 2，568 & \(\cdot 9119\) & 776 & 0.4 & 86 & 13.4 & do & 26．．． & Adulterated． \\
\hline 2，569 & －9142 & 85.1 & 06 & \(4 \cdot 3\) & 10.0 & do & 26．．． & Unadulterated． \\
\hline 2，570 & －9126 & 836 & 0.6 & \(6 \cdot 3\) & & do & 26．．． & do \\
\hline 2，580 & －9118 & 86.1 & 0.9 & 33 & 97 & Feb． & \(2 .\). & do \\
\hline 2，581 & \(\cdot 9100\) & 68.8 & \(2 \cdot 1\) & 83 & \[
20.8
\] & & & A dulterated，fatty acid 89
per cent． \\
\hline 2，582 & \(\cdot 9117\) & \(74 \cdot 7\) & 10 & \(11 \cdot 2\) & \(13 \cdot 1\) & do & \(2 .\). & Adulterated． \\
\hline 2，583 & －9114 & 78.0 & 15 & \(5 \cdot 1\) & \(15 \cdot 4\) & do & 14．．． & do \\
\hline 2，584 & －9117 & \(76 \cdot 9\) & 2.4 & \(3 \cdot 3\) & \(17 \cdot 4\) & do & 14．．． & do \\
\hline 2，585 & －9110 & \(78 \cdot 4\) & \(1 \cdot 4\) & 65 & 137 & do & 14．．． & do \\
\hline 2，592 & －9111 & 845 & 07 & 4.4 & 17.4 & do & \(2 \mathrm{2} . .\). & Unadulterated． \\
\hline 2，583 & －9107 & \(77 \cdot 3\) & 09 & 41 ！ & 17.7 & do & 20．．． & Adulterated． \\
\hline 2，594 & 9114 & \(72 \cdot 9\) & 09 & 79 & \(18 \cdot 3\) & do & \(20 .\). & do \\
\hline 2，548 & 9104 & 706 & 07 & 176 & \(11 \cdot 1\) & do & 23．．． & do \\
\hline 2，599 & －9114 & 838 & 1.6 & 54 & \(9 \cdot 2\) & do & 23．．． & Unadulterated． \\
\hline 2，600 & －9134 & \(87 \cdot 8\) & 06 & \(1 \cdot 1\) & 105 & do & 23．．． & do \\
\hline 3，204 & －9112 & 866 & 0.9 & \(5 \cdot 2\) & \(7 \cdot 3\) & Mch． & \(1 .\). & do \\
\hline 3，205 & －9108 & 81.7 & 0.8 & 48 & 127 & do & \(1 . .1\) & do \\
\hline 3，206 & －9111 & \(87 \cdot 1\) & 1.2 & 1.2 & 105 & do & \(1 .\). & do \\
\hline 3，217 & －9110 & 858 & 10 & \(3 \cdot 1\) & \(10 \cdot 1\) & do & 8．．． & do \\
\hline 3，218 & ． 9124 & 82.8 & 08 & 53 & \(11 \cdot 1\) & do & 8．．． & do \\
\hline 3，2 9 & －9111 & 84.4 & 08 & \(3 \cdot 3\) & 11.5 & do & 8．．． & do \\
\hline 3，237 & －9113 & 81.7 & 0.8 & 57 & 118 & do & 15．．． & do \\
\hline 3，238 & －9131 & 87.6 & 07 & \(3 \cdot 2\) & 85 & do & 15．．． & do \\
\hline 3，2，59 & ．9128 & \(82 \cdot 3\) & \(1 \cdot 6\) & \(6 \cdot 1\) & 100 & do & 15．．． & do \\
\hline 3，243 & 9112 & 800 & \(1 \cdot 3\) & \(2 \cdot 8\) & 159 & do & 22．．． & do \\
\hline 3，244 & 9128 & \(85 \cdot 1\) & 09 & 29 & 111 & do & 22．．． & do \\
\hline 3，24： & －9127 & 87－2 & 0.8 & \(2 \cdot 8\) & \(9 \cdot 2\) & do & 22．．． & do \\
\hline 3，252 & －9120 & 84.6 & 08 & 45 & \(10 \cdot 1\) & do & 27．．． & do \\
\hline 3，253 & －9108 & 85.1 & 09 & 5.6 & \(8 \cdot 4\) & do & 27．．． & do \\
\hline 3，264 & －9134 & \(80 \cdot 5\) & 26 & \(5 \cdot 8\) & 111 & do & 27. & do \\
\hline 3，263 & －9109 & 86.5 & 14 & 3.0 & 91 & Apl． & \(7 .\). & do \\
\hline 3，264 & －9114 & 80.2 & \(1 \cdot 8\) & 6.5 & 11.5 & do & \(7 .\). & do \\
\hline 3，265 & \(\cdot 9135\) & 81.9 & 0.5 & 4.8 & 12.8 & do & \(7 .\). & do \\
\hline 3，269 & －9129 & 83.9 & 08 & 4.5 & \(10 \cdot 8\) & do & 17．．． & do \\
\hline 3，270 & \(\cdot 9105\) & \(81 \cdot 5\) & \(1 \cdot 3\) & \(4 \cdot 8\) & \(12 \cdot 4\) & do & 17．．． & do \\
\hline 3，271 & －9112 & \(82 \cdot 4\) & \(0 \cdot 8\) & 39 & 12.9 & do & 17．．． & do \\
\hline 3，275 & －9121 & 86.4 & 19 & \(1 \cdot 3\) & 104 & do & 24．．． & do \\
\hline 3，276 & \(\cdot 9109\) & 86.0 & \(1 \cdot 0\) & \(3 \cdot 8\) & \(0 \cdot 2\) & do & 24．．． & do \\
\hline 3，277 & －9125 & \(85 \cdot 7\) & \(2 \cdot 1\) & \(1 \cdot 3\) & \(10 \cdot 9\) & do & 24．．． & do \\
\hline 3，281 & －9108 & \(82 \cdot 4\) & 1.4 & 2.7 & 135 & May & 1．．． & do \\
\hline 3，：82 & －9114 & 85.4 & \(0 \cdot 9\) & 35 & 102 & do & 1．．． & do \\
\hline 3，283 & －9118 & \(85 \cdot 8\) & 08 & 3.0 & 104 & do & 1．．． & do \\
\hline 3，535 & \(\cdot 9131\) & \(85 \cdot 2\) & 0.6 & 19 & 12.3 & June & 2．．． & do \\
\hline 3，536 & －9127 & 87.9 & \(0 \cdot 7\) & 33 & & do & 2．．． & do \\
\hline 3，545 & －9127 & 839 & \(0 \cdot 9\) & 18 & 13.4 & do & 7．．． & do \\
\hline 3，546 & －9117 & \(86 \cdot 1\) & 12 & 3.1 & 9.6 & do & \(7 .\). & do \\
\hline 3，549 & －9114 & 84.3 & 2.0 & 4.6 & \(9 \cdot 1\) & do & 14．．． & do \\
\hline 3，550 & －9133 & 868 & 1.2 & \(1 \cdot 6\) & \(10 \cdot 4\) & do & 14．．． & do \\
\hline 3，553 & －9133 & \(83 \cdot 1\) & \(0 \cdot 8\) & 0.3 & \(15 \cdot 8\) & do & \(21 .\). & do \\
\hline 3，554 & －9128 & 86－1 & 0.9 & 1.3 & 11.7 & do & 21．．． & do \\
\hline
\end{tabular}

Canned Fruits．
These include canned peaches，pears and＇cherries．All were unadulterated and of good quality．

\section*{Cocoa and Chocolate．}

Of these 20 samples were submitted to me，of which 10 wore

\section*{Canned Fruits．}
cocoa containing a vory little corn starch. These four samples were not chocolate at all. They were obtained from the manufacturers. Cocos and

I append a tabular statement of tho results of my analysis :- Chocolate.
Analysis of 20 samples of Cocoa and Chocolate.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline No. & Moisture. & Cold Estract. & Ash of Extract. & Total Ash. & Fat. & V'nder the Mioroscope. \\
\hline 2574 & \(4 \cdot 6\) & 29.5 & 0.2 & 2.0 & 23.5 & Arrowroot and corn starch. \\
\hline 2575 & 1.3 & 52.6 & 0.9 & 13 & \(19 \cdot 4\) & Corn starch. \\
\hline 2576 & 11 & 51.7 & \(1 \cdot 0\) & \(1 \cdot 4\) & 235 & do \\
\hline 2577 & 30 & 75 & 1.7 & \(2 \cdot 6\) & 409 & do \\
\hline 2578 & 58 & \(52 \cdot 3\) & 0.7 & \(2 \cdot 7\) & 218 & So foreign starch granules. \\
\hline 2579 & 1.8 & 90 & 19 & \(3 \cdot 0\) & \(49 \cdot 7\) & do \\
\hline 3255 & 1.8 & 13.5 & \(1 \cdot 3\) & \(2 \cdot 7\) & 46.7 & A little corn starch. \\
\hline 3256 & \(1 \cdot 2\) & \(9 \cdot 3\) & \(1 \cdot 2\) & \(2 \cdot 8\) & 500 & No foreign starch. \\
\hline 3257 & 0.8 & 96 & \(1 \cdot 7\) & \(3 \cdot 6\) & 500 & do \\
\hline 3284 & 36 & 458 & \(1 \cdot 1\) & \(1 \cdot 8\) & 190 & Corn starch. \\
\hline 3285 & \(4 \cdot 2\) & \(28 \cdot 5\) & 1.0 & \(1 \cdot 9\) & 250 & do \\
\hline 3286 & \(4 \cdot 3\) & \(40 \cdot 6\) & 1.5 & \(1 \cdot 7\) & 150 & Arrowroot and corn starch. \\
\hline 3287 & \(4 \cdot 1\) & 449 & 1.6 & \(1 \cdot 7\) & 155 & Uorn starch. \\
\hline 3288 & \(4 \cdot 3\) & 31.5 & 1.5 & \(2 \cdot 1\) & \(23 \cdot 2\) & Arrowroot and corn starch. \\
\hline 3289 & 51 & \(30 \cdot 8\) & \(1 \cdot 4\) & 1.7 & 24.8 & Arrowroot. \\
\hline 3290 & \(4 \cdot 5\) & 306 & 08 & \(2 \cdot 3\) & 240 & frrowroot and corn starch. \\
\hline 3291 & \(5 \cdot 3\) & 156 & \(3 \cdot 2\) & 47 & 263 & No foreign starch. \\
\hline 3292 & \(4 \cdot 3\) & \(30 \cdot 5\) & 1.8 & \(2 \cdot 6\) & \(23 \cdot 7\) & Arrowroot and corn starch. \\
\hline 3293 & 4.7 & 31.8 & 1.5 & 1.7 & \(25 \cdot 5\) & Arrowroot. \\
\hline 3294 & \(4 \cdot 8\) & \(36 \cdot 2\) & 1.4 & 1.5 & 13.6 & do \\
\hline
\end{tabular}

From these figures I infer that the articles examined have the composition indicated in the following table:-


In addition I would say that samples Nos． 3,285 and 3,288 were stated on the labels to contain only sugar and West India arrowroot． In fact，they both contain corn starch，and No．3，285 contains no ar－ rowroot at all．

\section*{Coffee．}

All the samples of coffee were adulterated with chicory or flour，

\section*{Coffoe．}

Milk． or peas，or with both chicory and flour or peas．

\section*{Milk．}

I have analysed during the past year 53 samples of milk，of which 17 or nearly one－third were adulterated．Last year just half the samples wore adalterated so that there is a decided improvement in this important article．

As to the quality of milk during the different months，my results this year are as follows ：－


It appears，therefore，that this year there was a regular increase of adulteration from January to April；but in the months of May and June the milk was supplied much purer，so far at least as my samples may be taken as representativo．

