





SESSIONAL PAPERS.

VOLUME XVIII.—PART III.

THIRD SESSION OF THE FIFTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO.

SESSION 1886.

Toronto:

PRINTED BY WARWICK & SONS 26 AND 28 FRONT STREET WEST.

1886.

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LIST OF SESSIONAL PAPERS

PRESENTED TO THE HOUSE DURING THE SESSION.

ARRANGED ALPHABETICALLY.

TITLE.	No.	REMARKS.
Accounts (<i>Dominion and Provinces</i>)	37	<i>Printed, in part only.</i>
Accounts, Public	18	<i>Printed.</i>
Agricultural College, Report	13	"
Agricultural College, Cash receipts	41	"
Agricultural College, Professor's Report	69	"
Agricultural Societies, analysis	42	<i>Not printed.</i>
Agriculture, Report of Commissioner	85	<i>Printed.</i>
Agriculture, Report of Professor	69	"
Agriculture and Arts, Report	7	"
Agriculture and Arts Association, moneys received	76	"
Asphodel and Douro, lots in	55	<i>Not printed.</i>
Asylums, Report	2	<i>Printed.</i>
Births, Marriages and Deaths, Report	9	<i>Printed.</i>
Blind Institute, Report	3	"
Borron's Report, Hudson's Bay	1	"
Brandon and Nelson, agreements	68	"
British Medical Acts, correspondence	47	<i>Not printed.</i>
Central Prison, Inquiry	26	<i>Printed, in part only.</i>
Central Prison, labour agreements	68	"
Central Prison, convicts in	73	"
College Federation	51	<i>Not printed.</i>
Legitimate Institutes, regulations	20	<i>Printed.</i>
Own Lands, Report	33	"
Blind and Dumb Institute, Report	4	<i>Printed.</i>
Lawyer, Judge, fees of	23	<i>Not printed.</i>
Legislation Acts, correspondence	47	"
Magistrate Courts, Report	71	<i>Printed.</i>
Magistrate Court, commitments	82	"
Mt. Pleasant and Waterloo Road	45	<i>Not printed.</i>
Education, Report	5	<i>Printed.</i>
Education, regulations	20	"
Elections Return	11	"
Alga House of Industry, Report	22	<i>Not printed.</i>

TITLE.	No.	REMARKS.
Elliot, Judge, fees of.....	23	<i>Not printed.</i>
Entomological Report.....	16	<i>Printed.</i>
Essex, swine plague in.....	59	<i>Not printed.</i>
Estimates.....	19	<i>Printed.</i>
Examinations of Teachers.....	21	"
Farmers' Institutes.....	29	<i>Not printed.</i>
Federation of Colleges.....	51	"
Franchise, exercise of.....	81	"
Fruit Growers' Report.....	6	<i>Printed.</i>
Gaols and Prisons' Report.....	10	<i>Printed.</i>
Government House, Title.....	56	"
Government Printing Contract, transfer.....	57	"
Halton, Temperance Act in.....	46	<i>Printed.</i>
Health, Board of, Report.....	74	"
Hope Township, indebtedness.....	30	<i>Not printed.</i>
Hospitals, Report.....	36	<i>Printed.</i>
Hurdman Brothers, timber license.....	53	"
Idiot Asylum, Report.....	2	<i>Printed.</i>
Immigration, Report.....	60	"
Insurance, Report.....	8	"
Judicature Act, Order in Council.....	23	<i>Not printed.</i>
Judicature Act, Order in Council.....	28	"
Judicature Act, Order in Council.....	63	"
Lacourse, Judge, fees of.....	63	<i>Not printed.</i>
Land Security Company, Statement.....	27	"
Legal Offices, Report.....	78	<i>Printed.</i>
Librarian's Report.....	17	"
Ludgate John, timber license to.....	61	"
McArthur <i>vs.</i> the Queen, judgment.....	80	<i>Not printed.</i>
McCarthy, Judge, fees of.....	28	"
Magdalen Asylums, Report.....	14	<i>Printed.</i>
Marsh Lands in Walsingham.....	62	<i>Not printed.</i>
Massey Manufacturing Company, stock.....	83	"
Mechanics' Institutes, Report.....	5	<i>Printed.</i>
Medical and Dentists Acts, British.....	47	<i>Not printed.</i>
Mills, lumber allowed to.....	52	<i>Printed.</i>
Municipal Assets.....	79	<i>Not printed.</i>
Municipal Debentures.....	50	"
Municipal Indebtedness.....	32	<i>Printed.</i>
Nelson and Brandon, prison agreements.....	68	<i>Printed.</i>
Niagara Falls Park.....	77	"
Northern Colonization Road.....	58	<i>Not printed.</i>
Orphan Asylums, Report.....	14	<i>Printed.</i>

TITLE.	No.	REMARKS
Poor Schools, grants in aid of.....	49	<i>Not printed.</i>
Practical Science, Report.....	5	<i>Printed.</i>
Printing Contract, transfer.....	57	"
Prisons and Reformatories', Report.....	10	"
Provincial Secretary's, Report.....	31	"
Public Accounts.....	18	"
Public and High Schools, regulations.....	20	"
Public Service, unpaid accounts.....	40	"
Public Works, Report.....	15	"
Railway Accidents.....	48	<i>Printed.</i>
Railway Annuities.....	39	"
Railway Companies, accidents liability.....	48	"
Reformatories and Prisons, Report.....	10	"
Refuge, Houses of, Report.....	14	"
Registrars' Returns.....	38	"
Secretary and Registrar's Report.....	31	<i>Printed.</i>
School Buildings, plans of.....	25	<i>Not printed.</i>
Schools, Public, regulations.....	20	<i>Printed.</i>
School Readers, compilation.....	87	"
Statutes, disposal of.....	34	<i>Not printed.</i>
Swine Plague in Essex.....	59	"
Tavern and Shop License's Report.....	12	<i>Printed.</i>
Teachers' Examinations.....	21	"
Titles, Report of Master of.....	64	"
Titles Act, applications under.....	65	<i>Not printed.</i>
Toronto General Trust Company, statement.....	24	<i>Printed.</i>
Toronto General Trust Company, moneys lent.....	72	"
Toronto University. Report.....	35	<i>Not printed.</i>
Toronto University, cash transactions.....	43	<i>Printed.</i>
Toronto University, Minutes of Senate down to 1880.....	54	"
Toronto University, Officers of.....	66	"
Toronto University, rules.....	84	Not <i>printed.</i>
Townley Estates.....	75	"
University College, Report.....	5	<i>Printed.</i>
University College, Officers of.....	66	"
University College Students.....	70	<i>Not printed.</i>
Unmarried Women as Voters.....	81	"
Upper Canada College, Report.....	5	<i>Printed.</i>
Upper Canada College, cash transactions.....	44	"
Upper Canada College, attendance.....	67	"
Voters at Municipal Elections.....	81	<i>Not printed.</i>
Walsingham, marsh lands in.....	62	<i>Not printed.</i>
Western University, Faculty of Law.....	86	<i>Printed.</i>
Widows, etc., as Voters at Municipal Elections.....	81	<i>Not printed.</i>

SESSIONAL PAPERS.

ARRANGED NUMERICALLY.

CONTENTS OF PART I.

- No. 1. Report of E. B. Borron, Stipendiary Magistrate, on part of the Basin of Hudson's Bay, belonging to the Province of Ontario. (*Printed.*)
- No. 2. Report of the Inspector of Prisons and Public Charities on the Asylums for the Insane and the Asylums for Idiots of the Province, for the year ending 30th September, 1885. (*Printed.*)
- No. 3. Report of the Inspector of Prisons and Public Charities upon the Institution for the Education and Instruction of the Blind, Brantford, for the year ending 30th September, 1885. (*Printed.*)
- No. 4. Report of the Inspector of Prisons and Public Charities upon the Institution for the Education and Instruction of the Deaf and Dumb, Belleville, for the year ending 30th September, 1885. (*Printed.*)
- No. 5. Report of the Minister of Education, of Ontario, for the year 1885, with the statistics of 1884, in which Report is included the Reports upon Mechanics' Institutes; the School of Practical Science: University College, Toronto; and Upper Canada College. (*Printed.*)

CONTENTS OF PART II.

- No. 6. Report of the Fruit Growers' Association, of Ontario, for the year 1884. (*Printed.*)
- No. 7. Report of the Council of the Agricultural and Arts Association, of Ontario, for the year 1885. (*Printed.*)
- No. 8. Detailed Report of the Inspector of Insurance, 1885, to which is appended the Insurance Amendment Acts, 1885. (*Printed.*)

CONTENTS OF PART III.

- No. 9. Report relating to the Registration of Births, Marriages and Deaths for 1885. (*Printed.*)
- No. 10. Report of the Inspector of Prisons and Public Charities upon the Common Gaols, Prisons and Reformatories of the Province, for the year ending 30th September, 1885. (*Printed.*)

No. 11. Return from the Records of the Elections to the Legislative Assembly since the last Return in 1885, shewing:—(1) The number of votes polled for each candidate in each Electoral District in which there was a contest. (2) The majority whereby each successful candidate was returned. (3) The total number of votes polled in each District. (4) The number of votes remaining unpolled. (5) The number of names on the Voters' Lists in each District. (6) The population of each District as shewn by the last census. (*Printed.*)

No. 12. Report of the Provincial Secretary on the working of the Tavern and Shop License Acts. for the year 1885. (*Printed.*)

No. 13. Report of the Ontario Agricultural College and Experimental Farm for the year 1885. (*Printed.*)

CONTENTS OF PART IV.

No. 14. Report of the Inspector of Prisons and Public Charities upon the Houses of Refuge and Orphan and Magdalen Asylums, aided by the Province of Ontario, for the year 1885. (*Printed.*)

No. 15. Report of the Commissioner of Public Works for the Province for 1885. (*Printed.*)

No. 16. Report of the Entomological Society for 1885. (*Printed.*)

No. 17. Report of the Librarian of the Legislative Assembly on the state of the Library. (*Printed.*)

No. 18. Public Accounts for the Province for 1885. (*Printed.*)

No. 19. Estimates for the year 1886. (*Printed.*)

No. 20. Regulations of the Education Department respecting Public and High Schools, and Collegiate Institutes, approved August 25th, 1885, as required by 48 Vic., cap. 49, sec. 7. (*Printed for distribution to Members only.*)

CONTENTS OF PART V.

No. 21. Return of copies of all correspondence between the Minister of Education and the University of Toronto, or any other University, relating to the holding of Examinations of Teachers and Matriculants, at the same time and place, and under the same Examiners, and also for copies of any Orders or Regulations of the Minister or Department of Education, and of the Statute or By-law of any University or Universities adopting or establishing such system of simultaneous co-examinations. (*Printed.*)

No. 22. Report of the Inspector of the Elgin House of Industry and Refuge for the year ending 31st October, 1885, as required by Sec. 460 of the Municipal Act. (*Not printed.*)

No. 23. Copies of Orders in Council under the 81st section of the Judicature Act, increasing commutation of His Honour Judge Elliott, of Middlesex, from \$925 to \$1,000, and commuting fees of His Honour Judge Dean as Local Master at Lindsay. (*Not printed.*)

- ✓ No. 24... Statements and Returns of the Toronto General Trust Company for 1885. *(Printed.)*
- ✓ No. 25... Return shewing what, if any, plans of school buildings, of various kinds, have ever been prepared by direction of the Education Department for adoption by school boards, and also shewing how far, if at all, any systems of lighting, heating, ventilating and draining have been approved of by the Department, or recommended for general adoption. *(Not printed.)*
- No. 26... Report of the Royal Commission appointed to inquire into certain charges preferred against the Warden of the Central Prison, and into the management of the said Central Prison, together with Supplementary Papers and documents with the evidence taken before the Royal Commission. *(Printed in part only.)*
- ✓ No. 27... Statement of affairs of the Land Security Company for the year 1885. *(Not printed.)*
- ✓ No. 28... Copy of an Order in Council commuting the fees payable to His Honour Judge McCarthy, under the 31st section of the Judicature Act. *(Not printed.)*
- ✓ No. 29... Return of the number of Farmers' Institutes formed in the several Ridings of the Province, together with the number of lectures delivered in connection with the Institutes by the Professors of the Agricultural College. *(Not printed.)*
- ✓ No. 30... Return shewing the amount due the Township of Hope to the Municipal Loan Fund with the interest on the same, together with a copy of the agreement entered into by the Provincial Treasurer and the Municipality of Hope for the payment of the debt. *(Not printed.)*
- ✓ No. 31... Report of the Secretary and Registrar of the Province for 1885. *(Printed.)*
- ✓ No. 32... Return shewing the indebtedness of any Municipality to the Government whenever the same may be in arrears for over one year, either on account of principal or interest. *(Printed.)*
- No. 33... Report of the Commissioner of Crown Lands for 1885. *(Printed.)*
- No. 34... Return from the Queen's Printer as to the disposal of the Statutes for 1885. *(Not printed.)*
- ✓ No. 35... Report of the University of Toronto for 1884-5. *(Not printed.)* See No. 5.
- No. 36... Report of the Inspector of Prisons and Public Charities upon the Hospitals of the Province. *(Printed.)*
- No. 37... Return of all correspondence, subsequent to that already brought down, between the Government of Ontario or any member or officer thereof, and the authorities of the Dominion of Canada or of the Province of Quebec, respecting the settlement of account between the Provinces and the Dominion; also, for a statement up to the 1st day of January, 1886, of the amounts which the respective municipalities interested, should receive as interest from the Land Improvement Fund in connection with School Lands. *(Printed in part only.)*

- No. 38.. Statement of the Returns forwarded to the Office of the Provincial Secretary of all the Fees and Emoluments received by the Registrars of Ontario, for the year 1885, made in accordance with the provisions of the R. S. O., cap. 111., sec. 97, and 43 Vic., cap. 3, sec. 2. with which are contrasted Receipts of same nature in 1883 and 1884. (*Printed.*)
- No. 39.. Return shewing the number of certificates of Railway Annuities and the amounts of the same, which have been either sold or exchanged for any portion of the outstanding Railway Scrip during the year 1885, as authorized under the provisions of Cap. 31. 47 Vic., to whom sold, or with whom exchanged; the terms upon which such sale or exchange was effected, and when sold; the date of the receipt of the money therefor. Also, a copy of the advertisement asking for tenders, with copies of all tenders received in response thereto. (*Printed.*)
- No. 40.. Return shewing the amounts payable in respect of any branch of the Public Service, as far as ascertained, on the 1st January, 1886, and not then paid. The same to be classified under the same head as the expenditures for the year are so classified in the Public Accounts. (*Printed.*)
- No. 41.. Return giving the following information with regard to the Ontario Agricultural College and Farm, namely:—1st. The cash receipts in each of the years 1882, 1883 and 1884, from each of the following sources, viz.: (*a*) From sales of stock by auction in 1881, 1882, 1883 and 1884, distinguishing the amounts received on account of each year's sales, with the amounts (if any) still to be collected on account of each, when the accounts as published in the Public Accounts of 1884 were closed; (*b*) From sales (made otherwise than by auction) of stock fed (experimentally or otherwise) for the butcher, with the number of each kind so disposed of; (*c*) From sales of horses, cattle, sheep, pigs and dogs not included in either of the preceding statements, with the numbers of each; (*d*) From sales of wheat, barley, peas, oats, garden and orchard produce and sundries. 2nd. A statement of the several amounts due for board, tuition fees, stock and produce, etc., when the accounts, as published in the Public Accounts of 1884, were closed. 3rd. A statement of the number of horses, cattle, sheep, pigs and dogs which either died or were destroyed during each of the years 1882, 1883 and 1884. 4th. A statement showing for each of the years 1882, 1883 and 1884—(*a*) The number of horses purchased and the amounts paid therefor; (*b*) the number and cost of cows and heifers (with the ages of the latter at time of purchase), other than those imported during the year 1884, purchased for milking and breeding purposes—distinguishing between "thoroughbreds" and "grades"; (*c*) the number and cost of steers and heifers purchased for either or both fattening and experimental purposes, with the date of delivery of each animal, and its weight and age at time of delivery; (*d*) the number and cost of sheep bought for breeding (exclusive of the importation of 1884) and fattening purposes respectively, distinguishing between "pure breds" and "grades"; (*e*) the number and cost of pigs (exclusive of 1884's importations) purchased for breeding and fattening purposes respectively; (*f*) the number and cost of the dogs purchased, with a statement of the amounts paid, and to whom paid, for feeding and taking care of the same. 5th. A statement of all outstanding claims (so far as can be ascertained up to the time of making this Return) against the Institution at the time the accounts, as published in the Public Accounts for 1884, were closed, distinguishing, as far as possible, between those chargeable against the Teaching Department, the Boarding Houses, the Farm and the

Creamery. 6th. A statement of the quantity and value of all grain (distinguishing between wheat and other grains), hay, straw, roots, ensilage, other food for stock and wool on hand on the 1st January, 1885. 7th. A statement shewing the number of cows, ewes and sows kept on the Farm for breeding purposes during each of the years 1882, 1883 and 1884, with the numbers of their progeny in each year, and a statement of the numbers of each retained on the Farm and disposed of during the year of their birth. (*Printed.*)

- ✓ No. 42.. Analysis of Reports of County and Township Agricultural Societies, and of Horticultural Societies, in accordance with the provisions of sections 47 and 48, cap. 35, R. S. O. (*Not printed.*)
- ✓ No. 43.. Bursar's Statement of Cash Transactions of the University of Toronto for the twelve months ending 30th June, 1885. (*Printed.*)
- ✓ No. 44.. Bursar's Statement of Cash Transactions of Upper Canada College for the twelve months ending 30th June, 1885. (*Printed.*)
- No. 45.. Return of copies of any correspondence which may have taken place between the Ontario and Dominion Governments, or between the former and any Corporation or persons, relating to the ownership, sale or lease of the Dundas and Waterloo macadamized road, together with copies of any papers in the possession of the Government relating thereto. (*Not printed.*)
- No. 46.. Return of the cost of enforcing the Canada Temperance Act in the County of Halton for the years 1882-3-4, with statement of the receipts shewing how much was paid by the Province, by the County Council, and the amount recovered from fines and Druggist Licenses. Also, a statement of the expenditure shewing the sum paid to the Police Magistrate for his salary and expenses; the sum paid to the License Inspectors for their salaries and expenses; the amounts paid to the Boards of License Commissioners for their fees and expenses, and any other expenses that have been paid. The number of convictions that have been quashed; by what court; for what cause; the amount of costs in each case, and by whom paid. (*Printed.*)
- ✓ No. 47.. Correspondence, Despatches, Orders-in-Council, and Report of the Honourable the Attorney-General with reference to the British Medical Acts, 1858 and 1868, and the Dentists' Act, 1878. (*Not printed.*)
- No. 48.. Return of payments or decisions in any Division of the High Court of Justice, as to the liability of Railway Companies for accidents to workmen, where the Company has failed to comply with the provisions of the Railway Accidents Act, 1881, and the accidents have happened by reason of such non compliance. (*Printed.*)
- ✓ No. 49.. Statement of Government Grants in aid of Poor Schools for the year 1885. (*Not printed.*)
- ✓ No. 50.. Statement of the Returns for the year 1885 of the debentures issued by the undermentioned Municipalities forwarded to the office of the Provincial Secretary, as required by cap. 176 R. S. O., respecting the Registration of Municipal and other Debentures. (*Not printed.*)
- ✓ No. 51.. Return of copies of any correspondence between the Minister of Education or any other member of the Government, and the authorities of any of the

Universities or Colleges of the Province, respecting a proposed Federation of Colleges referred to by His Honour the Lieutenant-Governor, in his Speech at the opening of the Legislature, on the 28th of January, 1885. (*Not printed.*)

No. 52. . . Return shewing the local mills east of the Bobcaygeon Road, to which lumber has been allowed under the local mill regulations, the quantity allowed to each mill *per* year, the license from which it has been directed to be taken, and all Orders in Council and regulations in connection therewith. (*Printed.*)

No. 53. . . Return of a copy of the petition of William Hurdman and Brothers, of the fourth of August, 1873, addressed to the Commissioner of Crown Lands for Ontario, praying (among other things) that a license might be issued to them as the assignee of one Richard McConnell for the vacant space between the licenses granted on the Amable du Fond and those granted on the Amable du Fond branch of the Petewawa, and of all correspondence to or from the Commissioner of Crown Lands, or any officer in the Crown Lands Department relating thereto; also, of all reports made and of all Orders in Council passed with reference thereto; also, of all assignments of the claim set up in the petition, and of all licenses issued in recognition of such claim, to whom issued, the area covered and the amount paid (if any) on account of ground rent accruing previous to the first issue of such license, and the amount (if any) allowed to Messrs. Hurdman and Brothers, or their assignee, as compensation or in rebate of the double dues charged them for cutting timber thereon without proper authority. (*Printed.*)

No. 54. . . Return containing Minutes of the Senate of the University of Toronto from date of last Return down to 1880. (*Printed.*)

No. 55. . . Return giving the following information with regard to all lots or parts of lots in the Townships of Asphodel, Douro and Otonabee, in the County of Peterborough, the arrearages on account of which have been reduced or remitted since the 1st of January, 1881, namely: the year in which such lot or part of lot was sold, with acreage, price and terms of payment; the amounts paid thereon, distinguishing between principal and interest, the date of reduction, with amounts then due for principal and interest under original contract, the amount to which the claim of the Province was reduced, and the terms of payment of such reduced amount with copies of the valuations, recommendations or other data upon which such reductions were made. (*Not printed.*)

No. 56. . . Return shewing the title of the Province of Ontario to that parcel of land on the West side of Simcoe Street between King and Wellington Streets, in the City of Toronto, known as Government House. Also, copies of all Orders in Council accepting such Title, and all Title Deeds and Documents affecting the Title. (*Printed.*)

No. 57. . . Copy of an Order in Council and of other documents relating to the assignment of the Contract for the Government Printing from the "Grip" Printing and Publishing Company to Messieurs Warwick & Sons. (*Printed.*) *as no. 75*

No. 58. . . Return shewing the amount expended on the Northern Colonization Road, in the Township of Gladstone, since the year 1881, giving the details of the expenditure in each year, the persons to whom moneys were paid and for

what purposes, and also a return giving the like particulars of the expenditure upon the Bridge over the Mississaga River in the same Township. (*Not printed.*)

- ✓ No. 59. . . Return of copies of all correspondence between the Minister of Agriculture and any persons in regard to the outbreak of Swine Plague in the County of Essex; a copy of the Report of Professor Greenside in regard thereto. Also, all correspondence with the Department of Agriculture at Ottawa, or with any other persons in regard to the outbreak of the disease in said County, or elsewhere in the Province. (*Not printed.*)
- No. 60. . . Report of the Department of Immigration for the Province for the year 1885. (*Printed.*)
- ✓ No. 61. . . Return shewing the number, concession and acreage of the lots in the Township of Livingstone, placed under license to cut timber, to John Ludgate, in August, 1884: the township, number, concession and acreage of the lots in lieu of which the license of 1884 was issued; the date when the last named lots were taken out of Ludgate's license, and the disposition made of the timber thereon, with copies of all correspondence, reports and Orders in Council, relating to the exchange of territory thus affected. (*Printed.*)
- ✓ No. 62. . . Return shewing in detail all lands, known as Marsh Lands, sold in the front of the Township of Walsingham; to whom sold; to whom patents have been issued, and the number of acres in each case. (*Not printed.*)
- ✓ No. 63. . . Copy of an Order in Council commuting the fees received by His Honour Judge Lacourse, Junior Judge of the County Court of the County of Waterloo, as Local Master of the Supreme Court of Judicature for Ontario, at Berlin approved by his Honour the Lieutenant-Governor on the 19th day of March, A.D. 1886. (*Not printed.*)
- ✓ No. 64. . . Report of the Master of Titles. (*Printed.*)
- ✓ No. 65. . . Return shewing how many persons have, up to the end of 1885, applied under the Land Titles Act of 1885 to the Master of Titles to be registered under the said Act, or to have any nominee registered in his stead, and shewing also the cost of each such application; the number of certificates granted; the date of each application and the date of each certificate. (*Not printed.*)
- ✓ No. 66. . . Return giving the names and salaries of the officers of the University of Toronto at the date of the Order. Also, the names and salaries of the Professors, Tutors, Fellows and Officers of University College at the same date, specifying in each case the subject taught or the office held, and giving the amount of remuneration for each where more duties than one are discharged by the same person. (*Printed.*)
- ✓ No. 67. . . Return shewing the average yearly attendance of pupils in Upper Canada College, since the date of the last return, down to and inclusive of the year 1885, distinguishing between resident and day pupils in each year, and giving the localities from which they came. Also, the conditions at present in force respecting entrance into the College, including especially the minimum age of the pupils and the curriculum on which the Entrance Examination is conducted. (*Printed.*)

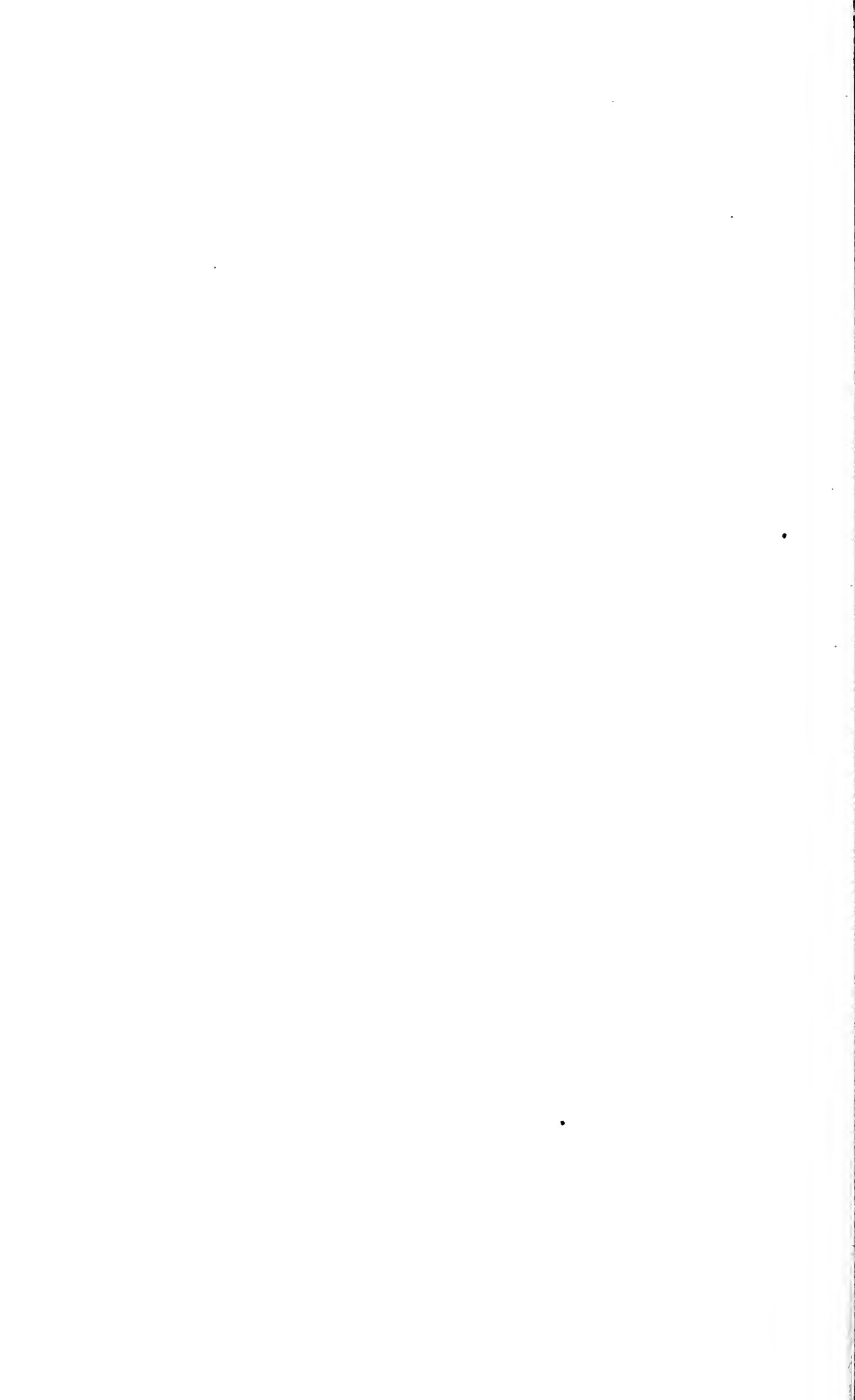
- No. 68. . . Agreement between the Inspector of Prisons and Public Charities and H. A. Nelson & Sons, relative to the manufacture of Brooms at the Central Prison. Also, Agreement between the Inspector of Prisons and Public Charities and C. T. Brandon & Co., relative to the employment of certain prisoners in the Central Prison in the manufacture of Wooden Ware. Also, Agreement between C. T. Brandon & Co., the Brandon Manufacturing Company, of Toronto (Limited), and the Inspector of Prisons and Public Charities, assigning the Agreement made between the Inspector of Prisons and Public Charities and C. T. Brandon & Co. to the Brandon Manufacturing Company, of Toronto (Limited). (*Printed.*)
- No. 69. . . Report of the Professor of Agriculture, Farm Manager and Experimental Superintendent, at the Agricultural College and Farm. (*Printed.*)
- No. 70. . . Return shewing the total number of students attending lectures in University College during the academic year 1884-85, and each of the preceding four years; the total number of students in residence during each of the same five years; the total receipts on account of board, lodging and other residence dues in each year, and a detailed statement of the disbursements on account of residence, including salaries, repairs, water, fuel, light, and steward's department in each year. (*Not printed.*)
- No. 71. . . Report of the Inspector of Division Courts for the Province for the year ending 31st December, 1885. (*Printed.*)
- No. 72. . . Return shewing the arrangement, if any, made under Rule 521 of the Supreme Court, with the Toronto General Trust Company, or otherwise, and the amount of money lent to and loaned out by the Company thereunder, stating amounts and rates of interest. (*Printed.*)
- No. 73. . . Return shewing the number of convicts confined in the Central Prison, and now employed at work which competes with the work of other citizens of the Province; the kind of work, the number employed at each kind of work, and the amount received *per diem* by the Government for each convict so employed. (*Printed.*)

CONTENTS OF PART VI.

- No. 74. . . Report of the Provincial Board of Health. (*Printed.*)
- No. 75. . . Return of copies of all correspondence between the Government of Canada and the Government of Ontario, and of all Orders in Council, and other papers relative to the alleged proceedings of persons in Canada and the United States, with respect to claims on the Townley or Lawrence Townley Estates in England. (*Not printed.*)
- No. 76. . . Return shewing for each of the years 1883, 1884 and 1885, all sums of money received by the Agricultural and Arts Association, the amount expended in prizes at the annual exhibitions, cost of management of said exhibitions, distinguishing between salaries and other disbursements; salaries paid officials of said association; all other disbursements made by the said association; balance sheet for each year's transactions, shewing profit or loss, as the case may be. (*Printed.*)
- No. 77. . . Papers relating to the Niagara Falls Park. (*Printed.*)

- ✓ No. 78. . . Report of the Inspector of Legal Offices for the year 1885. (*Printed.*)
- ✓ No. 79. . . Statement of the Assets, Liabilities, Revenue, etc., of the Municipalities within the several Counties in the Province for the year 1884. (*Not printed.*)
- ✓ No. 80. . . Return of copies of the judgment given by the Honourable Mr. Justice Proudfoot in the case of McArthur v. the Queen, and of the pleadings and evidence in the case, and all correspondence and Orders in Council relating to the claim of Peter Alexander McArthur, or any other person, to the timber limit in question in the case, together with an estimate of the value of the limit. (*Not printed.*)
- ✓ No. 81. . . Return shewing the number of Men, Widows, and Unmarried Women who availed themselves of the Franchise at the Municipal Elections of 1885-6, together with the total number of Male and Female voters respectively on the Voters' Lists of each Municipality in the Province. (*Not printed.*)
- No. 82. . . Return shewing the number of persons in each County committed to gaol by the County Court Judges during the years 1884 and 1885, for default of payment under an order of the Division Court. (*Printed.*)
- ✓ No. 83. . . Return of copies of all letters and correspondence between any and all members or officers of the Government of Ontario, and any party or parties interested in the capital stock of the Massey Manufacturing Company, or the contemplated increase thereof, in reference to such proposed increase. (*Not printed.*)
- No. 84. . . Return of copies of all rules and regulations in force at the University of Toronto, with regard to the admission of visitors to the Library, Museum and Tower. (~~Not~~ *printed.*)
- No. 85. . . Report of the Commissioner of Agriculture, for the Province, for the year 1885. (*Printed.*)
- ✓ No. 86. . . Copy of the Statute of the Western University, establishing a Faculty of Law in connection with the University, a copy of the Order in Council disallowing the said Statute, and of all reports upon which the Order in Council was based, and copies of all correspondence between the Minister of Education or any member of the Government, or any Departmental officer, and any other person in reference to the establishment of the Faculty, or the disallowance of the Statute, and a copy of the Statute of the said University establishing a Faculty of Medicine in connection with the said University, and of all Orders in Council in reference thereto. (*Printed.*)
- No. 87. . . Return giving a statement of all payments made on account of the compiling, preparation or publication of the Ontario Readers, up to and inclusive of the Fourth Book, subsequent to that already brought down. Also, copies of all advertisements or circulars inviting tenders for the privilege of publishing the said Fifth Reader, with copy of agreement entered into and all correspondence relating to the same. A copy of any agreement entered into for the publication of the drawing books, and the name of the person or firm in whom the copyright is vested, together with all correspondence relating thereto. The names of all text books authorized or in course of preparation, and intended to be authorized, or which have been in course of preparation with a view to authorization—subsequent to the list already brought down, with the names of the text books which they

have superseded or are intended to supersede. A statement of all payments made for compiling, preparing, or publishing each of the said books respectively, and all correspondence relating to the same, and a statement of the subjects in which it has been decided to authorize new text books, and of the persons engaged in the preparation of them. (*Printed.*)



REPORT

RELATING TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS

IN THE

PROVINCE OF ONTARIO,

FOR THE YEAR ENDING 31ST DECEMBER,

1884.