Analysis of 53 samples of Milk．
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \[
\begin{aligned}
& \dot{\circ} \\
& \text { 曾 } \\
& \text { 2 }
\end{aligned}
\] & 迢 &  & \[
\begin{aligned}
& \text { 枈 } \\
& \text { ® }
\end{aligned}
\] &  &  & 安 & Remarks． \\
\hline 2，553 & Jan．9．．．．．．． & 1.030 & \(12 \cdot 2\) & 32 & 90 & 0.70 & Unadulterated． \\
\hline 2，654 & do & 1.030 & 124 & \(3 \cdot 4\) & 90 & \(0 \cdot 76\) & do \\
\hline 2，555 & do ．．．．．． & 10.32 & 123 & 32 & 91 & 0.76 & do \\
\hline 2，565 & do 26．．．．．． & 1.030 & 12.0 & 28 & \(9 \cdot 2\) & 0.75 & do \\
\hline 2，566 & do ．．．．．．．． & 1.030 & \(12 \cdot 4\) & \(2 \cdot 8\) & 96 & 0.73 & do \\
\hline 2，567 & do ．．．．．．．． & 1030 & 121 & 2.6 & \(9 \cdot 5\) & 070 & do \\
\hline 2，571 & Feby．2．．．．．． & 1.031 & 11.4 & 24 & 90 & 0.70 & Skimmed． \\
\hline 2，572 & do ．．．．．． & 1025 & \(10 \cdot 3\) & 30 & 7.3 & 0.71 & Watered． \\
\hline 2，573 & do ．．．．．． & 1031 & 11.9 & 29 & 9.0 & 0.70 & Unadulterated． \\
\hline 2，586 & do 9．．．．．． & 1.031 & 116 & 26 & 9.0 & 0.66 & do \\
\hline 2，587 & do ．．．．．． & 1029 & \(11 \cdot 3\) & \(2 \cdot 3\) & \(9 \cdot 0\) & 0.67 & Skimmed． \\
\hline 2，588 & do ．．．．．． & 1.033 & 12.7 & \(2 \cdot 3\) & \(10 \cdot 4\) & 0.75 & do \\
\hline 2，589 & do 20 ．．．．． & 1.033 & 12.7 & 26 & \(10 \cdot 1\) & 0.71 & Unadulterated． \\
\hline 2，590 & do ．．．．．． & 1.032 & 12.6 & 3.0 & 96 & 0.75 & do \\
\hline 2，591 & do ．．．．．． 1 & 1033 & 125 & \(2 \cdot 8\) & 97 & 076 & do \\
\hline 2，595 & do 23．．．．．． & 1.031 & 12.6 & 2.7 & \(9 \cdot 9\) & 0.73 & do \\
\hline 2，696 & do ．．．．． & \(1 \cdot 0.8\) & 11.8 & \(3 \cdot 1\) & \(8 \cdot 7\) & \(0 \cdot 66\) & Watered． \\
\hline 2，597 & do ．．．．．． & 1.031 & 112 & \(2 \cdot 1\) & 91 & 069 & Skimmed． \\
\hline 3，201 & March 1．．．．．． & \(1 \cdot 030\) & \(11 \cdot 3\) & 24 & 89 & 0.66 & Watered． \\
\hline 3.202 & do ．．．．．． & \(1 \cdot(33\) & \(12 \cdot 9\) & 28 & \(10 \cdot 1\) & 0.76 & Unadu！tirated． \\
\hline 3，203 & do ．．．．．． & 1.030 & \(12 \cdot 6\) & \(3 \cdot 1\) & 95 & 0．70 & do \\
\hline 3，214 & do 8．．．．． & \(1 \cdot 031\) & \(12 \cdot 0\) & \(2 \cdot 6\) & \(9 \cdot 4\) & 0.73 & do \\
\hline 3，215 & do ．．．．．． & 1.030 & 11.0 & \(2 \cdot 7\) & \(8 \cdot 3\) & 0.70 & Watered． \\
\hline 3，216 & do ．．．．．． & 1.028 & \(9 \cdot 8\) & 23 & \(7 \cdot 5\) & 0.64 & do \\
\hline
\end{tabular}

Analysis of 53 samples of Milk-Continued.


Spices.
Of 26 spices analysed 18 were adulterated. The adulterations, as spicer. usual, consisted chiefly of farinaceous matter

Sugar.
The following table shows at a glance the composition of the Sugar. samples of sugar which have been submitted to me:-


\section*{Sweets.}

One sample out of 16 analysed contained about two per cent. of

Sweets.

Teas.

Teas.
I have analysed 12 teas, with the results given below :-
The leaves in No. 3,570 were broken into small fragments, its ash was 10.6 per cent. and its soluble ash only \(2 \cdot 5\). Hence it is both above and below the limits of the Society of Public Analysts ( 8 per cent. ash and 3 per cent. soluble ash), and I have reported it as adulterated.

It will be observed that this almost worthless tea gave 2.9 per cent. of thein,-more than any of the other samples.


I hare the honour to be, Sir,
Your obedient servant,
W. H. ELLIS.

\author{
Beaver Hacl Hild, Montreal, Ist Sept., 1880.
}

\section*{To the Commissioner of Inland Revenue, Ottawa.}

Sir,--I have the honor of submitting my report for the year ending lst July, 1880, comprising 263 samples, of which 186 were genuine, 62 adulterated and 15 doubtful, viz.:-

Number of Samples analysed.

- Uufit for fcod.

Comparing this statement with that of the previous year, an evident improvement has taken place in the quality of the food examined, and the ratio of adulteration has considerably diminishod since the operation of the Act. The articles of milk, butter and spices, however, are still open to improvement, although the extent of adulteration, as well as the number of instances, has obviously diminished.

The confectionery, although of a cheap class, appears to be generally free from unwholesome ingredients; and the sugars examined were of good quality and free from noxious chemicals.

It would now, I think, be very desirable to extend the operation of the Act into the surrounding country districts where it is probable that a cheaper class of goods, especially grocories, find a market and are less closely scrutinized than those supplied to the city traders. Moreover, a larger proportion of adulteration has so far;been found in the public markets tban in the city stores.

The remarks made in the last report on the several items of food might be repeated in the present, but this I deem to be unnecossary.

Improvement in quality of Food.

Confec-
tionery.

Necessity of having water filtered. - ademned as unfit for public consumption, there can be no doubt of the advantage and necessity of filtration for every public water sapply. If the advantage be small, then the cost is reduced in proportion; and if the cost of renewal of fiiters be formidable, then the necessity is the more urgent.

That this is important in the case of milch cows, as well as for inuman beings, has been illustrated in this city by an outbreak of typhoid fover, among the customers of a certain milk dealer, which the medical officer of health attributes to the impure condition of the water surrounding the cow sheds, and in which the ressels were washed. Upon analysis this water was found very impure, containing both free ammonia and albumenoid, and was decidedly contaminated with the drainage from the cow stables. This is not the first instance on record of the spread of diseases of this character, by neglect and filth in the cow stables. I believe a system of periodical inspection of such premises, and analysis of water supplied to dairy cows, would be of the greatest sanitary benefit to the public.

I have the honor to be
Your obedient servant,

\section*{J. BAKER EDWARDS,}
D.C.L., F.C.S.,

Public Analyst.

\section*{QUEBEC DIVISION.}

\section*{(Translation.)}

REMARKS AND GENERAL OBSERVATIONS.
Quebec, 21st January, 1880.
To the Commissioner
of Inland Revenue.
Sir,--In relation to the latest anelysis made by me by order of your Department, I have the honor to make the following remarks:

\section*{Milk.}

Milk much above the a verage.

The rarinus samples which I have examined have all, with some few exceptions, shewn remarkable richness, much above the average. I attribute this condition of things to the fact that during last season the pasturage in my district was of excellent quality.

I had an 'pportunity of noting in a marked manner the injurious effect of cold and frost upon the quality of the milk yielded by our herds. Indeed, from the 3 rd November, the samiles analysid contained a much smaller proportion of nutritive substanco, enpecially of fatty matter. This difference was due to the fact that in the last days of October and the first days of November the first frosts and snowtalls occurred.

The effect of the frost and snowfalls was immediate. The dairymen's herds were still at pasture.

1 have reason to bolieve that this is the first instance in which a chemist has been in a position to note such a lact as resulting from such an influence.

\section*{Butter.}

Still the same remarks to make; too mach water, too much kitchen salt, and frequently a rancid taste.

Butter.

\section*{Spices.}

Great improvement in the quality of spices of all kinds; the same is the case with regard to ground ceffee. I attribute this improvement to the fact that grocers have learned through the news- provement of. papers that they are under the observation of the Government, and that the products which they offer for sale are subject to inspection.

\author{
F. A. H. LARUE, M.A., M.D.
}

\section*{(Translation.) \\ REMARKS AND GENERAL OBSERVATIONS.}

Quebec, 16th August, 1880.

\section*{Milk.}

\section*{To the Commissioner \\ of Inland Revenue.}

With some exceptions the milk supplied by the milkmen of the city of Quebec has been found to be of excellent quality. They wilk. have ascertained from the newspapers or by hearsay that their milik is subjected to a searching inspection on behalf of the Federal Gorernment. Skimmed milk comes to us from the parishes adjacent to the city.

A very singular case of adulteration was brought under my cognizance within the last few days. I analysed a sample for a singular case farmer. This man had leased his farm on condition that the lessee of adultershould supply a certain quantity of milk to the owner; but in con- ation. sequence of deficient pasturage, resulting from drought, the lessee was unable to tultil his agreement. He was called upon to do so, and had recourse to the following expedient. His wife skimmed the evening milk and sold the cream or converted it into butter. Then when she went to milk the cows on the following day she took with her a certain quantity of this skimmed milk which she mixed out in the fields. at a distance from any habitation, with part of the milk she had just drawn from the cows. She was one day taken in the act.

In my analysis I found in the milk in question an almnst imperceptible amount of croam, but 16 por cent. of solid matter.

This is, I think, a npecies of adulteration hitherto unknown. 'The woman has since acknowledged the fact.

\section*{Butter.}

The same complaint cortinues; an excess of water. Sometimes too much kitchen salt or too much caseine. Our French Canadian
farmers do not know how to make butter. This is a misfortune, for, as I stated in a former report, butter would become an article of export of great value to the country.

\section*{Spices.}

Spices. A certain number of spices are constantly adulterated with farinaceous substances.

Tea.
Tea. Very good'and sold at low prices. This is perhaps a temporary result of the commercial depression.

Potted Meats.
Potted Meats. Improvement. Several are of excellent quality.
Sweets.

Sweets.

All the sagars examined have been found to be of excellent quality, contrary to what was the case previously. (Soe my previous reports.)

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

\author{
F. A. II. LARUE, M.A., M.D., Food Analyst.
}

\section*{HALIFAX DIVISION.}

Halifax, N.S., 5th July, 1880.
To the Commissioner of Inland Revenue, Ottawa.

Sir,-I beg to submit my report for the year ending 30th June 1880.

Number of The whole number of samples examined by me amounted to two Samples analysed. hundred and two.

The analysis of milks exterded over the months of October, November and December, 1879, and April, May and June, 1880, taken at intervals of a week and two wecks from city and country dealers.

The percentage of cream from the dealers' milks is much less than that of tho milk from cows owned by private individuals. In each sample I obtained from private individuals the butter-fat exceeded 3.0 ; and in the milks from most dealers the percentage of fat is seldom 25.

Of 54 samples of milk, 19 are deficient in"cream; 3 are skimmed; 30 are genuine; and in 2 there is an excess of cream.

The butters are of good quality; only one sample adulterated with Butter. foreign fat. Several samplos were rancid from bad packing and exposure to the air.

Teas, no adulterations. In some samples the leaves were much broken.

Coffees are all adulterated.
Sugars, all genuine.
Ground allspice, all genuine.
Ground cloves, all genuine.
Ground cinnamon, cassia substituted in all; and in one case the cassia was adulterated with 30 per cent. of pea-meal.

Ground gingers, two adulterated.
Mustards, all adulterated with wheat flour.
Confectionery, one adulterated with flour. None of the samples contained any injurious coloring.

Ground peppers, three adulterated.
Potted moats, all genuine.
Chocolates, all adulterated.
Cocoas, five adulterated; one genuine.
Canned fruits, no adulterations; all free from lead or tin.
There is a marked improvement in the character of ground spices offered for sale during the past year, but at auction rooms occasionally spices of very interior quality are sold; in most cases nicely put up to deceive. In one case ground pepper, with a facsimile of the Paris Exhibition prize medal on the package, contained sixty per cent. of pea-meal.

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

ROBERT G. FRASER.

\section*{SAMPLES.}
\begin{tabular}{|c|c|c|c|c|}
\hline Names of Samples. & 㝽 & 号 &  & Remarks. \\
\hline Butter........................... ....... & 67 & 56 & & \\
\hline Milk .......................................................... & 54 & 32 & 22 & \\
\hline Ollapice ............. .................... & \({ }_{5}^{5}\) & 5 & 0 & \\
\hline Ohacolate ......... ......................... & \({ }_{8}^{6}\) & 0 & \({ }_{8}^{0}\) & \\
\hline Oincamon, Ground. ...................... & 6 & 0 & 6 & \\
\hline Oloves, Gruund. .............................. & 5 & 5 & 0 & \\
\hline Cocoa & \({ }_{6}^{6}\) & 1 & 5 & \\
\hline Coffee, Ground ................. ....... & \(\stackrel{6}{6}\) & 5 & 13 & \\
\hline Ginger, Ground............................. & \({ }_{2}^{13}\) & 1 & 1 & \\
\hline Mustard ........................................ & 3 & 0 & & \\
\hline Pepper, Ground. ....... -.. ........... & \begin{tabular}{l}
8 \\
8 \\
\hline
\end{tabular} & \({ }^{6}\) & 2 & \\
\hline Sugar............... ......................... & 3
9
9 & 3
9 & 0 & \\
\hline Tea................... .................................. & \({ }_{12}\) & 12 & 0 & \\
\hline & 202 & 140 & 62 & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|}
\hline  &  \\
\hline \(\cdot 8\) & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline  &  \\
\hline  & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline 78.a 700 sp!ios & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline \({ }^{2} \times 78\) M & \begin{tabular}{l}
 \\
的
\end{tabular} \\
\hline \({ }^{\text {®sp!ios [8]0] }}\) & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline ' \({ }^{9} \mathrm{~V}\) & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline  & \begin{tabular}{l}
 \\

\end{tabular} \\
\hline
\end{tabular}
-0и!ə88

\(7^{7 B}\) d vepfng

Milk Vendors.
 J. D. Mackintosh................................ ............


ANALYSIS OF 57 SAMPLES OF BUTTER．
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Vendors． &  & \[
\begin{aligned}
& \dot{8} \\
& \text { 品 } \\
& \text { む } \\
& 0
\end{aligned}
\] & \[
\begin{aligned}
& \text { + } \\
& \text { た }
\end{aligned}
\] & 岕 &  & Remarks． \\
\hline & & & & & & \\
\hline & & & & & & \\
\hline \begin{tabular}{c} 
John Butcher，No． \\
do \\
No． \(2 . . . . . . . . . . . . . . . . . . . ~\) \\
\hline
\end{tabular} & 88.50
88.50 & 1.54
1.50 & 4.00
5.00 & 6.00
5.00 & 0.0
0.0 & No adulteration． \\
\hline W．H．Nauffts ．．．．．．．．．．．．．．．．．．．．．． & 8980 & 0.20 & 4.00 & 6.00 & \(0 \cdot 0\) & do \\
\hline T．D．Peakes．．．．．．．．．．．．．．．．．．．．．．．．． & 8600 & \(1 \cdot 00\) & \(3 \cdot 00\) & 10.00 & \(0 \cdot 0\) & do \\
\hline Thos．Longley．．．．．．．．．．．．．．．．．．．．．． & 90.00 & 1.00 & 4.00 & 5.00 & \(0 \cdot 0\) & do \\
\hline Rumsay \＆Johnston．．．．．．．．．．．．． & 8700 & 1.00 & 5.00 & 7.00 & 0：0 & do \\
\hline Jas．Sutherland．．．．．．．．．．．．．．．．．．． & \(8+30\) & \(0 \cdot 70\) & 500 & 1000 & \(0 \cdot 0\) & do（Rancid．） \\
\hline Thos．Thorburn，Colonial Mkt．． & 77.20 & \(0 \cdot 80\) & 500 & 700 & 100 & Adulterated． \\
\hline Herbert Hartland．．．．．．．．．．．．．．．．．．． & 92.50 & 0.50 & 300 & 4.00 & 0.0 & No adulteration． \\
\hline A．Nickerson．．．．．．．．．．．．．．．．．．．．．．．．． & 91.50 & \(0 \cdot 50\) & \(2 \cdot 00\) & \(3 \cdot 00\) & \(0 \cdot 0\) & do good butter． \\
\hline Wm．Kent．．．．．．．．．．．．．．．．．．．．．．．．． & \(89 \cdot 30\) & 0.70 & 4.00 & \(6 \cdot 00\) & 0.0 & do do \\
\hline Edward Power．．．．．．．．．．．．．．．．．．．．．． & \(92 \cdot 60\) & 0.90 & 2.50 & 4.00 & 0.0 & do do \\
\hline Dillon Bros．．．．．．．．．．．．．．．．．．．．．．．．．．． & \(88 \cdot 70\) & 0.30 & 500 & 600 & 00 & do \\
\hline Thomas Lownds．．．．．．．．．．．．．．．．．．．． & 8550 & \(0 \cdot 40\) & 7.10 & 7.00 & \(0 \cdot 0\) & do \\
\hline Thomas Finch ．．．．．．．．．．．．．．．．．．．．． & 87.70 & 0.30 & 6.00 & 7.00 & 0.0 & do \\
\hline Jea．Duggan \＆Sons．．．．．．．．．．．．．．．．＇ & \(82 \cdot 40\) & 0.60 & 7.00 & 10.00 & 0.0 & do \\
\hline A．K．Bruce．．．．．．．．．．．．．．．．．．．．．．．．．． & 88.00 & 1.00 & \(5 \cdot 00\) & 6.00 & 0.0 & do \\
\hline T．S．Murray．．．．．．．．．．．．．．．．．．．．．．．．． & \(83 \cdot 30\) & 0.70 & \(6 \cdot 00\) & 10.00 & 0.0 & do \\
\hline John H Bent．．．．．．．．．．．．．．．．．．．．．．．． & 86.0 & \(1 \cdot 0\) & 6.0 & 8.0 & 00 & do \\
\hline John K．Quinn．．．．．．．．．．．．．．．．．．．．．．． & 835 & 1.5 & 6.0 & 100 & \(0 \cdot 0\) & do \\
\hline John B．Butcher ．．．．．．．．．．．．．．．．．．．． & 85.0 & 10 & \(7 \cdot 0\) & \(7 \cdot 0\) & \(0 \cdot 0\) & do \\
\hline George Currie ．．．．．．．．．．．．．－．．．．．．． & 875 & 0.5 & \(4 \cdot 0\) & 8.0 & 0.0 & do \\
\hline Nelson Murphy．．．．．．．．．．．．．．．．．．．．．． & 84.0 & 1.0 & 5.0 & 100 & 00 & do \\
\hline Watson Eaton．．．．．．．．．．．．．．．．．．．．．． & \(89^{\circ} 0\) & \(1 \cdot 0\) & \(4 \cdot 0\) & 6.0 & 00 & do（Rancid．） \\
\hline O．\＆W．Anderson－．．．．．．．．．．．．．．．． & \(89 \cdot 0\) & \(1 \cdot 0\) & \(4 \cdot 0\) & 6.0 & 00 & Rancid． \\
\hline J．D．Peakes，No．1．．．．．．．．．．．．．．．．． & 850 & 1.0 & \(4 \cdot 0\) & \(10 \cdot 0\) & \(0 \cdot 0\) & No adulteration． \\
\hline do No．2．．．．．．．．．．．．．．．． & 870 & 1.0 & \(4 \cdot 0\) & \(8 \cdot 0\) & \(0 \cdot 0\) & do \\
\hline C．\＆W．Anderson．．．．．．．．．．．．．．\({ }^{\text {．}}\)－ & 858 & 0.4 & 60 & 8.8 & 00 & do \\
\hline W．A．Nauffts ．．．．．．．．．．．．．．．．．．．．．．． & 837 & \(0 \cdot 3\) & 8.0 & \(8 \cdot 0\) & \(0 \cdot 0\) & do \\
\hline J．A．Sutherlaud．．．．．．．．．．．．．．．．．．．． & 816 & \(0 \cdot 4\) & 6.0 & 120 & 0.0 & do \\
\hline Wm．Archibald & 85.0 & 0.5 & \(6 \cdot 0\) & \(8 \cdot 0\) & 0.0 & do \\
\hline Charles Graham \＆Co．（1）．．．．．． & 82.6 & \(0 \cdot 4\) & 70 & 100 & 0.0 & do \\
\hline do（2）．．．．．． & \(83 \cdot 7\) & \(0 \cdot 3\) & 6.0 & \(10 \cdot 0\) & 0.0 & do \\
\hline J．K．Jenkins．．．．．．．．．．．．．．．．．．．．．．．． & 88.6 & 0.4 & \(5 \cdot 0\) & 6.0 & 0.0 & Good hutter，no ndult＇n． \\
\hline A．K．Bruce．．．．．．．．．．．．．．．．．．．．．．．．．．． & \(85 \cdot 6\) & 0.4 & 5.0 & \(9 \cdot 0\) & 00 & No adulteration． \\
\hline James Duggan \＆Sons．．．．．．．．．．．．． & \(86 \cdot 7\) & 0.3 & 5.0 & 8.0 & 00 & Good butter． \\
\hline W do ．．．．．．．．．． & 84.2 & 08 & 50 & 100 & 0.0 & No adulteration． \\
\hline W．D．Harrington．．．．．．．．．．．．．．．．．． & 795 & 0.5 & 8.0 & 12.0 & 0.0 & do \\
\hline T．S．Murray \＆Do ．．．．．．．．．．．．．．．．．． & 87.3 & 0.7 & 4.0 & 80 & 0.0 & do \\
\hline Davidson Bros．．．．．．．．．．．．．．．．．．．．．．．．． & \(85 \cdot 70\) & \(0 \cdot 30\) & 6.00 & \(8 \cdot 00\) & 0.00 & do \\
\hline Philip Hire．．．．．．．．．．．．．．．．．．．．．．．．．．．． & 83.60 & \(0 \cdot 40\) & \(8 \cdot 00\) & 8.00 & 0.00 & do \\
\hline P．J．Esd ．．．．．．．．．．．．．．．．．．．．．．．．．．．． & 8880 & 0.20 & \(6 \cdot 00\) & 6.00 & 0.00 & Good butter． \\
\hline Thos．Diggins．．．．．．．．．．．．．．．．،．．．．．．． & 84.40 & \(0 \cdot 60\) & 900 & \(6 \cdot 00\) & 0.00 & do \\
\hline Thos．Wright．．．．．．．．．．．．．．．．．．．．．．．． & \(84 \cdot 60\) & 0.40 & 10.00 & 5.00 & 0.00 & do \\
\hline J．H．Nisbet．．．．．．．．．．．．．．．．．．．．．．．．．．． & 82.70 & 0.30 & 9.00 & \(8 \cdot 00\) & 0.00 & Rancid． \\
\hline H．Mumford ．．．．．．．．．．．．．．．．．．．．．．．．．． & \(81 \cdot 70\) & \(0 \cdot 30\) & \(8 \cdot 00\) & 1000 & 0.00 & No adulteration． \\
\hline Jas．Wallace．．．．．．．．．．．．．．．．．．．．．．．．． & \(83 \cdot 80\) & 0.20 & 6.00 & 1000 & 0.00 & do \\
\hline Francis Fry．．．．．．．．．．．．．．．．．．．．．．．．．．．． & \(84 \cdot 70\) & 0.30 & 7.00 & 8.00 & 000 & do \\
\hline George Shear．．．．．．．．．．．．．．．．．．．．．．．．． & 83.60 & 0.40 & 6.00 & 1000 & 0.00 & do \\
\hline Michael Sallivan－．．．．．．．．．．．．．．．．．．． & 90．70 & 0.30 & 400 & 5.00 & 0.00 & Good butter． \\
\hline Matthew Young，jr ．．．．．．．．．．．．．．．．． & \(89 \cdot 70\)
90 & 0.30 & 500 & 5.50 & \(0 \cdot 00\) & do \\
\hline John Cronan．．．．．．．．．．．．．．．．．．．．．．．． & 9080 & \(0 \cdot 20\) & 4.00 & 5.00 & 000 & Excellent bilter． \\
\hline Rumsay \＆Johnston．．．．．．．．．．．．．．．． & \(89 \cdot 70\) & 0.30 & 5.00 & 5.00 & \(0 \cdot 00\) & INo adulteration． \\
\hline Jajnes Scott．．．．．．．．．．．．．．．．．．．．．．．．．． & \(88 \cdot 60\) & \(0 \cdot 40\) & 5.00 & 6.00 & 000 & 1 do \\
\hline Joha Butcher ．．．．．．．．．．．．．．．．．．．．．．．．．． & 8870 & \(0 \cdot 30\) & \(4 \cdot 00\) & 700 & 0.00 & do \\
\hline Thomas Longley ．．．．．．．．．．．．．．．．．．．．． & \(85 \cdot 70\) & \(0 \cdot 30\) & \(7 \cdot 00\) & 7.00 & 0.00 & Goon hutter． \\
\hline John O＇Brien．．．．．．．．．．．．．．．．．．．．．．．．． & \(89 \cdot 8\) & 020 & \(5 \cdot 00\) & 5.00 & 000 & do \\
\hline
\end{tabular}

\section*{ST. JOHN DIVISION.}

St. John, N.B., 14th January, 1880.
To the Commissioner of Inland Revenue, Ottawa.
Sir,-I beg to submit the following Report of my work during the quarter ending 6th January, 1880 :-

\section*{Milk.}

Twelve samples of milk wore brought to me for examination; of these six were found to have been skimmed, two had been watered, Milk. two were of good quality and two were classed as excellent.

It is worthy of note that the milk sold by grocers in the city was found to be inferior to the milk supplied by coantry milkmen.

In some instances, however, milk had been skimmed before it reached the city.

In no case did I find that chalk or any foreign solid adulteration had been added to the milk.

It is generally admitted in this city that something should be done at once to chock the sale of watered and skimmed milk.

\section*{Butter.}

Of the six samples examined, only two were found to be unobjectionable. No foreign fats had been added. The butter-milk had Butter. been imperfectly removed and salt was present in large crystals.

\section*{Bread.}

There is little to complain of as regards the purity of the bread supplied to the poople of this city.

Bread.
In a few instances I have found a quantity of alum, which has been added either to make the bread whiter or to facilitate the incorporation of a large quantity of water. Neither pea meal, bran meal nor potato starch had been added to the flour.

\section*{Coffee.}

The higher priced coffees that were roasted and ground by city grocers were found to be unadulterated, but varying in strength. Coffee. Coffee sold in packages was found to be largely adulterated with pea and bran meal, chicory, \&c. It would be but fair to the honest dealer and to the consumer if each package of coffee, spices, \&c., if mixed with flour or any harmless substance, were marked " mixture."

In England manufacturers of spices, \&c.; arecompelled to state on Mixture. the label whether the article is or is not a mixture.

Cocoa.
This substance was pure in each case.

\section*{Fepper.}

Cocom.
'Every sample was more or less adulterated with flour.
Tea.

Pepper.
This important article was found to be of fair quality, but from the limited number of samples examined no general conclusions can Tea. be arrived at.

Sugar.
It so happened that the samples of sugar furnished were "Canadian" and "Scotch Refined." It was thus possible to compare these Sugar.
two important grades. I find that there is really very little difference in the two varieties, as far as I have examined them.

I beg leave to suggest that the following substances be included in some future list of articles for analysis.

Cream of tartar, ginger, confectionery, canned fruits, pickles and a few more samples of milk and butter.

I have the honor to be, Sir, Your obedient servant, WILLIAM F. BEST, Analystcal Chemist, Public Analyst.