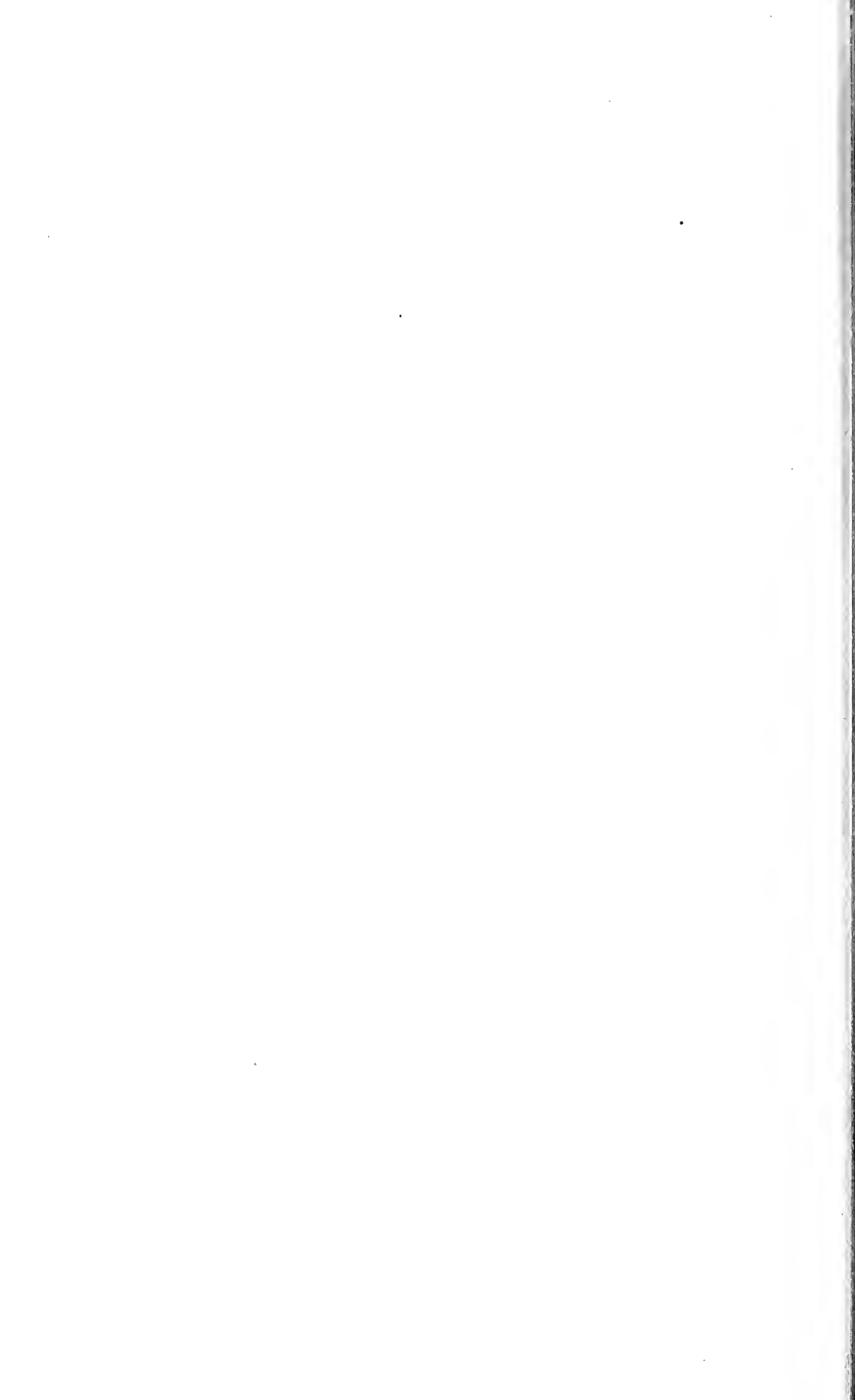
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Toronto:

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1885.



REGISTRAR GENERAL'S OFFICE, ONTARIO,

TORONTO, December 1st, 1885.

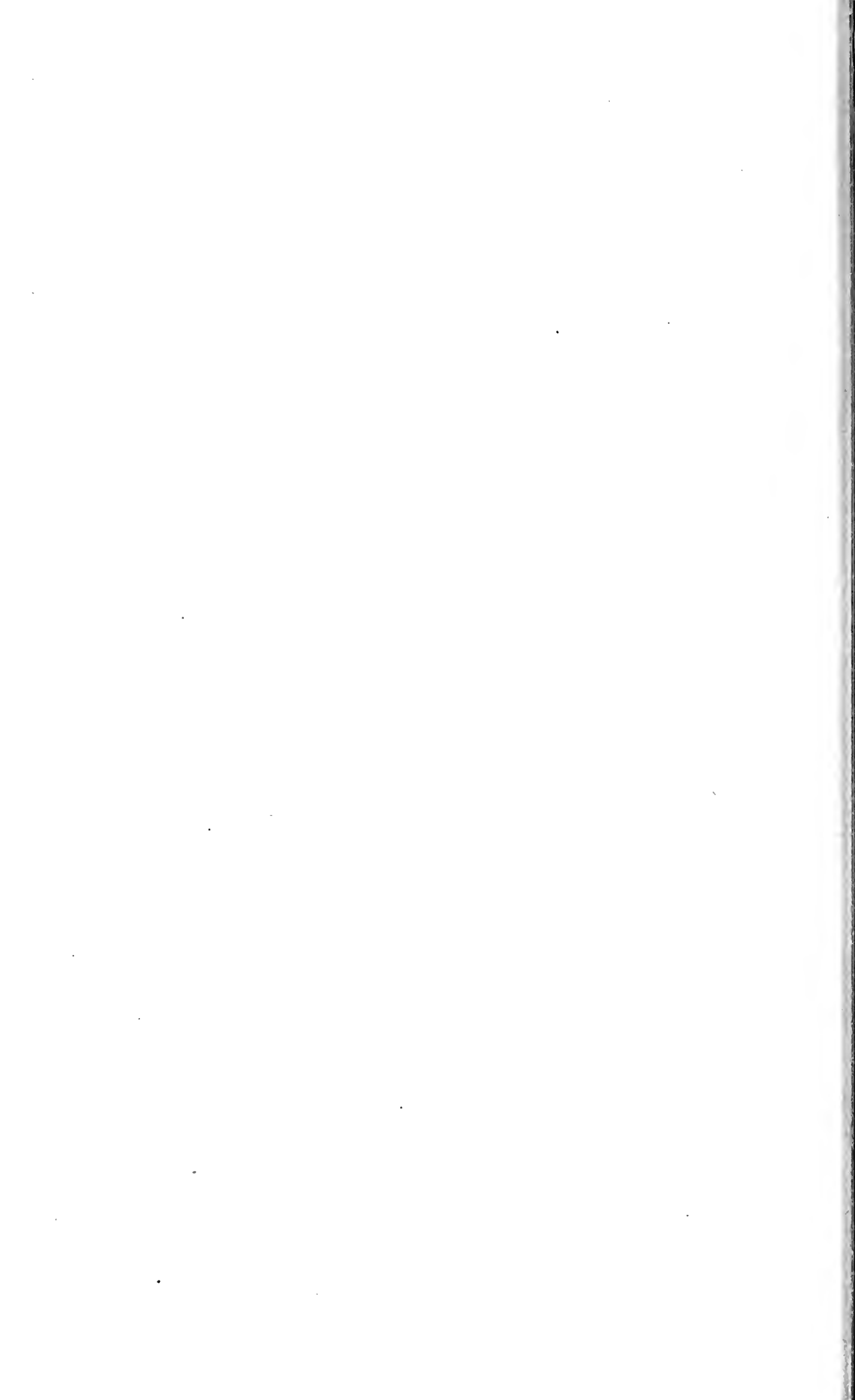
*To His Honour the Honourable John Beverley Robinson,
Lieutenant-Governor of the Province of Ontario,*

MAY IT PLEASE YOUR HONOUR:

In compliance with the Statute in that behalf, the undersigned respectfully presents to Your Honour the Annual Report of Births, Marriages and Deaths for the year ending 31st December, 1884.

Respectfully submitted,

ARTHUR S. HARDY,
Registrar-General.



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REPORT

RELATING TO THE

Registration of Births, Marriages and Deaths

IN THE

PROVINCE OF ONTARIO,

FOR THE YEAR ENDING 31st DECEMBER, 1884.

PARLIAMENT BUILDINGS,

TORONTO, December 1st, 1885.

*To the Honourable A. S. HARDY,**Registrar-General, Province of Ontario.*

SIR,—I have the honour to present a Report of the Births, Marriages and Deaths returned as having been registered in the Province during the year ending 31st December, 1884.

The total number of Births, Marriages and Deaths registered during the year amounted to 79,852, an increase over the number registered in 1883 of 1,545.

There were 44,504 Births registered; 1,523 more than in 1883; the Deaths registered numbered 21,702, or 653 more than in 1883; but the Marriages solemnized during the year have decreased from 14,277 in 1883, to 13,646 in 1884, a falling off of 631.

Tables 1, 2 and 3, are framed on the same principle as those presented in last year's report, and it is believed that taken in connection with the Tables in the Appendix they will be found valuable.

I (R.G.)

Twenty-six of the 39 Counties of the Province making returns, shew a total increase of 3,309 registrations, while the remaining 13 shew a total decrease of 1,764. Of these Carleton and Frontenac account for the decrease of nearly 700 registrations, which is mainly owing to a falling off in the number of births and deaths returned from public institutions situate within their limits. The large decreases in the Counties of Wentworth, Wellington, Perth, Ontario and Oxford, are not so easily accounted for. With the exception of Wentworth the birth and death rate per 1,000 of the population in those Counties was low, being as follows : Wellington, birth rate, 22.7 per 1,000, death rate 10.8 ; Perth birth rate, 20.6 per 1,000, death rate 7.7 ; Oxford birth rate 21.8 per 1,000, death rate 10.3 ; Ontario birth rate, 22.9 per 1,000, death rate, 11.1.

The principal increases were from the following Counties, viz. : Renfrew, 421 ; Hastings, 385 ; York 333 ; Prescott and Russell, (United) 272 ; Lanark, 256 ; Northumberland and Durham (United), 210 ; Simcoe, 132 ; and Victoria, 104. These increases were chiefly in the number of births registered.

Table 3 shews the statistics from the principal Towns, but, owing to the very imperfect returns made by some of the Assessors as to the population, the proportionate ratio of the births, marriages and deaths to population is not given, as if it were computed on such data, the results in many cases must be erroneous and misleading. Nearly all these Towns shew an increase in the total number of registrations, particularly in the number of births registered. Picton shews the largest increase, 53, while Brockville shews the greatest decrease, viz., 135.

Comparing the returns from the rural districts with the cities and towns, it is found that the birth rate was 22.2 per 1,000 in the former, and 26.7 in the latter ; the death rate was 18.5 per 1,000 in the cities and 9.6 per 1,000 in the rural districts, which proves that the births and deaths are far from being all registered in the rural districts.

TABLE I.

TABLE shewing the Total Number of Births, Marriages and Deaths, in each County in 1884.

COUNTIES.	Number of Births, 1884.		Increase over 1883.		Decrease.		Number of Deaths, 1884.		Increase over 1883.		Decrease.		Total number of B., M. and D., 1884.		Total number of B., M. and D., 1883.		Increase.		Decrease.		BIRTHS.		MARRIAGES.		DEATHS.	
	Number of Births, 1884.	Increase over 1883.	Decrease.	Number of Marriages, 1884.	Increase over 1883.	Decrease.	Number of Deaths, 1884.	Increase over 1883.	Decrease.	Total number of B., M. and D., 1884.	Total number of B., M. and D., 1883.	Increase.	Decrease.	Total number of B., M. and D., 1884.	Total number of B., M. and D., 1883.	Increase.	Decrease.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	Ratio to 1,000 Population.	
Algona	424	69		173	63		193	58		790	600	190		600	600			20.8				20.8				9.5
Brant	712		49	257	14		388	6		1357	1386			1386	1386			21.0				21.0				11.4
Bruce	1464	62		402	7		476		3	2342	2342	66		2342	2342			22.6				22.6				7.3
Carleton	1795		46	515		81	1270		209	3580	3919			3919	3919			28.001				28.001				19.8
Dufferin	478	41		142	8		187	13		807	745	62		745	745			23.2				23.2				9.1
Elgin	803	46		337		1	351	21		1491	1425	66		1425	1425			18.01				18.01				8.2
Essex	1407	6		337		24	673	86		2417	2349	68		2349	2349			30.2				30.2				14.4
Frontenac	837		248	305	13		533		121	1695	2051			2051	2051			19.6				19.6				7.0
Grey	1384	10		400	18		494	42		2278	2208	70		2208	2208			21.3				21.3				8.7
Haldimand	533	57		168	4		223	35		924	828	96		828	828			23.1				23.1				10.9
Halton	508	40		128		5	241	34		877	808	69		808	808			20.4				20.4				13.06
Hastings	1126	185		503	53		721	147		2350	1965	385		1965	1965			20.5				20.5				8.03
Huron	1574		10	424	11		615		12	2613	2624			2624	2624			20.2				20.2				9.9
Kenilworth	1098	23		407		25	551	49		2056	2009	47		2009	2009			20.2				20.2				7.4
Lambton	1119		80	268		99	544	118		1931	1992			1992	1992			21.5				21.5				10.4
Lanark	787	228		216		37	320	65		1353	1097	256		1097	1097			23.1				23.1				9.4
Leeds and Grenville	975	80		400		21	550		20	1925	1886	39		1886	1886			16.2				16.2				9.1
Lemoyne and Addington	448	15		210		25	232		29	890	929			929	929			16.9				16.9				8.7
Lincoln	679	11		190		51	457	36		1306	1310			1310	1310			21.5				21.5				13.8
Middlesex	2036		46	519		101	1149	173		3784	3758	26		3758	3758			21.8				21.8				12.2
Muskoka and Parry Sound	891	56		172		3	235		22	1301	1270	31		1270	1270			32.8				32.8				8.6
Norfolk	761	84		222		22	309	12		1292	1218	74		1218	1218			22.6				22.6				9.2
Northumberland and Durham	1432	123		518	36		742	51		2722	2512	210		2512	2512			18.5				18.5				9.5
Ontario	1120		101	277		70	542		34	1938	2144			2144	2144			22.9				22.9				11.1
Oxford	1098		41	347		39	517		44	1962	2086			2086	2086			21.8				21.8				10.3
Peel	598	69		148		14	301	38		1017	981	63		981	981			22.8				22.8				11.5
Perth	1107		25	338		70	416		24	1861	1980			1980	1980			20.6				20.6				7.7
Peterborough	826	20		251		10	380		29	1490	1509			1509	1509			24.7				24.7				10.9
Prescott and Russell	1483	217		230		11	435	44		2148	1876	272		1876	1876			39.003				39.003				11.1
Prince Edward	403	19		162	22		290	40		855	774	81		774	774			19.1				19.1				13.7

TABLE II.
BIRTHS, MARRIAGES AND DEATHS IN THE TEN CITIES IN 1884.

CITIES.	Population as returned by Assessors		BIRTHS.		MARRIAGES.		DEATHS.		Increase.	Decrease.	Total number of B. M. and D., 1884.	Total number of B. M. and D., 1883.	Increase.	Decrease.	Ratio to 1000 of the Population.		
	1884.	1883.	1884.	1883.	1884.	1883.	1884.	1883.							Births.	Marriages.	Deaths.
Toronto	2996	2790	1159	1083	2155	2040	76	115	6310	5913	397	28.4	11.0	20.4			
Hamilton	1095	1202	333	445	722	822	52	100	2210	2469	259	27.9	10.0	18.4			
Ottawa	1024	1015	377	427	1047	1211	50	164	2448	2653	205	33.2	12.2	34.0			
London	476	550	212	274	332	280	62	52	1020	1104	84	22.7	10.1	15.8			
Kingston	366	501	185	180	268	381	5	116	819	1065	246	24.0	12.0	17.5			
Brantford	270	263	127	112	143	159	15	16	540	534	6	22.8	10.7	12.0			
St. Thomas	305	262	155	156	91	91	43	1	551	509	42	28.2	14.3	8.4			
Guelph	311	299	66	96	175	150	30	25	552	545	7	30.5	6.4	17.1			
St. Catharines	195	180	86	126	189	166	15	23	470	472	2	19.6	8.6	19.0			
Belleisle	188	181	132	126	194	164	6	30	514	471	43	19.3	13.5	20.0			
Totals	7226	7243	2892	3025	5316	5467	102	245	15434	15735	495	27.3	10.9	20.1			

Decrease in Births, 17. Decrease in Marriages, 133. Decrease in Deaths, 151. Total decrease in B., M. and D., 301.

TABLE III.

BIRTHS, MARRIAGES AND DEATHS IN THE PRINCIPAL TOWNS IN 1884.

COUNTY TOWNS.	BIRTHS.		MARRIAGES.		DEATHS.		Total number of B. M. and D., 1884.	Total number of B. M. and D., 1883.	Increase.	Decrease.
	1884.	1883.	1884.	1883.	1884.	1883.				
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.				
Walkerton	75	69	38	38	32	22	145	129	16	.....
Windsor	188	181	74	101	116	99	378	381	17	.....
Owen Sound	119	126	86	58	68	59	273	243	30	.....
Goderich	72	86	24	37	48	53	144	176	.....	32
Chatham	144	160	155	118	128	125	427	403	24	.....
Sarnia	110	106	44	75	47	24	201	205	.....	1
Perth	134	68	58	89	46	42	238	199	39	.....
Brookville	138	175	62	116	111	155	311	446	.....	135
Napanee	84	71	57	82	60	41	201	197	4	.....
Cobourg	118	103	60	58	48	56	226	217	9	.....
Whitby	61	47	24	23	52	42	137	112	25	.....
Woodstock	143	158	74	78	50	61	267	297	.....	30
Brampton	92	79	43	55	75	72	210	206	4	.....
Stratford	155	165	89	119	76	57	320	341	.....	21
Peterboro'	178	159	99	92	109	113	386	364	22	.....
Picton	66	46	54	56	67	32	187	134	53	.....
Pembroke	123	126	62	61	40	58	225	245	.....	20
Barrie	112	112	100	92	57	55	269	259	10	.....
Cornwall	112	104	80	111	62	58	254	273	.....	19
Lindsay	110	86	84	89	61	71	255	246	9	.....
Berlin	172	138	65	64	68	68	305	270	35	.....
Totals	2506	2368	1432	1612	1421	1363	5359	5343	280	264

Increase in Births, 138.

Decrease in Marriages, 180.

Increase in Deaths, 58.

Total Increase, 16.

BIRTHS.

BIRTHS.

(See Tables 1, 2 and 3.)

According to table 1, the births registered in 1884 exceeded those of 1883 by 1,523, increasing the birth rate from 22.3 to 23.1 per 1,000 of the population.

The Counties of Frontenac and Wentworth, which in 1883 returned the largest increase in births, returned in 1884 the largest decrease, viz., 248 and 155 respectively; on the contrary the counties of Leeds and Grenville (United) and Bruce which returned the largest decrease in 1883 have in 1884 returned an increase.

Every county except two (Perth and Huron) which returned a decrease in the number of births in 1883 have in 1884 returned an increase, particularly the following counties, Leeds and Grenville (United) Bruce, Norfolk, Northumberland and Durham (United), Peel and Renfrew. The number registered in Renfrew in 1883 was 83 below the number registered in 1882, but in 1884 the returns shew an increase of 357.

The counties of Prescott and Russell (United), Lanark, Waterloo, Stormont, Dundas and Glengarry (United), Simcoe, Peterboro, Elgin, and York, all reported increases in the number of births registered in 1883 and continued to do so in 1884.

Four counties, Essex, Muskoka and Parry Sound (United), Prescott and Russell (United), and Waterloo, respectively, returned birth rates of over 30 per 1,000, and several other counties had nearly the same ratio, while in 1883 only three counties reached that rate, and only one of those three was over 30 per 1,000.

In Prescott and Russell (United) the ratio was 39 per 1,000, the highest of any county. That was also the case in 1883. The lowest ratios were in the three following counties: Leeds and Grenville (United) 16.2 per 1,000; Lennox and Addington (United) 16.9; Stormont, Dundas and Glengarry (United) 17.7 per 1,000.

In 1883 some counties had as low a rate as 14 per 1,000, but no county in 1884 returned less than 16 per 1,000, so that generally there was a marked improvement in the returns of births in the counties for 1884.

The number of births registered in the ten cities present a falling off. Instead of there being an increase as is generally the case, there was a total decrease of 17, caused principally by the large decrease in the cities of Hamilton, London and Kingston, numbering 107, 135, and 74 respectively. The other cities returned a total increase of 299, but it was not sufficiently large to overcome the decrease in the three cities named, consequently the ratio of births to population has decreased from 28.5 in 1883, to 27.3 in 1884.

The following comparison between the registration of births in several cities in other parts of the world with the ten cities of Ontario is here given:—

CITIES.	Country.	Population.	No. of Births.	Year.	Ratio to Population.
Providence	United States ..	116755	2,916	1883.....	24.9 per 1000.
Ogdensburgh	do	10341	205	do	20.0 "
Newburyport	do	13947	303	do	21.7 "
Bolton	England	107862	2338	do	21.6 "
Blackburn	do	108460	2648	do	24.4 "
Cork	Ireland.....	80124	1993	do	24.8 "
Limerick	do	38562	1051	do	27.0 "
Elberfeld	Germany.....	102000	2336	do	22.9 "
Rheims	France.....	98823	3020	do	32.1 "
Winterthur	Switzerland	14676	392	do	26.7 "
Total.....	.....	686550	17302	.....	25.0 per 1000.
Ten Cities of Ontario ..	.....	263992	7226	1884	27.3 per 1000.

The principal towns shew an increase of 138 births. The Town of Perth returned the largest increase, 66, and the Town of Brockville the largest decrease, 37.

TABLE IV.
ORDER of Births, by Months, in 1883 and 1884.

MONTHS.	1883.			MONTHS.	1884.		
	Male.	Female.	Total.		Male.	Female.	Total.
March	2031	1982	4013	March	2210	1953	4163
September	1952	1869	3821	September	1992	1926	3918
April	1919	1804	3723	August	2006	1890	3896
August	1890	1779	3669	April	1919	1838	3757
October	1872	1734	3606	July	1953	1755	3708
January	1860	1698	3558	May	1867	1833	3700
May	1787	1770	3557	February	1894	1785	3679
July	1814	1720	3534	October	1886	1784	3670
February	1821	1622	3443	January	1923	1726	3649
December	1786	1621	3407	June	1803	1680	3483
November	1718	1639	3357	November	1752	1708	3460
June	1665	1628	3293	December	1789	1632	3421
Total	22115	20866	42981	Total	22994	21510	44504

TABLE V.
QUARTERLY Return of Births, in 1883 and 1884.

QUARTERS.	1883.			1884.		
	Male.	Female.	Total.	Male.	Female.	Total.
Quarter ending March 31st	5712	5302	11014	6027	5464	11491
“ June 30th	5371	5202	10573	5589	5351	10940
“ September 30th	5656	5368	11024	5951	5571	11522
“ December 31st	5376	4994	10370	5427	5124	10551
Totals	22115	20866	42981	22994	21510	44504

TABLE VI.

The number of births within the several specified periods was as follows :

For the year	44,504	—Males, 22,944 ;	Females, 21,510
“ month	3,708	“ 1,916	“ 1,792
“ week	855	“ 442	“ 413
“ day	121	“ 63	“ 58

The difference between the male and female births reported in each year, for the last ten years, is shewn to have been as follows:

In 1874 there were	1,073	more male than female births.
“ 1875	“ 1,064	“ “
“ 1876	“ 987	“ “
“ 1877	“ 1,361	“ “
“ 1878	“ 1,780	“ “
“ 1879	“ 1,651	“ “
“ 1880	“ 1,726	“ “
“ 1881	“ 1,580	“ “
“ 1882	“ 1,373	“ “
“ 1883	“ 1,249	“ “
“ 1884	“ 1,484	“ “

TABLE VII.

THE following Statement shews the total number of Births, in each quarter, for the last ten years, with the percentages.

QUARTERS.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	Total for ten years.	Percentage of the whole ten years.
January to March ..	6998	10012	12580	10652	11333	11050	10845	11117	11014	11491	107092	26.8
April to June.....	6481	9566	9899	9688	10484	10345	9893	10032	10573	10940	97901	24.6
July to September..	6474	9623	9854	10075	9944	10893	10146	10875	11024	11522	100430	25.2
October to December	6015	9257	7624	9821	9274	10024	9838	10405	10370	10551	93171	23.4
Total	25968	38458	39957	40236	41035	42312	40714	42429	42981	44504	398594	100.00

TABLE VIII.

BIRTHS by Months, in the Province, 1884, shewing the proportion of Male to Female Births.

SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Males	1923	1894	2210	1919	1867	1803	1953	2006	1992	1886	1752	1789	22994
Females	1726	1785	1953	1838	1833	1680	1755	1890	1926	1784	1708	1632	21510
Total	3649	3679	4163	3757	3700	3483	3708	3896	3918	3670	3460	3421	44504
Male births to 100 female births	111.4	106.1	113.1	104.4	101.8	107.3	111.2	106.1	103.4	105.7	102.5	109.6	106.8

BIRTHS by Months, in the ten Cities, during 1884, shewing the proportion of Male to Female Births.

SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Males	313	300	356	312	295	257	301	339	343	329	323	305	3773
Females	289	257	313	289	233	276	312	319	265	294	287	269	3403
Total	602	557	669	601	528	533	613	658	608	623	610	574	7176
Male births to 100 female births	108.3	116.7	113.7	107.9	126.6	93.1	96.4	106.2	129.4	111.9	112.5	113.3	110.8

TABLE IX.
COMPARATIVE STATEMENT of the Birth Rate in the Cities of Ontario for Nine Years

CITIES.	1876.			1877.			1878.			1879.			1880.			1881.			1882.			1883.			1884.		
	Population.	Number of Births.	Birth rate per 1,000 living.	Population.	Number of Births.	Birth rate per 1,000 living.	Population.	Number of Births.	Birth rate per 1,000 living.	Population.	Number of Births.	Birth rate per 1,000 living.	Population according to Census, 1881.	Number of Births.	Birth rate per 1,000.	Population according to Census, 1881.	Number of Births.	Birth rate per 1,000 living.	Population.	Number of Births.	Birth rate per 1,000 living.	Population as returned by Assessors.	Number of Births.	Birth rate per 1,000 living.	Population as returned by Assessors.	Number of Births.	Birth rate per 1,000 living.
Toronto	71673	1984	27	67386	2222	32	70867	2637	37	73813	2638	35	83410	2650	31.7	86445	2545	29.4	86115	2600	30.0	95450	2790	29.2	105211	2996	28.4
Hamilton	32641	644	19	32641	949	28	33511	1008	30	34268	994	29	35041	941	26.7	35965	957	26.6	35961	948	26.3	39216	1202	30.6	39216	1095	27.9
Ottawa	25000	458	18	24431	339	13	24000	474	19	24015	479	19	26830	667	24.8	27417	495	18.0	27412	1042	38.0	30790	1015	33.0	30791	1024	33.2
London	18196	456	25	18898	465	24	19186	521	27	19666	539	27	19370	487	24.6	19763	426	21.5	19746	449	22.7	20976	550	26.2	20970	476	22.7
St. Catharines	12870	137	10	13143	161	12	11079	172	15	10475	186	17	9165	257	27.4	9642	172	17.8	9631	192	20.0	10053	180	17.9	9931	195	19.6
Kingston	12786	416	32	13253	349	26	11072	352	25	14358	889	27	13925	397	28.5	14093	363	25.7	14091	329	23.3	15297	501	32.7	15297	366	24.0
Belleville	9768	284	29	11192	321	28	9612	301	31	9789	320	33	9295	296	31.8	9516	210	22.0	9516	190	20.0	9742	181	18.5	9742	188	19.3
Brantford	9114	237	25	10631	278	26	10792	262	24	10587	254	24	9475	263	27.7	9626	247	25.6	9616	256	26.5	11783	263	22.3	11833	270	22.8
Geolph	9017	311	34	9677	341	35	9918	340	34	10072	298	29	9589	289	30.1	9890	282	28.5	9894	284	28.7	10190	299	29.3	10190	311	30.5
St. Thomas	5527	109	19	5954	123	20	6446	125	19	7217	151	21	7753	182	23.6	8370	204	24.3	8367	177	21.1	10811	262	24.2	10811	305	28.2

These tables are deductions from the general table of births in the appendix, and exhibit in a concise manner the sex of the children born, the number of births in each month and quarter of the year, the proportion of male to female births, and the ratio to population.

BIRTHS BY MONTHS.

(See Table 4.)

March invariably returns more births than any other month. The months of June and December generally return the least number of births.

In the aggregate the male births always exceed the female births, but the excess varies every year, in 1884 the male births exceeded the female by 1,484. The largest excess 1,780, was in 1878, and the smallest, 987, in 1876.

In four counties, viz., Halton, Leeds and Grenville (United), Stormont, Dundas and Glengarry (United), and Waterloo, there were more female than male births.

The proportion between male and female births for the whole year was 106 males to 100 females for the Province; in the cities it was 110 males to 100 females. The largest proportion in the Province was during the month of March, 113 males to 100 females, the smallest in May, 101.8 to 100. In the cities the largest proportion was in the month of September, 129 males to 100 females, and the smallest in June, 93 males to 100 females. The third quarter of the year returned the largest number of births; in previous years the first quarter held that position. There was an average of 3.708 births every month, 855 every week, and 121 every day.

TABLE X.

ILLEGITIMATE BIRTHS, TWINS AND TRIPLETS.

YEAR.	ILLEGITIMATE BIRTHS.			No. of Pairs of Twins.	No. of Triplets.
	No.	Proportion to the whole Number of Births.	Ratio in every 1000 Births.		
1872	235	One in every 99 Births	10.0	76	0
1873	229	" " 129 "	8.3	200	1
1874	196	" " 144 "	6.9	255	2
1875	198	" " 131 "	4.8	264	1
1876	392	" " 98 "	10.1	349	1
1877	529	" " 75 "	13.2	411	5
1878	575	" " 70 "	14.2	425	9
1879	524	" " 78 "	12.7	378	1
1880	671	" " 63 "	15.8	407	6
1881	748	" " 51 "	18.3	384	3
1882	966	" " 43 "	22.7	389	5
1883	989	" " 43 "	23.0	377	8
1884	644	" " 69 "	14.4	382	8
Average for 13 years	530	One in every 84 Births		310	3.8

Illegitimate Births.

A very satisfactory decrease in the number of these births was reported in 1884. In 1883 the number returned was 989, in 1884 only 644, a decrease of 345, reducing the proportion to the whole number of births from one in every 43 births to one in every 69, which is comparatively low when compared with the illegitimate birthrate in other countries. The principal falling off was observable in the City of Ottawa, which for four years has returned a very large number of illegitimate births. In 1883 there were 331 of these births registered there, while in 1884 only 71, a decrease of 260.

Of the 44,504 births registered in 1884, 43,860, or 98.6 per cent. were legitimate, and 644, or 1.4 per cent. illegitimate. In Ireland, according to the Report of the Registrar-General for 1883, the total number of births registered was 118,163, of which 115,114, or 97.4 per cent. were legitimate, and 3,049 or 2.6 per cent. were illegitimate. The birth rate for the same year in that country was 23.6 per 1,000. In this Province it was 23.1 per 1,000. In Scotland, England and France, particularly the latter country, the illegitimate birth rate was much higher. From recently issued returns in France it appears that these births are greatly on the increase. In 1880 there were 68,227 illegitimate births, or 7 per cent. of all the births in that year, being one in every 14 births. In 1881 they increased to 71,305, one in every 13 births, or 7.6 per cent. of the whole number, and in 1884 the number was still higher—75,754—one in every 12 births, or 8 per cent.

Twin Births, and Triplets.

The number of twin births was 382, an increase of 5. The same number of cases of triplets, eight, was registered in 1884 as in 1883. Two of them were reported from the County of Wellington, and one each from the Counties of Bruce, Lanark, Stormont, Dundas and Glengarry (United), Victoria, Welland and York.



MARRIAGES.

MARRIAGES.

(See Tables 1, 2 and 3.)

The number of marriages registered in 1884 was 13,646, a decrease, of 631 as compared with the number reported in 1883, reducing the ratio from 7.4 per 1,000 of the population to 7.09.

It is noticed that those counties which return increased registrations of marriages in one year return, as a rule, decreases the following year, and, contrariwise, those that return fewer marriages in one year return, in the following year increases; thus the counties of Perth, Oxford, Carleton, Lanark, Stormont, Dundas and Glengarry (United), which in 1883 returned an increased number of marriages over those returned in 1882, have in 1884 returned a less number than in 1883, while the counties of Prescott and Russell (United) Grey, Bruce, Dufferin, Prince Edward and Simcoe, whose returns in 1883 shewed a falling off from 1882, return in 1884 an increase over the number registered in 1883.

TABLE XI.

MARRIAGES BY DENOMINATIONS.

Of the whole number of persons married in 1883 the percentages of those whose religious denominations were given, were as follows:—

34.67	per cent.	(or 1 in every	2.88)	were	Methodists.
19.73	"	(" "	5.06)	"	Presbyterians.
17.74	"	(" "	5.63)	"	Episcopalians.
14.37	"	(" "	6.59)	"	Roman Catholics.
5.09	"	(" "	19.06)	"	Baptists.
1.96	"	(" "	50.89)	"	Lutherans.
1.95	"	(" "	51.08)	"	Bible Christians.
1.06	"	(" "	93.92)	"	Congregationalists.
.60	"	(" "	164.10)	"	Evangelical Association.
.57	"	(" "	196.89)	"	Mennonites.
.09	"	(" "	1057.55)	"	Quakers.
2.15	"	(" "	46.42)	"	of other denominations.

The percentages in 1884 were as follows:—

37.41	per cent.	(or 1 in every	2.67)	were	Methodists.
20.14	"	(" "	4.96)	"	Presbyterians.
17.00	"	(" "	5.88)	"	Episcopalians.
14.25	"	(" "	7.01)	"	Roman Catholics.
4.73	"	(" "	21.21)	"	Baptists.
1.84	"	(" "	54.14)	"	Lutherans.
1.07	"	(" "	92.82)	"	Congregationalists.
.62	"	(" "	160.54)	"	Evangelical Association.
.54	"	(" "	184.45)	"	Mennonites.
.04	"	(" "	2099.38)	"	Quakers.
1.03	"	(" "	76.66)	"	of other denominations.

MARRIAGES BY DENOMINATIONS.

Marriages amongst Methodists still largely outnumber the marriages amongst other denominations, and while they shew an increase of 304 in 1884, every other denomination except Mennonite shew a decrease. Over 37 per cent. of all who were married in 1884 were Methodists, twenty per cent. were Presbyterians, 17 per cent. were Episcopalians, and 14.25 per cent. were Roman Catholics.

In thirty counties the Methodist marriages numbered more than any other denomination. In three counties, Bruce, Lanark and Waterloo, more Presbyterians were married; and in five counties, Prescott and Russell (United), Carleton, Renfrew, Essex and Stormont, Dundas and Glengarry (United), the Roman Catholic marriages were the most numerous.

The Episcopalians do not appear to have had the largest number of marriages in any county, but they were the second highest in fourteen.

According to the census of 1881, the Methodists numbered 30.7 per cent. of the whole population of Ontario, and they returned 37.4 per cent. of all the marriages; the Presbyterians were 21.7 per cent. of the population, and they returned 20.1 per cent. of the marriages; the Episcopalians were 19.1 per cent. of the population and 17 per cent. of the marriages; the Roman Catholics were 16.6 per cent. of the population and 14.2 per cent. of the marriages.

TABLE XII.

MARRIAGES BY MONTHS IN NUMERICAL ORDER.

1883.		1884.	
December	1614	December	1543
October	1547	October	1437
January	1519	January	1271
November	1263	November	1256
March	1167	September	1147
September	1139	February	1124
April	1130	April	1109
February	1044	March	1090
June	1018	June	1066
May	1014	July	961
July	942	May	855
August	821	August	735
No date given	59	No date given	52
Total	14277	Total	13646

The average number of marriages, per quarter, for 1884 was 3,411

"	"	"	"	month,	"	1,137
"	"	"	"	week	"	262
"	"	"	"	day	"	37

TABLE XIII.

QUARTERLY RETURN OF MARRIAGES, 1883 AND 1884.

QUARTERS.	1882.		1884.	
	Number of Marriages.	Per cent. of the whole Number.	Number of Marriages.	Per cent. of the whole Number.
Quarter ending 31st March	3730	26.1	3485	25.6
" " 30th June	3162	22.2	3030	22.3
" " 30th September	2902	20.3	2843	20.8
" " 31st December	4424	31.0	4236	31.0
Date of Marriages omitted	59	.4	52	3
	14277	100.0	13646	100.0

MARRIAGES BY MONTHS.

(See Tables 12 and 13.)

December and August again return the highest and lowest number of marriages respectively.

There was an average of 1,137 marriages every month, 262 every week, and 37 every day. More marriages took place in the last quarter of the year than in any other quarter.

MARRIAGES BY AGES.

(See Tables 14 and 15.)

The proportion between males and females who married under 20 years remains about the same as in former years; 141 males and 2,657 females were married before arriving at the age of 20 years. Between 20 and 25 years the difference was not so great, being 5,125 males and 6,849 females. In all the other periods of life the proportion between males and females was in favor of the males. Fifty per cent. of all the females married were between 20 and 25 years of age at the time of their marriage.

Of the 13,646 men married 12,143 or 89 per cent. were bachelors, and 1,503 or 11 per cent. were widowers. Of the women married 12,918 or 94.6 per cent. were spinsters, and 728 or 5.4 per cent. were widows.

Every year the returns shew the marriages of persons far advanced in years, and in 1884 thirty-eight persons were married at the age of seventy and over.

The united ages of the oldest couple married in 1884 were 148 years, 3 years more than the oldest couple married in 1883. The bridegroom was 82 years and the bride 66 years at the time of their marriage.

The greatest disparity in the ages of any couple married was that of a man aged 72 years who took for his wife a maiden of 22 years. Only one case occurred in the list where the bride was the elder, a man of 45 married a woman aged 70 years. Eighteen damsels were married at 15 years and three children at 14 years.

TABLE XIV.—MARRIAGES BY AGES.

The proportion of males to females married during the different quinquennial periods of life for the years 1883-4 to the whole number of marriages, is shown in the appended table :—

QUINQUENNIAL PERIODS OF LIFE.	1883.				1884.			
	Whole number of marriages, 14,277.				Whole number of marriages, 13,646.			
	Males.		Females.		Males.		Females.	
	Number Married.	Per cent. of whole.	Number Married.	Per cent. of whole.	Number Married.	Per cent. of whole.	Number Married.	Per cent. of whole.
Under 20 years	175	1.22	2841	19.90	141	1.04	2657	19.47
From 20 to 25 years	5341	37.42	7168	50.20	5125	37.55	6849	50.19
" 25 to 30 "	4944	34.62	2599	18.20	4784	35.06	2580	18.91
" 30 to 35 "	1869	13.09	771	5.40	1740	12.75	710	5.21
" 35 to 40 "	734	5.14	337	2.36	724	5.30	320	2.34
" 40 to 45 "	429	3.00	212	1.48	381	2.79	189	1.38
" 45 to 50 "	240	1.68	117	.82	247	1.82	109	.79
" 50 to 55 "	177	1.24	58	.41	162	1.18	48	.36
" 55 to 60 "	116	.81	60	.42	104	.76	36	.26
" 60 to 65 "	87	.61	22	.15	66	.48	23	.16
" 65 to 70 "	61	.43	8	.06	38	.28	9	.07
" 70 to 75 "	31	.22	5	.04	22	.17	4	.03
" 75 to 80 "	9	.07	1	.01	6	.04	0	.....
" 80 and over	0	.....	0	.....	6	.04	0	.....
Ages not given	64	.45	78	.55	100	.74	112	.83
	14277	100.00	14277	100.00	13646	100.00	13646	100.00

TABLE XV.
MARRIAGES exhibiting great disparity of age between Bridegroom and Bride.

COUNTIES.	BRIDEGROOM THE ELDER.				BRIDE THE ELDER.			
	Occupation of Bridegroom.	Age of Bridegroom.	Age of Bride.	COUNTIES.	Occupation of Bridegroom.	Age of Bridegroom.	Age of Bride.	COUNTIES.
Carleton	Gentleman	77	53	Norfolk	Cooper	70	69	Northumberland and Durham
"	Farmer	75	70	Northumberland and Durham	"	79	52	"
"	Labourer	82	66	Ontario	Clergyman	73	41	"
Elgin	Farmer	72	56	"	Farmer	70	69	"
Essex	"	74	64	Oxford	Weaver	83	44	"
Grey	Gentleman	77	62	Peel	Gentleman	70	57	"
Halton	Farmer	72	67	"	"	74	71	"
Hastings	Clergyman	72	56	Peterborough	Farmer	70	51	"
Huron	Merchant	71	40	Prescott and Russell	Pensioner	80	53	"
Kent	Tailor	70	61	Simcoe	Farmer	72	20	"
"	Farmer	77	60	Wellington	"	70	63	"
Lambton	"	70	59	York	Doctor of Medicine	77	51	"
"	Gentleman	70	69	"	Farmer	73	63	"
Leeds and Grenville	Justice of the Peace	81	63	"	"	74	43	"
"	Civil Engineer	72	22	"	Mechanic	73	55	"
"	Farmer	75	70	"	Farmer	80	66	"
Lennox and Addington	Gentleman	83	44					
Middlesex	Farmer	70	40					

DEATHS.

DEATHS.

(See Appendix, page xxxv.)

TABLE XVI.—DEATHS AT DIFFERENT AGES.

The death rate under one year, from one to five, from five to ten, and in each decennial period thereafter, for the years 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, and 1884, is shown in the following table:

	1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.	
	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.	No.	Per cent. of the whole.
Total under 1 year.....	3844	21.4	4704	24.1	3963	22.9	3869	22.2	4379	22.8	5246	23.6	4874	22.3	4882	23.2	5242	24.1
“ from 1 year to 5 years.....	2471	13.7	2841	14.6	2321	13.4	2159	12.3	2795	14.6	3120	14.0	2912	13.6	2215	10.5	2157	9.9
Total under 5 years.....	6315	35.1	7545	38.7	6284	36.3	6028	34.5	7174	37.4	8366	37.6	7826	35.9	7097	33.7	7399	34.0
Total from 5 to 10 years.....	1012	5.6	1064	5.6	904	5.2	777	4.5	796	5.1	1144	5.2	1150	5.2	825	3.9	806	3.7
“ 10 “ 20 “.....	1341	7.5	1391	7.1	1187	6.8	1057	6.1	1197	6.2	1499	6.8	1449	6.6	1377	6.5	1296	6.0
“ 20 “ 30 “.....	1696	9.5	1687	8.6	1623	9.4	1622	9.3	1785	9.3	2027	9.1	1930	8.8	2105	10.0	2075	9.6
“ 30 “ 40 “.....	1316	7.4	1310	6.7	1201	7.0	1265	6.9	1192	6.2	1451	6.5	1359	6.3	1519	7.2	1477	6.8
“ 40 “ 50 “.....	1116	6.2	1444	5.8	1026	6.0	1112	6.3	1142	5.9	1302	5.9	1201	5.5	1249	5.9	1267	5.8
“ 50 “ 60 “.....	1099	6.1	1098	5.6	1067	6.1	1166	6.6	1119	5.8	1278	5.8	1257	5.8	1283	6.1	1285	5.9
“ 60 “ 70 “.....	1311	7.3	1389	7.1	1276	7.4	1486	8.5	1468	7.6	1519	6.9	1600	7.4	1557	7.4	1617	7.4
“ 70 “ 80 “.....	1595	9.0	1572	8.1	1551	9.1	1675	9.6	1803	9.4	2058	9.3	1952	8.9	1903	9.1	2251	10.4
“ 80 “ 90 “.....	917	5.1	1000	5.2	951	5.5	1071	6.2	1112	5.9	1269	5.7	1250	5.8	1254	6.0	1367	6.3
“ 90 “ 100 “.....	228	1.2	272	1.5	214	1.3	269	1.5	235	1.2	265	1.2	273	1.2	223	1.1	266	1.4
Age not given.....	17946	100.0	19472	100.0	17284	100.0	17468	100.0	19203	100.0	22208	100.0	21237	97.4	20392	96.9	21106	97.3
Whole number of deaths.....	677	3.6	581	2.8	524	2.9	490	2.7	599	3.0	613	2.7	563	2.6	657	3.1	596	2.7
	18623	.....	20053	.....	17808	.....	17958	.....	19802	.....	22821	.....	21800	100.0	21049	100.0	21702	100.0

TABLE XVII.

COUNTIES.	Including deaths under one year.					Deducting all who died under one year.						
	No. of Male Decedents.	Average Age at Death.	No. of Female Decedents.	Average Age at Death.	Total No. of Decedents.	Average Age at Death.	No. of Male Decedents.	Average Age at Death.	No. of Female Decedents.	Average Age at Death.	Total No. of Decedents.	Average Age at Death.
Brant	200	26.1	188	30.7	388	28.4	158	33.2	148	39.0	306	36.0
Bruce	251	32.5	225	31.5	476	32.0	204	40.1	195	36.4	399	38.3
Carleton	649	20.4	621	22.0	1270	21.2	355	36.8	364	37.5	719	37.2
Dufferin	95	38.6	92	33.1	187	35.8	73	50.7	79	38.4	152	49.5
Elgin	181	34.8	170	29.1	351	32.0	136	47.2	139	36.1	275	41.7
Essex	360	29.9	313	24.0	673	26.5	245	31.0	246	30.2	491	27.5
Frontenac	312	40.2	241	33.4	553	36.8	262	48.2	199	40.0	461	44.1
Grey	264	32.7	230	31.4	494	32.0	218	44.3	187	38.7	405	41.5
Haldimand	121	40.2	102	38.0	223	39.1	95	51.9	88	44.2	183	48.1
Halton	110	44.3	131	41.2	241	41.6	93	52.1	112	48.3	205	45.2
Hastings	378	29.6	343	26.0	721	27.8	301	37.1	280	32.0	581	34.6
Huron	317	37.3	298	32.2	615	34.8	246	48.3	239	40.2	485	44.2
Kent	283	32.5	268	32.2	551	32.3	210	44.2	234	37.2	444	40.7
Lambton	274	27.2	270	26.1	544	26.7	188	39.6	202	34.7	390	37.2
Lanark	157	37.1	163	32.8	320	34.9	120	48.4	142	37.8	262	43.1
Leeds and Grenville ..	261	37.2	289	31.7	550	34.4	220	44.1	256	36.0	476	40.1
Lennox and Addington	115	33.1	117	38.2	232	35.6	90	42.2	98	46.0	188	44.1
Lincoln	227	32.1	210	37.2	437	36.6	169	43.0	178	44.1	347	46.0
Middlesex	609	34.2	540	33.1	1149	33.6	459	45.7	418	42.6	877	44.2
Norfolk	162	36.0	147	36.6	309	36.3	122	40.8	123	40.5	245	40.6
Northumberland and Durham	383	39.3	359	38.2	742	38.7	307	48.8	309	44.3	616	46.5
Ontario	279	33.8	263	38.8	542	36.3	211	44.8	226	45.5	437	45.1
Oxford	277	39.4	240	34.4	517	36.9	213	51.0	190	43.5	403	42.3
Peel	152	32.0	149	38.0	301	35.0	111	45.0	135	42.3	246	43.6
Perth	209	35.9	207	39.2	416	37.6	167	45.0	171	47.5	338	46.2
Peterboro'	209	30.6	171	32.1	380	31.3	156	41.0	141	39.1	297	40.1
Prescott and Russell ..	247	30.0	188	24.4	435	27.2	155	46.1	127	33.4	282	39.7
Prince Edward	156	36.8	134	35.4	290	36.1	134	43.0	117	40.6	251	41.8
Renfrew	172	33.4	166	28.7	338	31.0	127	45.3	127	36.7	254	41.0
Simcoe	350	30.0	292	31.2	642	30.6	262	39.6	237	38.3	499	38.9
Stormont, Dundas and Glengarry	285	38.7	297	37.2	582	37.9	238	46.1	245	44.2	483	45.1
Victoria	171	34.1	197	32.7	368	33.4	127	41.2	169	39.6	296	40.4
Waterloo	250	30.3	220	29.4	470	29.8	178	38.7	164	36.4	342	37.5
Welland	191	31.6	141	28.7	332	31.2	153	41.4	116	37.3	269	39.3
Wellington	355	33.1	360	32.8	715	32.9	259	45.2	293	40.9	552	43.0
Wentworth	584	31.4	559	31.3	1143	31.4	429	42.7	432	40.3	861	41.5
York	1430	26.5	1347	26.9	2777	26.7	941	40.2	945	38.2	1886	39.2
	11026	33.3	10248	32.5	21274	33.0	8132	43.6	8071	39.8	16203	41.7

TABLE XVIII.

CITIES AND TOWNS.	Including deaths under one year.						Deducting all who died under one year.					
	No. of Male Decedents	Average Age at Death.	No. of Female Decedents.	Average Age at Death.	Total No. of Decedents.	Average Age at Death.	No. of Male Decedents.	Average Age at Death.	No. of Female Deaths.	Average Age at Death.	Total No. of Decedents.	Average Age at Death.
Brantford	78	37.6	65	34.0	143	35.8	64	45.7	51	43.1	115	44.4
Walkerton	19	18.7	13	19.8	32	19.3	9	38.5	11	23.2	20	30.8
Ottawa	523	17.3	524	18.8	1047	18.1	251	35.3	280	35.2	531	35.2
St. Thomas	50	16.1	41	25.0	91	20.6	29	27.4	31	33.2	60	30.3
Windsor	58	15.9	58	23.1	116	19.0	33	28.0	43	30.9	76	29.4
Owen Sound	41	28.0	27	29.3	68	28.6	31	36.7	23	31.2	54	35.4
Kingston	139	34.5	129	29.1	268	31.8	109	47.5	98	39.5	207	43.5
Goderich	28	30.4	20	25.0	48	27.7	23	36.7	19	26.9	42	31.8
Belleville	99	27.5	95	27.5	194	27.5	80	36.8	71	33.9	151	35.4
Chatham	71	29.2	57	24.9	128	27.0	50	41.2	46	36.9	96	39.0
Sarnia	25	21.7	22	23.9	47	22.8	17	31.4	16	32.5	33	31.9
Perth	26	30.4	20	24.1	46	27.3	18	43.5	17	28.2	35	35.8
Brockville	53	20.0	58	32.2	111	26.1	36	30.1	48	38.7	84	34.4
Napanee	32	27.1	28	33.1	60	30.1	22	39.6	25	37.1	47	38.4
St. Catharines	97	28.0	92	32.7	189	30.3	73	38.3	77	39.9	150	39.1
London	175	31.3	157	28.6	332	29.9	123	43.5	111	40.4	234	41.9
Cobourg	25	33.6	23	47.0	48	40.3	22	38.0	20	53.9	42	45.5
Whitby	30	35.0	22	31.0	52	33.0	24	43.5	18	37.7	42	40.6
Woodstock	31	38.4	19	27.8	50	33.1	25	47.4	14	37.7	39	42.6
Brampton	45	21.0	30	36.5	75	29.7	25	37.0	28	39.1	53	38.0
Stratford	35	28.4	41	28.7	76	28.5	28	35.3	29	45.7	57	40.5
Peterborough	60	32.8	49	31.6	109	32.2	46	42.5	42	39.0	88	40.7
Pictou	31	30.3	36	34.8	67	32.6	27	34.7	33	38.0	60	36.4
Pembroke	19	26.1	21	16.4	40	21.2	14	35.0	13	26.0	27	30.5
Barrie	27	23.0	30	39.1	57	36.0	18	34.0	25	46.5	43	40.2
Cornwall	28	22.3	34	28.8	62	26.0	24	26.0	28	33.4	52	29.7
Lindsay	30	21.2	31	28.4	61	24.8	24	34.6	28	31.3	52	33.0
Berlin	43	38.9	25	24.9	68	31.9	33	50.4	13	47.0	46	48.7
Guelph	92	30.9	83	28.8	175	28.3	64	44.4	63	37.0	127	40.7
Hamilton	370	25.2	352	37.2	722	31.2	249	37.2	255	35.4	504	36.3
Toronto	1101	24.2	1054	25.1	2155	24.6	689	40.0	699	38.1	1388	39.1
	3481	27.2	3256	28.9	6737	28.1	2280	38.1	2275	36.7	4555	37.4

TABLE XIX.

Quarterly Return of Deaths in 1884.

QUARTERS.	Males.	Females.	Total.	Per cent. of the whole.
Quarter ending March 31st.....	2860	2776	5636	25.9
" June 30th	2676	2541	5217	24.0
" September 30th.....	2889	2610	5499	25.4
" December 31st.....	2866	2484	5350	24.7
Totals	11291	10411	21702	100.0

Monthly return of Deaths, arranged according to Numbers.

MONTHS.	Males.	MONTHS.	Females.	MONTHS.	Totals.
March	1070	April	1032	March.....	2065
September	1035	March	995	April.....	2038
December	1017	January.....	913	September.....	1947
April	1006	September.....	912	December	1852
August.....	999	February.....	868	August	1844
October	966	July	853	January	1843
January.....	930	August	845	October	1808
November.....	883	October	842	February	1728
May	860	December	835	July	1708
February.....	860	November	807	November	1690
July	855	May	785	May	1645
June	810	June	724	June	1534
Totals.....	11291		10411		21702

TABLE XX.

Nationalities of Decedents over Sixty Years of Age.

	English.	Irish.	Scotch.	Canadian.	American.	German.	French.	Swiss.	Other Countries.	Unknown.	Total.
Deaths between 60 and 70....	329	488	237	358	75	71	14	2	8	35	1617
" 70 " 80....	465	662	326	480	159	103	17	2	4	33	2251
" 80 " 90....	258	440	273	184	122	50	12	3	14	11	1367
" 90 " 100....	42	68	59	35	19	9	6	.....	.....	2	240
" 100 " upw'ds	1	14	3	1	5	.....	1	.....	.....	1	26
Total Deaths over 60....	1095	1672	898	1058	380	233	50	7	26	82	5501

TABLE XXI.

LIST OF CENTENARIANS, 1884.

No.	Name.	Sex.	Occupation.	Where Born.	Age at Death.	Where Died.	Cause of Death.
1	Bridget Cassidy	F.		Ireland	100	Greenock, Bruce County	Old age.
2	Henry Lypphi	M.	Farmer	Penn., U. S.	101	Colchester, Essex	"
3	America Ann Jacobs	F.	Widow	Virginia, U. S.	108	Windsor	General debility.
4	Dennis Cranny	M.	Farmer	Queens' Co., Ireland	102	Cayuga, Hamilton	Heart disease.
5	John Good	"	Labourer	Ireland	112	Augusta, Leeds	Old age.
6	Robert Capstone	"	Farmer	"	104	Osgoode	Debility.
7	Hill McCulloch	"	Labourer	"	107	Merriton, Lincoln	Old age.
8	Richard Brown	"	Joekey and V. S.	Baltimore, U. S.	105	Niagara	"
9	Thomas Westgate	"	Farmer	Mayo, Ireland	102	Warwick, Lambton	"
10	Elizabeth McDonald	F.		Scotland	100	West Zorra, Oxford	"
11	Daniel Sheehan	M.	School Teacher	Ireland	104	Douro, Peterboro'	"
12	Margaret McMahon	F.	None	"	103	N. Marysburgh, P. E.	"
13	Archibald McLaurin	M.	Farmer	Scotland	100	Lochiel, Stormont	"
14	Rose Poinier	F.		Quebec	100	Charlotteburg	"
15	— Daniels	"	Farmer's wife.	"	105	Roxborough	"
16	Mary McDonald	"	Married	Scotland	100	Mariposa, Victoria	"
17	Peter Daly, Sr.	M.	Farmer	Ireland	100	Nichol, Wellington	Senile gangrene.
18	Michael Flahiff	"		"	103	Arthur	General decay.
19	Andrew Daragh	"		"	100	Guelph	Old age.
20	Mary McCleary	F.	Gentleman	England	101	March, Carlton	"
21	Joseph Stanzel	M.	Servant	France	100	Goulbourne	"
22	Amelia Lucy	F.	Farmer	Virginia, U. S.	100	Raleigh, Kent	"
23	Elizabeth Bartlett	"	Widow	"	100	Chatliam	"
24	Alice Lahey	"	Widow	Ireland	100	Loughboro, Frontenac	"
25	Ellen Madden	"	"	"	102	Pittsburgh	"
26	Elizabeth McGaghan	"	"	"	102	Bromley, Renfrew	General debility.

DEATHS.

The number of deaths registered in 1884 was 21,702, being one in 88.6 or 11.2 per 1,000 of the population.

The mortality amongst males was 11,291; of females, 10,411; the former being equal to one in 86.4 or 11.5 per 1,000 of the males living, and the latter to one in 90.9 or 10.6 per 1,000 of the females living.

The death rate, 11.2 per 1,000, was somewhat over the average rate for the preceding four years.

Eleven Counties return a death rate above the average, and twenty-eight below it.

The following six Counties returned the highest death rate, viz: Carleton (19.8), York (18.1), Wentworth (17.0), Essex (14.4), Lincoln (13.8), and Prince Edward (13.7); and the following six Counties, the Counties the lowest, viz: Grey (7.0), Bruce (7.3), Perth (7.7), Huron (8.0), Elgin (8.2), and Renfrew (8.3).

TABLE shewing the Death Rate per 1,000 of population, in each County of the Province, for four years; also average for that time.

COUNTIES.	1881.	1882.	1883.	1884.	Average for the four years.
Algoma	5.9	6.7	6.7	9.5	7.2
Brant	12.9	10.4	11.3	11.4	11.5
Bruce	8.5	8.1	7.4	7.3	7.8
Carleton	17.9	23.6	23.0	19.8	21.1
Dufferin	8.4	9.1	8.4	9.1	8.7
Elgin	9.3	7.5	7.7	8.2	8.2
Essex	18.8	14.5	12.6	14.4	15.1
Frontenac	14.2	14.8	15.8	12.9	14.4
Grey	6.9	8.3	6.4	7.0	7.1
Haldimand	12.4	9.2	7.5	8.7	9.4
Halton	12.5	11.7	9.4	10.9	11.1
Hastings	11.5	10.6	10.4	13.0	11.4
Huron	10.0	8.9	8.2	8.0	8.8
Kent	10.6	10.0	9.2	9.9	9.9
Lambton	10.4	8.2	8.1	10.4	9.2
Lanark	8.1	7.2	7.5	9.4	8.0
Leeds and Grenville	11.4	10.7	9.4	9.1	10.1
Lennox and Addington	10.7	10.0	9.8	8.7	9.8
Lincoln	14.3	12.6	12.7	13.8	13.4
Middlesex	16.2	11.8	10.4	12.2	12.6
Muskoka and Parry Sound	8.5	10.5	9.4	8.6	9.2
Norfolk	11.7	10.2	8.8	9.2	10.0
Northumberland and Durham	9.7	9.0	8.9	9.5	9.2
Ontario	11.9	10.2	11.8	11.1	11.2
Oxford	11.3	12.0	11.2	10.3	11.2
Peel	10.7	12.8	10.0	11.5	11.2
Perth	10.5	9.5	8.2	7.7	9.0
Peterboro'	11.4	10.4	11.8	10.9	11.1
Prescott and Russell	9.9	11.4	10.2	11.1	10.6
Prince Edward	12.3	16.5	11.9	13.7	13.6
Renfrew	8.4	8.1	7.9	8.3	8.2
Simcoe	8.3	8.3	8.1	8.5	8.3
Stormont, Dundas and Glengarry	9.5	8.2	7.2	8.8	8.4
Victoria	8.9	9.5	10.3	10.4	9.8
Waterloo	13.9	13.5	11.5	10.9	12.4
Welland	12.8	12.1	10.0	10.4	11.3
Wellington	12.0	10.9	10.8	10.8	11.1
Wentworth	17.1	15.9	18.1	17.0	17.0
York	16.4	16.1	17.8	18.1	17.1
	11.8	11.3	10.9	11.2	11.3

TABLE shewing the Death Rate to 1,000 of population, during the last four years, in the ten Cities,

CITIES.	1881.	1882.	1883.	1884.	Average for the four years.
Toronto	19.5	20.0	21.3	20.4	20.6
Hamilton	18.0	17.7	20.9	18.4	18.8
Ottawa	30.7	44.9	39.4	34.0	37.2
London	18.9	16.0	13.3	15.8	16.0
Kingston	20.0	22.2	25.1	17.5	21.2
Brantford	18.4	16.2	13.5	12.0	15.0
St. Thomas	11.8	9.8	8.4	8.4	9.6
Guelph	18.5	17.0	14.7	17.1	16.8
St. Catharines	20.2	16.2	16.5	19.0	18.0
Belleville	17.7	18.0	16.8	20.0	18.1
Average for each year.....	19.3	19.8	18.9	18.2	19.1

The average death rate for the whole Province for the last four years was, 11.3 per 1,000 of the population. It was the same in 1882—in 1881 it was 11.8. In the other two years, 1883 and 1884, the ratio was 10.9 and 11.2 per 1,000 respectively.

In 25 counties the death rate has decreased since 1881, but the number of deaths returned for that year was the highest of any since the Registration Act came into force.

The greatest variations in the death rate during these four years, were in the following counties: Carleton, a variation of 5.7 per 1,000; Essex, 6.2 per 1,000; Middlesex, 5.8 per 1,000; Haldimand, 5; Prince Edward, 4.6; Waterloo, Algoma, Frontenac, Halton and Norfolk, 3 per 1,000 each. In the majority of the remaining counties the variation only averaged 2 per 1,000, and in a few counties less than 1 per 1,000.

The total mortality in the cities and principal towns in 1884, was comparatively larger than in the whole Province. The total number of deaths in those places was 6,737, one in every 53.8, or 18.5 per 1,000 of the population.

The ten cities alone returned 5,316 deaths, one in every 49.6, or 20.1 per 1,000 of the living, and the principal towns returned 1,421 deaths, one in every 69.6, or 14.3 per 1,000 of the estimated population.

The average death rate in the cities for the last four years, was 19.1 per 1,000 of the population. Considerable variation is found in this rate during these years, particularly in the following cities: In Brantford the rate varied from 18.4 per 1,000 in 1881, to 13.5 in 1883. In London, from 18.9 per 1,000 in 1883, to 13.3 in 1881. In Belleville, from 16.8 per 1,000 in 1883, to 20.0 per 1,000 in 1884.

DEATHS BY AGES.

(See General Table. Appendix, Page cxxvi. See Table xvi.)

There was an increase in the number of deaths under one year in 1884, over 1883 of 360, or 7.3 per cent. Between the ages of one and five years there was a slight decrease

The total deaths under five years, however, shew an increase of 302, or 4.2 per cent.

The average percentage of deaths under one year during the last four years, was 23.3; the highest was 24.1 in 1884, and the lowest 22.3 in 1882, so that the variation was not very great.

During these four years 87,372 persons died, of whom 30,688, or 35.1 per cent., were under five years of age; the highest rate, 37.6 per cent., was in 1881, and the lowest, 33.7, in 1883; a variation of nearly four per cent.

The number of those dying over 70 years of age has increased, shewing that the length of life in this Province is not decreasing.

AVERAGE AGE.

(See Tables xvii. and xviii.)

The average age of all who died in 1884, was 33 years; of males 33.3 years, and of females 32.5 years, a difference of .8 years between the sexes. Deducting all who died

under one year, the average was increased to 41 years; of males to 43.6, and of females to 39.8 years, shewing a much greater difference between the ages of the sexes when this deduction is made.

The average length of life of both sexes during the last four years was 30.3 years; of males, 30.6; and of females, 30 years. Deducting those who died under one year, then, the average for the whole was 39.9 years; for males 40.2 years, and for females 37.6 years. The mortality of children under one year is always larger in cities and towns than in the rural districts, therefore the average length of life in those places will be found to be comparatively shorter.

The average length of life in the cities and towns was 28.1 years, nearly five years shorter than the average for the whole Province; when, however, those dying under one year are deducted, the average age increases more than when the same deduction was made for the whole Province.

After separating the returns of deaths from the cities and towns from those for the whole Province, it is found that the average length of life is as follows: In the cities and towns the average age was, as already stated, 28.1 years; in the remaining parts of the Province it was 34.4 years, a difference of 6.3 years in favour of the length of life in the rural districts.

DEATHS AT DIFFERENT SEASONS OF THE YEAR, MONTHLY AND QUARTERLY.

March is generally the most prolific month of the year for births, and in 1884 it had the largest death rate. The births registered in March numbered 4,163, or 9.3 per cent. of all the births, and the deaths in the same month were 2,065, or 9.05 per cent. of all. The death rate was nearly as high in April, 2,038, or 9.3 per cent., but the births were not equally so. March is the most fatal month for males, and April for females. In June the mortality was least for both sexes.

The first quarter returned the highest number of deaths, and the second the lowest; there was a difference of 419 deaths between the two quarters.

During the last four years the first quarter has always returned the highest number of deaths, the other quarters varying every year.

The deaths in the first six months of the year generally exceed those of the second. In 1883 there were 1,299 more deaths in the first half year than in the second. In 1884 there were only four more, therefore the mortality in the latter six months of 1884 was greater than the second half year of 1883.

NATIONALITY OF DECEDENTS OVER SIXTY YEARS OF AGE.