St. Joinn, N.B., 13th July, 1880.
To the Commissioner of
Inland Revenue, Ottawa.

Number of samples analysed.

Sir,-I beg to make the following Report on my work during the last quarter.

Of the seventy-six samples of food material submitted to me for analysis, (46) forty-six samples were found pure and unadulterated, (26) twenty-six samples were found adulterated and (4) four were clansed as "doubtful."

The only special remarks that I will make on my results are:-
1st. That a larger proportion of the butter samples were fresh and good than on the last occasion.
Tea and milk largely adulterated.

2nd. That the milk is more extensively watered than formerly; and lastly, that nearly 50 per cent of the tea was adulterated with forcigu leaves and refuse matter.

I append a tabulatod statement of my results.
\begin{tabular}{|c|c|c|c|c|}
\hline Nature of Suhstance submitted for Analysis. &  &  & 号 & Totals. \\
\hline Allspice ........ ........ ................. . & 0 & 2 & 0 & 2 \\
\hline Butter ............... .................... ..... & 13 & 5 & 0 & 18 \\
\hline Canned Fruit ........ .......... ...c.as....... & 3 & 0 & 0 & 3 \\
\hline Choculate ......... ... ........ ......... ....... & 3 & 0 & 0 & 3 \\
\hline Cinnamon ......... ......... ..................... & 0 & 2 & 0 & 2 \\
\hline Olnves ................................................ ..... .. & 0 & 2 & 0 & 2 \\
\hline Coffee .......... .................. ............................. & 3 & 0 & 0 & 3 \\
\hline Ginger ........ .......... ........ ............... & 0 & 2 & 0 & 2 \\
\hline Milk ...... ........ .............. .............. & 9 & 6 & 3 & 18 \\
\hline Mustard...............o. ........................ 1 & 0 & 3 & 0 & 3 \\
\hline Yepper ......... .......... . . . . . . . . . . . . . . . . . . ........ & 0 & 2 & 0 & 2 \\
\hline Poited Meats ............... .............. .. & 3 & 0 & 0 & 3 \\
\hline Sugrr:......... ........ ...... ......... ..... .... . & 5 & 0 & 0 & 5 \\
\hline Sweets ......... ................ ..... ... ......... & 3 & 0 & 0 & 3 \\
\hline Tea ......... ......... .... .... ............... ...... & 4 & 2 & 1 & 7 \\
\hline Totals.................... & 46 & 26 & 4 & 76 \\
\hline
\end{tabular}

I have the honor to \(b \in\), Sir, Your obedient servant,

WILLIAM F. BEST, Public Analyst.

\section*{APPENDIX B-INSPECTION OF FOOD AND DRUGS.}
Memorandum of Instructions given to Collectors of Inland Revenue as to tho number of Samples to be submitted to tho
ratious Public Analysta, during Fiscal Year ending 3uth June, 1880 .

APPENDIX C-INSPECTION OF FOOD AND DRUGS.




DRUGS.-Tabulated Statement, \&c.-Continued.


APPENDIX C.-INSPECTION OF FOOD AND
BUTTER.-


\section*{DRUGS.-Tabulated Statement, \&c.-Continued.}

Continued.

Results of Analysis.



\section*{DRUGS. -Tabulated Statemont, \&c.-Continued.}

Continued.
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Results of Analysis.} & \multirow{2}{*}{Remarks by the Analyst.} \\
\hline Salts. & Water. & Other
Fats. & Ash. & \\
\hline p. cent. & p. cent. & p. cent. & p. cent. & \\
\hline ............ & 8.00 & ........... & \(2 \cdot 16\) & Very good. \\
\hline ........... & 88.83 & ........... & \(2 \cdot 33\) & do \\
\hline ............ & 11.66
14.75 & ............ & 5.16
4.75 & Too much water. \\
\hline …........... & 11075 & .............. & \begin{tabular}{l}
4.75 \\
1.50 \\
\hline
\end{tabular} & \(\begin{array}{ll}\text { do } \\ \text { do } & \text { do } \\ \text { do }\end{array}\) \\
\hline ............. & 10.25 & ......... & 1.50 & do do \\
\hline .............. & 9.75
925 & ….......... & 2.00
200 & Good, but percentagaiof water a little too.high. \\
\hline ............ & 1000 & ............ & \(1 \cdot 0\) & Too much water, do \\
\hline ............ & 775
975 & ... & 1.25
1.25 & Good. \\
\hline .............. & \(\begin{array}{r}9 \\ 10 \\ \hline 0\end{array}\) & ........... & 1.25
450 & Too much water. \\
\hline ............ & 700 & .............. & 166 & Pure. \\
\hline ..., ....... & 933 & ........... & 265 & Pretty good. \\
\hline .......... & 1000
10.25 & ..... & 2.00
375 & Too much water. \\
\hline ................ & 11.50 & ............ & 3.5
5.50 & \[
\begin{array}{lll}
\text { do } & \text { do } & \text { and salt. } \\
\text { do do } & \text { do }
\end{array}
\] \\
\hline ........... & 550 & ........... & \(1 \cdot 75\) & Rancid. do do \\
\hline ............ & 12.25 & ..... & 375 & Too much water. \\
\hline ............... & 14.25
885 & .............. & 375
250 & do do \\
\hline ........ & 1033 & ............... & 200 & Too much water and caseine ; very rancid. \\
\hline ............ & 11.33
10.33 & ..... & 2.00
1.33 & do do do \({ }^{\text {do }}\) do \\
\hline ............... & 1033
13 & .............. & 1.33
1.75 & do
do \\
\hline .......... & 9.50 & ........ & 700 & do do and salt. \\
\hline ................ & 1050
10
10 & .............. & 275
500
5 & do do do \\
\hline ..... & \(9 \cdot 00\) & ............... & \(2 \cdot 50\) & do do do \\
\hline ............ & 11000 & ….......... & \(\begin{array}{r}7 \cdot 25 \\ 300 \\ \hline\end{array}\) & do do and salt. \\
\hline ............... & 1300 & ........... & \begin{tabular}{l}
300 \\
3.25 \\
\hline
\end{tabular} & do do do \\
\hline ..... ...... & \(12 \cdot 65\) & …....... & \(2 \cdot 50\) & do do \\
\hline ............... & 966
123 & .............. & 333
4.00 & do do and rarcid. \\
\hline .............. & 133. & & 466 & do do \\
\hline ..... ...... & 14.50
1300 & ........... & 400 & do do \\
\hline ............... & 1300
10.00 & …........... & 3.25
3.25 & do
do
do
do \\
\hline ............ & \(12 \cdot 66\) & ............ & 400 & do do \\
\hline ..... ...... & 1066
10.33 & ........... & 466 & do do \\
\hline ............ & \(10 \cdot 33\) & ........... & \(2 \cdot 33\) & do do \\
\hline ..... ....... & \(8 \cdot 34\) & ........... & \(3 \cdot 60\) & Good. \\
\hline ............... & 700
9.00 & ............ & 097
1.49 & do \\
\hline ............ & 11.80 & .... ....... & 266 & Too mach water. \\
\hline ................ & 1000
15.00 & ............. & 466
366 &  \\
\hline ............... & 734 & …......... \({ }^{\prime}\) & \({ }_{2} 56\) & Perr large.percentage of water. \\
\hline ........... 1 & 1100
9 & .... \(\frac{. . . .}{}\) & 800 & Toomuch water. \\
\hline …........ & 9.50
\(1 \% 50\) & …........ & \(\stackrel{364}{1.66}\) & Pure. \({ }^{\text {Tuo much water. }}\) \\
\hline ............. & 8.00 & .............. & 200 & Good. \\
\hline ……....... & 1034
9.17 & …........ & 258
2.80 & Tou much water. \\
\hline ............... & 9.17
9.19 & .............. & \(2 \cdot 80\)
260 & \[
\begin{array}{ll}
\text { do do } \\
\text { do } & \text { do }
\end{array}
\] \\
\hline & & & & \\
\hline
\end{tabular}

\section*{APPENDIX C.-INSPECTION OF FOOD AND}

BUTTER.-


\section*{DJRUGS.--Tabulated Statement, \&c.-Continued.}

Continued.

Results of Analysis.
\begin{tabular}{|c|c|c|c|c|}
\hline Salts. & Water. & Other Fats. & Asb. & \\
\hline p. cent. & p. cent. & p. cent. & p. cent. & \\
\hline ......... & 9-13 & ......... & \(2 \cdot 00\) & Too mach water. \\
\hline ......... & 843 & ....... ..... & \(2 \cdot 30\) & Pretty good. \\
\hline .... & 840 & ............ & \(2 \cdot 00\) & Tpo mach caseine, \\
\hline . \(0 . . .1\). & \(2 \cdot 06\) & ............ & 4.00 & \\
\hline \(5 \cdot 0\) & 80 & ... & & No adulteration. \\
\hline 5.0 & 10.0 & ............. & ........... & do \\
\hline 70 & \(7 \cdot 0\) & ............. & ....... ..... & do \\
\hline 40 & 8.0 & ....... ..... & ............. & do \\
\hline 50 & 100 & ....... .... & ............. & do \\
\hline \(4 \cdot 0\) & 60 & -........... & ...........0. & do rancid. \\
\hline 4.0 & \(6 \cdot 0\) & ............ & & Rancid. \\
\hline 4.0 & 100 & ............ & ........ & No adulteration. \\
\hline \(4 \cdot 0\) & \(8 \cdot 0\) & .-1......... & ........... & do \\
\hline 6.0 & 80 & ........ ... & ............ & do \\
\hline 80 & 80 & ............ & ............ & do \\
\hline 60 & 12.0 & ............. & ........... & do \\
\hline 6.0 & \(8 \cdot 0\) & ... ....... & ...... ...... & do \\
\hline 70 & \(10 \cdot 0\) & ............ & ............ & do \\
\hline 60 & 100 & ............ & ............ & do \\
\hline 50
50 & 60
90 & ............ & ............. & do \\
\hline 60
5.0 & 90 & ...... ..... & - ........ .. & do \\
\hline 5.0
8.0 & 8.0 & ....... ..... & ......... & do \\
\hline 8.0
80 & 100 & ...... ..... & ............. & do \\
\hline 80
40 & 12.0 & ...........0 & ............. & do \\
\hline 40
6.0 & 80 & ............. & ..........e. & do \\
\hline 6.0
80 & 80 & ..... ....... & ...1......... & do \\
\hline 80
6.0 & \(8 \cdot 0\) & ............ & ...... . . ..... & do \\
\hline 6.0
90 & \(5 \cdot 0\) & ...... & ............ & do \\
\hline 9.0
10.0 & \(6 \cdot 0\) & ......... ... & ...... ....... & Good butter. \\
\hline 10.0
9.0 & 5.0
8.0 & ... ......... & ............ & do \\
\hline 9.0
8.0 & 80
10.0 & ............... & ....... . . . .... & No adulteration. \\
\hline 60 & 10.0 & ....... ....... & .............. & do \\
\hline 70 & \(8 \cdot 0\) & j............ & ..... & do \\
\hline 60 & 100 & .......... & ............ & do \\
\hline 4.0 & 50 & ...0. ....... & ............ & do \\
\hline \(5 \cdot 0\) & \(6 \cdot 0\) & |...... .osoo. & ........... & do \\
\hline 4.0
50 & 5.0
50 & ............. & ............ & do \\
\hline 50
5.0 & 5.0 & ...... ..... & ....0. -..... & do \\
\hline 5.0
4.0 & 6.0
70 & ............. & .............. & do \\
\hline 7.0 & 7.0 & ............... & ............. & do \\
\hline 50 & 5.0 & ............ & ....... ..... & do \\
\hline & & & & \\
\hline 40 & 60 & ............. & I............ & do \\
\hline 50 & 50 & ................ & '................ & do \\
\hline 4.0 & 60 & \(\cdot\) & ............ & do \\
\hline 3.0 & 10.0 & ............ & ............ & do \\
\hline 4.0 & \(5 \cdot 0\) & ............. & .........00. & do \\
\hline \(5 \cdot 0\) & 70 & ..... ...... & ..... . ...... & do \\
\hline 50 & 100 & ............ & ...... . & do rancid. \\
\hline 5.0 & 70 & |-0.0.. ..... & ............ & Adulterated with 10 per cent. of foreign fat. \\
\hline 3.0
2.0 & \(4 \cdot 0\) & ............. & ............. & Good butter, no adulteration. \\
\hline 20
40 & 30 & -.0.0...... & ............ & do do \\
\hline 40
2.5 & 6.0 & ...0.1. ...... & ............. & do do \\
\hline 2. & 40 & . \(1.00 \cdot 0.0 .0\). & & 27 \\
\hline
\end{tabular}

APPENDIX C.-INSPECTION OF FOOD AND
butter.-


DRUGS.-Tabdatad Stat\$ment, do.-Continued.
Continued.
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Results of Anatysis.} & \multirow{2}{*}{Remarks by the Analyst.} \\
\hline Selts. & Water. & Other Fats. & Ash. & \\
\hline & & & & \\
\hline 7.10 ' & 700 & . & ............. & No adalteration. \\
\hline \(6 \cdot 00\) & 600 & ......... & .-........... & do \\
\hline 7.00 & 10.00 & . & -......... & do \\
\hline 6.00
8.00 & 6.00 & -.......... & -......... & do \\
\hline 280 & 16.50 & .............. & ..... & Bady prepared ; contains too mueh water. \\
\hline \(2 \cdot 30\) & \(6 \cdot 30\) & ............ & & Too large percentage of card ; badly prepared. \\
\hline 1.70 & \(10^{\circ} 00\) & ............ & ............ & Good butter. \\
\hline 4.25
1.75 & 1100
11.60 & .......... & ......... & Strong and old. \\
\hline 2.60 & 11.60
9 & ........... & & l \\
\hline 2.85 & 9.00 & \(\ldots\) & ... & Not adnlterated. \\
\hline -3.68 & 9.00 & ........... & ........... & Excellent ; fresh when examinod. \\
\hline 13.25
6.00 & 6.00
700 & ............ & ............ & Not adulterated. \({ }_{\text {do }}\) \\
\hline 800 & 6.50 & ... & ........... & - do \\
\hline 13.00 & 700 & ............ & ........... & do \\
\hline .51
2.50 & 14.00 & .......... & ......... & Tresh do ' \\
\hline 2.50
6.90 & 13.70
10.50 & ............ & ............ & Fresh batter. \\
\hline 11.00 & 10.00 & & ............. & Adulteated with buttermilk and salt'in excess. \\
\hline 12.60 & O. 0 & .......... & .......... & Not adulterated; caseine and salt slightly in excess. \\
\hline 761
810 & 7.00
4.90 & .......... & -..... & do good quality. \\
\hline 1.80 & 780 & ............ & ... & do qualiy rather inferior; coloured with annata \\
\hline 4.00 & \(15 \cdot 30\) & ...... & .... & Contains too much Water. \\
\hline 7.50
8.00 & 18.60
28.00 & -............. & ............... & Containg excess of water and alt.
Excess of wat r. \\
\hline \(2 \cdot 40\) & 980 & ........ & & Genuine butter, bot coloured with annato. \\
\hline
\end{tabular}
APPENDIX C.-INSPECTION OF FOOD AND DRUGS-Tabulatod Statoment, \&c.-Contirued.


APPENDIX C.-INSPECTION OF FOOD AND DRUGS.-Tabalated Statement, tc.-Continued.
CLOVES.-Continued.


\footnotetext{
CINNAMON.
\begin{tabular}{l|c|c|c}
3561 & R. Kidney ......................... & Adulterated with flour and cassia. \\
3562 & W. McMillan & do................ & do \\
3563 & A. E. Fairfield................ & do & do \\
do
\end{tabular}

}

APPENDIX C.-INSPECTION OF FOOD AND DRUGS.--Tabulated Statement, \&c.-Continued.

\begin{tabular}{|c|}
\hline  \\
\hline  \\
\hline  \\
\hline 竐 \\
\hline 官它安安安血： \\
\hline  \\
\hline  \\
\hline  \\
\hline  \\
\hline  \\
\hline
\end{tabular}
APPENDIX C.-ISPECTION OF FOOD AND DRUGS.-Tabulated Statement, \&c.-Continued.



\begin{tabular}{|c|c|c|}
\hline 2454
3156
3156 & \(\left\lvert\, \begin{aligned} & \text { Valiquette \& Perrin.. ........... } \\ & \text { J. U'8haughnessy........... ...... } \\ & \text { M. Aubin ................. ........ }\end{aligned}\right.\) & \begin{tabular}{l}
do 3.00 ; adulterated to about 30 per cent with chicory, roasted peas and beans. \\
do 380 ; adulterated to the extent of 50 per cent. with chicory and roasted peas. \\
Adulterated over 40 per cent. with chicory and roasted peas.
\end{tabular} \\
\hline 3156 &  & Adulterated over 40 per cent. with ehicory and roasted peas. \\
\hline 2706 & Et. Paradis ......... ................ & No adulteration, \\
\hline 2707 & do & One-third chicory. \\
\hline 2708 & do ................... ..... & One-half chicory and pea flour. \\
\hline 2719 & do ........................ & Pure Jamaica coffce. \\
\hline 2710 & St. Boily . ...... .. ........ ........ & do do \\
\hline 2711 & |s Brouard ......... ........ ........ & Pure Java coffee. \\
\hline 2712 & do & do do \\
\hline 2713 & JJ. B. Z. Dubeau................... & do do \\
\hline 2714 & do & do do \\
\hline 2715 & do & do \\
\hline 2863 & Et. Paradis .. . ........... ......... & Adulterated with one-third of amylaceous substances. \\
\hline 2878 & do .................... ...... & Pure. \\
\hline 2831 & J. Brouard ........e ........ & \\
\hline 2222 & C. \& W. Anderson .............. & Adulterated with 30 per cent, of peas. \\
\hline 2243 & James Scott ........ ........ ..... & do 30 per cent. of peas and 10 per cent. of chicory. \\
\hline 2264 & Sutherland \& Fader.... ........ & do \(\quad 70\) per cent. of peas which were musty and un- \\
\hline 2265 & Wilham A rchibald ...... ........ & Adulterated with 60 per cent. of peas and 8 per cent of chicory. \\
\hline 2266 & W. B. Spencer .................. & do 70 per cent. of peas and 10 per cent. of chicory \\
\hline 2267 & Lordily \$ Btimpson...... ......... & do 70 per cent. of peas. \\
\hline 2268 & , A. Nickerson.. ..nooc. ..... ...... & do \(\quad 40\) per cent. of peas and 10 per cent of chicory. \\
\hline 22:9 & W. \& A. Naufts ...... ... ........ & do 30 per cent. of peas and 30 per cent of chicory. \\
\hline 2270 & J. W. Betcher. ............. ...... & do \(\quad 60\) per cent. of peas and 10 per cent of chicory. \\
\hline 2271 & W. K. Schwartz \& Son.... .i.. & do 50 per cent, of peas and 10 per cent. of chicory. \\
\hline 3155 & Thomas Longley ................ & Adulterated with 50 per cent. of peas and 15 per cent. of chicory. \\
\hline 3156 & Drvidson Brus............... ...... & do 50 per cent. of peas and 10 per cent of chicory. \\
\hline 3157 & Rubeat U'Mullins................. & do \(\quad 55\) per cent. of peas and 15 per cent of chicory. \\
\hline 2903 & D. Breeze ..... ...... i..... ........ & Unadulterated. \\
\hline 2904 & A. Lordly .....0.0.0.0 \%.... & Pure, and containing nothing but ground coffee beans, \\
\hline
\end{tabular}

APPENDIX C-IXSPECTION OF FOOD AND DRGGS-Tubulated Statement, de.-Continued. OOMFW!:-Continitd.



APPENDIX C.-INSPECTION OF FOOD AND
MILK. -
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Date. & \[
\begin{gathered}
\text { Name } \\
\text { of } \\
\text { Analyst. }
\end{gathered}
\] & Division. & No. of Analyst's Bepert. & Vendor. & Butter Fst. & Oaseine. \\
\hline 1880. & & & & & p. cent. & p. cent. \\
\hline Jan. 13... & W. Fllis ........... & Toronto....... & 2553 & Charles Lee................ .... & 32 & 4.0 \\
\hline do 13... & do ........... & do ...... & 2554 & R. McGuiggan... ......... ...... & 34 & 38 \\
\hline do 13... & do ............ & do ....... & 2555 & A Charters .............. ........ & 32 & \(4 \cdot 4\) \\
\hline do 29... & do & do ....... & 2565 & Patrick Gajnor ................ & 2.8 & \(3 \cdot 8\) \\
\hline do 29... & do & do ...... & 2566 & Frrnk Rex ....................... & 2.8 & 3.8 \\
\hline do 29... & do ........... & do ...... & 2567 & MeParlane \& Co.. .............. & 2.6 & 3.9 \\
\hline Feb. 6... & do & do ....... & 2571 & J. Moat .................... ........ & \(2 \cdot 4\) & 4.0 \\
\hline do 5... & do ............ & do ...... & 2572 & f. Preston ................. ........ & 3.0 & \(3 \cdot 2\) \\
\hline do 5... & do & do ...... & 2573 & |J. Carson............ ............. & 29 & \(4 \cdot 1\) \\
\hline do 14... & do & do ....... & 2586 & W. Arden .. ........ .. ...... ...... & \(2 \cdot 8\) & 3.2 \\
\hline do 14... & do & do ....... & 2587 & P. J. Dogle. ..................... & \(2 \cdot 3\) & \(3 \cdot 7\) \\
\hline do 14... & do & do ...... & 2588 & |John Busteed.... ........ .. ...... & 25 & 3.8 \\
\hline do 33... & do & do ...... & 2589 & John Mead. ........ ........ ......) & 26 & 4.6 \\
\hline do 23... & do & do ...... & 2590 & Churles Johnston... \({ }^{\text {a }}\)......... & 30 & 3.9 \\
\hline do 23... & do & do ....... & 2591 & |Mrs. Ann Mooney ..... ........] & \(2 \cdot 8\) & 4.7 \\
\hline do 26...! & do & do ...... & 2595 & John Roach. ....... .. ..... ...... & 2.7 & 4.9 \\
\hline do 26... & do & do ...... & 2596 & W. Mcfarland .......... ........ & 31 & 3.5 \\
\hline do 26... & do & do ...... & 2397 & W. H. West:........ ... ......... & 21 & \(4 \cdot 4\) \\
\hline March 5... & do ............ & do ...... & 3201 & John Gaymond ........ ........ & \(2 \cdot 4\) & \(3 \cdot 6\) \\
\hline do 5... & do & do ...... & 3202 & Thomas Smith ........ ........ & 28 & 4.9 \\
\hline do 5... & do & do ...... & 3203 & Ubarles Tomlin ............... & \(3 \cdot 1\) & 48 \\
\hline do 11... & do & do ...... & 3214 & H. J. Hawkins........ . ........ & \(2 \cdot 6\) & \(4 \cdot 5\) \\
\hline do 11... & do ....... .... & do ...... & 3315 & Toronto Duiry Co............. & 2.7 & 3.8 \\
\hline do 11... & do & do ...... & 3216 & Mrs. Shipwrys., ........ & 2.3 & \(3 \cdot 4\) \\
\hline do 20... & do & do ....... & 32.34 & John \(O^{\prime}\) Neil. .......... ..... ...... & 2.7 & \(4 \cdot 3\) \\
\hline do 20... & do ........... & do ....... & 3235 & W. Mathers... ......... ..... ...... & \(2 \cdot 9\) & \(3 \cdot 8\) \\
\hline do 20... & do & do ......| & 3236 & Prilip Kelly .......... ..... ... & 33 & \(4 \cdot 3\) \\
\hline do 27... & do ... ....... & do ...... & 3240 & Wm. McFarland. . ............ & \(3 \cdot 3\) & \(3 \cdot 7\) \\
\hline do 27... & do ........... & do ....... & 3741 & J. Trebilcock .....................| & 25 & \(4 \cdot 4\) \\
\hline do 27... & do ............ & do ....... & 3242 & J LaBelle.. ......... ........ ...... & 2.5 & \(4 \cdot 9\) \\
\hline April 2... & do ...... ....... & do ...... & 3249 & Joha Ward ....................... & 35 & 3.6 \\
\hline do 2... & do ............ & do ...... & 3250 & Heary Uarson... ........ ........ & \(3 \cdot 4\) & 39 \\
\hline do 2... & do ........... & do ...... & 3251 & John Mead. ........ ......... ..... & \(2 \cdot 8\) & \(4 \cdot 1\) \\
\hline do 12... & do ............ & do ....... & 3260 & A. D. Macdonald ............... & 2.6 & \(3 \cdot 1\) \\
\hline do 12... & do ............ & do ...... & 3261 & Willinm Law. ................... & 36 & \(4 \cdot 4\) \\
\hline do 12... & do ............ & do ...... & 3262 & Prarmers Dairy Co............. & \(3 \cdot 8\) & 36 \\
\hline do 22... & do . ............ & do ...... & 3266 & Toronto Dairy Ou.............. & 3.3 & 32 \\
\hline do 22... & do ...... ..... & do ...... & 3267 & John Gaynor. ......... ...........| & 2.8 & 4.0 \\
\hline do 22... & do ............ & do ...... & 3.68 & W. H. West.. ................... & 29 & \(3 \cdot 2\) \\
\hline do 22... & do & do ....... & 3272 & James Gayman ................ & 35 & \(3 \cdot 1\) \\
\hline do 22... & do ............ & do ...... & 3273 & Toronto Dairy Co..... .... ... & 2.4 & 2.9 \\
\hline do 22... & do ............ & do ....... & 374 & J. Wightman ................. & \(2 \cdot 7\) & \(4 \cdot 7\) \\
\hline May 7... & do .......... & do ..... & 3278 & David Hunter... ......... ........ & 5.7 & \(2 \cdot 8\) \\
\hline do 7... & do ........... & do ...... & 3279 & M. Sberhan ........ .............. & \(3 \cdot 3\) & 38 \\
\hline do 7... & do ............ & do ..... & \(3!80\) & A. Gihb.: ........ ........ ....... & 3.0 & 34 \\
\hline June 5... & do ............ & do ...... & 3533 & Mrs. McCormack............... & 2-8 & \(3 \cdot 8\) \\
\hline do 5... & do ............ & do ...... & 3334 & D. Hogan .......... ............. & \(2 \cdot 8\) & 3.0 \\
\hline do 11... & do ............ & do ...... & 3.31 & W. Pickard ....ano.............. & 32 & \(3 \cdot 2\) \\
\hline do 11... & do ........... & do ...... & 3544 & W. Kenny.. ......... ............. & 3.2 & 3.5 \\
\hline do 16... & do ............ & do ..... & 3547 & P. J. Doyle.................... .. & 2.5 & 2.5 \\
\hline do 16... & do ........... & do ...... & 3548 & Mrs. Hughes.. ......... ..... .... & 30 & 3.3 \\
\hline do 23... & do ........... & do ...... & \(3 \cdot 51\) & |J. Elliott........o................ & \(2 \cdot 8\) & \(3 \cdot 3\) \\
\hline do 23... & do ............ & do ...... & 3552
42 & IJohn Ward..., .................... & \(2 \cdot 7\) & \(3 \cdot 3\) \\
\hline
\end{tabular}