There was an increase in the number of deaths recorded in 1884 over 1883, and, in conjunction therewith, in the number of those dying over sixty years of age, Table xx., shows that 5,501 died over that age in 1884, an increase of 564 over the number returned in 1883. Of these 5,501 deaths of persons over sixty years of age, 1,672, or 30.3 per cent. were Irish, 1,095, or 20 per cent. were English; 1,058, or 19.3 per cent. were Canadians; 898, or 16.3 per cent. were Scotch; 380, or 7 per cent. were American; 233, or 4.2 per cent. were German; 50, or .9 per cent. were French; 26, or .5 per cent. were of other countries; and of 82, or 1.5 per cent. the nationality was not given.

CENTENARIANS.

(See Table xxi.)

Thirty-five persons were reported in 1883 as having reached the age of one hundred years and over at the time of their death. In 1884, 26 were so registered; one of them, John Good, was reported as having died at the age of 112 years, an extended length of life seldom reached. There is, however, no doubt that a large number live to advanced ages in this Province, probably as large a percentage as in any country. The birth-place of fourteen of these centenarians was given as Ireland, three as Scotland, five as the United States, one each in England, France and Canada, and of one the place of birth was not returned.

TABLE XXII.

Ten Highest Causes of Death, with their percentage of the whole number of Deaths from specified causes, for the years 1877, 1878, 1879, 1880, 1881, 1882, 1883 and 1884.

1877.			1878.			1879.			1880.		
DISEASES.	No. of Deaths.	Per cent. of the whole.	DISEASES.	No. of Deaths.	Per cent. of the whole.	DISEASES.	No. of Deaths.	Per cent. of the whole.	DISEASES.	No. of Deaths.	Per cent. of the whole.
	Whole number of Deaths from specified causes.....	19,260		Whole number of Deaths from specified causes.....	16,852		Whole number of Deaths from specified causes.....	16,897		Whole number of Deaths from specified causes.....	19,152
Phthisis.....	2157	11.2	Phthisis.....	1999	11.8	Phthisis.....	2065	12.2	Phthisis.....	1254	11.2
Old Age.....	1661	8.6	Old Age.....	1722	10.2	Old Age.....	1749	10.3	Old Age.....	1658	8.6
Infantile Debility.....	1164	6.0	Infantile Debility.....	1100	6.5	Infantile Debility.....	955	5.6	Infantile Debility.....	1300	6.7
Pneumonia.....	1050	5.4	Diphtheria.....	986	5.8	Pneumonia.....	942	5.5	Pneumonia.....	1257	6.5
Diphtheria.....	964	5.0	Pneumonia.....	826	4.9	Heart Disease.....	784	4.6	Diphtheria.....	822	4.2
Scarlet Fever.....	717	3.7	Heart Disease.....	621	3.6	Diphtheria.....	574	3.4	Heart Disease.....	760	3.0
Heart Disease.....	697	3.6	Convulsions.....	454	2.1	Convulsions.....	445	2.6	Convulsions.....	518	2.7
Diarrhoea.....	666	3.4	Enteritis.....	417	2.4	Dropsy.....	400	2.3	Bronchitis.....	488	2.3
Convulsions.....	573	2.9	Diarrhoea.....	401	2.3	Enteritis.....	393	2.3	Croup.....	429	2.2
Enteritis.....	497	2.5	Typhoid Fever.....	379	2.1	Diarrhoea.....	340	2.0	Congestion of Lungs.	419	2.1

TABLE XXII—Continued

1881.			1882.			1883.			1884.		
DISEASES.	No. of Deaths.	Per cent. of the whole.	Whole number of Deaths from specified causes..... 21,997			Whole number of Deaths from specified causes..... 20,299			Whole number of Deaths from specified causes..... 21,149		
			DISEASES.	No. of Deaths.	Per cent. of the whole.	DISEASES.	No. of Deaths.	Per cent. of the whole.	DISEASES.	No. of Deaths.	Per cent. of the whole.
Phthisis.....	2397	10.8	Phthisis.....	2464	11.6	Phthisis.....	2500	12.3	Phthisis.....	2347	11.1
Old Age.....	1972	8.9	Anæmia.....	1895	8.9	Old Age.....	1731	8.5	Old Age.....	2065	9.7
Infantile Debility.....	1481	6.7	Old Age.....	1811	8.7	Anæmia.....	1600	7.8	Anæmia.....	1697	8.0
Diphtheria.....	1171	5.3	Pneumonia.....	1322	6.2	Pneumonia.....	1335	6.5	Pneumonia.....	1255	5.9
Pneumonia.....	1137	5.1	Diphtheria.....	1239	5.8	Heart Disease.....	921	4.5	Heart Disease.....	929	4.3
Heart Disease.....	886	4.0	Heart Disease.....	753	3.5	Diphtheria.....	709	3.5	Diphtheria.....	668	3.1
Diarrhoea.....	818	3.7	Typhoid Fever.....	555	2.6	Convulsions.....	518	2.7	Paralysis.....	535	2.5
Typhoid Fever.....	616	2.8	Scarlatina.....	543	2.5	Bronchitis.....	497	2.4	Diarrhoea.....	531	2.5
Croup.....	533	2.4	Diarrhoea.....	497	2.3	Diarrhoea.....	471	2.3	Convulsions.....	527	2.4
Convulsions.....	509	2.3	Convulsions.....	492	2.3	Typhoid Fever.....	469	2.2	Enteritis.....	512	2.4

TABLE XXIII.—Shewing the Population and Deaths in each County ; also the ten

COUNTIES.	Population by Census.	Total No. of Deaths.	Ratio per 1,000 of the Population.	PHTHISIS.			OLD AGE.			ANEMIA.		
				No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.
Algoma and Thunder Bay	20820	193	9.3	22	11.4	1.07	4	2.0	0.2	23	12.0	1.1
Brant	33869	388	11.4	35	9.0	1.1	40	10.3	1.1	21	5.0	0.6
Bruce	64774	476	7.3	65	13.7	1.0	61	12.8	0.9	45	9.0	0.7
Carleton	64103	1270	19.8	124	9.7	1.9	102	8.0	1.5	183	14.4	2.8
Dufferin	20536	187	9.1	17	9.0	0.8	26	13.8	1.2	27	14.5	1.3
Elgin	42361	351	8.2	44	12.5	1.03	31	8.8	0.7	16	5.0	0.3
Essex	46559	673	14.4	65	9.6	1.3	44	6.5	0.9	108	16.0	2.3
Frontenac	42555	553	12.9	61	11.0	1.4	64	11.5	1.5	32	5.8	0.7
Grey	70528	494	7.0	46	9.3	0.6	58	11.7	0.8	50	10.1	0.7
Haldimand	24991	223	8.7	27	12.1	1.8	24	10.7	1.0	16	7.1	0.6
Halton	21919	241	10.9	19	7.9	0.7	38	15.7	1.7	14	5.8	0.6
Hastings	55192	721	13.0	83	11.5	1.5	58	8.0	1.5	52	7.2	0.9
Huron	76525	615	8.0	65	10.5	0.8	63	10.2	0.8	57	9.2	0.7
Kent	54335	551	10.0	68	12.3	1.2	47	8.6	0.9	35	6.3	0.6
Lambton	52034	544	10.4	54	10.0	1.03	26	4.7	0.5	28	5.1	0.5
Lanark	33975	320	9.4	40	12.4	1.1	48	15.0	1.4	26	8.1	0.8
Leeds and Grenville	60164	550	9.1	69	12.5	1.1	73	13.2	1.2	32	5.9	0.5
Lennox and Addington	26484	232	8.7	27	11.6	1.02	32	13.8	1.2	26	11.2	1.0
Lincoln	31563	437	13.8	58	13.2	1.8	44	10.0	1.4	32	7.3	1.0
Middlesex	93081	1149	12.2	107	9.3	1.1	101	9.0	1.08	73	6.3	0.7
Muskoka and Parry Sound	27204	235	8.6	13	5.5	0.4	16	6.8	0.6	25	10.6	0.9
Norfolk	33527	309	9.2	32	10.3	0.9	35	11.3	1.0	17	5.5	0.5
Northumberland and Durham	77390	742	9.5	96	12.9	1.2	98	13.2	1.2	31	4.1	0.4
Ontario	48812	542	11.1	76	14.0	1.5	68	12.5	1.4	30	5.5	0.6
Oxford	50159	517	10.3	47	9.0	0.9	60	11.6	1.1	28	5.4	0.5
Peel	26175	301	11.5	38	12.6	1.4	33	10.9	1.2	10	3.3	0.4
Perth	53686	416	7.7	49	11.7	0.9	59	14.1	1.1	17	4.08	0.3
Peterborough	34648	380	10.9	37	9.7	1.07	45	9.2	1.0	24	6.3	0.7
Prescott and Russell	38022	435	11.4	41	9.4	1.07	32	7.3	0.8	91	20.9	2.3
Prince Edward	21045	290	13.7	36	12.4	1.7	32	11.0	1.5	6	2.0	0.3
Renfrew	40246	338	8.3	30	9.0	0.7	33	9.8	0.8	44	1.3	1.1
Simcoe	74903	642	8.5	64	10.0	0.8	52	8.1	0.7	54	8.4	0.7
Stormont, Dundas and Glengarry	66017	582	8.8	103	17.7	1.5	85	14.6	1.3	58	10.0	0.8
Victoria	35163	368	10.4	34	9.2	0.9	44	12.0	1.2	15	4.0	0.4
Waterloo	42735	470	10.9	50	10.6	1.1	52	11.0	1.2	26	5.5	0.6
Welland	31771	332	10.4	35	10.5	1.1	38	11.4	1.2	11	3.3	0.3
Wellington	66189	715	10.8	83	11.6	1.2	71	10.0	1.07	36	5.0	0.5
Wentworth	66952	1143	17.0	129	11.2	1.9	71	6.2	1.06	72	6.3	1.08
York	153098	2777	18.1	258	9.3	1.6	167	6.0	1.08	206	7.4	1.3
Total	1923610	21702	11.28	2347	10.8	1.2	2065	9.5	1.07	1697	7.8	0.8

highest Causes of Death, with their per centage and rates to Population in 1884.

PNEUMONIA.			HEART DISEASE.			DIPHThERIA.			PARALYSIS.			DIARRHŒA.			CONVULSIONS.			ENTERITIS.		
No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.	No. of Deaths.	Per Cent.	Ratio to Population.
6	3.0	0.3	4	2.07	0.2	5	2.6	0.2	2	1.0	0.1	7	3.6	0.3	3	1.5	0.1	4	2.0	0.2
7	12.1	1.4	18	4.6	0.5	15	3.8	0.4	10	2.6	0.3	6	1.5	0.2	5	1.3	0.1	14	3.6	0.4
35	7.3	0.5	17	3.5	0.2	4	0.8	0.06	16	3.3	0.2	5	1.0	0.08	11	2.3	0.2	10	2.1	0.1
46	3.6	0.7	43	3.4	0.7	13	1.0	0.2	26	2.0	0.4	68	5.3	1.05	20	1.5	0.3	40	3.2	0.6
9	4.8	0.4	5	2.6	0.2	4	2.1	0.2	4	2.1	0.2	...	...	...	5	2.7	0.2	4	2.1	0.2
29	8.2	0.7	16	4.5	0.4	5	1.4	0.1	15	4.2	0.3	2	0.5	0.05	10	3.0	0.2	9	2.6	0.2
20	3.0	0.4	17	2.5	0.3	71	10.5	1.5	12	1.7	0.2	20	3.0	0.4	8	1.2	0.2	12	1.7	0.3
28	5.0	0.6	34	6.1	0.8	14	2.5	0.3	21	3.8	0.5	10	1.9	0.2	9	1.6	0.2	12	2.1	0.3
22	4.4	0.2	18	3.6	0.2	15	3.0	0.4	3	0.6	0.04	9	1.8	0.1	10	2.0	0.1	11	2.2	0.1
15	7.0	0.6	17	8.0	0.7	1	0.4	0.04	8	3.5	0.3	4	1.8	0.2	3	1.3	0.1	5	2.2	0.2
9	3.7	0.4	12	5.0	0.6	7	2.9	0.3	5	2.0	0.2	4	1.6	0.2	7	2.9	0.3	3	1.2	0.1
37	5.1	0.7	18	2.5	0.3	20	2.7	0.3	16	2.2	0.3	20	2.7	0.3	11	1.5	0.2	10	1.3	0.2
26	4.2	0.3	30	5.0	0.4	10	1.6	0.1	14	2.2	0.2	11	1.7	0.1	15	2.4	0.2	15	2.4	0.2
33	6.0	0.6	22	4.0	0.4	15	2.7	0.3	16	2.9	0.3	14	2.5	0.2	7	1.2	0.1	15	2.7	0.3
53	9.7	1.01	19	3.4	0.3	8	1.4	0.1	9	1.6	0.2	17	3.0	0.3	10	1.8	0.2	21	4.0	0.4
16	5.0	0.5	22	7.0	0.6	30	9.3	0.9	8	2.5	0.2	9	2.8	0.2	1	0.3	0.02	6	1.8	0.2
33	6.0	0.5	20	3.6	0.3	66	12.0	1.1	13	2.3	0.2	6	1.1	0.1	7	1.2	0.1	11	2.0	0.1
9	3.8	0.4	5	2.1	0.2	9	3.8	0.4	13	5.6	0.5	3	1.3	0.1	1	0.4	0.04	4	1.7	0.1
24	5.4	0.7	21	4.8	0.6	6	1.3	0.2	10	2.2	0.3	5	1.1	0.1	11	2.5	0.3	3	0.6	0.1
98	8.5	1.05	54	4.7	0.5	13	1.1	0.1	26	2.3	0.2	35	3.0	0.3	26	2.2	0.3	39	3.4	0.4
18	7.6	0.6	10	4.2	0.4	5	2.1	0.2	4	1.7	0.1	7	3.0	0.2	12	5.1	0.4	9	4.0	0.3
30	9.0	0.9	9	2.9	0.3	...	...	...	8	2.6	0.2	4	1.3	0.1	7	2.2	0.2	11	3.5	0.3
37	5.0	0.5	34	4.5	0.4	20	2.7	0.2	34	4.6	0.4	22	2.9	0.3	15	2.0	0.2	23	3.1	0.5
30	5.5	0.6	19	3.5	0.4	21	4.0	0.5	12	2.2	0.3	8	1.4	0.1	14	2.6	0.3	20	3.7	0.2
49	9.4	0.9	27	5.2	0.5	8	1.5	0.1	20	3.7	0.4	7	1.3	0.1	14	2.7	0.3	17	3.2	0.3
13	4.3	0.5	10	3.3	0.4	11	3.6	0.4	7	2.3	0.2	3	1.0	0.1	8	2.6	0.3	4	1.3	0.1
25	6.0	0.4	19	4.5	0.3	3	0.7	0.5	6	1.4	0.1	7	1.6	0.1	11	2.6	0.2	13	3.1	0.2
25	6.5	0.7	22	6.0	0.6	8	2.1	0.2	13	3.4	0.4	7	1.9	0.2	9	2.4	0.2	14	3.6	0.3
19	4.3	0.5	11	2.5	0.3	18	4.0	0.5	7	1.6	0.2	6	1.3	0.1	12	2.7	0.3	3	0.7	0.1
3	1.03	0.14	16	5.5	0.8	4	1.3	0.2	6	2.1	0.3	4	1.3	0.2	6	2.0	0.3	6	2.1	0.2
6	1.7	0.15	12	3.5	0.3	21	6.2	0.5	7	2.0	0.2	8	2.3	0.2	5	1.5	0.1	8	2.3	0.2
26	4.05	0.3	24	3.7	0.3	28	4.3	0.4	13	2.1	0.1	24	3.7	0.3	29	4.5	0.4	18	2.8	0.2
21	3.6	0.3	15	2.5	0.2	17	3.0	0.2	12	2.0	0.2	13	2.2	0.2	4	0.7	0.06	13	2.2	0.2
26	7.06	0.7	20	5.4	0.5	30	8.1	0.9	7	1.8	0.2	7	1.9	0.2	4	1.1	0.1	14	3.8	0.4
22	4.6	0.5	20	4.2	0.4	5	1.0	0.1	13	2.7	0.3	8	1.7	0.2	20	4.2	0.5	17	3.6	0.4
30	9.0	0.9	15	4.5	0.5	9	2.7	0.3	10	3.0	0.3	3	0.8	0.1	8	2.4	0.2	6	1.8	0.2
44	6.1	0.6	35	4.8	0.5	12	1.6	0.2	20	2.8	0.3	9	1.2	0.1	17	2.3	0.2	17	2.3	0.2
71	6.2	1.06	67	5.8	1.0	63	5.5	0.9	26	2.2	0.4	32	2.4	0.5	30	2.6	0.4	21	1.8	0.3
165	6.0	1.07	132	4.7	0.8	54	1.9	0.3	63	2.2	0.4	97	3.4	0.6	122	5.6	0.8	30	1.1	0.2
1255	5.7	0.65	929	4.2	0.48	668	3.07	0.34	535	2.4	0.27	531	2.4	0.26	527	2.4	0.23	512	2.3	0.2

TABLE XXIV.—

CITIES.	Population according to Assessors' returns for 1884.	Total No. of Deaths.	Ratio to 1000 of the population.	PHTHISIS.			ANEMIA.			OLD AGE.		
				Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.
Toronto.....	105211	2155	20.4	189	8.7	1.8	179	8.3	1.7	100	4.6	.9
Hamilton.....	39216	722	18.4	78	10.8	2.0	52	7.2	1.3	17	2.3	.4
Ottawa.....	30791	1047	34.4	100	9.5	3.2	162	15.4	5.2	54	5.1	1.7
London.....	20970	332	15.8	29	8.7	1.3	12	3.6	.5	18	5.4	.9
Kingston.....	15297	268	17.5	28	10.4	1.8	18	6.8	1.1	20	7.4	1.3
Brantford.....	11833	143	12.7	10	7.0	.9	10	7.0	.9	19	13.2	1.6
St. Thomas.....	10811	91	8.4	8	8.8	.8	6	6.6	.5	3	3.3	.3
Guelph.....	10190	175	17.1	21	12.0	2.0	7	4.0	.6	21	12.0	2.0
St. Catharines.....	9931	189	19.0	28	14.8	2.8	12	6.3	1.2	9	4.7	.9
Belleville.....	9742	194	20.0	22	11.3	2.2	7	3.6	.7	15	7.7	1.5
	263992	5316	20.1	513	9.6	1.9	465	8.7	1.7	276	5.2	1.0

TABLE XXV.—

PRINCIPAL TOWNS.	Deaths from all causes.	PHTHISIS.		Old Age.		ANEMIA.	
		No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.
Walkerton.....	32	3	9.3	2	6.1	2	6.1
Windsor.....	116	8	7.0	7	6.0	18	15.4
Owen Sound.....	68	3	4.4	5	7.3	6	8.8
Goderich.....	48	3	6.0	4	8.0		
Chatham.....	128	25	19.5	8	6.2	2	1.4
Sarnia.....	47	7	15.0	2	4.0	2	4.2
Perth.....	46	8	17.4	5	10.8	2	6.5
Brockville.....	111	10	9.0	12	10.8	3	6.3
Napanee.....	60	8	13.3	5	8.2	7	11.6
Cobourg.....	48	5	10.4	5	10.4		
Whitby.....	52	11	21.1	6	11.5	4	7.7
Woodstock.....	50	8	16.0	5	10.0	3	6.0
Brampton.....	75	12	16.0	4	5.3	3	4.0
Stratford.....	76	18	23.6	6	8.0	10	13.1
Peterboro.....	109	10	9.1	9	8.2	4	3.6
Picton.....	67	10	14.9	3	4.4		
Pembroke.....	40	2	5.0			1	2.5
Barrie.....	57	6	10.5	3	5.2	4	7.0
Cornwall.....	62	7	11.2	6	9.6	4	6.4
Lindsay.....	61	10	16.5	4	6.5	1	1.6
Berlin.....	68	2	3.0	17	25.0	10	14.7
	1421	176	12.3	118	8.3	91	6.4

CITIES.

PNEUMONIA.			HEART DISEASE.			DIARRHŒA.			CONVULSIONS.			CHOLERA INFANTUM.			TYPHOID FEVER.			BRONCHITIS.		
Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.	Number.	Per cent.	Ratio per 1000 of population.
128	6.0	1.2	100	4.6	.9	85	3.9	.8	109	5.0	1.0	67	3.1	.6	67	3.1	.6	75	3.4	.7
38	5.2	.9	33	4.5	.8	23	3.2	.6	18	2.5	.4	16	2.2	.4	15	2.1	.4	19	2.6	.4
38	3.6	1.2	32	3.0	1.0	66	6.3	2.1	18	1.7	.6	27	2.5	.8	16	1.5	.5	14	1.3	.4
30	9.0	1.4	14	4.2	.7	12	3.6	.5	15	4.5	.7	11	3.3	.5	13	4.0	.5	11	3.3	.5
16	6.0	1.0	18	6.7	1.1	6	2.2	.4	3	1.1	.2	1	.4	.06	6	2.2	.4	5	1.8	.3
25	17.4	2.1	6	4.2	.5	2	1.4	.1	1	.7	.08	3	2.0	.2	4	2.8	.3	3	2.1	.2
12	13.2	1.1	5	5.5	.4	.....	.....	.....	4	4.4	.4	9	10.0	.8	6	6.5	.5	1	1.1	.1
8	4.5	.7	5	2.8	.5	4	2.2	.3	2	1.1	.2	1	.5	.....	6	3.4	.5	3	1.7	.2
11	6.0	1.1	13	7.0	1.3	3	1.6	.3	6	3.0	.6	5	2.6	.5	11	5.8	1.1	3	1.6	.3
6	3.0	.6	7	3.6	.7	2	1.0	.2	1	.5	.1	14	7.2	1.4	3	1.5	.3	1	.5	.0
312	5.8	1.1	233	4.3	.8	203	3.8	.7	177	3.3	.7	154	2.8	.6	147	2.7	.5	135	2.5	.5

PRINCIPAL TOWNS.

DIPHTHERIA.		PNEUMONIA.		HEART DISEASE.		DIARRHŒA.		CONVULSIONS.		TYPHOID FEVER.		CHOLERA INFANTUM.	
No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.	No. of Deaths.	Per cent.
2	6.2	2	6.1	.....	.....	1	3.1	1	3.1	.....	.....	.....	.....
11	9.4	2	1.7	3	2.5	4	3.4	4	3.4	2	1.7	4	3.4
.....	.....	1	1.4	5	7.3	1	1.4	.....	.....	2	3.0	1	1.4
.....	.....	5	10.4	3	6.2	.....	.....	2	4.1	.....	.....	.....	.....
9	7.0	9	7.0	4	3.1	3	2.3	3	2.3	1	.7	3	2.3
3	6.4	1	2.1	1	2.0	3	3.3	.....	.....	.....	.....	1	2.0
.....	.....	4	8.7	1	2.1	1	2.1	1	2.1	.....	.....	.....	.....
13	11.7	8	7.2	1	.9	6	5.4	3	2.7	5	4.5	3	2.7
1	1.6	1	1.6	1	1.6	2	3.3	1	1.6	.....	.....	.....	.....
7	14.5	.....	.....	1	2.0	.....	.....	2	4.1	.....	.....	.....	.....
1	2.0	3	5.7	3	5.7	.....	.....	.....	.....	1	2.0	1	1.9
.....	.....	4	8.0	6	12.0	2	4.0	1	2.0	1	2.0	2	4.0
4	5.3	6	8.0	2	2.6	.....	.....	1	1.3	1	1.3	4	5.3
1	1.3	1	1.3	1	1.3	.....	.....	1	1.3	1	1.3	.....	.....
2	1.8	9	8.2	10	9.1	3	2.7	4	3.7	5	4.5	1	.9
.....	.....	.....	.....	4	5.9	1	1.4	5	7.4	.....	.....	1	1.5
.....	.....	1	2.5	2	5.0	6	15.0	.....	.....	.....	.....	2	5.0
1	1.7	1	1.7	.....	.....	5	8.7	3	5.2	3	5.2	.....	.....
7	11.2	1	1.6	1	1.6	1	1.6	1	1.6	3	5.0	.....	.....
13	21.3	1	1.6	4	6.5	.....	.....	1	1.6	.....	.....	.....	.....
1	1.4	1	1.4	2	2.9	.....	.....	.....	.....	3	4.4	2	3.0
76	5.3	61	4.3	55	3.8	39	2.6	34	2.4	28	2.0	25	1.7

DEATH WAVES—1881, 1882, 1883 AND 1884.

(See Diagram No. 1.)

This diagram gives a concise view of the increase and decrease of the mortality in the Province through the different months of the year for each of the last four years.

The two particular features noticeable are the uniform high point of mortality in each year in the month of March, and also the uniform low point in June.

DEATH WAVE IN 1884.

The two high points of mortality during the year were, as usual, in March and September, and the two low points in June and November. In noticing the wave from its commencement in January, it will be seen that the mortality in that month was 1,843, a little above the average monthly rate—1,808. In February the wave descends, as it did in the corresponding month in 1883, but not to so low a point; as there was one day more in February in 1884, being leap year. March finds the wave at the highest point, which, however, was not so high as in 1882 or 1883. The descent of the wave in April was very little, as there were only 27 deaths less than in March, therefore March and April together may be taken as the highest points of the death wave in the year. A very rapid descent, however, took place through May and June, and in the latter month the lowest point of mortality in the year was reached, lower than the wave descended in the same month either in 1881, 1882 or 1883. The wave then ascends gradually through July, August and September, reaching the second highest point in the last month, September; it then descends similarly to the waves in preceding years through October, and in November falls to the second lowest point. This month invariably exhibits a low mortality. A considerable rise in the wave was observable in December. The deductions to be made from the variations of different waves of mortality in the last four years as shewn by the diagram are, that December, January and February are moderately healthy months, being slightly below the average monthly mortality; while March and April, being greatly above the average, are the most unhealthy. May, August and September are somewhat above the average mortality, while June, July, October and November are much below, and may therefore be considered the healthiest months of the year.

CLASSIFIED CAUSES OF DEATH.

(See Appendix, page xxxv.)

The following table shews the names of the different classes, also the number of deaths in each class with percentages:

CLASSES.	Deaths in 1884.	Percentage to whole number of deaths.	Deaths to 1,000 of population.
Class I.—Zymotic diseases	3888	17.9	2.0
Class II.—Constitutional diseases.....	5513	25.4	2.8
Class III.—Local diseases.....	7506	34.6	3.9
Class IV.—Developmental diseases	3464	16.0	1.8
Class V.—Violent deaths	778	3.6	0.4
Cause not specified	553	2.5	0.3
Total	21702	100.0	11.2

No. 1.

DEATH WAVE IN THE YEARS 1881, 1882, 1883 AND 1884.

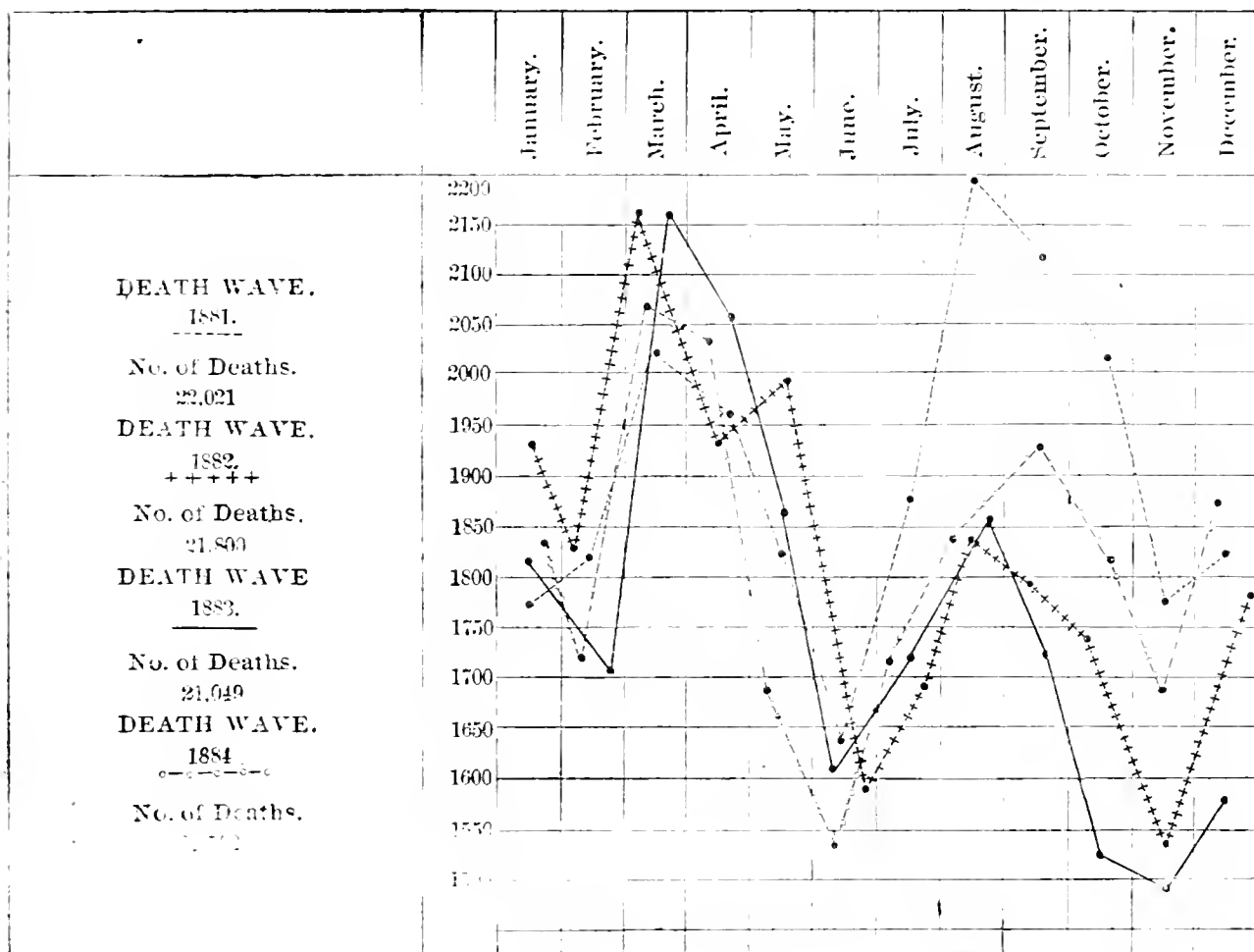
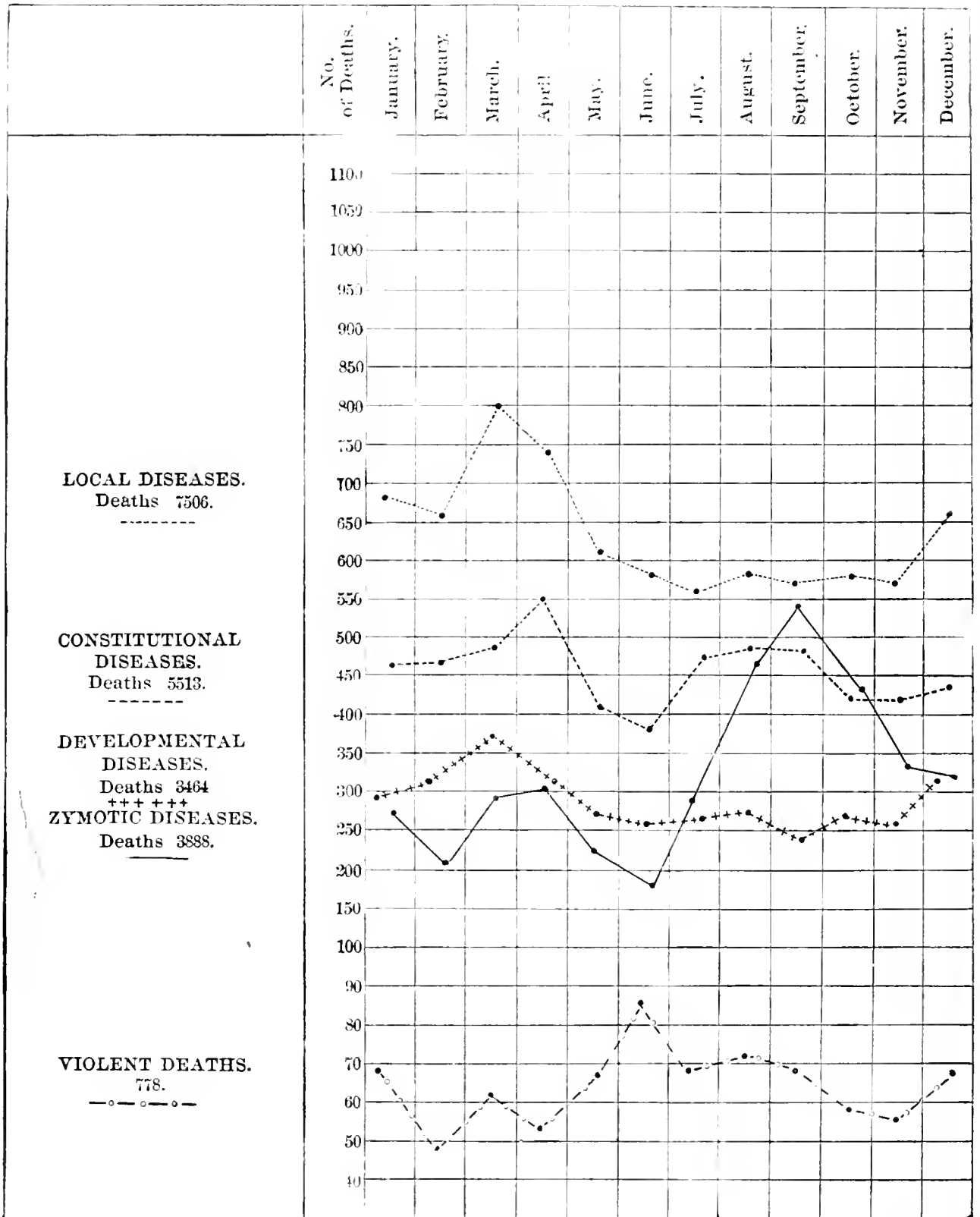
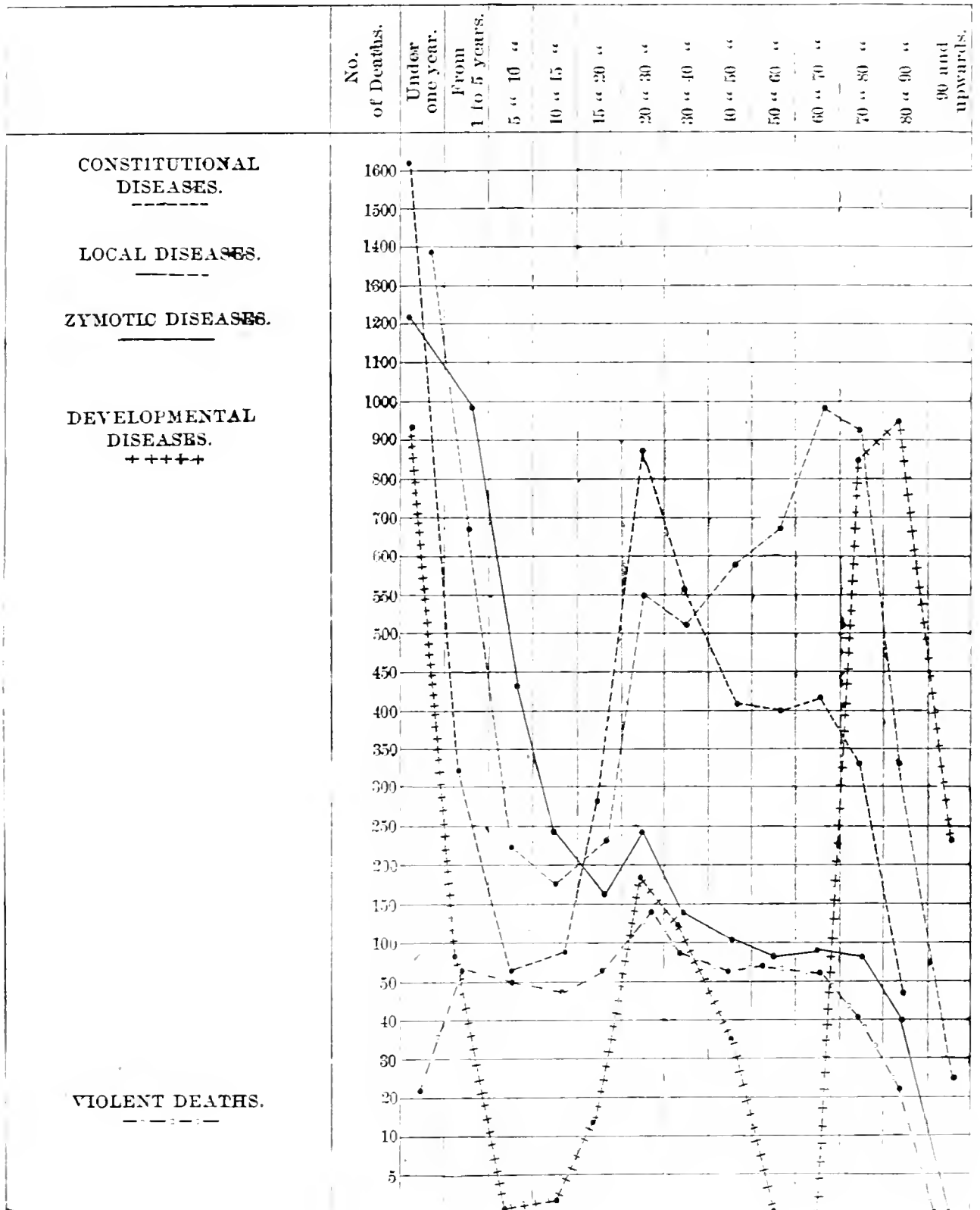