DRUGS. -Tabulated Statement, \&c.-Continued.
Continued.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multicolumn{5}{|c|}{Regults of Analybig.} & \multirow{4}{*}{Remarks by the Analyst.} & \\
\hline \multicolumn{4}{|c|}{Containeà in 100 parts.} &  & & \\
\hline \multirow[t]{2}{*}{Sugar and Salts.} & \multirow[b]{2}{*}{Ash.} & \multicolumn{2}{|c|}{Total.} &  & & \\
\hline & & Solids. & Water. &  & & \\
\hline p. cent. & p. cent. & p. cent. & p. cent. & p. cent. & & \\
\hline 4.3 & \(\cdot 7\) & 12.2 & 87.8 & 16. & Unsophisticated. Genuine. & \\
\hline 4.6
3.9 & \({ }^{-7}\) & 125
12.2 & 87.5
87.8 & 176. & \begin{tabular}{l}
Genuine. \\
Unsophisticated.
\end{tabular} & \\
\hline 4.7 & \(\cdot 7\) & 12.0 & 88.0 & 14. & \multirow[t]{3}{*}{} & \\
\hline \(8 \cdot 1\) & \(\cdot 7\) & \(12 \cdot 4\) & 87.6 & 14. & & \\
\hline \(4 \cdot 9\) & \(\cdot 7\) & \(12 \cdot 1\) & 879 & 13. & & \\
\hline 4.3
3.4 & \(\cdot 7\) & \(11 \cdot 4\)
103 & 88.6 & 9.9
8.5 & Skimmed. & \\
\hline 3.4
4.2 & \(\cdot{ }^{-7}\) & 10.3
11.9 & \(89 \cdot 7\)
88.1 & 8.5
8.5 & Watered. & \\
\hline \(5 \cdot 1\)
4.6 & \(\cdot 7\) & 11.6 & 88.4 & \(10 \cdot\) & Unadulterated.
do & \\
\hline 4.6
5.7 & \(\cdot 7\) & 11.3
13.7 & 88.7 & 8.5 & Bkimmed. & \\
\hline 4.8 & -7 & 12.7 & \({ }_{87 \cdot 3}\) & 10.8. & Unadulterated. & \\
\hline 5.0 & \(\cdot 7\) & 12.6 & 87.4 & 8 & - do & \\
\hline 4.3 & \(\cdot 7\) & \({ }^{12} 2.5\) & 87.5 & 9. & \({ }_{\text {do }}^{\text {do }}\) & \\
\hline 4.3
4.52 & \({ }_{-68} \cdot 7\) & 12.6
11.8 & 87.4
88.2 & \(\stackrel{10}{10} 9\) & & \\
\hline 40 & \(\cdot 7\) & 11.2 & 88.8 & \({ }^{6} 5\) & Watered. & \\
\hline \(4 \cdot 63\) & - 63 & 113 & 88.7 & \(9{ }^{9}\) & Watered. & \\
\hline 4.8
4.8 & \(\cdot 7\) & 12.9
12.6 & 87.1
87.4 & \(\underline{12}\) & Unadulterated. & \\
\hline \(4 \cdot 2\) & \(\cdot 7\) & 12.0 & 880 & 8. & do & \\
\hline 3.89 & -68 & 1107 & 8993 & 8.5 & Watered. & \\
\hline 3.44
4.5 & \(\stackrel{.68}{\cdot 7}\) & 9.8
12.2 & 90.2
87.8 & \({ }_{7} 8.5\) & do & \\
\hline 4.1 & \(\cdot 7\) & 11.5 & \({ }_{88} 8.5\) & \(9{ }^{\circ}\) & Genaine. Watered. & \\
\hline 4.5
4.6 & \(\stackrel{-8}{-7}\) & 128 & 87.2 & 12. & Unadulterated. & \\
\hline 4.6
4.7 & \(\cdot 7\) & 12.3 & 87.7
87.6 & \({ }_{10}^{11}{ }^{\circ}\) & do \({ }_{\text {do }}^{\text {do }}\) & \\
\hline \(4 \cdot 6\) & -8 & 12.8 & 87.8
87 & \({ }^{10}\) & - \({ }_{\text {do }}^{\text {do }}\) & \\
\hline 4.3 & \(\cdot 7\) & 12.1. & 87.9 & 9. & Watered. & \\
\hline 4.4
4.8 & \(\cdot 7\) & 12.4
12.4 & \(87 \cdot 8\)
\(87 \cdot 8\) & 9.5
100 & Unadulterated. & \\
\hline 4.81 & 69 & 11.2 & 888 & \({ }^{-9}\) & Watered. & \\
\hline \(4 \cdot 1\) & \(\stackrel{7}{7}\) & 12.8 & 87.2 & \(9 \cdot 5\) & Unadulterated. & \\
\hline \(4 \cdot 7\)
3.92 & \(\stackrel{.7}{.68}\) & 12.8
111 & 87.2
88.9 & 10.0
120 & Watered. & \\
\hline \(4 \cdot 8\) & -7 & 12.0 & \({ }_{88.0}\) & 7.0 & Unadulterated. & \\
\hline 4.7
4.76 & -64 & 11.5 & 88.5
88.0 & 9.5 & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { Watered. } \\
\text { do } \\
\text { do }
\end{gathered}
\]} & \\
\hline \(4 \cdot 68\) & -64 & 12.0
10.5 & 88.0
89.5 & 10.0
8.0 & & \\
\hline 4.1
4.8 & .7 & 12.2 & 87.8 & 80 & Unadulterated. & \\
\hline 48 & \(\stackrel{7}{7}\) & 14.0
12.7 & 86.0
87.3 & 12.0
100 & \multirow[t]{2}{*}{\begin{tabular}{l}
Unadulterated. \\
do
\end{tabular}} & \\
\hline \({ }^{5} 11\) & -8 & 12.3 & 87.3
87.7 & 100
9.0 & & \\
\hline 4.6
58 & \(\cdot 7\) & 11.9
12.3 & 881 & 90 & do & \\
\hline \(5 \cdot 5\) & \(\cdot 8\) & 12.3
12.7 & 87.7
87.3 & 9.5
9.0 & \multirow[t]{2}{*}{d do} & \\
\hline 4.9 & \(\cdot 7\) & 12.3 & 887 & 10.5 & & \\
\hline \(5 \cdot 42\)
500 & \({ }^{\cdot 68}\) & 11.1
12.0 & \(\begin{array}{r}88.9 \\ 88 \\ \hline 8\end{array}\) & 8.0
7.5 & Watered. & \\
\hline 56 & \(\cdot 7\) & 12.0
12.4 & 880
876 & \({ }_{6} 7.5\) & Unadulterated. & \\
\hline \(4 \cdot 91\) & -69 & 11.8 & 88.4 & 7. & iWatered. \(\pm 3\) & \\
\hline
\end{tabular}


DRUGS.-Tabulated Statement, \&c.-Continued.
Continued.
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{5}{|l|}{Readlis of Amalysis.} & \multirow{4}{*}{Remarks by the Analyst.} \\
\hline \multicolumn{4}{|l|}{Contained in 100 parts.} &  & \\
\hline \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { Sugar } \\
& \text { and } \\
& \text { Salts, }
\end{aligned}
\]} & \multirow[b]{2}{*}{Ash.} & & & + \({ }_{\text {¢ }}^{\text {¢ }}\) & \\
\hline & & Solids. & Water. & d & \\
\hline \multirow[t]{2}{*}{p. cent.} & \multirow[t]{2}{*}{p. cent.} & \multirow[t]{2}{*}{\[
\underset{12 \cdot 5}{\text { p. cent. }}
\]} & \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { p. cent. } \\
& 8750
\end{aligned}
\]} & \multirow[t]{2}{*}{\[
\underset{0}{\text { p. cent. }}
\]} & \multirow[t]{2}{*}{Skimmed milk.} \\
\hline & & & & & \\
\hline \(5 \cdot 1\) & -8 & 13.9 & 86.1 & 12. & Genuine milk. \\
\hline \(3 \cdot 6\) & \(\cdot 7\) & 10.5 & \(89 \cdot 5\) & …..... & : do of fair quality. \\
\hline \(3 \cdot 4\) & -5 & 11.0 & \(89 \cdot 0\) & 12. & do \\
\hline 4.4
4.6 & \(\cdot 5\) & \(10 \cdot 9\)
12.4 & \(88 \cdot 1\) & 6. & Adulterated by removal of cream. Aenuine but poor milk. \\
\hline 4.6 & \(\cdot 6\) & \(12 \cdot 8\) & \(87 \cdot 2\) & 6.
9.5 & \\
\hline 4.1
3.4 & \(\cdot 7\) & \(13 \cdot 3\)
12.6 & 87.7
87.4 & 9.5 & \begin{tabular}{l}
Fair milk. \\
Creamy milk, probably sampled by pouring from the -
\end{tabular} \\
\hline 3.4 & -6 & \(12 \cdot 6\) & 87.4 & \(15^{\circ}\) & Creamy milk, probably sampled by pouring from the top. \\
\hline 36
3.5 & \(\cdot 6\) & 12.2 & 87.8 & 12. & Rich milk. \\
\hline 3.5 & -5 & 128 & 87.2 & 16. & Oreamy milk, probably taken from the top of the vessel after standing. \\
\hline \(3 \cdot 5\) & -6 & 14.2 & 858 & 18. & Essence of cream, probably taken from tha top of the vessel after stainding. \\
\hline 3.9 & \(\cdot 6\) & \(12 \cdot 4\) & 87.6 & 12. & Rich milk. \\
\hline \(3 \cdot 2\) & \(\cdot 6\) & \(9 \cdot 5\) & 90.5 & \(6 \cdot 5\) & Adulterated from 15 to 20 per cent. with water. \\
\hline \(4 \cdot 2\) & \(\cdot 6\) & 11.2 & 88.8 & \(6 \cdot\) & Adylterated by removal of cream. \\
\hline \(3 \cdot 6\) & \(\cdot 7\) & 11.5 & 88.5 & 11. & Rich and good milk. \\
\hline \(3 \cdot 1\) & -6 & \(9 \cdot 2\) & \(90 \cdot 8\) & \(7 \cdot\) & Adulterated with water. \\
\hline \(3 \cdot 9\) & \(\cdot 5\) & \(9 \cdot 2\) & 908 & \(6{ }^{\circ}\) & Adylierated by remoral of cream. \\
\hline \(3 \cdot 5\) & -5 & \(9 \cdot 1\) & 909 & \(5 \cdot 5\) & Adulterated by removal of cream and the addition of 10 to 15 per cent. of water. \\
\hline \(4 \cdot 5\) & -6 & 12.2 & 87.8 & \(9 \cdot\) & Genuine milk: \\
\hline \(4 \cdot 2\) & \(\cdot 7\) & 122 & \(87 \cdot 8\) & \(7 \cdot 5\) & Poor milk, but not adulterated. \\
\hline \(4 \cdot 6\) & \(\cdot 6\) & \(13 \cdot 2\) & 81.8 & 12. & Good milk. \\
\hline 43 & \(\cdot 7\) & \(13 \cdot 1\) & 869 & \(10^{\circ}\) & Milk of fair quality. \\
\hline 3.9 & \(\cdot 7\) & \(12 \cdot 6\) & \(87 \cdot 4\) & 12 & Rich milk. \\
\hline 3.6 & \(\cdot 2\) & 11.5 & 88.5 & 15. & Unfairly sampled; adulteration doubtful. \\
\hline \(3 \cdot 6\) & - 6 & 11.0 & \(89 \cdot 0\) & \(10^{\circ}\) & Badly sampled and doubtful. \\
\hline \(4 \cdot 1\) & \(\cdot 7\) & 12.8 & \(87 \cdot 2\) & 12. & Good milk. \\
\hline \(4 \cdot 3\) & \(-7\) & \(12 \cdot 9\) & \(87 \cdot 1\) & \(11^{\circ}\) & Good quality. \\
\hline \(4 \cdot 3\) & 6 & \(12 \cdot 3\) & \(87 \cdot 7\) & \(10^{\circ}\) & Average milk. \\
\hline \(4 \cdot 1\) & \(\cdot 7\) & \(12 \cdot 3\) & \(87 \cdot 7\) & 11. & Genuine milk. \\
\hline 3.6
3.1 & -5 & 82 & 91.8
91.0 & \(3^{\text {6. }}\) & Adulterated by the removal of cream and the addition of 15 to 20 per cent. of water. \\
\hline \(3 \cdot 1\) & \(\bullet 6\) & 90 & 91.0 & \(6 \cdot\) & Adulterated by the addition of 15 to 20 per cent. of water. \\
\hline 3.0
3.6 & \(\cdot 6\) & 9.2 & \(90 \cdot 8\) & 65 & Adulterated with 15 to 20 per cent, of water. \\
\hline 3-6 & \(\cdot 7\) & \(12 \cdot 9\) & \(87 \cdot 1\) & 12. & Grood and rich milk. \\
\hline \(4 \cdot 4\) & \(\cdot 6\) & 12.0 & \(88 \cdot 0\) & 9. & Genuine milk. \\
\hline \(4 \cdot 3\)
4.1 & \(\cdot \cdot 7\) & \(12 \cdot 6\) & 87.4 & \(10^{\circ}\) & do \\
\hline \(4 \cdot 1\) & -5 & \(13 \cdot 1\) & 86.9 & 12. & Rich milk. \\
\hline 4.0
360 & \(\cdot 65\) & \(13 \cdot 40\) & 86.60 & \(9{ }^{\circ}\) & Genuine milk. \\
\hline 360
3.80 & -40 & \(12 \cdot 90\)
15.50 & \(8 \div \cdot 10\) & 7. & Ppor milk, but not adulterated. \\
\hline 3.80
4.40 & -60 & \(15 \cdot 50\) & 84.50 & 12. & Genuine and rich milk. \\
\hline 4.40
5.3 & \(\cdot 60\)
\(\cdot 7\) & 1320
1300 & 8680
8700 & \(10^{\circ}\) & Genuine milk and of good quality.
Adulterated by a partial removal of cream. \\
\hline \(3 \cdot 9\) & \(\cdot 7\) & \({ }^{9.9}\) & \(80 \cdot 10\) & \(2 \cdot 5\) & Adulterated by removal of cream and addition of water. \\
\hline \(4 \cdot 1\)
\(4 \cdot 5\) & & 9.9 & \(90 \cdot 10\) & \(6 \cdot 5\) & Adulterated with from 16 to 20 per cent. of water. \\
\hline 4.5
4.3 & \({ }^{-7}\) & \(13 \cdot 6\) & 86.40 & 12.5 & Genuine and rich milk. \\
\hline 4 & \(\cdots\) & 11.6 & 88.40 & 63 & Good milk, pour in cream ; adulteration by removal of cream doubtful; not watered. \\
\hline
\end{tabular}

APPENDIX C.-INSPECTION OF FOOD AND
MLK.-


DRUGS-Tabulated Statement, \&c.-Continued.
Continued.


MILK.-


\section*{DRUGS.-Tabulated Statement, \&c.-Continued.}

Continued.

Regelts of Analysis.


APPENDIX C.-INSPECTION OF FOOD AND
MILK-


DRUGS．－Trabulated Statement，\＆c．－C＇ontinued．
Continued．
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{5}{|l|}{Resclits of Analysis．} & \multirow{4}{*}{Remarks by the Analyst．} \\
\hline \multicolumn{4}{|l|}{Contained in 100 parts．} & 商号家家 & \\
\hline \multirow[t]{2}{*}{Sugar and Salts．} & \multirow{2}{*}{Ash．} & & al． &  & \\
\hline & & Solids． & Water． &  & \\
\hline p．cent． & \multirow[t]{2}{*}{p．cent．} & p．cent． & p．cent． & p．cent． & \\
\hline \multirow[t]{2}{*}{\[
\begin{aligned}
& 5 \cdot 90 \\
& 6 \cdot 10
\end{aligned}
\]} & & 13.10 & 8690 & \(6 \cdot 3\) & Deficient in cream． \\
\hline & \(\cdot 70\) & 13.70 & 86.30 & \(5 \cdot 4\) & \({ }^{\text {do }}\) \\
\hline \(6 \cdot 10\)
35
4 & \(\cdot 70\) & \(14 \cdot 60\) & 88.40 & \(15 \cdot 84\) & Genuine milk． \\
\hline \[
\begin{array}{r}
4 \cdot 3 \\
39
\end{array}
\] & \(\stackrel{60}{\cdot 60}\) & 1460
12.00 & \(85 \cdot 4 \mathrm{C}\)
8800 & 14.85
8.91 & Pure milk． \\
\hline \multirow[t]{2}{*}{5.4
59} & ． 60 & \(11 \cdot 70\) & \(88 \cdot 30\) & \(5 \cdot 28\) & Deficient in cream． \\
\hline & －60 & 25.00 & 75.00 & 5346 & Excess of cream． \\
\hline 5.9
5.8 & \(\cdot 70\) & 12.00 & 88.00 & 7.59 & Deficient in cream． \\
\hline & ． 65 & 1300 & 87.00 & 11.55 & Good milk． \\
\hline \multirow[t]{2}{*}{605
6.10} & \(\cdot 70\) & 1300 & 87.00 & 891 & No adulteration． \\
\hline & \(\cdot 70\) & 12.90 & \(87 \cdot 10\) & 1056 & Genuine milk． \\
\hline 6.10
6.10 & \(\cdot 70\) & 11.80
1230 & 88.20
87.70 & \begin{tabular}{l}
7.59 \\
924 \\
\hline 2
\end{tabular} & No adulteratioa． \\
\hline 6.10
5.50 & \(\stackrel{.60}{ } \cdot 6\) & 1230
1130 & 87.70
88.70 & 924
759 & do \\
\hline 4.30
4.40 & －60 & \(12 \cdot 40\) & 87.60 & 10.56 & Good milk． \\
\hline 4.40
4.90 & \(\cdot 60\) & 1300 & \(87 \cdot 0\) & 864 & Onadulterated． \\
\hline \multirow[t]{2}{*}{6.50
\(5 \cdot 45\)} & \(\cdot 70\) & 16.50 & 83.50 & 21.12
3 & Excess of cream ；probably not an average sample． \\
\hline & \(\stackrel{.70}{.65}\) & \(11 \cdot 90\)
13 & 8810
86.80 & 3.63
6.93 & \begin{tabular}{l}
Deficient in cream ；partially skimmed． \\
Deficient in cream．
\end{tabular} \\
\hline \(4 \cdot 85\) & －65 & 1250 & 87.50 & 495 & do \\
\hline \(5 \cdot 35\)
\(7 \cdot 30\) & \(\cdot 70\) & 13.90 & \(86 \cdot 10\) & 1188 & Good milk． \\
\hline \(7 \cdot 30\)
6.55 & \(\cdot 70\) & 13.70 & 86.30 & 10.23 & Genuine milk． \\
\hline 4.00 & \(\cdot 70\) & \(11 \cdot 30\)
\(13 \cdot 60\) & 88.70
86.40 & 2.97
12.21 & Skimmed milk． \\
\hline \multirow[t]{2}{*}{4.30
5.60
5.30} & \(\stackrel{70}{70}\) & \(13 \cdot 60\)
11.80 & \(86 \cdot 40\)
\(88 \cdot 20\) & 12.21
6.27 & lil \({ }_{\text {Good milk．}}^{\text {Deficient in cream．}}\) \\
\hline & －70 & 13.20 & 86.80 & 5.61 & \\
\hline \(5 \cdot 25\) & \(\cdot 80\) & 13.25 & 86．75 & 9.75 & Perfectly pure milk and only contains the nominal amount of water． \\
\hline \multirow[t]{2}{*}{6.25
5.10} & \(\cdot 60\) & 1160 & 88.40 & 5.25 & Adulterated with from 15 to 20 per cent．of water． \\
\hline & \(\cdot 75\) & \(13 \cdot 45\) & 8655 & 11.50 & Milk of good quality． \\
\hline \multirow[t]{2}{*}{3.75
7.50} & \(\cdot 85\) & \(9 \cdot 60\) & \(90 \cdot 40\) & 4.50 & Skimmed and no doubt watered． \\
\hline & \(\begin{array}{r}1.75 \\ \hline .80\end{array}\) & 13.75
8.80 & \(86 \cdot 25\)
91.20 & \(6 \cdot 75\)
450 & Evidently skimmed． \\
\hline 350 & \(\cdot 80\) & 8.80 & \(91 \cdot 20\) & 450 & Skimmed． \\
\hline \(4 \cdot 55\)
3.45 & －60 & \(10 \cdot 00\) & 90．00 & 5.50
700 & A portion of the cream has been removed． \\
\hline \(5 \cdot 20\) & \(\cdot 63\) & 15.42
12.50 & 8.58
87.50 & 7.00
775 & Probably skimmed milk． \\
\hline \multirow[b]{3}{*}{4.00
3.5
5.50} & \(\cdot 60\) & 12.60 & 88.40 & 15.50 & ｜Very rich milk and large quantity of cream． \\
\hline & \(\cdot 70\) & 11.45 & 88.55 & 13.50 & Excellent do do did \\
\hline & \(\cdot 60\) & \(10 \cdot 80\) & \(89 \cdot 20\) & 6.50 & Watered to the extent of 20 to 30 per cent． \\
\hline \multirow[t]{2}{*}{5.5
4.0} & － 6 & 11.9 & 88.1 & 6. & Cream remored． \\
\hline & \(\cdot 7\) & \({ }^{9} \cdot 9\) & \(90 \cdot 1\) & 6. & Skimmed． \\
\hline 4.5
4.7 & \(\cdot 70\) & 116 & 88.40 & 7.5 & do \\
\hline \multirow[t]{2}{*}{4.7
4.8} & －70 & 11.20
12.00 & \(88 \cdot 80\)
88.00 & 6. & \\
\hline & \(\cdot 90\) & 12.00 & 88.00 & \(10^{\circ}\) & Good milk ；normal amount of croam． 51 \\
\hline \multicolumn{5}{|c|}{4－472＊＊＊} & \\
\hline
\end{tabular}

APPENDIX C.-INSPECTION OF FOOD AND MILK—
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Date. & \[
\begin{gathered}
\text { Name } \\
\text { of } \\
\text { Analyst. }
\end{gathered}
\] & Division. & \[
\begin{aligned}
& \text { No. of } \\
& \text { Analyst's } \\
& \text { Report. }
\end{aligned}
\] & Vendor. & Butter Fat. & Caseine. \\
\hline 1880. & & & & & p. cent. & p. cent. \\
\hline May , 1... & W. F. Best.. ...... & St. John...... & 2980 & W. Stewart...... ................. & 1.5 & 3.50 \\
\hline do 17... & do ......... & do ...... & 2931 & P. McEroy...... ....... ..... ...... & \(2 \cdot 75\) & \(3 \cdot 40\) \\
\hline do 17... & do ......... & do ...... & 2983 & S. F. MicLeod ................... & \(2 \cdot 50\) & \(4 \cdot 00\) \\
\hline do 17... & do ......... & do ...... & 2983 & McPherson Bros....... . ........ & 3.00 & \(4 \cdot 00\) \\
\hline do 29... & do ......... & do ....... & 3306 & W. Steadman.................... & 380 & \(4 \cdot 00\) \\
\hline do 29... & do .......... & do ....... & 3307 & W. MeLeod ......... ........ ..... & \(3 \cdot 00\) & \(4 \cdot 00\) \\
\hline do 29... & do ........ & do ...... & 3308 & G. A. McClary.. ....... & 2.00
3.00 & \(4 \cdot 10\) \\
\hline June 15... & do ......... & do ..... & 3318 & W. A. Stewart.. ................ & \(3 \cdot 70\) & \(4 \cdot 20\) \\
\hline do 15... & do ......... & do ....... & 3319 & Thomas M. McCarthy.......... & \(3 \cdot 00\) & \(4 \cdot 10\) \\
\hline do 15... & do ......... & do ....... & 3320 & William Martin. ................. & 350 & 3.00 \\
\hline do \(21 \ldots\) & do ......... & do ...... & 3324 & C. F. Smith..... ................. & \(3 \cdot 30\) & \(4 \cdot 80\) \\
\hline do 21... & do \(\quad . . . . . . .\). & do \({ }^{\text {do }}\)-..... & 3325
3326 & William Bailey.. ....ocoen ......... & 2.00
2.00 & 3.00
3.00 \\
\hline do 21... & & & 3326 & G. E. Mills. ........ .............. & 2.00 & 3.00 \\
\hline
\end{tabular}

DRUGS-Tabulated Statement, \&c.-Continued.
Concluded.
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{5}{|l|}{Resclits or analysis.} & \multirow{4}{*}{Remarks by the Analyst.} \\
\hline \multicolumn{4}{|l|}{Contained in 100 parts.} &  & \\
\hline \multirow[t]{2}{*}{Sugar and Salts.} & \multirow{2}{*}{Ash.} & \multicolumn{2}{|c|}{Total.} & \multirow[t]{2}{*}{} & \\
\hline & & Solides. & Water. & & \\
\hline p. cent. & p. cent. & p. cent. & p. cent. & p. cent. & \\
\hline \(4 \cdot 8\) & \({ }^{60}\) & 10.40 & 89.60
89
50 & 5.00
8.15 & Cream remored. \\
\hline \(3 \cdot 8\)
4.75 & \(\cdot 55\) & 10.50
11.75 & 8950
88
80 & 8.15
8.00 & Doubtful. \({ }^{\text {Probably skimmed. }}\) \\
\hline 5.25 & .75 & 13.00 & 87.00 & \(9 \cdot 00\) & Milk of fair quality. \\
\hline \(4 \cdot 50\) & . 70 & 13.00 & 87.00 & 12.00 & Rich milk; not adulterated. \\
\hline \(4 \cdot 20\) & . 50 & 11.70 & \(88 \cdot 30\) & 10.00 & Good milk. \\
\hline \(4 \cdot 30\) & \(\cdot 70\) & 11.10
13.70 & 8890
86.30 & 6.50
13.25 & Poor quality ; evidently skimmed. \\
\hline \(5 \cdot 30\)
6.00 & . 90 & 13.70
14.00 & \(86 \cdot 30\)
8600 & 13.25
9.00 & \({ }_{\text {Not adulterated. }}^{\text {do }}\) ( \\
\hline \(7 \cdot 50\) & \(\cdot 70\) & 14.70 & \(85 \cdot 30\) & 1050 & do \\
\hline \(5 \cdot 00\) & -70 & 13.80 & 86.20 & 10.50 & Genuine milk ; not adulterated. \\
\hline 4.50 & \(\cdot 50\) & 10.00 & \({ }^{90} 900\) & \(5 \cdot 00\) & Doubtful. \\
\hline 410 & \(\cdot 60\) & \(9 \cdot 70\) & \(90 \cdot 30\) & \(6 \cdot 00\) & \\
\hline
\end{tabular}
ATPENDIX C.-INSPECTION OF FOOD AND DRUGS.--Tabulated Statement, \&c.-Continued. mustard.