DIAGRAM SHEWING THE MORTALITY IN THE FIVE CLASSES OF



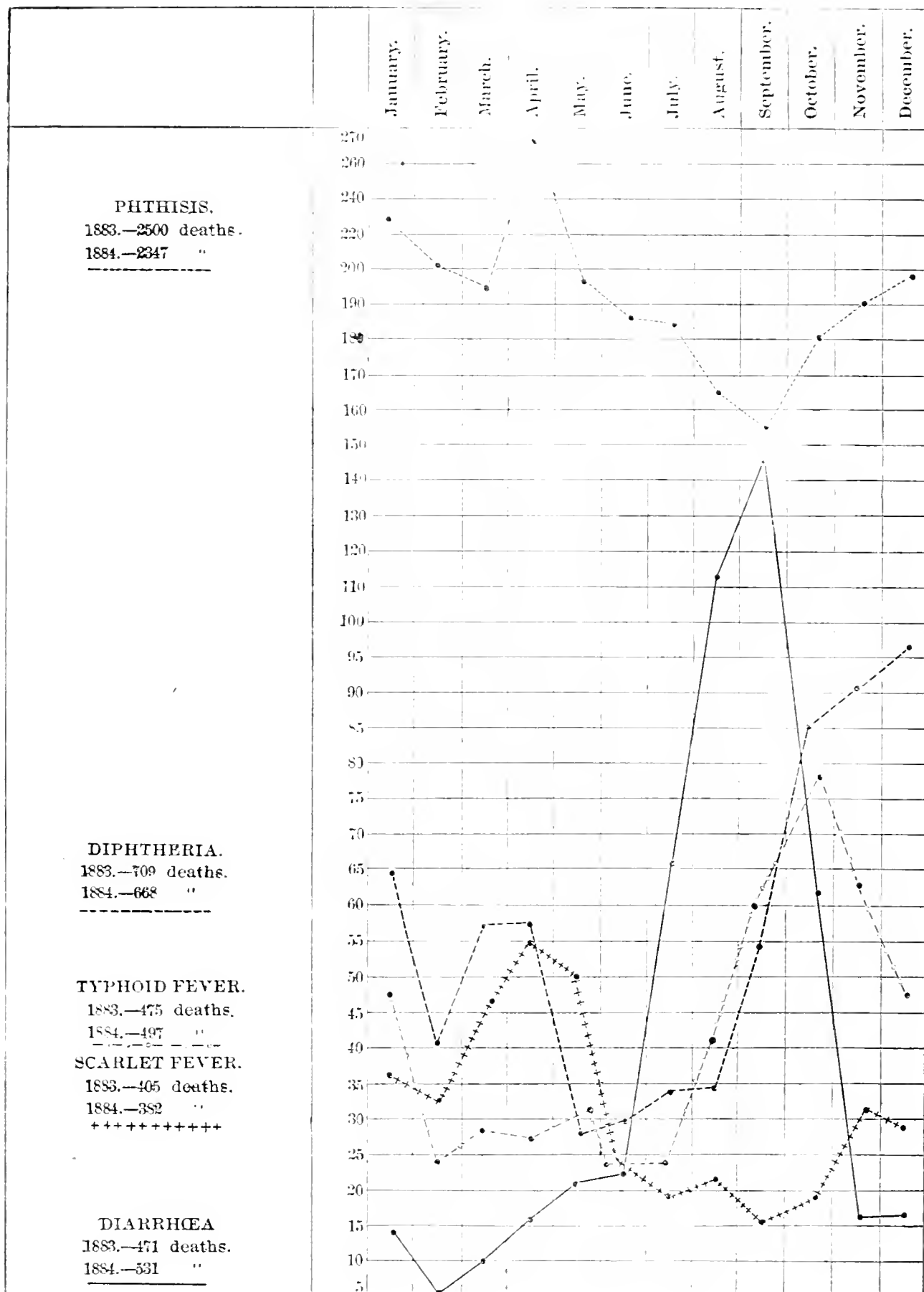
2.

DISEASES IN EACH MONTH AND EACH PERIOD OF LIFE IN 1884.



No. 3.

DIAGRAM SHEWING THE MORTALITY FROM FIVE DISEASES BY MONTHS FOR THE YEARS 1883 AND 1884.



EXPLANATION OF THE DIFFERENT CLASSES.

Class I.—Zymotic diseases, a term proposed by Dr. Farr, is usually employed as synonymous with preventible, and includes all those diseases such as Measles, Scarlatina, Diphtheria, Dysentery, Cholera Infantum, Bilious, Typhoid and Typhus fevers and Smallpox, which occur as endemics or epidemics.

Class II.—Constitutional diseases include Anæmia, Cancer, Rheumatism, Dropsy, Gout, Abscess, Hydrocephalus, Scrofula, and Phthisis or Consumption.

Class III.—Local diseases include all those diseases in which the functions of particular organs of the system are disturbed, such as Epilepsy, Apoplexy, Convulsions, Paralysis, Insanity, Heart Disease, Congestion of the Lungs, Bronchitis, Pleurisy, Pneumonia, Disease of the Stomach, Liver and Kidneys, etc.

Class IV.—Developmental diseases are those incidental to women, children, and old people.

Class V.—Deaths by violence or those which are caused by wounds, burns, drowning, poison, hanging, suicide, murder, etc.

CLASS I.—ZYMOTIC DISEASES.

The deaths from the diseases in this class numbered 3,888, or 17.9 per cent. of the total deaths, about the same as in 1883. Chief among them was Diphtheria, 668 deaths having been caused by it, a slight decrease from 1883, both in number and percentage.

The counties particularly afflicted with this disease were Essex, which returned 71 deaths, or 10.5 per cent. of all the deaths in that county; Leeds and Grenville (united), returned 66 deaths, or 12 per cent.; Lanark 30 deaths, or 9.3 per cent.; Victoria 30, or 8.1 per cent.; Wentworth 63, or 5.5 per cent.; and Renfrew 21, or 6.2 per cent.

In the counties of Leeds and Grenville (united), Renfrew, Essex and Lanark, this disease, seems to prevail to a large extent every year. Each of them had a large ratio of deaths to population from Diphtheria.

The following counties shew a large falling off in the number of deaths from this cause, owing it is believed, to the adoption of preventible measures so strongly recommended by the Provincial Board of Health.

DIPHThERIA.

COUNTIES.	1883.		1884.		Decrease.	
	No. of Deaths.	Per Cent.	No. of Deaths.	Per Cent.	No of Deaths.	Per Cent.
Brant.....	29	7.6	15	3.8	14	3.8
Bruce.....	13	2.7	4	0.8	9	1.9
Carleton.....	46	3.1	13	1.0	33	2.1
Huron.....	33	5.2	10	1.6	23	3.6
Norfolk.....	7	2.3			7	2.3
Oxford.....	34	6.1	8	1.5	26	4.6
Perth.....	11	2.5	3	0.7	8	1.8
Prescott and Russell.....	26	6.6	18	4.0	8	2.6
Waterloo.....	14	2.8	5	1.0	9	1.8
Wellington.....	22	3.1	12	1.6	10	1.5
York.....	85	3.1	54	1.9	31	1.2
CITIES.						
Toronto.....	58	2.8	27	1.2	31	1.6
Ottawa.....	30	3.6	7	0.6	23	3.0
Brantford.....	18	11.3	7	4.8	11	6.5

Diphtheria does not appear on the List of ten highest causes of death in the cities, although it is sixth in the similar list for the Province.

The percentage of deaths from this cause was much less in the cities than in the whole Province; in the former it was only 2.1 per cent., in the latter 3.07. The ratio to population was, however, slightly higher in the cities than in the Province.

In the principal towns Diphtheria was more prevalent than in the cities, possibly owing to their sanitary conditions not being so good. The number of deaths from all causes in these towns was 1,421, of which 76, or 5.3 per cent. were from Diphtheria.

It was quite epidemic in the following towns, viz.: Lindsay, 13 deaths, or 21.3 per cent.; Brockville, 13 deaths, or 11.7 per cent.; Cobourg, 7 deaths, or 14.5 per cent.; Cornwall, 7 deaths, or 11.2 per cent.; Windsor, 11 deaths, or 9.4 per cent.; Chatham, 9 deaths, or 7 per cent. On the other hand, in the following towns no deaths were returned from Diphtheria, viz.: Owen Sound, Goderich, Perth, Woodstock, Picton and Pembroke.

The three months of the year, viz., October, November and December, returned 273, or 40 per cent. of all the deaths from Diphtheria, while the three months, May, June and July, returned only 89, or 13 per cent.

Only 51 deaths were of persons over 15 years, the remaining 617 died under that age, chiefly between one and five years of age, so that the disease may be classed as one belonging to infancy.

FEVERS.

The mortality from the different kinds of fever in 1884 was 1125, being 39 more than in 1883.

TYPHOID FEVER.

Comparing the mortality from this fever in the different divisions of the Province, it is found that in the whole Province there were 492 deaths, being 2.2 per cent. of the total deaths, and, .25 per 1,000 of the population. In the cities the deaths from Typhoid Fever were 147, or 2.7 per cent. of the deaths in those places, and .5 per 1,000 of the population. In the towns there were 28 deaths from this cause, not quite 2 per cent., and .28 per 1,000 of their population. In the rural districts there were 317 deaths from this disease, 2.1 per cent., and .2 per 1,000 of their population. Therefore, this fever was more prevalent in the cities than in the rural districts during the year 1884.

There was a small increase in the number of deaths from it in 1884, but owing to the increase in the number of deaths in the whole Province the percentage was about the same as in 1883.

October was the most fatal month for this fever, and June the least so. More died from this cause between 20 and 30 years than at any other period of life.

SCARLET FEVER.

The returns show a decrease of 23 deaths from Scarlet Fever. One hundred and five, or 27 per cent. of the 382 deaths occurred in April and May. In former years March was the most fatal month. The returns also shew that 50 children died from Scarlet Fever under the age of one, and 177 between one and five years, together nearly sixty per cent. of all, under five years of age.

DIARRHŒA.

There were 531 deaths from Diarrhœa, 299 males and 232 females. It stands eighth in the list of the ten highest causes of death, in place of ninth as in 1883. The percentage for the Province was 2.4, the ratio to population .26. In the cities it was 3.8 per cent. and ratio, .7 per 1,000 of the population. In the principal towns it was 2.7 per cent. with a ratio of .3. In the rural districts the percentage was only 1.8, and the ratio, .18; therefore, this disease may be considered as principally confined to cities and towns. The months of July, August and September invariably return the highest death rate from Diarrhœa. A large majority of the deaths were of children under one year. The city of Ottawa returns the highest percentage of the cities, and the towns of Pembroke, Barrie and Sarnia, the highest percentage of the towns.

CHOLERA INFANTUM.

This disease of infancy shews an increase of 110 deaths over 1883. The only cause that can be assigned for this increase, is, that the total number of deaths have also increased. The three months—July, August and September—which were so fatal from this cause in 1883, were equally so in 1884. The Table shews that 326, or 77 per cent. died during these three months.

CROUP.

For several years it has been the practice in compiling the Tables of the Annual Report, to enter under (Cynanche, Croup) all those deaths reported as caused by "Diphtheric Croup." It has now been thought advisable that as these cases are so nearly allied to Diphtheria, they should be entered under that heading; therefore, an apparent decrease of 106 in the number of deaths from "Croup" appears in the Table. October, December and February were the most fatal months for this disease, and May, June and August the least so.

SMALLPOX.

This loathsome disease was prevalent in 1884, the returns shewing that 63 deaths were registered as having been caused by it.

It appears to have broken out in the northern part of the County of Hastings, but through the prompt and vigorous action of the Provincial and Local Boards of Health, it was chiefly confined to that locality.

According to the report of the Provincial Board of Health, there were 202 cases of this disease in the township of Hungerford, and 45 deaths; and 8 more deaths in an adjacent township. The disease appears to have been brought into the county by an immigrant boy, and the cause of its spreading was principally owing to the inhabitants having in many cases neglected vaccination. The necessity for compulsory vaccination is so well advocated by the Board, and the reasons given are so plainly pointed out, that an extract from them is here given:

"Through the absence of any statutory provisions making vaccination compulsory, there is rapidly growing up over the whole Province a young population, amounting, in the case which has been illustrated by these statistics, to 80 per cent. of all under 20 years of age who are unvaccinated, and who in a very few years, if the same disregard is shown, will amount to 75 per cent. of the whole population. As the population becomes more centralized and our cities increase, they will become like those European cities from which, during the past year this Province has received the first cases of six outbreaks of Smallpox. What, amongst an unvaccinated population, the mortality which prevailed in Hungerford in this class, viz., 33 per cent., would mean, should an outbreak similar to that of Hungerford once get beyond our control, may well make us pause to consider. The remedy is found in a statutory provision making the proof of successful vaccination a condition of entrance to our public schools. As, however, there would be between 1 and 5 years a large percentage of unprotected children, it would seem that thoroughness points us to the system by which England has reduced the annual number of children under one year remaining unvaccinated to 5 per cent., and proved in 1881 its efficacy in saving life by shewing that while the vaccinated shew to the unvaccinated as 19:1, the deaths from smallpox amongst all this army of vaccinated children was only 1."

Ten more cases were reported in other parts of the Province. The cities of Toronto and Ottawa each returned one death from this cause, as did also the town of Berlin. The other cities and towns were exempt.

There was an outbreak of this disease in 1880, when it carried off 143 persons: it was, however, chiefly confined to the city of Ottawa, which reported 97 deaths. The counties of Prescott and Russell united, returned 18 and the counties of Kent and York each returned 5 deaths respectively.

CLASS II.

CONSTITUTIONAL DISEASES.

The number of deaths registered in this class was 5,513 : of males 2,559, and of females 2,954. In 1883 the number was 5,511 only, a difference of 2 between the two years.

PHTHISIS, OR CONSUMPTION.

For many years each Annual Report has recorded an increase in the number of deaths from Phthisis, but a gratifying change was observable in 1884, the returns shewing a decrease of 153 notwithstanding that the total number of deaths in the Province had increased, which, if taken into account, would make the decrease relatively larger. A comparison of the percentages and ratios in the two years shews this. In 1883 the deaths from Phthisis were 11.9 per cent. of all, and the ratio to population 1.3 per 1,000 ; in 1884 they were only 10.8 per cent. and a ratio of 1.2 per 1,000, a decrease of 1.1 per cent. and .1 per 1,000 in the ratio. Still the mortality in 1884 was large, no less than 2,347 deaths being returned from this cause.

In 27 counties there was a falling off in the deaths from Phthisis ; and in the counties where there was an increase it was generally small.

In 1883, the cities returned 627 deaths, 11.4 per cent., or 2.6 per 1,000 of their population from Phthisis. In 1884 only 513 were returned, a percentage of 9.6, and ratio 1.9, shewing a decrease of 114 deaths, or 1.8 per cent.

In the principal towns the average death rate from this cause was high, 12.3 per cent., but the ratio was lower than in the cities, 1.7 per 1,000.

In the rural districts the deaths were 1,658, being 11 per cent. of all the deaths and 1.06 per 1,000 of their population. The month of April was again the most fatal month for those afflicted with this disease, and September the most favourable.

Diagram No. 3 plainly points out the variations of the deaths from this disease during the several months of the year.

The deaths of 1,496 persons are recorded as having died from Phthisis between 20 and 50 years, 63 per cent. of all who died from it ; the period between 20 and 30 years, alone, returned 780 deaths, nearly one-third of the whole number.

The remarks made on Consumption by the State Registrar of New Hampshire in his Annual Report for 1883, appear to be so applicable to this Province that they are here quoted :

“ Consumption is a silent foe which insidiously invades every community, and gathers its victims largely from the ranks of those who have not yet reached the meridian of life. If 2,347 human beings were annually killed upon the railroads of our Province, the Legislature would promptly prohibit the running of trains. If a contagious disease were annually imported into the Province that swept from existence 2,347 living souls, the Province would protect every rod of her frontier by a cordon that would require an army of 10,000 able men, and the expense would be of secondary account. If 2,347 citizens of Ontario were annually carried to eternity through an epidemic that did its fearful work in a few days, panics and demoralization would follow, business would be stagnated, and a general exodus from the Province would be the result. But the spectacle is different. These 2,347 souls drop into the sea of eternity as silently as the leaf falls upon the bosom of the lake, and the ripples made reach not the public, and fall lighter upon the friends because expected. But these deaths, the majority of them, in the light of modern study and research, are as needless as deaths from other preventible diseases. The opinion is entertained by eminent physicians and sanitarians, who have carefully considered all the factors that bear upon this disease, that it may be to a very large extent avoided. Without any hereditary tendency, the occurrence of Consumption must be from a violation of some of the laws of physical life for which the individual is responsible. With a hereditary

“family tendency to this disease, the individual has a warning that should lead to the adoption of such habits of life as will tend to maintain the system in the best possible state of existence. To this end it becomes a duty, not only of physicians, but of the public, to consider seriously this alarming subject.”

Substituting 2,347, the number of deaths from Consumption in Ontario, for 827, the deaths from it in New Hampshire, the force of these remarks will be more plainly seen.

The deaths from Anæmia, Rheumatism and Hydrocephalus in 1884 were about the same as in 1883. The mortality from Cancer and Dropsy still continue to increase from year to year, although not to a very great extent. The increase in 1884 was of the former 19, and of the latter 27.

CLASS III.

LOCAL DISEASES.

The diseases of this class may be viewed under the same divisions as in the last Report, viz.: First, those affecting the nervous system. Second, those of the circulatory system. Third, those of the lungs and throat. Fourth, those of the digestive organs.

1ST.—NERVOUS DISEASES—APOPLEXY, CONVULSIONS AND BRAIN DISEASES.

The number of deaths from Apoplexy and Convulsions was 893, a decrease of 56 from 1883. Those who died from Apoplexy were generally of middle or advanced age, while those who died from Convulsions were of children under five years of age.

The deaths from the many different affections of the brain, such as Epilepsy, Paralysis, Necrencephalus, Insanity, Meningitis, etc.; have with the exception of the last mentioned increased considerably during 1884, especially Paralysis.

That the progress of civilization with its attendant excitement, rush and business anxiety, has largely caused the increase of Apoplexy and diseases of the brain, cannot be doubted when the returns of deaths from these causes are found to have increased steadily and regularly every year during the last four years.

The deaths of the insane are not all registered as caused by Insanity, but from some disease which was the immediate cause of death; therefore, it is impossible to ascertain from the returns whether Insanity is on the increase in this Province; it is believed, from the Reports of Inspector of Asylums, however, that it is more prevalent than in former years.

Paralysis has increased so as to entitle it to be placed seventh in the List of ten highest causes of death.

DISEASES OF THE CIRCULATORY SYSTEM—HEART DISEASE.

Heart Disease again stands fifth in the list of ten highest causes of death in the whole Province, and also in the cities, and sixth in the towns, with very nearly the same number of deaths and percentage as in 1883. It appears to have been most prevalent in the counties of Haldimand, Lanark, Peterborough, Wentworth, Prince Edward and Frontenac; their percentage averaged 6.4 per cent., whereas the average percentage of deaths from Heart Disease for the whole Province was 4.2 per cent. of the total deaths from all causes.

The city of St. Catharines returns the highest death rate of the ten cities from this disease, 7.0 per cent. and a ratio of 1.3 per 1,000 of its population. Kingston also returns a high rate, 6.7 per cent. with a ratio of 1.1 per 1,000. The lowest return from any city comes from Guelph, 2.8 per cent. or .5 per 1,000.

The towns of Peterboro', Owen Sound, Lindsay and Goderich, returned a high death rate from Heart Disease, all of them being above 6 per cent.

In Woodstock it reached 12 per cent., but with the exception of Peterboro' the ratio to population was low, not 1 per 1,000.

February and March were the most fatal months of the year, and the periods of life between 60 and 80 years were similarly so.

DISEASES OF THE THROAT AND LUNGS—PNEUMONIA AND BRONCHITIS.

These two are the principal diseases of this order. The deaths from them numbered 1,681 in 1884, a decrease of 151 from 1883. From Consumption more females than males died. From Pneumonia the deaths of males exceeded those of females.

The spring months of the year are also as fatal to those afflicted with these diseases as Consumption and similarly the majority of the deaths are at the same periods of life, viz., between 20 and 50 years, although more died from Pneumonia and Bronchitis over that age than from Consumption. Pneumonia stands fourth in the list of ten highest causes of deaths in the Province, and also in the cities and towns, but Bronchitis only appears in the list for the cities, and then in the tenth place there. In 1883 it was eighth in the list for the Province.

DISEASES OF THE STOMACH.

Enteritis, Peritonitis, Dyspepsia and Gastritis, are the principal diseases of the Stomach. The deaths from them were 863, an increase of 115, chiefly in the deaths from Enteritis. Enteritis has not appeared in the list of the highest causes of death since 1879 until 1884, when it takes the tenth place.

DISEASES OF THE URINARY ORGANS, AND LIVER.

The deaths from these diseases do not generally vary much in number from year to year, but in 1884 there appears to have been an exceptional increase in Nephria and Nephritis (diseases of the kidneys), 51 more deaths having been recorded from these two diseases.

The deaths from Hepatitis (inflammation of the liver) were about the same as in 1883.

CLASS IV

DEVELOPMENTAL DISEASES.

Old Age still maintains its position as the second highest cause of death in the Province, and third in the cities and towns. In 1883, the deaths recorded from Old Age were 1,731; in 1884 there were 2,065 so recorded, an increase of 334

Comparing the deaths from Old Age in the Province with the cities and towns, the following results appear: For the whole Province the death rate was 9.5 per cent. or 1.07 per 1,000 of the population. For the cities it was 5.2 per cent. or 1.0 per 1,000. For the towns 8.3 per cent. or 1.1 per 1,000. For the rural districts 11.1 per cent. or 1.13 per 1,000 of the population.

It would appear, then, from these data, that although the percentage was much larger in the rural districts than in the cities and towns, yet the ratio to population was about the same as the towns but larger than the cities; it may, therefore, be concluded that the prospects of living to old age are greater in the rural districts than in the cities.

The other diseases included in this class besides Old Age are Dentitio (teething), Still Birth, Premature Birth, diseases of women, such as Child Birth, etc., but they do not present any particular features calling for special remark.

CLASS V.

VIOLENT DEATHS.

There was a slight increase in the deaths in this class. Deaths from accidents are of various kinds, but principally from wounds. Of the 778 deaths from violence 285 were from that cause, 86 were killed by cars, 4 more than in 1883, but the number was small when compared with other countries: 170 were drowned, and 74 died from burns and scalds; suicides increased from 33 in 1883 to 53 in 1884, an increase not desirable to record.

More minute details as to the number, causes of death, age and sex of all returned as having died in this Province during the year 1884, will be found by referring to the Tables in the Appendix. They have been carefully prepared from data derived from the returns received from the Registration Divisions of the whole Province.

TABLE XXVI.

DEATHS BY OCCUPATIONS.

Over the Average Age, - - - - 57.7.

OCCUPATIONS.	No. of Deaths.	Average Age at Death.	OCCUPATIONS.	No. of Deaths.	Average Age at Death.
Gentlemen	221	Years. 70.0	Provincial Land Surveyors	9	Years. 65.1
Weavers	34	69.4	Farmers	2666	63.6
Volunteers, Soldiers and Pen- sioners	43	69.2	Gardeners	40	60.7
Coopers	23	67.7	Masons	26	60.0
Clergymen	45	65.5	Public Officials	84	59.8
Millwrights	6	63.9	Tailors	70	58.8
			Shoemakers	80	58.5

UNDER the Average Age.

OCCUPATIONS.	No. of Deaths.	Average Age at Death.	OCCUPATIONS.	No. of Deaths.	Average Age at Death.
Hunters and Fisherman	8	Years. 57.6	Plasterers	7	Years. 45.3
Blacksmiths	64	57.6	Artists	6	45.1
Physicians	29	56.5	Printers	12	45.0
Millers	32	55.0	Cooks	5	45.0
Bricklayers	9	55.0	Cabinet-makers	23	44.0
Builders and Contractors	19	54.1	Musicians	4	42.7
Merchants	133	54.1	Tinsmiths	16	42.5
Butchers	31	53.7	Lawyers	17	42.5
Carpenters	182	53.4	Bankers	5	42.2
Carriage and Wagon-makers	26	53.4	Miners	8	41.8
Sailors	31	52.9	Barbers	13	41.3
Tavern keepers	53	51.9	Brewers and Distillers	8	41.3
Tanners and Curriers	10	51.8	Brickmakers	2	41.0
Pedlars	13	51.8	Servants, Females	63	41.0
Labourers	921	51.6	Book-keepers and Clerks	94	39.3
Moulders	20	51.0	Railway Employees	56	38.5
Manufacturers	39	50.1	Dentists	8	39.0
Saddlers and Harness-makers	23	50.0	Stone-cutters	13	38.2
Teachers (Males)	36	50.0	Teachers (Females)	21	38.1
Teamsters	36	48.5	Machinists	26	38.0
Other Mechanics	58	46.8	Lumbermen	15	37.3
Engineers	30	46.3	Milliners and Dress-makers	28	35.8
Editors	4	46.0	Seamstresses	31	35.0
Painters	39	45.8	Tobacconists and Cigar-makers	9	35.0
Watchmakers and Jewellers	11	45.6	Chemists and Druggists	7	34.5
Bakers and Confectioners	16	45.5	Telegraph Operators	11	26.6
Agents	44	45.3			

TABLE XXVII

A STATISTICAL CLASSIFICATION of the number of Deaths of persons whose Occupations were specified, giving the Number, Average and Aggregate Ages.

OCCUPATIONS.	NUMBER OF PERSONS.	AGES AT DEATH.	
		Aggregate.	Average.
CLASSES AND OCCUPATIONS	5773	332917	Years. 57.7
1. CULTIVATORS OF THE SOIL	2706	172054	63.5
2. MECHANICS	922	48781	52.9
3. LABOURERS	970	49947	51.4
4. MERCHANTS, FINANCIERS, AGENTS, ETC.	401	18902	47.0
5. PROFESSIONAL MEN	514	31325	61.0
6. OTHER EMPLOYMENTS	138	7234	52.4
7. FEMALES AT WORK	122	4674	39.0
CLASS I.—CULTIVATION OF THE SOIL	2706	172054	63.5
Farmers	2666	169627	63.6
Gardeners	40	2427	60.7
CLASS II.—MECHANICS	922	48781	52.9
Blacksmiths	64	3685	57.6
Brickmakers	2	82	41.0
Brewers and Distillers	8	330	41.3
Bricklayers	9	500	55.0
Barbers	13	537	41.3
Butchers	31	1664	53.7
Bakers, Confectioners, Etc.	16	728	45.5
Carpenters	182	9731	53.4
Cabinetmakers	23	1013	44.0
Coopers	23	1557	67.7
Cooks	5	224	45.0
Contractors and Builders	19	1031	54.3
Masons	26	1566	60.0
Machinists	26	984	38.0
Moulders	20	1020	51.0
Millers	32	1755	55.0
Millwrights	6	383	63.9
Miners	8	335	41.8
Other Mechanics	58	2717	46.8
Painters	39	1785	45.8
Printers	12	541	45.0
Plasterers	7	317	45.3
Stonecutters	13	497	38.2
Shoemakers	80	4682	58.5
Saddlers and Harnessmakers	23	1152	50.0
Tinsmiths	16	680	42.5
Tobacconists and Cigarmakers	9	315	35.0
Tailors	70	4119	58.8
Tanners and Curriers	10	518	51.8
Undertakers	1	83	83.0
Watchmakers and Jewellers	11	502	45.6
Weavers	34	2360	69.4
Carriage and Waggonmakers	26	1307	53.4

TABLE XXVII—Continued.

OCCUPANTS.	NUMBER OF PERSONS.	AGES AT DEATH.	
		Aggregate.	Average.
CLASS III.—LABOURERS	970	49947	51.4
Labourers.	921	47528	51.6
Pedlars	13	673	51.8
Teamsters.	36	1746	48.5
CLASS IV.—MERCHANTS, ETC.	401	18902	47.0
Agents	44	1994	45.3
Book-keepers, Salesmen and Clerks.....	94	3700	39.3
Bankers	5	211	42.2
Chemists and Druggists.....	7	241	34.5
Manufacturers	39	1956	50.1
Merchants	133	7198	54.1
Tavern-keepers.....	53	2750	51.9
Telegraph Operators.....	11	293	26.6
Lumbermen.....	15	559	37.3
CLASS V.—PROFESSIONAL MEN.....	514	31325	61.0
Artists.....	6	271	45.3
Clergymen	45	2947	65.5
Dentists	8	311	39.0
Engineers	30	1388	46.3
Editors	4	184	46.0
Lawyers	17	725	42.5
Musicians.....	4	171	42.7
Physicians	29	1639	56.5
Public Officials.....	84	5020	59.8
Provincial Land Surveyors.....	9	586	65.1
Teachers, Male.....	36	1802	50.0
“ Female.....	21	803	38.1
Gentlemen.....	221	15478	70.0
CLASS VI.—OTHER EMPLOYMENTS	138	7234	52.4
Hunters and Fishermen.....	8	461	57.6
Railroad Employees	56	2155	38.5
Sailors	31	1640	52.9
Volunteers, Soldiers and Pensioners.....	43	2978	69.2
CLASS VII.—FEMALES AT WORK	122	4674	39.0
Domestic Servants	63	2583	41.0
Milliners and Dressmakers.....	28	1004	35.8
Seamstresses	31	1087	35.0

DEATHS BY OCCUPATIONS.

See General Table (Appendix Page clxxxii.)

This Table contains the occupations at the time of death of 9,597 persons out of the 21,702 who died in 1884.

Their average age was 57.7 years; in 1883 it was 56.2 years; therefore, there was an increase in the length of their lives in 1884 of 1.5 years.

(See Table xxvi.)

Eliminating "Farmers' Wives," "Housewives," and "Occupations Unknown," there remains 5,773 actual workers to be noticed. They are divided into 66 different occupations. The number of deaths in 13 of them was over the average age, while 53 were below it.

(See Table xxvii.)

STATISTICAL CLASSIFICATION.

In this Table the various occupations are divided into seven classes, grouping together all whose employments are of a similar kind.

CLASS I.

CULTIVATORS OF THE SOIL.

All the workers of the soil may be classified under Farmers and Gardeners. Their average age was 63.5 years, which, although it is not so high as some other occupations, yet if their numbers, 2,706, nearly 50 per cent. of all, be taken into account, their average age was relatively equal to any other occupation.

CLASS II.

MECHANICS.

The deaths of 922 persons who during their life followed some mechanical trade were registered in 1884, a decrease of 49 from 1883. The decrease was chiefly amongst the brickmakers, cabinetmakers, printers, plasterers, stonecutters and shoemakers. The deaths registered under "Other Mechanics" were also less in consequence of the mechanical trade of the deceased being more specifically given. The deaths in the other mechanical trades were more numerous by 69 than in 1883, particularly amongst tailors. The average age of all the mechanics whose deaths were registered in 1884 was 52.9 years, an increase of 1.4 years. Weavers' average age was 69.4, being next to gentlemen the longest lived of any occupation. Millwrights, coopers and masons, also, died at an average age above sixty, viz., 63.7 years, but there were not many who died while following these occupations.

The four occupations, carpenters, shoemakers, blacksmiths and tailors, together reported nearly the same number of deaths as in 1883. Their average age was 56.1 years, and 396 of these mechanics are reported as having died in 1884. Tailors' and shoemakers' average age was 58 years, shewing that they are long lived considering the nature of their occupation.

Amongst those mechanics whose average age was low, the following may be specified: Tobacconists, 35 years; machinists and stonecutters, 38 years each at time of death; brickmakers, brewers, barbers, miners, each 41 years, and tinsmiths 42 years.

CLASS III.

LABOURERS.

Under this head are classed those who had no trade or profession. Only three occupations are included, labourers, pedlars and teamsters. Their deaths numbered 970 and their average age was 51.4 years.

CLASS IV.

MERCHANTS, ETC.

In this class 401 deaths were recorded at an average age of 47.0 years. It includes ten different occupations, and the difference in their average ages was very marked. Merchants lived to an average age of 54 years, while telegraph operators only averaged 26 years, a difference of 28 years between the length of life in the two occupations.

The book-keepers, clerks and salesmen who died in 1884 lived longer than those who died in 1883 by six years, but there were not so many deaths among them as in that year.

The average age at death of tavern-keepers also increased from 47.9 years to 51.9 years, but only 53 of them died in 1884, while in 1883 the deaths of 77 of them were recorded. There was, however, a decrease of deaths in the whole class of 31.

CLASS V.

PROFESSIONAL MEN, ETC.

Gentlemen are generally those who have retired from the cares and worries of life, and therefore are shielded to a great extent from the many diseases incidental to active working life. It is not, therefore, surprising to find that their average age at death, 70 years, was the highest.

The three professions, divinity, law and medicine, together returned the deaths of 91 of their members, 10 less than in 1883; their average age was 58.3 years; in 1883 it was only 52.3 years, so that taken together their length of life appears to have increased, but if the ages at death of these professional men are viewed separately, then considerable difference in their length of life will appear. Thus, clergymen lived to an average age of 65 years, while lawyers only reached the age of 42.5 years. Physicians were between the two, with an average age of 56.5 years. Provincial land surveyors appeared to have lived to nearly the same age as clergymen, but only 9 of them died in 1884. Their occupation being chiefly out of doors, tends to lengthen life.

Teachers seem to be gaining every year in their length of life; this, no doubt, is owing in a great measure to the improvement in the school houses, both as regards their ventilation and sanitary condition. Male teachers remain longer in the profession than females, therefore their average age at death was greater than that of females. In 1884 the average age of male teachers was 50 years, of females 38 years.

CLASS VI.

OTHER EMPLOYMENTS.

About the same number of deaths were registered of those employed in connection with railways. All engaged in railway work incur more or less risk; at the same time, many accidents may be traced to carelessness on the part of those injured; long continuance in dangerous employments begets recklessness and loss of precaution against danger. Fifty-six railway employees died in 1884, at an average age of 38 years.

The usual number of deaths of volunteers, soldiers and pensioners were recorded in 1884. They were principally the deaths of pensioners of the British army. Their average age was nearly 70 years.

CLASS VII.

FEMALES AT WORK.

Very little change appears amongst these workers. The returns from the three occupations included in this class were very nearly the same as in 1883. In 1884 there were 122 deaths at an average age of 39 years; in 1883, 130 of these females died at an average age of 39.4 years. The average age at death of domestic servants has increased, while that of milliners and dressmakers have decreased.

In numerous instances Division Registrars exhibit great carelessness in making their entries in the schedules. The writing is almost illegible, and many items of information required by the Act omitted. I would, therefore, call their attention to the following extract from a Circular of Instructions issued from this Department some time ago:

“ Division Registrars are requested to remember that the original forms will be bound into books to be kept in the office of the Registrar General, and care, therefore, must be taken that they are neatly filled in with writing as small as is consistent with clearness and legibility, and that they are in no way mutilated or disfigured; and it is further absolutely necessary that they in every case, see that the whole of the information required by the Act to be given is obtained. It should also be borne in mind that there is no context to assist the eye, and that the legibility of the name depends solely on the actual formation of each letter composing it. What is called running hand, or one decorated with unnecessary flourishes, is fatal to the accurate indexing or transcription of proper names.”

These remarks apply with equal force to many clergymen and medical men when filling up returns for transmission to Division Registrars.

In conclusion, I may add that it is intended in the next Annual Report, unless great improvement is found in the Schedules, to call special attention to those municipalities in which the best and worst work is done. By this means those Division Registrars who endeavour to properly perform their duty in this matter will receive the credit justly due to them, while those who do not do so, will, it is hoped, be stimulated to pay more attention to their duties.

I have the honour to be,

Sir,

Your obedient servant,

H. S. CREWE,

Inspector.

APPENDIX.

BIRTHS.

TABLE A.—BIRTHS BY MONTHS, 1884.

COUNTIES.	MONTHS.												Total.	No. of Pairs of Twins.	Triplets.	Illegitimate.	Still Born.		
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.							
Algonia and Thunder Bay :																			
Males.....	18	18	17	19	27	17	25	16	15	18	12	12							
Females.....	13	16	19	18	20	20	18	19	22	18	13	13							
Total.....	31	34	36	37	47	37	43	35	37	36	25	25							
Total.....	52	52	77	58	68	55	53	58	61	69	51	58							
Brant :																			
Males.....	25	26	44	29	42	28	26	31	33	34	25	25							
Females.....	27	26	33	29	26	27	27	27	28	35	25	33							
Total.....	52	52	77	58	68	55	53	58	61	69	51	58							
Total.....	63	70	85	66	51	52	69	64	54	57	58	70							
Bruce :																			
Males.....	63	71	72	50	72	62	53	51	63	55	49	45							
Females.....	62	71	72	50	72	62	53	51	63	55	49	45							
Total.....	125	141	157	116	123	114	122	115	117	112	107	115							
Total.....	168	148	162	149	124	138	186	158	121	141	132	168							
Carleton :																			
Males.....	87	84	81	76	57	73	102	86	66	70	66	101							
Females.....	81	64	81	73	67	65	84	72	55	71	66	67							
Total.....	168	148	162	149	124	138	186	158	121	141	132	168							
Total.....	168	148	162	149	124	138	186	158	121	141	132	168							
Dufferin :																			
Males.....	21	25	19	20	23	17	25	22	28	28	15	22							
Females.....	20	21	20	21	15	14	17	20	17	11	26	11							
Total.....	41	46	39	41	38	31	42	42	45	39	41	33							
Total.....	41	46	39	41	38	31	42	42	45	39	41	33							
Elgin :																			
Males.....	37	35	48	49	31	30	32	36	32	45	39	25							
Females.....	32	38	36	35	25	19	30	31	28	34	29	24							
Total.....	69	73	84	84	56	49	62	70	60	79	68	49							
Total.....	69	73	84	84	56	49	62	70	60	79	68	49							

TABLE A.—BIRTHS BY MONTHS, 1884—Continued.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of Pairs of Twins.	Triplets.	Illegitimate.	Still Born.
Lambton:																	
Males	51	57	55	48	43	49	53	47	50	53	47	40	593			3	3
Females	31	46	43	41	46	43	51	35	58	56	40	33	526			2	2
Total	85	103	98	89	89	92	104	82	108	109	87	73	1119	7		5	5
Lanark:																	
Males	30	37	38	50	43	35	41	39	26	29	31	33	412			5	1
Females	31	35	33	31	42	34	21	35	43	24	20	26	375			1	1
Total	61	72	71	61	85	69	62	74	69	53	51	59	787	3	1	6	2
Leeds and Grenville:																	
Males	39	42	39	40	30	41	50	38	42	43	42	27	473			3	4
Females	37	48	50	55	50	32	42	50	32	40	43	23	502			7	2
Total	76	90	89	95	80	73	92	88	74	83	85	50	975	11		10	6
Lennox and Addington:																	
Males	23	20	17	18	21	20	18	19	13	24	17	21	231			1	1
Females	16	19	17	17	21	15	20	17	20	23	14	18	217			1	1
Total	39	39	34	35	42	35	38	36	33	47	31	39	448	6		2	2
Lincoln:																	
Males	28	31	35	26	32	26	25	34	34	28	24	20	343			5	1
Females	26	24	25	31	28	26	32	34	32	38	21	19	336			2	1
Total	54	55	60	57	60	52	57	68	66	66	45	39	679	9		7	2
Middlesex:																	
Males	82	89	97	86	72	76	93	96	95	98	71	77	1032			10	2
Females	84	69	84	93	78	87	71	92	109	71	85	81	1004			10	3
Total	166	158	181	179	150	163	164	188	204	169	156	158	2036	13		20	5

Muskoka and Parry Sound:	35	35	41	35	29	45	35	29	38	37	457			1	1
Males	29	38	38	34	43	88	69	73	40	41	437			1	2
Females															
Total	64	61	77	74	87	88	69	73	78	78	894	9		2	3
Norfolk:	29	28	49	33	30	28	40	34	28	28	388			6	2
Males	30	34	35	36	32	32	25	29	35	28	373			1	1
Females															
Total	59	62	84	69	62	60	65	63	63	56	761	7		7	3
Northumberland and Durham:	77	55	60	61	57	68	52	64	69	59	734			5	2
Males	57	54	55	60	59	55	48	73	60	63	698			5	1
Females															
Total	134	109	115	121	116	123	100	137	129	122	1432	15		10	3
Ontario:	60	50	50	55	49	42	42	48	49	45	595			4	2
Males	37	40	46	47	40	47	45	43	47	31	525			3	1
Females															
Total	97	90	96	102	89	89	87	91	96	79	1120	13		7	3
Oxford:	54	49	47	39	57	71	51	59	41	40	578			6	2
Males	51	50	41	28	49	41	50	51	39	44	520			7	2
Females															
Total	108	99	88	67	106	112	101	110	80	81	1098	6		13	4
Peel:	28	23	27	31	23	29	26	35	22	17	312			2	2
Males	25	26	19	20	19	29	23	24	21	23	286			3	1
Females															
Total	53	49	46	54	42	58	49	59	46	40	598	4		5	3
Perth:	60	54	61	41	50	55	38	49	41	45	587			2	2
Males	48	49	41	45	48	47	36	41	47	50	520			6	1
Females															
Total	108	103	102	86	98	102	74	93	91	95	1107	12		8	3
Peterborough:	33	40	45	47	32	35	36	41	28	33	438			6	3
Males	29	30	32	40	40	40	35	40	28	30	418			2	2
Females															
Total	62	70	77	87	72	75	71	81	56	63	856	5		8	5

TABLE A.—BIRTHS BY MONTHS, 1884—Continued.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of Pairs of Twins.	Triplets.	Illegitimate.	Still Born.
Prescott and Russell:																	
Males	53	50	99	66	67	63	55	78	65	42	59	70	767			5	1
Females	57	58	62	61	59	53	63	47	61	70	56	59	716			4	1
Total	110	118	161	127	126	116	118	125	126	112	115	129	1483	15		9	2
Prince Edward:																	
Males	20	16	19	18	14	19	24	11	22	12	19	13	207			2	1
Females	24	17	17	17	16	7	17	15	16	20	14	16	196			5	1
Total	44	33	36	35	30	26	41	26	38	32	33	29	403	5		7	2
Renfrew:																	
Males	43	49	75	60	51	60	56	42	43	40	45	41	605			5	1
Females	55	50	59	58	56	45	63	45	50	34	27	38	580			10	1
Total	98	99	134	118	107	105	119	87	93	74	72	79	1185	11		15	2
Simcoe:																	
Males	66	61	69	53	68	56	66	62	74	68	56	64	763			3	3
Females	48	59	73	59	74	48	58	56	69	56	60	50	710			4	6
Total	114	120	142	112	142	104	124	118	143	124	116	114	1473	12		7	9
Stormont, Dundas and Glengarry:																	
Males	39	60	55	52	40	44	39	50	58	34	51	56	578			2	
Females	39	45	63	45	61	39	40	53	61	50	51	44	591			2	
Total	78	105	118	97	101	83	79	103	119	84	102	100	1169	11	1	4	
Victoria:																	
Males	41	36	34	26	37	41	45	29	35	32	42	28	426			3	1
Females	36	32	43	37	34	35	30	40	34	41	28	30	420			1	2
Total	77	68	77	63	71	76	75	69	69	73	70	58	846	9	1	4	3

Waterloo:	65	48	44	70	71	58	54	61	52	682	.....	.....	.....	8	4
Males	46	49	43	48	60	73	64	78	61	684	.....	.....	.....	43	4
Females	111	97	87	118	131	131	118	139	113	1366	11	.....	.....	21	8
Total	23	33	20	31	23	26	33	35	25	356	.....	.....	.....	1	1
Welland:	28	31	31	28	31	30	30	18	31	319	.....	.....	.....	3	1
Males	51	64	54	59	57	56	63	53	56	705	2	1	.....	4	2
Females	74	60	74	61	77	66	63	63	58	822	.....	.....	.....	3	2
Total	128	119	129	114	145	131	119	110	117	1508	14	2	.....	6	3
Wellington:	77	71	61	65	66	85	83	92	87	927	.....	.....	.....	22	4
Males	76	62	62	76	85	69	83	79	71	883	.....	.....	.....	34	4
Females	153	133	123	111	151	154	166	171	161	1810	9	.....	.....	56	8
Total	195	185	172	191	205	228	230	181	151	2330	.....	.....	.....	87	5
Wentworth:	174	176	167	180	201	180	188	182	157	2153	.....	.....	.....	61	3
Males	367	361	339	374	406	408	418	366	311	4503	40	1	.....	148	8
Females	1923	1891	1803	1953	2006	1992	1886	1752	1789	22994	.....	.....	.....	326	94
Total	1726	1785	1680	1755	1890	1926	1784	1708	1632	21510	.....	.....	.....	318	81
York:	3619	3679	3183	3708	3896	3918	3670	3160	3121	44501	382	8	.....	611	175
Total Males															
Total Females															
Grand Total															

H. S. CREWE,
Inspector.

TABLE A.—BIRTHS BY MONTHS, 1884—CITIES.

CITIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of pairs of twins.	Triplets.	Illegitimate.	Still Born.
Toronto:																	
Males	123	122	151	122	131	106	127	148	155	136	135	98	1554	33		77	6
Females	147	143	134	124	111	125	128	128	110	135	115	92	1442	25		58	4
Total	240	235	285	246	242	231	255	276	265	271	260	190	2996	29 pairs.		135	10
Hamilton:																	
Males	49	46	59	52	44	37	31	36	51	58	56	60	582	11		20	3
Females	43	38	51	32	35	42	45	55	40	40	42	50	513	7		28	2
Total	92	84	110	84	79	79	79	91	91	98	98	110	1095	9 pairs.		48	5
Ottawa:																	
Males	51	52	39	44	20	36	70	56	47	41	43	66	571	11		31	3
Females	47	33	36	33	19	28	60	43	30	47	39	38	453	9		40	4
Total	101	85	75	77	39	64	130	99	77	91	82	104	1024	10 pairs.		71	7
London:																	
Males	23	23	21	25	17	17	13	23	24	16	15	19	236	1		5	1
Females	22	14	26	23	20	18	10	21	25	16	25	20	240	3		5	1
Total	45	37	47	48	37	35	23	44	49	32	40	39	476	2 pairs.		10	2
St. Catharines:																	
Males	3	4	12	6	10	10	9	11	9	12	6	4	96	3		1	1
Females	9	7	3	12	5	8	11	13	8	13	3	7	99	1		1	1
Total	12	11	15	18	15	18	20	24	17	25	9	11	195	2 pairs.		2	2
Kingston:																	
Males	13	15	16	15	19	17	7	17	14	12	13	22	180	4		1	1
Females	16	14	15	11	18	12	19	18	21	8	14	20	186	2		1	2
Total	29	29	31	26	37	29	26	35	35	20	27	42	366	3 pairs.		2	3

Belleville:	9	8	11	7	9	8	6	7	7	5	10	4	91	3	1	3
Males	12	10	12	6	5	6	5	11	4	6	11	9	97	3	1	5
Females	21	18	23	13	14	14	11	18	11	11	21	13	188	3 pairs.	2	8
Total	13	7	18	9	24	5	8	13	13	12	16	7	145	4	4	.....
Brantford:	10	7	15	12	4	15	15	8	6	10	11	12	125	4	1	.....
Males	23	14	33	21	28	20	23	21	19	22	27	19	270	4 pairs.	5	.....
Females	14	10	15	12	14	14	14	14	10	15	20	13	165	2	2	4
Total	7	12	13	20	13	15	11	9	16	11	8	11	146	2	1	3
Guelpb:	21	22	28	32	27	29	25	23	26	26	28	24	341	2 pairs.	3	7
Males	12	13	14	20	7	7	13	14	13	19	9	12	153	4	.....	.....
Females	6	9	8	16	3	7	8	13	5	8	9	10	102	2	.....	.....
Total	18	22	22	36	10	14	21	27	18	27	18	22	255	3 pairs.	.....	.....
St. Thomas:	313	300	356	312	295	257	301	339	343	329	323	305	3773	76	142	22
Males	289	257	313	289	233	276	312	319	265	294	287	269	3403	58	136	22
Females	602	557	639	601	528	533	613	658	608	623	610	574	7176	67 pairs.	278	44
Grand Total																

H. S. CREWE,
Inspector.

MARRIAGES.

TABLE B.—MARRIAGES BY DENOMINATIONS, 1884—Continued.

COUNTIES.	Religious Denomination of Bride and Bridegroom.											No Denomination given.	Total.	How Married.			Total Marriages.	Widowers.	Widows.								
	Episcopalian.	Presbyterian.	Methodist.	Roman Catholic.	Baptist.	Congregationalist.	Lutheran.	Evangelical Association.	Quaker.	Mennonite.	Other Denominations.			License.	Banns.	Not stated.											
Hastings:																											
Males	73	77	257	67	9	3	2																				
Females	82	64	274	64	9	2																					
Total	155	141	531	131	18	5	2															448	50	5	503	59	27
Huron:																											
Males	57	136	172	12	5	3	17	10																			
Females	45	129	192	14	4	5	16	13																			
Total	102	265	364	26	9	8	33	23																			
Kent:																											
Males	65	69	165	63	32	1		1																			
Females	66	56	173	67	32	2																					
Total	131	125	338	130	64	3		1																			
Lambton:																											
Males	45	55	122	12	23	4	1	1																			
Females	48	55	121	13	23	2	1	1																			
Total	93	110	243	25	46	6	2	2																			

TABLE B.—MARRIAGES BY DENOMINATIONS, 1884—Continued.

COUNTIES.	Religious Denomination of Bride and Bridegroom.										No Denomination given.	Total.	How Married.			Total Marriages.	Widowers.	Widows.
	Episcopalian.	Presbyterian.	Methodist.	Roman Catholic.	Baptist.	Congregationalist.	Lutheran.	Evangelical Association.	Quaker.	Mennonite.			Other Denominations.	License.	Banns.				Not stated.
Northumberland and Durham :																		
Males.....	76	104	281	47	16	6												
Females.....	72	112	284	49	15	6												
Total.....	148	216	565	96	31	12					14	504	44		518	53	26	
Ontario :																		
Males.....	56	56	143	15	11	2		2	2	3	7							
Females.....	25	53	163	15	8	2				3	8							
Total.....	61	109	306	30	19	4		2	2	6	15	269	8		277	30	14	
Oxford :																		
Males.....	54	64	138	9	44	12	2	2	2	12	8							
Females.....	48	70	128	10	59	9	4	4	3	10	6							
Total.....	102	134	266	19	103	21	6	6	5	22	14	336	10	1	347	40	13	
Peel :																		
Males.....	29	43	66	1	6	1					2							
Females.....	27	41	68	1	10					1								
Total.....	56	84	134	2	16	1				1	2	144		4	148	13	6	

Perth :	38	87	115	29	7	4	37	4	2	2	9	6	338	311	27	5	230	36	338	39	16
Males.....	37	92	117	28	10	2	36	2	2	2	6	5	338								
Females.....																					
Total	75	179	232	57	17	6	73	6	4	4	15	11	676	311	27	5	230	36	338	39	16
Peterborough :																					
Males.....	31	65	96	52	9	1							254								
Females.....	26	67	97	56	8								254								
Total	57	132	193	108	17	1							508	212	42		254	36			12
Prescott and Russell :																					
Males.....	10	25	16	172	4	3							230								
Females.....	10	24	17	173	5	1							230								
Total	20	49	33	345	9	4							460	70	155	5	230	26			10
Prince Edward :																					
Males.....	22	7	118	4	3								162								
Females.....	21	12	122	2							7	1	162								
Total	43	19	240	6	3						11	2	324	160	1	1	162	21			9
Renfrew :																					
Males.....	50	81	39	124	4		17						321								
Females.....	41	83	40	123	7		18						321								
Total	94	164	79	247	11		35				2		642	205	115	1	321	34			15
Simcoe :																					
Males.....	106	137	183	71	44	15	3			2	5	5	538								
Females.....	94	122	200	77	12	12	1			2	6	3	538								
Total	200	259	382	148	23	27	4			4	11	8	1076	478	58	2	538	50			26
Stornont, Dundas and Glengarry :																					
Males.....	38	118	93	156	4	7	14				2	4	438								
Females.....	44	114	96	154	14	2	12				1	1	438								
Total	82	232	189	310	18	9	26				3	5	876	301	133	4	438	46			9

TABLE B.—MARRIAGES BY DENOMINATIONS, 1884—Concluded.

COUNTIES.	Religious Denomination of Bride and Bridegroom.											How Married.			Total Marriages.	Widowers.	Widows.								
	Episcopalian.	Presbyterian.	Methodist.	Roman Catholic.	Baptist.	Congregationalist.	Lutheran.	Evangelical Association.	Quaker.	Mennonite.	Other denominations.	No denomination given.	Total.	License.				Banns.	Not stated.						
Victoria:																									
Males.....	38	50	111	37	5	2																			
Females.....	31	58	110	37	8								3												
Total.....	69	108	221	74	13	2							5		27			246	37	16					
Waterloo:																									
Males.....	25	65	59	53	17	2	63	11																	
Females.....	21	70	56	55	18	3	63	16					47												
Total.....	46	135	115	108	35	5	126	27					90								23	11			
Welland:																									
Males.....	37	31	92	16	5		11	4																	
Females.....	43	20	100	15	10		7	3					4												
Total.....	80	51	192	31	15		18	7					5								20				
Wellington:																									
Males.....	36	115	136	30	15	3	3																		
Females.....	45	102	130	36	17	7	2																		
Total.....	81	217	266	66	32	10	5						17								27				

TABLE C.

MARRIAGES BY MONTHS.

TABLE C.—MARRIAGES BY MONTHS, 1884.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No date given.	Total number of Couples married.
Algoma and Thunder Bay.....	11	8	7	4	14	16	24	11	27	20	18	10	.....	173
Brant.....	22	20	20	11	16	28	28	11	27	29	20	22	.....	257
Bruce.....	32	43	40	40	24	33	32	14	20	36	30	52	.....	402
Carleton.....	33	32	27	63	40	51	44	34	53	51	49	31	4	515
Dufferin.....	20	14	20	12	7	5	8	7	5	12	15	16	1	142
Elgin.....	40	30	31	22	14	22	28	23	28	29	28	40	2	337
Essex.....	30	24	12	31	32	27	29	26	26	30	40	30	.....	337
Frontenac.....	26	21	18	22	12	33	19	20	50	22	34	41	7	305
Grey.....	50	44	41	26	19	33	16	19	26	42	24	60	.....	400
Haldimand.....	14	12	17	14	5	14	8	8	20	20	12	24	.....	168
Halton.....	14	11	13	8	7	7	10	3	1	18	13	17	3	128
Hastings.....	42	45	37	39	29	49	36	29	30	55	53	53	6	503
Huron.....	45	37	44	30	33	32	22	9	24	47	24	74	3	424
Kent.....	40	34	30	33	25	28	22	14	27	49	48	57	.....	407
Lambton.....	27	19	22	20	25	14	11	14	24	24	32	36	.....	268
Lanark.....	22	16	12	31	14	19	17	13	20	33	23	26	.....	246
Leeds and Grenville.....	42	35	38	37	23	33	19	14	32	41	34	52	.....	400

Lennox and Addington	20	25	22	12	11	17	10	9	19	17	21	24	3	210
Lincoln	16	10	16	10	15	22	14	12	11	21	21	21	1	190
Middlesex	60	46	43	40	29	48	38	26	48	80	52	88	1	599
Muskoka and Parry Sound	13	13	14	19	12	9	13	13	18	20	10	18	.....	172
Norfolk	22	16	13	21	13	14	10	14	19	36	21	23	.....	222
Northumberland and Durham	59	45	64	52	28	26	36	34	39	45	54	65	1	548
Ontario	42	22	16	20	23	13	17	13	17	27	26	41	.....	277
Oxford	30	44	29	22	20	24	23	16	38	38	23	40	.....	317
Peel	13	16	11	12	9	7	11	7	12	19	14	15	2	148
Perth	44	35	34	28	25	20	16	13	20	30	31	41	1	338
Peterboro'	19	17	17	25	14	19	13	7	20	32	33	37	1	254
Prescott and Russell	17	24	7	15	11	15	22	26	31	30	22	7	3	230
Prince Edward	17	14	12	7	7	7	12	8	19	19	12	27	1	162
Renfrew	12	22	21	27	23	32	30	34	36	35	25	24	.....	321
Simcoe	68	50	41	36	40	35	47	22	48	49	41	58	3	538
Stormont, Dundas and Glengarry	55	45	37	34	23	23	35	23	40	54	37	29	3	438
Victoria	21	22	35	23	13	20	13	14	17	22	16	29	1	246
Waterloo	33	41	40	39	25	27	20	10	24	25	40	44	1	369
Welland	16	8	16	11	21	26	17	10	16	30	19	31	.....	221
Wellington	32	35	35	32	19	24	22	19	22	37	36	34	.....	347
Wentworth	45	30	41	45	25	59	40	26	46	60	64	64	2	547
York	107	99	97	127	110	135	129	167	164	150	141	142	2	1510
Total	1271	1124	1090	1109	855	1066	961	735	1147	1437	1256	1543	52	11616

H. S. CREWE,
Inspector.

TABLE D.—MARRIAGES BY AGES, 1884.

COUNTIES.	Under 20.	AGES.										Total.					
		20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and under 65.	65 and under 70.		70 and under 75.	75 and under 80.	Over 80.	Ages not given.	
Algona and Thunder Bay :																	
Males	1	61	63	22	8	3	3	1									11
Females	43	84	24	5	4	1	1		1								10
Total	44	145	87	27	12	4	4	1	1	1	1	1	1	1	1	1	21
Brant :																	
Males	3	93	98	28	4	9	6	6	4	3	3	3					
Females	42	122	62	9	7	3	3	1	1	1	1	1					
Total	45	215	160	36	13	16	9	7	5	4	4	4	4	4	4	4	514
Bruce :																	
Males	4	130	159	62	25	10	5	1	3	1	2	2					
Females	68	225	70	8	5	5		1	2								
Total	72	355	229	85	33	15	6	2	5	1	2	2	2	2	2	2	801
Carleton :																	
Males	8	171	162	75	29	25	13	4	12	3	2	2					
Females	93	226	100	16	11	9	9	6	1		1	1					
Total	101	397	262	45	40	34	22	10	13	3	3	3	3	3	3	3	1030
Dufferin :																	
Males		45	57	21	11	4	2										
Females	23	79	27	4	2	1	1										
Total	23	124	84	15	6	5	3	1	1	2	2	2	2	2	2	2	284
Elgin :																	
Males	8	136	112	41	18	9	5	2	1	2	1	1					
Females	83	166	50	11	18	4			3	1							
Total	91	302	162	52	36	13	5	2	4	3	1	1	1	1	1	1	674

Essex :	Males	6	158	100	34	13	9	5	1	4	3	1	1	1	2	337
	Females	112	161	36	13	7	3	2	1	1	1	1	1	1	1	337
	Total	118	319	136	47	20	12	7	2	2	4	4	1	1	2	674
Frontenac :	Males	4	128	106	38	10	9	4	2	2	1	1	1	1	1	305
	Females	69	149	56	22	6	2	1	1	1	1	1	1	1	1	305
	Total	73	277	162	60	16	11	5	2	2	2	1	1	1	1	610
Grey :	Males	2	125	168	56	20	8	9	6	3	1	1	1	1	1	400
	Females	78	216	74	16	3	6	5	1	1	2	1	1	1	1	400
	Total	80	341	242	72	23	14	14	6	6	3	3	1	1	1	800
Haldimand :	Males	27	63	59	19	9	6	4	1	2	5	1	1	1	1	168
	Females	27	92	28	10	3	3	3	1	1	1	1	1	1	1	168
	Total	27	155	87	29	12	9	7	2	2	3	5	1	1	1	336
Halton :	Males	1	44	51	13	9	4	2	2	1	1	1	1	1	1	128
	Females	18	65	29	9	2	1	3	1	1	1	1	1	1	1	138
	Total	19	109	80	22	11	4	5	2	2	1	1	1	1	1	256
Hastings :	Males	2	193	179	59	26	13	9	7	3	1	1	1	1	10	503
	Females	113	252	79	28	13	3	3	1	2	1	1	1	1	10	503
	Total	115	445	258	87	39	16	12	7	7	5	1	1	1	20	1006
Huron :	Males	2	149	158	53	28	16	4	6	3	1	1	1	1	3	424
	Females	66	241	77	24	4	6	1	1	1	1	1	1	1	4	424
	Total	68	390	235	77	32	22	4	7	4	4	1	1	1	7	848
Kent :	Males	5	141	151	47	18	12	11	8	2	1	1	1	1	7	407
	Females	95	179	76	23	10	9	2	1	3	2	1	1	1	8	407
	Total	100	320	230	70	28	21	13	8	0	2	1	1	1	15	814

TABLE D.—MARRIAGES BY AGES, 1884—Continued.