APPENDIX C.-INSPECTION OF FOOD AND DRUGS.--Tabulated Statement, \&c.-Continued. PEPPER-Continued.
POTTED MEATS.
\begin{tabular}{|c|c|c|c|c|c|}
\hline 1880. & & & & & \\
\hline May 31... & J. B. Edwards ..... ........ & Montreal ........... & 3123 & Dufresne \& Mongenais.. ....... & Potted ham-Poor in flavour and too long kept; prepared in lard which has become rancid; unwholesome food. \\
\hline do 31... & do & do m......... & 3424 & do
\(\qquad\) & Potted ham and chicken.-Well prepared and in good condi- \\
\hline do 31... & do & do ........... & 3425 & do & Ersence of beef.-In good condition, highly spiced and very \\
\hline
\end{tabular}

APPENDIX C.--INSPECTION OF FOOD AND DRUGS-Tabulated Statement, \&e.-Continued.


APPENDIX C.-INSPECHION OF FOOD AND DRUGS.-Trabulated Statement, \&c.-Continued.


APPENDIX C.-INSPECTION OF FOOD AND DRUGS.-Tabulated Statament, \&c.-Continued.
\begin{tabular}{|c|c|c|c|c|c|}
\hline Date. & Name of Analyst. & Division. & No. of Analyst's Report. & Vender. & Results of Analysts, and Remarks by the Analyst. \\
\hline 1880. & & & & & \\
\hline \[
\text { May } 28 . .
\] & W. F. Best.................. & St. John........... & 3304 & Jardine \& Co.................... & Bright, yellow and red Sweets, contains no injurious colouring matter fustic and yellow lake also cochiueal and carmen lake are present in sumall quantities. \\
\hline June 15.. & do & o & 3311 & A. B. McLean .... ...... ........ & Bright, red and yellow Sweets not adulterated, sugar pure, entire absence of injurious colours. \\
\hline do 15.. & do ............. ...... & do ........... & 3312 & T. White......... .... ..... ....... & Common candy, containlng no mineral colouring matter. Red produced by a small quantity of cochineal. \\
\hline
\end{tabular}
TEA.

APPENDIX C.-INSPECTION OF FOOD AND DRUGS.-Tabulated Statement, \&c.-Continued.


APPENDIX C．－INSPECTION OF FOOD AND DRUGS．－Tabulated Statement，\＆c．－Continued．
\begin{tabular}{|c|c|c|c|}
\hline &  &  &  \\
\hline \multirow{7}{*}{} & －99п10801 \％ev &  & \(\because \times\) \\
\hline &  &  & 骨 \(\ddagger\) \\
\hline &  &  &  \\
\hline & －0aver &  &  \\
\hline & －питч， &  &  \\
\hline & －पөヲ &  & \[
\mathscr{\circ}
\] \\
\hline & 7081919 &  & ¢ \\
\hline \multicolumn{2}{|r|}{\[
\begin{aligned}
& \stackrel{\Delta}{\dot{\circ}} \\
& \stackrel{\circ}{\circ}
\end{aligned}
\]} &  &  \\
\hline \multicolumn{2}{|r|}{} &  &  \\
\hline \multicolumn{2}{|r|}{\[
\begin{aligned}
& \dot{\mathrm{g}} \\
& \stackrel{\mathrm{~g}}{\mathrm{~B}}
\end{aligned}
\]} &  &  \\
\hline \multicolumn{2}{|r|}{} &  &  \\
\hline \multicolumn{2}{|r|}{ロั்} &  &  \\
\hline
\end{tabular}

\section*{INDEX}




\begin{tabular}{|c|c|}
\hline Gavery W Pagr & Thornburn, Thomes, PAGE \\
\hline Bavery, W ......... ..... ...................... ..... 20 & Thornburn, Thomas, ..... ................. ........ 26 \\
\hline  & Tiffin do, Thomas ..... ...... ...... ...... ........ 64 \\
\hline Scoley, E .... ..... ..... ..... ....................... 20 & Todhunter \& COo ............ ...... ..... ............... ... 34, 34 \\
\hline \(8_{\text {cott, }}\) Jumes ......... ....26, 33, 37, 39, 55, 59, 6t & Toichard Bros ..... ........... ........... ..... ...... \({ }^{\text {a }}\) \\
\hline Scott, W. (t .... ..... ...... ........ ..... ..... ..... 55 & Tomlin, Cbrrles ..... ... ...... ..... ..... ........ 42 \\
\hline Sharp, Thomas .... .... .................... ....... 50 & Toronto Dity Co.. ..... ..... ..... ............... 42, 42 \\
\hline 8hsw, alex. ..... ..... ........ ..... .... ..... ..... 46, 46 & Toronio Te t C , .... ..... ..... ........... ......36, 63, 63 \\
\hline Bhaw, J. \& W ................ ..... ............ .... 19 & Trappier \& \(\mathrm{C}, \mathrm{T}\)..... ..... ...... ............ .... 63 \\
\hline Shea, J .... .... ..... ..... ..... ...... ............... 20 & 'I'renholme \& Armitage...... .......... - .... ...... 44 \\
\hline Shearer, George ... .......... ..... ........ ..... 26 & Trebilcock, J ... .................. ..... ........ ... 42 \\
\hline Sheehan, M .... ..... ...... ...... ...... ..... ........ 42 & Trudel, A. ............. .......... ................. 19, 46 \\
\hline Sheehan, Mrs. J. ..... ..... ..... .... .. ....... 48 & Trumяn, J. P....... ...... ..... ............ ..... ..... 28 \\
\hline Shiel tis. James ..... ..... ..... .......... ..... 20, 31, 55 & Truteau, A. C ..... ......... .. ..... ........... ..... 19 \\
\hline Shields, Bru4 .... ..... ..... ..... ........31, 36, 6), 63 & Tufts, If.... ..... ........... ................. 28, 59, 65 \\
\hline Shipwers \({ }^{\text {S }}\) Mrs . .. ...... ................ ...... .... 42 & Tully, w H ......... ................. .............. 32 \\
\hline Short, George .... ..... ..... ... . ..... .......... 51 & Tur otte, J. 8 ...... ...... ........... ...... ........... 44 \\
\hline Simud, tubert.. ......... ...... ...... ... ......... 46 & Turcot, II ..... ................. ...... ..... ............ 46 \\
\hline Slate, ( \({ }^{\text {S }}\)... .... ...... ..... .... ..... ...... ....... 20 & \\
\hline Slorn, J. A.. .. .. . ... . ..... ..... ........... ..... 20 & \\
\hline Smith, i ... ........... .......... .......... ..... 19 & Uppertown Market............ ...................... 24 \\
\hline Sinith, A. \& W..... .... ..... ...... ..... . .. ...... 59, 6.) & Uphan, st ..... ..... ................. .... ...... ..... 48 \\
\hline Smith, 0. F ... ........... ........ ........... ..... 52 & \\
\hline Smith, George .......... .......... .......... ..... 57 & \\
\hline 8mith, James.. ............ ......... ..... .... ...... 50 & Valiquette \& Perrin..... ........... ...... ............ 39 \\
\hline Smith, L A ....... .. .. ..... .... ..... .......... 50 & Vrliquette, T. \& A ................ ................. 38, 63 \\
\hline Smith, Thomas ....... ...... ..... .......... ......... 43 & Valiq tette, [. .... .................. ................. 64 \\
\hline Smythe, G ..... ..... ...... ..... ..... ..... ..... ..... 22, 22 & Vallère, dreorge... .......... ...... ..... ........... 24 \\
\hline Spell \({ }^{\text {sssy, }}\) M .... ..... ...... ...... ..... .............. 22 & Vanwart, 0) v...... ..... ........... ...... .... ...... 28 \\
\hline Sp neer, W. B ..... ..... ..... ..... ..... ... .. ...... 39 & Veith, W. J. ..... ..... ........... .................... 48 \\
\hline Spragg, U. H . .... ..... ......... .... ..... ........ 50 & Vézinя, (\% ............... ..... .......... ...... ..... 46 \\
\hline Stentman, J. F........ ........... ..... ..... ........ 50 & Vezinn, M .... .......... ...... .... ...... ........... 24 \\
\hline Steadınn, W.. ..... .... ....... .... ..... ........... 41, 52 & Viall Bros .............. ........... ........... ...... 19 \\
\hline Stephtins \& Figgures.......... ..... ... .. ..... 37, 56, 59 & Vincent, Jane. ...................... ............... 50 \\
\hline Stewart, 4. G ..... ...... ................ ........... 28, 59 & Vincent, J. B.. ..... ...... ..... ..... ........... ..... 28 \\
\hline Stewart, W.. ...... ... ........ .... ..... ..... ..... 52 & Vincent, J. L. ..... ................. ................. 17 \\
\hline Suwhrt, W. A ...... .. .. ...... ..... .... ........... 52 & \\
\hline Stuart, J.............. ...... ............. .................... 22. & \\
\hline Strachan, Jame , .. ..... ..... ..... ...... .......... 19 & Wallace, Jannes.. ........ ........ ............. ...... 28 \\
\hline Strond Bres. ... : .......... .......... ............... 64 & Walker, Jumes... ...... .. .................. ..... ...... \(60^{\text { }}\) \\
\hline St. Jean, J . ................. .......... ........... 46 & Walsh, Mrs . .. ... ............................... 48, 50 \\
\hline St. Lawcence Refining Co.. ........... .......... 58 , & Walsh, ل1rs. M ........ ........ ............. ........ 48, 50 \\
\hline Sugar.... .. ... .................. ... ........... 57 5 & War 1, Juhn .... ........... ........... ..... ....... 42, 42 \\
\hline Sudeiland it Fadera ...... .... .......... ..... ..... 39, 66 & Water - \({ }^{\text {We.t }}\) ' \({ }^{\text {a }}\)........ . .. ...... 26, 35, 35, 37, 65, 65 \\
\hline Sulivan, \(11 . . . . . . . . .9\).............. . ......... 26 26 & We-t. W. H...... .... ..... ..... ........ ...... ...... 42, 42 \\
\hline Sutherland, James............. ..... .......... 26, 50 & Weturor, Mrs ......... ....... . . . ................. 50 \\
\hline Sutherinnd, J. A... .... ...... ...................... 26 & Whit., R.. ...... .............. ........... ..... ...... 38 \\
\hline Sution \& Co........ ...... ..... ........... ..... .... 50 & White, T.. ..... ........ ............................ 62 \\
\hline Sweets.. ... ..... .......................... ..... ... ... 6. \({ }^{\text {. }}\) & \(W_{\text {Widgr }} \mathbf{r y , ~ W ~ . . . . . . . ~ . . . . . . ~ . . . . . ~ . . . . . . ~ . . . . . . . . . . . . . . . . . . ~} 60\) \\
\hline Swan Bros ..... .... .................... .... ...... ..... 55, 63 & Wıghtman, J... ........ ........... ....... .. ......... 42 \\
\hline Swiderskie, Y. F.................... ................ 19 & Wills d \(\mathrm{n}_{\text {atson. ..... ........... . ......... ........ } 31}\) \\
\hline & Willisan, H.... ... ..... ......... ........ ...... ...... .. 38 \\
\hline &  \\
\hline Talbot, E. ................ ..... ........... ..... ...... 61 & Wingti-1 I. T ........................ ................. s0 \(^{\text {a }}\) \\
\hline Tribot, F. .... ............................ ...... 24 & Wisw II, W ............................ ............ 50 \\
\hline Taylor \& Dorkrell................ .. 28, 31, 35, 65, 65 & Wigit, I humas. ............................... 26, 49, 18 \\
\hline T. \(\boldsymbol{r}\). \({ }^{\text {a }}\). ................ ...... .... ....... 63 & Wright, W ............... ................ ........ 3: 10 \\
\hline Thompson. Juhn... ...................... ..... .... 46 & WuodıII, A. A ........... ......... ...... ...... ........ 18 \\
\hline Th.inps \(n\), Mrs.. ......... ............. ..... ... 46 & \\
\hline Tlumpsun is Buckley ........ ........... .......... 34, 38 & Youug, jr., M...... ...... ..... ..... ......... ...... 26 \\
\hline
\end{tabular}```


[^0]:    Note.-This return does not include Inspector P. R. Neale, Supply Officer.

[^1]:    List of Board of Examiners appointed under 37 Vict., Cup. 45 and 39 Vict., Cap. 35, \&c.-Continued.