COUNTIES.	Under 20.	AGES.										Total.				
		20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and under 65.	65 and under 70.		70 and under 75.	75 and under 80.	80 and over.	Ages not given.
Lambton :																
Males	3	98	107	29	14	5	3	2	2	1	1	2				1
Females	65	132	48	11	4	1	2	1	1		1					3
Total	68	230	155	40	18	6	5	3	3	1	2	2				3
Lanark :																
Males	1	71	82	47	8	6	5	1		2	1					19
Females	32	97	72	13	7	3	2			1						19
Total	33	171	154	60	15	9	7	1		3	1					38
Leeds and Grenville :																
Males	6	138	136	61	27	6	8	2	5	1	1	2			1	6
Females	73	188	86	26	5	6	5	1		1		1				8
Total	79	326	222	87	32	12	13	3	5	2	1	3			1	14
Lennox and Addington :																
Males	5	87	65	25	6	5	6	5	1	3	1				1	
Females	56	102	25	9	5	5	4		1	2						1
Total	61	189	90	34	11	10	10	5	2	5	1				1	1
Lincoln :																
Males	1	70	66	19	10	10	2	8	2	1	1					
Females	31	103	33	7	6	7	1	1		1						
Total	32	173	99	26	16	17	3	9	2	2	1					380
Middlesex :																
Males	4	213	210	72	45	17	13	15	3	4	1	1				1
Females	97	295	136	35	8	14	8	1	2	2						1
Total	101	508	346	107	53	31	21	16	5	6	1	1				2

Muskoka and Parry Sound :	2	77	54	24	6	6	1	2					1							172
Males	55	88	12	6	4	2	2	3												172
Females																				
Total	57	165	66	30	9	8	3	5					1							344
Norfolk :	8	95	71	22	10	3	5	3	3											222
Males	60	109	30	9	5	1	3	1	3				1							222
Females																				
Total	68	204	101	31	15	4	8	4	6				1							444
Northumberland and Durham :	5	203	200	67	30	11	10	6	4				1							548
Males	92	263	122	28	9	6	13	3	1				2							548
Females																				
Total	97	466	322	95	39	17	23	9	5				5						1	1096
Ontario :	1	118	89	30	7	6	5	4	2				3							277
Males	53	135	42	19	8	2	3	3					1							277
Females																				
Total	54	253	131	49	15	8	8	7	2				4							554
Oxford :	2	133	125	42	14	11	5	4	4											347
Males	72	181	56	22	6	4	1	3	1											347
Females																				
Total	74	314	181	64	20	15	6	7	7				4							694
Peel :																				
Males	22	47	62	22	9	2	3		1											148
Females		82	33	4	5				1											148
Total	22	129	95	26	14	2	3		2											296
Perth :	2	110	137	53	21	7	4	3												338
Males	45	181	74	21	7	2	2	2												338
Females																				
Total	47	291	211	74	28	9	6	5					1							676
Peterborough :	1	80	90	36	26	11	4	2	2											254
Males	34	130	58	15	10	5	1	1												254
Females																				
Total	35	210	148	51	36	16	5	3	2				1							508

X X X.

TABLE D.—MARRIAGES BY AGES, 1884—Concluded.

COUNTRIES.	Under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and under 65.	65 and under 70.	70 and under 75.	75 and under 80.	80 and over.	Ages not given.	Total.
	Prescott and Russell:															
Males.....	4	117	69	23	4	5	2	2	1	1	1	1	1	1	1	230
Females.....	69	122	22	8	2	3	1	1	1	1	1	1	1	1	1	230
Total.....	73	239	91	31	6	8	3	3	1	1	1	1	1	2	2	460
Prince Edward:																
Males.....	4	72	45	21	9	6	1	1	1	2	1	1	1	1	1	162
Females.....	37	73	32	11	5	4	4	1	1	1	1	1	1	1	1	162
Total.....	41	145	77	32	14	6	5	1	1	2	1	1	1	1	1	324
Renfrew:																
Males.....	2	99	128	51	14	12	4	3	3	1	1	1	1	3	3	321
Females.....	83	152	50	18	9	5	1	1	1	1	1	1	1	2	2	321
Total.....	85	251	178	69	23	17	5	3	3	1	2	1	1	5	5	642
Simcoe:																
Males.....	3	198	192	81	30	7	12	7	3	2	2	1	1	1	1	538
Females.....	126	265	101	22	11	5	4	3	1	1	1	1	1	1	1	538
Total.....	129	463	293	103	41	12	16	10	4	2	2	1	1	1	1	1076
Stormont, Dundas and Glengarry:																
Males.....	6	172	146	49	21	23	7	5	3	2	2	2	2	4	4	438
Females.....	90	228	82	16	8	2	3	1	1	1	1	1	1	9	9	438
Total.....	96	400	228	65	29	25	10	5	3	2	2	2	2	13	13	876
Victoria:																
Males.....	2	95	81	29	16	8	3	3	5	2	2	2	2	1	1	246
Females.....	49	127	40	14	8	5	1	1	1	1	1	1	1	1	1	246
Total.....	51	222	121	43	24	13	4	4	5	3	2	2	2	2	2	492

Waterloo:	Males.....	4	163	132	30	19	8	6	3	3	.....	.....	.....	.....	.....	1	369
	Females.....	76	189	69	17	13	2	1	1	.....	.....	.....	.....	.....	.....	1	369
Total		80	352	201	47	32	10	7	4	3	.....	.....	.....	.....	2	738	
Welland:	Males.....	3	86	62	38	13	4	7	2	3	.....	.....	.....	.....	.....	.....	221
	Females.....	42	98	50	11	7	7	.....	1	2	.....	.....	.....	.....	.....	.....	221
Total		45	184	112	52	20	11	7	3	5	.....	.....	.....	.....	.....	.....	442
Wellington:	Males.....	.....	125	126	46	21	11	1	5	3	.....	.....	.....	.....	.....	1	347
	Females.....	46	199	67	15	10	3	1	3	.....	.....	.....	.....	.....	.....	1	347
Total		46	324	193	61	34	14	5	8	3	.....	.....	.....	.....	.....	2	694
Wentworth:	Males.....	10	242	159	58	32	12	17	8	2	.....	.....	.....	.....	.....	2	547
	Females.....	113	272	103	21	7	13	6	3	3	.....	.....	.....	.....	.....	2	547
Total		123	514	262	82	39	25	23	11	5	.....	.....	.....	.....	.....	4	1094
York:	Males.....	16	576	524	197	82	42	28	19	8	.....	.....	.....	.....	.....	1	1510
	Females.....	209	778	349	86	44	24	7	3	5	.....	.....	.....	.....	.....	3	1510
Total		225	1354	873	283	126	66	35	22	13	.....	.....	.....	.....	.....	4	3020
Total Males.....		144	5125	4784	1740	724	381	247	162	101	.....	.....	.....	.....	.....	6	13646
Total Females		2657	6849	2580	710	320	189	109	48	36	.....	.....	.....	.....	.....	112	13646
Grand Total.....		2798	11974	7364	2450	1044	570	356	210	140	.....	.....	.....	.....	.....	212	27292

H. S. CREWE,
Inspector.



DEATHS.

TABLE E.—

Distinguishing by Months, by Ages, by Sex and by Diseases, the Registered Number

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CLASS I. ZYMOTIC DISEASES, <i>Zymotici</i> .													
ORDER I. MIASMATIC DISEASES, <i>Miasmatici</i> .													
Anthrax (Carbuncle).....M	1												1
“ “.....F		1											1
Total	1	1											2
Cholera Infantum.....M		1	3	5	3	7	31	70	81	29	11	5	246
“ “.....F	1		1	4	4	3	27	57	60	16	3		176
Total	1	1	4	9	7	10	58	127	141	45	14	5	422
Cholera Morbus.....M			1	1	2		1	6	3	5	2		21
“ “.....F		1		1	1		2	5	6	4		1	21
Total		1	1	2	3		3	11	9	9	2	1	42
Cynanche Trachealis (Membranous Croup) M	12	19	14	8	6	8	7	8	10	19	12	27	150
“ “.....F	15	14	14	18	2	2	6		6	12	10	12	111
Total	27	33	28	26	8	10	13	8	16	31	22	39	261
Diarrhoea Acuta (Acute Diarrhoea).....M	8	2	5	8	12	12	39	65	81	33	10	10	285
“ “.....F	6	1	5	7	9	11	26	46	67	28	6	6	218
Total	14	3	10	15	21	23	65	111	148	61	16	16	503
Diarrhoea Chronica (Chronic Diarrhoea).....M				2				3	4	2	1	2	14
“ “.....F			2	2		1	1	4	3			1	14
Total			2	4		1	1	7	7	2	1	3	28
Dysentery Acuta (Acute Dysentery).....M	1	2	2	2	1	7	7	14	17	13	4	3	73
“ “.....F	1		3	1	2	2	4	8	12	6	7	3	49
Total	2	2	5	3	3	9	11	22	29	19	11	6	122
Diphtheria.....M	31	17	28	25	12	12	19	17	29	41	43	49	323
“ “.....F	33	23	29	32	15	17	14	17	25	44	48	48	345
Total	64	40	57	57	27	29	33	34	54	85	91	97	668
Erysipelas.....M	7	10	5	8	10	6	5	4	1	6	1	6	69
“ “.....F	8	2	10	10	4	2	3	5	4	2	1	2	53
Total	15	12	15	18	14	8	8	9	5	8	2	8	122

DEATHS.

of Deaths from various specified Causes (arranged in Classes) during the year 1884.

SEX.	AGES.													Total.		
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.	
Males.....										1						1
Females.....								1								1
Total.....								1		1						2
Males.....	202	44														246
Females.....	148	28														176
Total.....	350	72														422
Males.....	1	1	2			1	5	1	5	3	1				1	21
Females.....	1	2				1	3	2	3	3	3	2			1	21
Total.....	2	3	2			2	8	3	8	6	4	2			2	42
Males.....	53	73	19	4							1					150
Females.....	32	60	15	3			1									111
Total.....	85	133	34	7			1				1					261
Males.....	190	56	4	2			2	4	2	4	12	6	1	2		285
Females.....	153	31	4			1	4	2	1	5	8	5	2	2		218
Total.....	343	87	8	2		1	6	6	3	9	20	11	3	4		503
Males.....	1					1		2	1	1	6	2				14
Females.....	3	2					2		2	2	1	1		1		14
Total.....	4	2				1	2	2	3	3	7	3		1		28
Males.....	29	21	3			2	3	2	1	5	3	3		1		73
Females.....	22	11				1	1		1	2	6			5		49
Total.....	51	32	3			3	4	2	2	7	9	3		6		122
Males.....	44	134	86	35	9	7		2				1		5		323
Females.....	23	120	114	54	21	8		3						2		345
Total.....	67	254	200	89	30	15		5				1		7		668
Males.....	16	2		2	1	2	3	7	6	7	11	10		2		69
Females.....	12	7			2	3	6	6	5	6	3	1	1	1		53
Total.....	28	9		2	3	5	9	13	11	13	14	11	1	3		122

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Enterocolitis.....M										2			2
“.....F													
Total										2			2
Febris Biliosa (Bilious Fever).....M	3		3	1		1	3	1	3	1			16
“.....F	1	1	1		2		3	2	3		1		15
Total	4	1	4	1	2	1	6	3	6	1	1		31
Febris Cerebro-Spinalis (Spinal Fever).....M	4	9	8	3	4	6	5	6	4	8	4	7	68
“.....F	6	5	7	4	4	6	8	2	7	4	3	5	61
Total	10	14	15	7	8	12	13	8	11	12	7	12	129
Febris Congestiva (Congestive Fever).....M								1				1	2
“.....F						1	1						2
Total						1	1	1				1	4
Febris Intermitiens (Intermittent Fever).....M	3	2	4	2	1		2	5	1	4	4	4	32
“.....F	1	1	2	1	2		2		3	2	2	1	17
Total	4	3	6	3	3		4	5	4	6	6	5	49
Febris Remittens (Remittent Fever).....M	1	2	4	2	1	1	1	3	1		1	1	18
“.....F	2		3	2	2		2	1	1	1	1		15
Total	3	2	7	4	3	1	3	4	2	1	2	1	33
Febris Typhoides (Typhoid Fever).....M	31	10	17	13	14	12	14	23	34	46	28	28	270
“.....F	16	14	11	13	17	11	10	18	26	32	35	19	222
Total	47	24	28	26	31	23	24	41	60	78	63	47	492
Febris Typhus (Typhus Fever).....M			2						1			1	4
“.....F				1									1
Total			2	1					1			1	5
Influenza.....M	1	2	5	2	1		1		3	1		1	17
“.....F	3	1	4	2	1	2	2			1	3	1	20
Total	4	3	9	4	2	2	3		3	2	3	2	37
Morbilli (Measles).....M	3	4	4	9	9	2	3	2	1	2	1	1	41
“.....F	1	7	5	10	9	4		2				2	40
Total	4	11	9	19	18	6	3	4	1	2	1	3	81

DEATHS—Continued.

SEX.	AGES.														Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.		
Males.....	1														1	2
Females.....																
Total.....	1														1	2
Males.....	1	1	2	1	1	1	1	4	1	3					1	16
Females.....			2		3	2	1	1	2	2		1			1	15
Total.....	1	1	4	1	4	2	2	5	3	2	3	1			2	31
Males.....	18	25	12	7	4	1	1									68
Females.....	15	23	10	2	3	5		1		1					1	61
Total.....	33	48	22	9	7	6	1	1		1					1	129
Males.....		1			1											2
Females.....						1			1							2
Total.....		1			1	1			1							4
Males.....	9	8	2	1	2	4		1		3	2					32
Females.....	3	3	5		1	1	1	1	1	1						17
Total.....	12	11	7	1	3	5	1	2	1	4	2					49
Males.....	3	6	3	1	1	1	1				1				1	18
Females.....	1	4	3		2	2		1		1	1					15
Total.....	4	10	6	1	3	3	1	1		1	2				1	33
Males.....	7	14	10	10	33	95	34	19	18	9	3	2			16	270
Females.....	8	12	17	18	34	52	30	11	11	11	2	3			13	222
Total.....	15	26	27	28	67	147	64	30	29	20	5	5			29	492
Males.....					2	2										4
Females.....	1															1
Total.....	1				2	2										5
Males.....	6	3	1		1	1				3	1				1	17
Females.....	7	3	1		3	1	1	1		1	1				1	20
Total.....	13	6	2		4	2	1	1		4	2				2	37
Males.....	10	21	5	2	2	1										41
Females.....	9	11	7	1	7	1	1	2							1	40
Total.....	19	32	12	3	9	2	1	2							1	81

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Parotitis (Mumps).....M			2	1	1	1					1		6
.....F			2										3
Total.....			5	1	1	1					1		9
Pertussis (Whooping Cough).....M	7	6	5	3	9	7	7	9	7	11	9		80
.....F	5	3	8	7	5	4	4	15	5	9	5	4	74
Total.....	12	9	13	10	14	11	11	24	12	20	14	4	154
Pyæmia.....M	5	5	8	8	6	1	5	4		1	4	7	54
.....F	6	5	6	11	4	6	2	2	2	2	4	4	54
Total.....	11	10	14	19	10	7	7	6	2	3	8	11	108
Scarlatina (Scarlet Fever).....M	18	14	26	30	26	15	6	8	6	6	18	13	186
.....F	19	18	21	25	24	10	13	14	9	13	14	16	196
Total.....	37	32	47	55	50	25	19	22	15	19	32	29	382
Tonsilitis (Quinsy).....M	2	1						1	1	2	1		8
.....F	1			1						1		2	5
Total.....	3	1		1				1	1	3	1	2	13
Variola (Small-Pox).....M				2	1				2	1	17	15	38
.....F											13	12	25
Total.....				2	1				2	1	30	27	63
ORDER 2. ENTHETIC DISEASES. <i>Enthetici.</i>													
Syphilis.....M	3							1	1	1		1	7
.....F		1	2		1		1		1	1	1		8
Total.....	3	1	2		1		1	1	2	2	1	1	15
ORDER 3. DIETIC DISEASES. <i>Diæticæ.</i>													
Alcoholism.....M	3	2	2	4	2	1	1	2	1	2	2	3	25
.....F		1		2			1		4			1	9
Total.....	3	3	2	6	2	1	2	2	5	2	2	4	34

DEATHS—Continued.

SEX.	AGES.														Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.		
Males		6														6
Females	1	1		1												3
Total	1	7		1												9
Males	53	21	4	1				1								80
Females	45	25	1	2							1					74
Total	98	46	5	3				1			1					154
Males	6	3	1	4	2	4	4	8	8	4	5	2		3		54
Females	2	2	1	2	1	14	14	4	2	3	4			5		54
Total	8	5	2	6	3	18	18	12	10	7	9	2		8		108
Males	25	83	41	13	10	10	2	1			1					186
Females	25	94	40	17	6	5	1							8		196
Total	50	177	81	30	16	15	3	1			1			8		382
Males		4	2			1				1						8
Females	1	1								3						5
Total	1	5	2			1				4						13
Males	5	5	4	1	4	8	4	4		1					2	38
Females	1	1	4	7		6	1	1		1		1		2		25
Total	6	6	8	8	4	14	5	5		2		1		4		63
Males		1			1	1		2							2	7
Females	7						1									8
Total	7	1			1	1	1	2							2	15
Males						1	5	1	9	6	1				2	25
Females						1	2	5		1						9
Total						2	7	6	9	7	1				2	34

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Bronchocele													
“												1	1
Total												1	1
Purpura			1			1		1			1	1	5
“	1		1					1				1	4
Total	1		2			1		2			1	2	9
Rachitis (Rickets)													
“				1				1					2
Total				1				1					2
Scurvy	1			1	1	1			1		2		7
“				1							1		2
Total	1			2	1	1			1		3		9
ORDER 4. PARASITIC DISEASES. <i>Paracitici.</i>													
Apthæ (Thrush)		1		4	1	2		1	6	5	2		22
“	1		1				1		3	4	4		14
Total	1	1	1	4	1	2	1	1	9	9	6		36
Tænia Solium (Tape Worm)													
“													
Total													
Vermes (Worms)			2	1	1	1	1	1	1	1			9
“	2	1		1	1		2	1	1		2		11
Total	2	1	2	2	2	1	3	2	2	1	2		20
Total Zymotic Diseases	145	109	151	145	124	104	158	256	300	242	179	186	2099
“	129	100	139	157	109	82	135	201	248	182	164	143	1789
Total	274	209	290	302	233	186	293	457	548	424	343	329	3888

DEATHS—Continued.

SEX.	AGES.														Total.
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.	
Males															
Females							1								
Total							1								1
Males	3	1								1					5
Females	2	1									1				4
Total	5	2								1	1				9
Males															
Females		2													2
Total		2													2
Males	4		1			1				1					7
Females	1						1								2
Total	5		1			1	1			1					9
Males	21													1	22
Females	12	2													14
Total	33	2												1	36
Males															
Females															
Total															
Males	3	4	1							1					9
Females		9	2												11
Total	3	13	3							1					20
Males	711	538	203	84	74	144	65	59	53	50	50	26	1	41	2099
Females	535	455	226	107	83	105	72	42	32	40	31	14	3	44	1789
Total	1246	993	429	191	157	249	137	101	85	90	81	40	4	85	3888

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CLASS II. CONSTITUTIONAL DISEASES, <i>Cachectici</i> .													
ORDER I. DIATHETIC DISEASES, <i>Diathetici</i> .													
Anæmia.....M	69	62	95	72	57	44	82	100	102	81	62	50	876
“.....F	58	58	79	70	49	49	90	85	92	70	59	62	821
Total.....	127	120	174	142	106	93	172	185	194	151	121	112	1697
Anasarca (General Dropsy).....M	13	21	10	23	7	9	19	11	18	18	9	15	173
“.....F	20	24	18	28	10	7	24	22	22	12	22	19	228
Total.....	33	45	28	51	17	16	43	33	40	30	31	34	401
Asthma (Spasmodic Asthma).....M	4	6	5	2	5	4	4	1	5	3	4	5	48
“.....F	3	6	3	1	4	1	2	4	1	.....	4	2	31
Total.....	7	12	8	3	9	5	6	5	6	3	8	7	79
Carcinoma (Cancer).....M	13	17	22	17	13	18	6	11	23	14	16	17	187
“.....F	26	29	23	17	21	19	14	14	21	11	21	19	235
Total.....	39	46	45	34	34	37	20	25	44	25	37	36	422
Leucocythæmia.....M	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
“.....F	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	3
Total.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	3
Mortification.....M	3	2	5	1	2	2	1	1	1	.....	2	.....	20
“.....F	2	.....	.....	1	.....	1	1	.....	1	.....	1	1	8
Total.....	5	2	5	2	2	3	2	1	2	.....	3	1	28
Noma (Canker).....M	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2
“.....F	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	1	4
Total.....	.....	.....	.....	1	.....	2	.....	.....	1	.....	1	1	6
Rheumatic Gout.....M	.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	3
“.....F	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	3
Rheumatism.....M	4	8	5	6	7	4	5	10	4	2	4	13	72
“.....F	9	15	4	8	5	2	4	8	2	8	2	5	72
Total.....	13	23	9	14	12	6	9	18	6	10	6	18	144

DEATHS—Continued.

SEX.	AGES.													Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.
Males.....	701	81	11	5	3	10	5	10	13	27	3			7	876
Females.....	597	94	5	5	8	16	21	13	25	33				4	821
Total.....	1298	175	16	10	11	26	26	23	38	60	3			11	1697
Males.....	7	2	4	2	3	6	11	14	15	35	69			5	173
Females.....	5	8	5	5	9	12	15	29	30	48	62				228
Total.....	12	10	9	7	12	18	26	43	45	83	131			5	401
Males.....	1	2	1				2	4	7	13	15	2		1	48
Females.....		1	1	1			2	2	3	8	5	6		2	31
Total.....	1	3	2	1			4	6	10	21	20	8		3	79
Males.....						3	3	13	48	50	48	16		6	187
Females.....		1		3	2	8	15	43	59	49	40	7		8	235
Total.....		1		3	2	11	18	56	107	99	88	23		14	422
Males.....							1	2							3
Females.....															
Total.....							1	2							3
Males.....		1				1		1	4	5	4			3	20
Females.....							1	1	2	2	1			1	8
Total.....		1				1	1	2	3	6	6	4		4	28
Males.....	1								1						2
Females.....	2		1				1								4
Total.....	3		1				1		1						6
Males.....										1	1	1			3
Females.....															
Total.....										1	1	1			3
Males.....	2	1	5	6	8	5	3	7	10	12	7	4		2	72
Females.....	2	4	2	3	7	8	8	7	9	11	10	1			72
Total.....	4	5	7	9	15	13	11	14	19	23	17	5		2	144

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
ORDER 2. TUBERCULAR DISEASES. <i>Phthisici.</i>														
Hydrocephalus	M	6	4	6	12	6	10	10	19	11	10	7	11	112
"	F	4	4	7	7	10	11	13	11	12	10	10	3	102
Total		10	8	13	19	16	21	23	30	23	20	17	14	214
Tubercular Meningitis	M	.....	1	4	5	12	3	3	4	1	4	.....	4	41
"	F	4	3	4	6	4	5	5	3	5	4	4	1	48
Total		4	4	8	11	16	8	8	7	6	8	4	5	89
Morbus Coxarins (Hip Disease)	M	.....	.....	1	1	1	.....	1	2	.....	1	.....	.....	7
"	F	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	3
Total .....		.....	1	1	1	1	.....	3	2	.....	1	.....	.....	10
Phthisis Pulmonalis (Consumption)	M	91	94	88	113	87	83	69	76	56	70	79	80	986
"	F	137	107	106	153	110	103	115	89	100	111	111	119	1361
Total		228	201	194	266	197	186	184	165	156	181	190	199	2347
Scrofula	M	.....	1	.....	3	1	3	2	7	.....	2	1	3	23
"	F	.....	1	1	.....	4	4	6	3	.....	1	2	1	23
Total .....		.....	2	1	3	5	7	8	10	.....	3	3	4	46
Tabes Mesenterica	M	.....	.....	.....	.....	1	.....	4	3	.....	.....	.....	1	9
"	F	1	2	2	2	2	.....	1	2	3	.....	.....	.....	15
Total		1	2	2	2	3	.....	5	5	3	.....	.....	1	24
Total Constitutional Diseases	M	203	216	242	256	199	180	206	245	222	206	185	199	2559
"	F	264	250	247	294	220	205	277	241	259	227	237	233	2954
Total		467	466	489	550	419	385	483	486	481	433	422	432	5513
CLASS III. LOCAL DISEASES.														
<i>Monorganici.</i>														
ORDER I. DISEASES OF THE NERVOUS SYSTEM. <i>Cephalici.</i>														
Apoplexia (Apoplexy)	M	23	14	21	26	14	19	18	15	11	12	13	18	204
"	F	16	13	17	11	14	17	16	10	11	12	13	12	162
Total		39	27	38	37	28	36	34	25	22	24	26	30	366
Atropia Musculorum Ingrayicens	M	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	3
"	F	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	2
Total .....		.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	2	5

DEATHS—Continued.

SEX.	AGES.														Total.
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.	
Males	79	24	6	1							1			1	112
Females	81	15	4	1						1					102
Total	160	39	10	2						2				1	214
Males	18	6	3	1		5	3	3						2	41
Females	10	11	2	5	3	7	3	3		1				3	48
Total	28	17	5	6	3	12	6	6		1				5	89
Males		1	1	1	1	1		1	1						7
Females			1						1		1				3
Total		1	2	1	1	1		1	2		1				10
Males	35	17	11	14	70	313	175	115	94	73	25	6		38	986
Females	31	35	8	35	160	467	280	146	80	44	24	1		50	1361
Total	66	52	19	49	230	780	455	261	174	117	49	7		88	2347
Males	8	8	1			4		1			1				23
Females	11	8	1				1		1					1	23
Total	19	16	2			4	1	1	1		1			1	46
Males	8	1													9
Females	6	4			1	2	1							1	15
Total	14	5			1	2	1							1	24
Males	860	144	43	30	85	348	202	169	190	216	174	33		65	2559
Females	745	181	30	58	190	520	349	246	210	197	143	15		70	2954
Total	1605	325	73	88	275	868	551	415	400	413	317	48		135	5513
Males	7	1	3		2	10	13	25	28	48	41	14	3	9	204
Females	4	1			3	9	7	23	24	29	45	10	2	5	162
Total	11	2	3		5	19	20	48	52	77	86	24	5	14	366
Males						1						1		1	3
Females												1		1	2
Total						1						2		2	5

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Chorea (St. Vitus' Dance).....M				2							1		3
“.....F	1			1	2	1		1					6
Total	1			3	2	1		1			1		9
Convulsions.....M	22	26	30	29	21	29	27	27	38	21	11	28	309
“.....F	22	18	20	17	16	21	21	19	22	17	7	18	218
Total	44	44	50	46	37	50	48	46	60	38	18	46	527
Encephalitis (Inflammation of the Brain).....M	12	7	16	13	14	6	12	16	21	14	11	10	152
“.....F	14	13	9	10	11	10	12	19	18	14	12	7	149
Total	26	20	25	23	25	16	24	35	39	28	23	17	301
Epilepsy.....M	5	2	3	3	3	5	4	2	2	6	5	5	45
“.....F	3	2	5	5	4	3	3	4	3	4	3	6	45
Total	8	4	8	8	7	8	7	6	5	10	8	11	90
Hemiplegia.....M		1	1	1			1						4
“.....F	1	2	1					1	1				6
Total	1	3	2	1			1	1	1				10
Insanity.....M	4	1	4	2	1	2	1	2	2	2	1	3	25
“.....F	1	1	1	5	1			1		2	1	1	14
Total	5	2	5	7	2	2	1	3	2	4	2	4	39
Insolatio (Sunstroke).....M						1	1	3					5
“.....F							1		1				2
Total						1	2	3	1				7
Meningitis.....M	8	13	9	11	12	5	6	7	15	14	14	16	130
“.....F	6	5	14	10	10	8	11	13	13	7	5	3	105
Total	14	18	23	21	22	13	17	20	28	21	19	19	235
Myelitis (Inflammation of Spinal Cord).....M		2	4	1		1	4		2	1	2	2	19
“.....F		2	4		1	2	3	1	3	1	4	3	24
Total		4	8	1	1	3	7	1	5	2	6	5	43
Neerencephalus (Softening of Brain).....M	3	3	2	4	4	1	5	5	4	1	6	2	40
“.....F	2	2	3	2	6	2	2	2	1	1			23
Total	5	5	5	6	10	3	7	7	5	2	6	2	63

DEATHS—Continued.

SEX.	AGES.														Total.
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.	
Males.....			1						1	1					3
Females.....		2		2				1						1	6
Total.....		2	1	2				1	1	1				1	9
Males.....	223	75	6			1	2			1				1	309
Females.....	146	50	8		2	7	2	1						2	218
Total.....	369	125	14		2	8	4	1		1				3	527
Males.....	65	35	8	6	4	6	5	4	10	3	4			2	152
Females.....	45	46	14	6	7	8	8	5	1	6				2	149
Total.....	111	81	22	12	11	14	13	9	11	9	4			4	301
Males.....			3	1	2	7	9	6	5	4	6	1		1	45
Females.....		1	2	4	6	10	8	7	2		4			1	45
Total.....		1	5	5	8	17	17	13	7	4	10	1		2	90
Males.....									1	1		1		1	4
Females.....						1	1		2		2				6
Total.....						1	1		3	1	2	1		1	10
Males.....						3	2	5	7	5	1			2	25
Females.....						1	4	4	2	1	1			1	14
Total.....						4	6	9	9	6	2			3	39
Males.....						1	1	1	1					1	5
Females.....		1		1											2
Total.....		1		1		1	1	1	1					1	7
Males.....	35	30	11	3	7	11	10	6	4	2	5			6	130
Females.....	21	22	11	5	9	10	4	9	7	3	2	2		105	
Total.....	56	52	22	8	16	21	14	15	11	5	7	2		6	235
Males.....	2	2		2	2			2	2	2	1	1		1	19
Females.....	2		2	4	2			5	4	1	3	1			24
Total.....	4	2	2	6	4			7	6	3	5	2	1	1	43
Males.....	1	1				2		4	2	10	15	2		3	40
Females.....	1	2			1			2	3	9	3	1	1		23
Total.....	2	3			1	2		2	4	5	19	3	1	3	63

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Paralysis													
".....M	27	17	32	23	20	22	23	26	27	31	21	30	299
".....F	26	24	21	18	13	14	18	21	12	32	18	19	236
Total.....	53	41	53	41	33	36	41	47	39	63	39	49	535
Paraplegia (Palsy of Lower Extremities).....M									1			1	2
".....F											1		1
Total.....									1		1	1	3
Tetanus (Lockjaw).....M	1	1	1		1	1	1		2	2	2		12
".....F				1		1							2
Total.....	1	1	1	1	1	2	1		2	2	2		14
Neuralgia													
".....M	1		2				1	1	1			1	7
".....F					1	1						1	3
Total.....	1		2		1	1	1	1	1			2	10
ORDER 2. DISEASES OF THE CIRCULATORY SYSTEM— <i>Cardiaci.</i>													
Aneurism													
".....M					1	1						1	3
".....F									1				1
Total.....					1	1			1			1	4
Angina Pectoris.....M	1		1	1		1		1		1			6
".....F					1		1						2
Total.....	1		1	1	1	1	1	1		1			8
Atrophia Cordis.....M		1									1	1	3
".....F		1			2			1			1		5
Total.....		2			2			1			2	1	8
Carditis (Inflammation of Heart).....M			2	2			1						5
".....F	1	1	2								2		6
Total.....	1	1	4	2			1				2		11
Degeneratio Cordis— (Fatty Degeneration of Heart).....M		1				2							3
".....F	1					1							2
Total.....	1	1				3							5

DEATHS—Continued.

SEX.	AGES.														Total.
	Under 1 year	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.	
Males	4	3	1	2	3	3	14	20	28	72	90	51	6	2	299
Females	2	4	1	3	1	6	8	15	24	52	69	43	2	6	236
Total	6	7	2	5	4	9	22	35	52	124	159	94	8	8	535
Males							1	1							2
Females								1							1
Total							1	2							3
Males			1	1	3	4		1		1	1				12
Females		1						1							2
Total		1	1	1	3	4		2		1	1				14
Males							1		2	2	2				7
Females							1	1	1						3
Total							2	1	3	2	2				10
Males									2		1				3
Females									1						1
Total									3		1				4
Males							2	1		1	1		1		6
Females			1							1					2
Total			1				2	1		2	1		1		8
Males								1			2				3
Females				1		1		1			1	1			5
Total				1		1		2			3	1			8
Males	1				1	2			1						5
Females				1	1	1				1	2				6
Total	1			1	2	3			1	1	2				11
Males							1			1		1			3
Females		1						1							2
Total		1					1	1		1		1			5

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Endocarditis M					1	1		1					3
“ F		1		2									3
Total		1		2	1	1		1					6
Hydrops Pericardii (Dropsy of Heart) ... M	5	1	3		1		1		3	1	5	1	21
“ F	3	1	3	2	3	1		1	2	1	2	2	21
Total	8	2	6	2	4	1	1	1	5	2	7	3	42
Hypertrophica Cordis (Enlarge't of Heart) M						1		2		1	1		5
“ F			1				1	1	2	2	1	2	10
Total			1			1	1	3	2	3	2	2	15
Valvular Disease of Heart M	43	45	44	49	37	38	35	30	31	38	42	54	486
“ F	38	43	58	36	41	37	19	32	31	39	36	33	443
Total	81	88	102	85	78	75	54	62	62	77	78	87	929
Pericarditis M			1		1	1	1			1			5
“ F	1		4			1							6
Total	1		5		1	2	1			1			11
Phlebitis M													
“ F	2										1		3
Total	2										1		3
Syncope M					2	1	1		1	2	1	1	9
“ F			3	2		2							7
Total			3	2	2	3	1		1	2	1	1	16
ORDER 3. DISEASES OF THE RESPIRATORY SYSTEM— <i>Pneumonici</i> .													
Apoplexia Pulmonalis (Congest'n of Lungs) M	20	21	35	27	19	14	7	6	7	9	12	18	195
“ F	21	24	24	25	16	15	13	12	4	6	11	16	187
Total	41	45	59	52	35	29	20	18	11	15	23	34	382
Bronchitis M	17	15	23	35	28	12	13	10	10	15	15	21	214
“ F	15	20	21	24	18	26	17	13	14	9	15	20	212
Total	32	35	44	59	46	38	30	23	24	24	30	41	426

DEATHS—Continued.

SEX.	SEX.													Total.		
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.	
Males.....						3										3
Females.....						1		1		1						3
Total.....						4		1		1						6
Males.....			1		1	1		2	1	8	3	1	1	2		21
Females.....			1		1	1	3	2	2	7	3	1				21
Total.....			2		2	2	3	4	3	15	6	2	1	2		42
Males.....									1	2	1				1	5
Females.....			1			1	1	1	2	2	2					10
Total.....			1			1	1	1	3	4	3				1	15
Males.....	22	3	8	7	10	26	33	44	68	114	111	25		15	486	
Females.....	13	11	8	9	11	45	42	43	70	87	72	16		16	443	
Total.....	35	14	16	16	21	71	75	87	138	201	183	41		31	929	
Males.....			1			1	1	1		1						5
Females.....				1		2	3									6
Total.....			1	1		3	4	1		1						11
Males.....																
Females.....								2	1							3
Total.....								2	1							3
Males.....								1	2	1	3	1		1		9
Females.....					2	1			2	2						7
Total.....					2	1		1	4	3	3	1		1		16
Males.....	62	27	6	3	5	14	30	13	6	20	20	12		4	195	
Females.....	38	36	4	4	5	16	14	13	11	17	18	6		5	187	
Total.....	100	63	10	7	10	30	17	26	17	37	38	18		9	382	
Males.....	93	36	4	3	2	4	5	6	8	15	17	11	2	8	214	
Females.....	78	42	4	2	1	3	8	2	10	21	21	13		7	212	
Total.....	171	78	8	5	3	7	13	8	18	36	38	24	2	15	426	

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Emphysema..... M	1		1			1		1					4
..... F	1	1											2
Total.....	2	1	1			1		1					6
Empyema..... M		1											1
..... F													
Total.....		1											1
Hydro-thorax (Dropsy of Chest)..... M	2				1								3
..... F												1	1
Total.....	2				1							1	4
Laryngitis (Inflammation of Larynx)..... M	2	2	2			2	2		1	1	3	2	17
..... F	1		1	2				1	2	2		2	11
Total.....	3	2	3	2		2	2	1	3	3	3	4	28
Pleuritis (Pleurisy)..... M	1	2	2	1	5		2	2	1	3		3	22
..... F	1	3			3	1	1		2		2	3	16
Total.....	2	5	2	1	8	1	3	2	3	3	2	6	38
Pneumonia (Inflammation of Lungs)..... M	70	64	81	85	56	56	45	33	23	40	68	69	690
..... F	69	60	85	79	42	31	31	24	29	33	40	42	565
Total.....	139	124	166	164	98	87	76	57	52	73	108	111	1255
ORDER 4. DISEASES OF THE DIGESTIVE ORGANS— <i>Enterici.</i>													
Ascites..... M		1		1		2				1			5
..... F	2				1								3
Total.....	2	1		1	1	2				1			8
Chololithus..... M												1	1
..... F													
Total.....												1	1
Cirrhosis of Liver..... M	4	2	4	3	2	2	2	2	2	5	3	3	34
..... F	2	1		2				1	1				7
Total.....	6	3	4	5	2	2	2	3	3	5	3	3	41

DEATHS—Continued.

SEX.	AGES.													Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.
Males	1					1	1						1		4
Females					1					1					2
Total	1				1	1	1			1			1		6
Males						1									1
Females															
Total						1									1
Males							1	1				1			3
Females					1										1
Total					1		1	1			1				4
Males	2	2	3	1	1	2	1		2	1	1			1	17
Females	2	2	2		1	3						1			11
Total	4	4	5	1	2	5	1		2	1	1	1		1	28
Males	1			1	3	3	3	2	5	2	2				22
Females		1	1	1		2		2	1	3	3	1		1	16
Total	1	1	1	2	3	5	3	4	6	5	5	1		1	38
Males	181	77	26	10	15	55	51	63	58	59	58	15	2	20	690
Females	107	78	22	16	29	58	54	47	34	47	45	14		14	565
Total	288	155	48	26	44	113	105	110	92	106	103	29	2	34	1255
Males						1		1	1		2				5
Females										3					3
Total						1		1	1	3	2				8
Males									1						1
Females															
Total									1						1
Males				2		2	5	7	7	8	1			2	34
Females			1					3	1	1		1			7
Total			1	2		2	5	10	8	9	1	1		2	41

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Colic.....M							1	1				1	3
“.....F	1								1	1			3
Total	1						1	1	1	1		1	6
Dyspepsia.....M	4	3	3	3	3	8	2	4	2	4	3	5	44
“.....F	1	1	2	3	1	2	4	2	2	3	2	1	24
Total	5	4	5	6	4	10	6	6	4	7	5	6	68
Enteritis (Inflammation of the Bowels).....M	18	25	22	21	22	20	20	25	31	27	19	20	270
“.....F	19	17	22	23	18	21	21	16	33	23	14	15	242
Total	37	42	44	44	40	41	41	41	64	50	33	35	512
Fistula.....M									1				1
“.....F													
Total									1				1
Gastritis (Inflammation of Stomach).....M	6	8	7	3	3	3	7	9	4	10	9	1	70
“.....F	8	4	9	9	5	6	7	6	4	5	2	3	68
Total	14	12	16	12	8	9	14	15	8	15	11	4	138
Hæmatemesis.....M	3		3				1		2	2	1	1	13
“.....F	1	3	1	4			1	1	1	2	1	2	17
Total	4	3	4	4			2	1	3	4	2	3	30
Hæmorrhoids (Piles).....M		1		1					1		1		4
“.....F													
Total		1		1					1		1		4
Hepatitis (Inflammation of Liver).....M	6	8	10	11	8	8	8	10	9	9	8	12	107
“.....F	7	8	10	5	3	10	10	10	5	9	15	6	98
Total	13	16	20	16	11	18	18	20	14	18	23	18	205
Hernia (Rupture).....M	1	3	3		1		2	2	4	1	3	1	21
“.....F	1	2	1	1			2		1	4	1	4	17
Total	2	5	4	1	1		4	2	5	5	4	5	38
Icterus (Jaundice).....M	5	3	3	1	4	3	2	3	7	1	1	4	37
“.....F	3	3	2	2	3	2	1	5	1	5	2	1	30
Total	8	6	5	3	7	5	3	8	8	6	3	5	67

DEATHS—Continued.

SEX.	AGES.														Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.		
Males.....	1						1				1					3
Females.....	1							1				1				3
Total	2						1	1			1	1				6
Males.....	1					1	1	5	6	10	17	1		2	44	
Females.....						1	3	2	9	7	1		1	24		
Total	1					2	4	5	8	19	24	2	3	68		
Males.....	83	33	15	17	16	17	16	16	10	27	9			11	270	
Females.....	55	32	13	9	16	27	17	18	12	25	9	4		5	242	
Total	138	65	28	26	32	44	33	34	22	52	18	4		16	512	
Males.....											1				1	
Females.....																
Total											1				1	
Males.....	11	4	2		1	7	3	8	10	17	4			3	70	
Females.....	5	3	1	1	2	7	4	8	9	17	3	3		5	68	
Total	16	7	3	1	3	14	7	16	19	34	7	3		8	138	
Males.....	1					3	2	1	2	1	3				13	
Females.....	3					4	1	3	2	2				2	17	
Total	4					7	3	4	4	3	3			2	30	
Males.....							1		1		2				4	
Females.....																
Total							1		1		2				4	
Males.....	6		2	1	1	4	6	15	13	36	15	2		6	107	
Females.....	3	3	1	3		4	8	15	15	24	13	3		6	98	
Total	9	3	3	4	1	8	14	30	28	60	28	5		12	205	
Males.....	1		1		1			6	6	3	2	1			21	
Females.....	1					2	3	2	3	1	3	1		1	17	
Total	2		1		1	2	3	8	9	4	5	2		1	38	
Males.....	12	2					1	2	4	7	8			1	37	
Females.....	7	1				2	2	2	4	2	8	2			30	
Total	19	3				2	3	4	8	9	16	2		1	67	

TABLE E.—

MONTHS.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Ileus	M												
"	F						1						1
Total							1						1
Intus-susceptio	M	1					1		1				3
"	F	1				1	2			1	1		6
Total		1	1			1	3		1	1	1		9
Obstipatio (Constipation)	M	2	1	1	1	2				3	4	2	16
"	F	3				1	2	1	1			1	9
Total		5	1	1	1	2	1	2	1	3	4	3	25
Peritonitis	M	2	8	3	5	9	5	8	9	7	5	7	73
"	F	6	12	10	8	5	7	5	5	1	6	2	72
Total		8	20	13	13	14	12	13	14	8	11	9	145
Perforation of Intestine	M					1				1			3
"	F											1	2
Total						1				1		2	5
Splenitis (Inflammation of Spleen)	M								1				1
"	F	1		2						1			4
Total		1		2					1	1			5
Stomatitis (Inflammation of Mouth)	M						1						2
"	F	1		1				1	1	1	1		6
Total		1		1			1	1	1	1	1	1	8
Stricture of Intestine	M			2									2
"	F		1		1		1						4
Total			1	2	1	1	1						6
Ulceration of Intestine	M			1		2	1	1		1		1	7
"	F	1				1			2		1		6
Total		1		1		3	1	1	2	1	1	1	13
Ulcer of Stomach	M		3	4	1		2		1	1		2	17
"	F	1	3		5	3			2		1	2	20
Total		1	6	4	6	3	2		3	1	1	4	37

DEATHS—Continued.

SEX.	AGES.													Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.
Males.....												1			
Females.....															
Total.....												1			1
Males.....	2							1							3
Females.....	1		1	1		2	1								6
Total.....	3		1	1		2	1	1							9
Males.....	1	1				2			2	2	5	3			16
Females.....							1	3	3	2					9
Total.....	1	1				2	1	3	5	4	5	3			25
Males.....	4	5	7	4	8	14	6	7	7	5	2			4	73
Females.....	5		4	4	11	15	11	10	2	2	2			6	72
Total.....	9	5	11	8	19	29	17	17	9	7	4			10	145
Males.....						1			1	1					3
Females.....		1				1									2
Total.....		1				2			1	1					5
Males.....					1										1
Females.....							1			2	1				4
Total.....					1		1			2	1				5
Males.....	1							1							2
Females.....	4	1				1									6
Total.....	5	1				1	1								8
Males.....						1					1				2
Females.....							1		1	1	1				4
Total.....						1	1		1	2	1				6
Males.....	1	1							3					1	7
Females.....	1					2	1			1	1				6
Total.....	2	1				3	1		3	1	1			1	13
Males.....						1	1	3	1	4	3	3		1	17
Females.....	1	2		1		2	4		3	2	5				20
Total.....	1	2		1		3	5	3	4	6	8	3		1	37

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
ORDER 5. DISEASES OF THE URINARY SYSTEM—Nephritici.													
Calculus (Stone) M	1					1			1				3
“ “ F				1									1
Total	1			1		1			1				4
Cystitis (Inflammation of Bladder) M	7	5	1	8	2	2	3	2	3	5	2	3	43
“ “ F		1		1				1	2				5
Total	7	6	1	9	2	2	3	3	5	5	2	3	48
Diabetes M	5	4	9	3	3	3	4	2	2	4	5	4	48
“ “ F	2	3	3		4	2		1	4	2		1	22
Total	7	7	12	3	7	5	4	3	6	6	5	5	70
Ischuria (Retention of Urine) M			1	1	1		1		2		2		8
“ “ F					1								1
Total			1	1	2		1		2		2		9
Lithiasis (Gravel) M		1	2	6	2	1	3		3	1	3	5	27
“ “ F				1									1
Total		1	2	7	2	1	3		3	1	3	5	28
Morbus prostaticus M	2	4		1	1	1		1			2	1	13
“ “ F					1								1
Total	2	4		1	2	1		1			2	1	14
Nephria (Bright's Disease) M	5	6	10	5	5	9	9	8	3	5	2	5	72
“ “ F	4	5	2	2	5	4	7	5	6	3	4	2	49
Total	9	11	12	7	10	13	16	13	9	8	6	7	121
Nephritis (Inflammation of Kidneys) M	9	7	7	7	13	11	8	6	11	5	9	18	111
“ “ F	5	4	6	4	7	9	4		3	7	3	6	58
Total	14	11	13	11	20	20	12	6	14	12	12	24	169
Stricture of Urethra M				1			1						2
“ “ F													
Total				1			1						2

DEATHS—Continued.

SEX.	AGES.													Total.		
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.	
Males.....						1			1	1						3
Females.....									1							1
Total.....						1			2	1						4
Males.....				1		1	1	1	4	10	11	9	3	2		43
Females.....						1	1	1	1					1		5
Total.....				1		2	2	2	5	10	11	9	3	3		48
Males.....			3	5	3	5	10	3	5	2	6	2		4		48
Females.....				1	2	5	3		5	5				1		22
Total.....			3	6	5	10	13	3	10	7	6	2		5		70
Males.....	1				1		1		1		2	2				8
Females.....		1														1
Total.....	1	1			1		1		1		2	2				9
Males.....									2	6	13	5	1			27
Females.....										1						1
Total.....									2	7	13	5	1			28
Males.....			1		1				1	4	6					13
Females.....							1									1
Total.....			1		1		1		1	4	6					14
Males.....		1	1	3	4	5	8	7	10	14	16	2		1		72
Females.....		2	1	3	1	6	7	8	1	7	6	4		3		49
Total.....		3	2	6	5	11	15	15	11	21	22	6		4		121
Males.....	6	3	3	3	2	8	11	8	11	19	25	8		4		111
Females.....	2	7	2	1	3	5	8	6	6	10	6	1		1		58
Total.....	8	10	5	4	5	13	19	14	17	29	31	9		5		169
Males.....									1	1						2
Females.....																
Total.....									1	1						2

TABLE E.—

CAUSE OF DEATH.	MONTHS.													
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	
ORDER 6. DISEASES OF THE GENERATIVE ORGANS. <i>Genitici.</i>														
Hydrocele	M				1						1		2	
Hydrops Ovarii (Ovarian Dropsy)	F			1									1	
Metritis (Inflammation of Womb)	F	1			2	1	1		2	2			9	
Morbus Uteri (Uterine Disease)	F				1			1	1			1	4	
Tumor Ovarii (Ovarian Tumor)	F	3	2	1	3	2	6	3	2	2	3	6	33	
Tumor Uteri (Uterine Tumor)	F	5	5	5	2	3	3	2	3	1	3	4	37	
ORDER 7. DISEASES OF THE LOCOMOTIVE SYSTEM. <i>Myostici.</i>														
Arthritis (Inflammation of Joints)	M							1		1		1	3	
“ “ “ “	F								1		1		2	
Total								1	1	1	1	1	5	
Caries	M	2		2	1				1				6	
“ “ “ “	F				1								1	
Total		2		2	2				1				7	
Ostitis (Inflammation of Bones)	M										1		1	
“ “ “ “	F			1					1				2	
Total				1					1		1		3	
ORDER 8. DISEASES OF THE INTEGUMENTARY SYSTEM. <i>Chrotici.</i>														
Abscess	M	2	6	3	5	3	5	4	4	8	4	10	8	62
“ “ “ “	F	2	5	5	7	2	5	5	5	2	4	2	4	48
Total		4	11	8	12	5	10	9	9	10	8	12	12	110
Phlegmon	M													
“ “ “ “	F			1									1	2
Total				1									1	2
Total Local Diseases	M	350	342	419	405	331	310	302	281	311	309	335	394	4089
“ “ “ “	F	326	318	381	337	276	275	250	243	250	269	235	257	3417
Total		676	660	800	742	607	585	552	524	561	578	570	651	7506

DEATHS—Continued.

SEX.	AGES.													Total.		
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.	
Males	1						1									2
Females									1							1
Females						4	1	1	1			1		1		9
Females							1	2			1					4
Females					1	3	3	6	8	5	4				3	33
Females						9	5	6	8	6	2			1		37
Males				1	2											3
Females					1	1										2
Total				1	3	1										5
Males	1				1			1	2	1						6
Females							1									1
Total	1				1		1	1	2	1						7
Males															1	1
Females							1	1								2
Total							1	1							1	3
Males	5	1	1	1	2	11	5	7	10	13	4	2				62
Females	7		1		4	9	5	4	3	7	6			2		48
Total	12	1	2	1	6	20	10	11	13	20	10	2		2		110
Males																2
Females	1							1								2
Total	1							1								2
Males	839	343	119	78	106	247	243	309	368	570	545	178	19	125	4089	
Females	558	353	107	84	124	303	272	285	292	428	373	132	5	101	3417	
Total	1397	696	226	162	230	550	515	594	660	998	918	310	24	226	7506	

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
CLASS IV. DEVELOPMENTAL DISEASES. <i>Metamorphici.</i>													
ORDER I. DEVELOPMENTAL DISEASES OF CHILDREN. <i>Paidici.</i>													
Anus Imperforatus	M	2		1					4		1		8
“ “	F			2	2		1	1			1		7
Total		2		3	2		1	1	4		2		15
Atelectasis Pulmonum	M	6	4		1	4	4	6	9	11	1	4	50
“ “	F		1	2	1	1	3	4	3	3	2	1	21
Total		6	5	2	2	5	7	10	12	14	3	5	71
Cyanosis	M	1	1	2	1	3	1	3	2	1		1	16
“ “	F		2	1	2	1		1	1			1	9
Total		1	3	3	3	4	1	4	2	1	1	2	25
Deutitio (Teething)	M	2	3	8	1	4	3	2	6	15	13	4	66
“ “	F	5	3	7	1	2	4	10	5	14	7	3	63
Total		7	6	15	2	6	7	12	11	29	20	7	129
Hæmorrhagia Umbilicalis	M	1		1		1							3
“ “	F				1	1	1						4
Total		1		1	1	2	1	1					7
Preternatural Birth	M	1											1
“ “	F					1		1					2
Total		1				1		1					3
Partus Emortuus (Still Birth)	M	23	24	29	20	20	22	19	17	20	22	17	258
“ “	F	16	18	12	12	13	16	20	17	10	13	10	173
Total		39	42	41	32	33	38	39	34	30	35	27	431
Partus Intempestivus (Premature Birth)	M	16	9	28	12	15	13	11	30	8	13	14	186
“ “	F	4	10	11	16	12	11	15	13	9	8	12	133
Total		20	19	39	28	27	24	26	43	17	21	26	319
Spina Bifida	M		3			1			1		1	1	8
“ “	F		1	1	1	3	1	2	1	1		1	12
Total			4	1	1	4	1	2	2	1	1	1	20

DEATHS—Continued.

SEX.	AGES.														Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.		
Males	8															8
Females	7															7
Total	15															15
Males	46	4														50
Females	16	5														21
Total	62	9														71
Males	14	1	1													16
Females	9															9
Total	23	1	1													25
Males	40	26														66
Females	38	25														63
Total	78	51														129
Males	3															3
Females	4															4
Total	7															7
Males	1															1
Females	2															2
Total	3															3
Males	258															258
Females	173															173
Total	431															431
Males	186															186
Females	133															133
Total	319															319
Males	5	2	1													8
Females	11			1												12
Total	16	2	1	1												20

TABLE E.—

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
ORDER 2. DEVELOPMENTAL DISEASES OF WOMEN.													
Abortion, Miscarriage.....F	.....	.....	2	.....	2	1	1	.....	1	.....	.....	.....	7
Climacteria (Turn of Life).....F	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2
Eclampsia Parturi-- (Convulsions in Child-birth). ....F	1	1	3	1	2	1	1	.....	1	.....	1	.....	12
Febris Puerperalis (Puerperal Fever)....F	11	13	18	16	8	6	6	5	2	5	8	10	108
Hæmorrhagia post partum (Flooding) ....F	1	1	3	1	1	.....	.....	.....	1	.....	1	1	10
Mania puerperalis (Puerperal Mania) ....F	3	3	10	4	3	8	1	2	.....	1	1	5	41
Partus (Child-birth) .....F	15	25	16	29	16	10	13	10	14	14	17	15	194
Phlegmasia dolens (Milk Leg).....F	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	2	5
ORDER 3. DEVELOPMENTAL DISEASES OF OLD PEOPLE. <i>Geratici.</i>													
Senectus (Old Age).....M	95	97	125	100	93	75	76	84	63	80	73	107	1068
“ “.....F	95	96	97	103	70	74	77	59	70	82	84	90	997
Total.....	190	193	222	203	163	149	153	143	133	162	157	197	2065
Total Developmental Diseases.....M	147	141	194	135	136	119	115	146	119	141	111	160	1664
“ “.....F	152	174	185	188	137	134	153	120	127	134	140	156	1800
Total.....	299	315	379	323	273	253	268	266	246	275	251	316	3464
CLASS V. VIOLENCE TENDING TO SUDDEN DEATH. <i>Thanatici.</i>													
ORDER 1. ACCIDENT AND NEGLIGENCE.													
Ambusta (Burns and Scalds) .....M	19	4	4	4	2	1	1	1	2	1	1	4	44
“ “.....F	5	.....	3	6	1	2	3	3	.....	.....	3	4	30
Total.....	24	4	7	10	3	3	4	4	2	1	4	8	74
Amputation .....M	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2
“ “.....F	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2

DEATHS—Continued.

SEX.	AGES.													Total.		
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.	
Females						4	1	2								7
Females								2								2
Females					3	4	3	1							1	12
Females					3	47	42	6							10	108
Females						4	2	1		1					2	10
Females					3	19	14	3							2	41
Females					4	103	62	18	1						6	194
Females						2	2	1								5
Males											450	503	115		1068	
Females											431	445	121		997	
Total											881	948	236		2065	
Males	561	33	2								450	503	115		1664	
Females	393	30		1	13	183	126	34	1	1	431	445	121	21	1800	
Total	954	63	2	1	13	183	126	34	1	1	881	948	236	21	3464	
Males	1	15			2	8	5	1	2	2	1			7	44	
Females	2	12	5	1		2	1	1	3		2			1	30	
Total	3	27	5	1	2	10	6	2	5	2	3			8	74	
Males				1		1									2	
Females																
Total				1		1									2	

TABLE E.—

CAUSE OF DEATH.	MONTHS.												Total.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		
Congussio	M	1		2				1	1	2		3	2	12
"	F				1	1		2	1		2		1	8
Total		1		2	1	1		3	2	2	2	3	3	20
Contusio	M										1			1
"	F													
Total											1			1
Explosio	M			1	2					1	5			9
"	F		1											1
Total			1	1	2					1	5			10
Fractura	M	1		3	1	2	1		2	1	1	1		13
"	F			3		1			1			1	2	8
Total		1		6	1	3	1		3	1	1	2	2	21
Gelatio (Freezing)	M	2	2										2	6
"	F		1	1									1	3
Total		2	3	1									3	9
Ictus fulminis (Lightning)	M					1	2	2						5
"	F								1					1
Total						1	2	2	1					6
Suffocatio	M			1		1	2	2	3	2	1		3	15
"	F	1				1		2		2		1	2	9
Total		1		1		2	2	4	3	4	1	1	5	24
Submersio (Drowning)	M		2	6	7	12	39	23	13	14	9	11	7	143
"	F			2	3	4	3	3	4	2		1	1	23
Total			2	8	10	16	42	26	17	16	9	12	8	166
Venenatio (Poison)	M	1		1	2		1	2	3		1	2		13
"	F		1	1		2	2	1	2	1				10
Total		1	1	2	2	2	3	3	5	1	1	2		23
Vulnera (Wounds)	M	17	18	24	11	20	20	13	12	28	25	16	21	225
"	F	6	4	1	4	8	2	2	2	5	5	2	4	45
Total		23	22	25	15	28	22	15	14	33	30	18	25	270

DEATHS—Continued.

SEX.	AGES.														Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Unknown.		
Males		1				1	2		2	3	3					12
Females	1	1		1		1		1	2	1						8
Total	1	2		1		2	2	1	4	4	3					20
Males					1											1
Females																
Total					1											1
Males					1	4	2	1							1	9
Females			1													1
Total			1		1	4	2	1							1	10
Males				1	1	2	2		1		2	2		2		13
Females		1							1		2	3		1		8
Total		1		1	1	2	2		2		4	5		3		21
Males					1	2		1		1	1					6
Females	1					1		1								3
Total	1				1	3		2		1	1					9
Males					1	1		2	1							5
Females				1												1
Total				1	1	1		2	1							6
Males	6	3		1			1	2		1				1		15
Females	4	1	1				1	1		1						9
Total	10	4	1	1			2	3		2				1		24
Males	1	11	26	16	16	32	11	5	9	4	4	2		6		143
Females	1	8	2	2	2	2	2	1	1			1		1		23
Total	2	19	28	18	18	34	13	6	10	4	4	3		7		166
Males			2		1	1	1		4	2	2					13
Females	2	1		1		1	2	2						1		10
Total	2	1	2	1	1	2	3	2	4	2	2			1		23
Males	1	4	9	15	19	46	28	22	26	19	8	5	1	22		225
Females		2	4	2	4	4	7	1	7	3	4	6	1			45
Total	1	6	13	17	23	50	35	23	33	22	12	11	2	22		270

TABLE E.—

CAUSE OF DEATH.	MONTHS.													
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	
Killed by Cars	M	15	6	3	6	3	4	6	11	6	4	8	3	75
“ “	F	2	2	1	1	1	2	3	2	2	1	1	1	11
Total		15	8	3	6	4	4	8	14	6	6	8	4	86
ORDER 2. HOMICIDE.														
Murder and Manslaughter	M		1	1	1				1		1	1	1	6
“ “	F				2				1					3
Total			1	1	2	1			1	1		1	1	9
ORDER 3. SUICIDE-- <i>Autophonici</i> .														
Submersio (Drowning)	M						1		1					2
“ “	F						1				1			2
Total						1	1		1		1			4
Suspendium (Hanging)	M		3	1	1	3	2		3			4	3	20
“ “	F			1		3		1					1	6
Total			3	2	1	6	2	1	3			4	4	26
Venenatio (Poison)	M				2			1				1	1	5
“ “	F			1	1				1					3
Total				1	3			1	1			1	1	8
Vulnera (Wounds)	M	1	1	2	1		1	1	2	2	1		1	13
“ “	F		1			1								2
Total		1	2	2	1	1	1	1	2	2	1		1	15
ORDER 4. EXECUTION.														
Suspendium (Hanging)	M						3						1	4
“ “	F													
Total							3						1	4
Total Class V.—Violent Deaths	M	57	37	49	37	45	76	53	52	60	49	48	50	613
“ “ “	F	12	10	13	17	23	10	16	19	10	9	9	17	165
Total		69	47	62	54	68	86	69	71	70	58	57	67	778
Cause not specified	M	28	15	15	28	25	21	21	19	23	19	25	28	267
“ “	F	30	16	30	39	20	18	22	21	18	21	22	29	286
Total		58	31	45	67	45	39	43	40	41	40	47	57	553

DEATHS—Continued.

SEX.	AGES.													Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.
Males.....				3	10	20	13	5	5	7	4			8	75
Females.....		2				1	4	1		2				1	11
Total.....		2		3	10	21	17	6	5	9	4			9	86
Males.....						1	1	1	2		1				6
Females.....									1		2				3
Total.....						1	1	1	3		3				9
Males.....						1			1						2
Females.....							2								2
Total.....						1	2		1						4
Males.....					1	2	1	4	1	5	2	2		2	20
Females.....						1	3	1	1					2	6
Total.....					1	3	4	5	2	5	2	2		2	26
Males.....						2			2	1					5
Females.....						2			1						3
Total.....						4			3	1					8
Males.....					1	1	3	3	1	1	2			1	13
Females.....									1					1	2
Total.....					1	1	3	3	2	1	2			2	15
Males.....						1	2		1						4
Females.....															
Total.....						1	2		1						4
Males.....	9	34	37	37	55	126	72	47	58	46	30	11	1	50	613
Females.....	11	28	13	8	6	15	22	10	18	7	10	10	1	6	165
Total.....	20	62	50	45	61	141	94	57	76	53	40	21	2	56	778
Males.....	16	12	13	14	24	28	20	28	34	31	13			34	267
Females.....	4	6	13	13	22	56	34	38	29	31	1			39	286
Total.....	20	18	26	27	46	84	54	66	63	62	14			73	553

TABLE E.—DEATHS BY

CAUSE OF DEATH.	MONTHS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
CLASS I.													
Total Zymotic Diseases—Males.....	145	109	151	145	124	104	158	256	300	242	179	186	2099
Females.....	129	100	139	157	109	82	135	201	248	182	164	143	1789
Total.....	274	209	290	302	233	186	293	457	548	424	343	329	3888
CLASS II.													
Total Constitutional Diseases—Males....	203	216	242	256	199	180	206	245	222	206	185	199	2559
Females..	264	250	247	294	220	205	277	241	259	227	237	233	2954
Total.....	467	466	489	550	419	385	483	486	481	433	422	432	5513
CLASS III.													
Total Local Diseases—Males.....	350	342	419	405	331	310	302	281	311	309	335	394	4089
Females.....	326	318	381	337	276	275	250	243	250	269	235	257	3417
Total.....	676	660	800	742	607	585	552	524	561	578	570	651	7506
CLASS IV.													
Total Developmental Diseases—Males...	147	141	194	135	136	119	115	146	119	141	111	160	1664
Females..	152	174	185	188	137	134	153	120	127	134	140	156	1800
Total.....	299	315	379	323	273	253	268	266	246	275	251	316	3464
CLASS V.													
Total Violent Deaths—Males.....	57	37	49	37	45	76	53	52	60	49	48	50	613
Females.....	12	10	13	17	23	10	16	19	10	9	9	17	165
Total.....	69	47	62	54	68	86	69	71	70	58	57	67	778
Total Deaths from other Causes and Causes not specified—Males.....	28	15	15	28	25	21	21	19	23	19	25	28	267
Females.....	30	16	30	39	20	18	22	21	18	21	22	29	286
Total.....	58	31	45	67	45	39	43	40	41	40	47	57	553
Total—Males.....	930	860	1070	1006	860	810	855	999	1035	966	883	1017	11291
Females.....	913	868	995	1032	785	724	853	845	912	842	807	835	10411
Grand Total.....	1843	1728	2065	2038	1645	1534	1708	1844	1947	1808	1690	1852	21702

CLASSES.—RECAPITULATION.

SEX.	AGES.													Total.	
	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.		Unknown.
Males	711	538	203	84	74	144	65	59	53	50	50	26	1	41	2099
Females	535	455	226	107	83	105	72	42	32	40	31	14	3	44	1789
Total	1246	993	429	191	157	249	137	101	85	90	81	40	4	85	3888
Males	860	144	43	30	85	348	202	169	190	216	174	33	.....	65	2559
Females	745	181	30	58	190	520	349	246	210	197	143	15	.....	70	2954
Total	1605	325	73	88	275	868	551	415	400	413	317	48	.....	135	5513
Males	839	343	119	78	106	247	243	309	368	570	545	178	19	125	4089
Females	558	353	107	84	124	303	272	285	292	428	373	132	5	101	3417
Total	1397	696	226	162	230	550	515	594	660	998	918	310	24	226	7506
Males	561	33	2	.....	.....	.....	.....	.....	.....	.....	450	503	115	.....	1664
Females	393	30	.....	1	13	183	126	34	1	1	431	445	121	21	1800
Total	954	63	2	1	13	183	126	34	1	1	881	948	236	21	3464
Males	9	34	37	37	55	126	72	47	58	46	30	11	1	50	613
Females	11	28	13	8	6	15	22	10	18	7	10	10	1	6	165
Total	20	62	50	45	61	141	94	57	76	53	40	21	2	56	778
Males	16	12	13	14	24	28	20	28	34	31	13	.....	.....	34	267
Females	4	6	13	13	22	56	34	38	29	31	1	.....	.....	39	286
Total	20	18	26	27	46	84	54	66	63	62	14	.....	.....	73	553
Males	2996	1104	417	243	344	893	602	612	703	913	1262	751	136	315	11291
Females	2246	1053	389	271	438	1182	875	655	582	704	989	616	130	281	10411
Grand Total	5242	2157	806	514	782	2075	1477	1267	1285	1617	2251	1367	266	596	21702

H. S. CREWE,
Inspector.

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Croup).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febbris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Algoma :									
Males	2			6		3		8	
Females	1			1		2		2	
Total	3			7		5		10	
Brant :									
Males	5		1	2	3	8	3	4	
Females	5	2	2	4		7	1	7	3
Total	10	2	3	6	3	15	4	11	3
Bruce :									
Males			5	2	1	3	2	4	1
Females	1	1	2	3	1	1	1	4	3
Total	1	1	7	5	2	4	3	8	4
Carleton :									
Males	16	1	7	40	2	8		11	8
Females	15	1	4	28	1	5	1	7	10
Total	31	2	11	68	3	13	1	18	18
Dufferin :									
Males		1			4	2		2	4
Females					1	2	1	1	8
Total		1			5	4	1	3	12
Elgin :									
Males	14	1	2	1		3	2	9	
Females	5		2	1		2	1	4	
Total	19	1	4	2		5	3	13	
Essex :									
Males	9		9	7	2	38	3	11	12
Females	8	1	4	13	2	33	2	11	8
Total	17	1	13	20	4	71	5	22	20
Frontenac :									
Males	2		9	9	5	6	1	6	
Females	1		8	1	2	8	2	3	2
Total	3		17	10	7	14	3	9	2
Grey :									
Males	2		2	6	1	10	4	3	5
Females			1	3	1	5	2	3	4
Total	2		3	9	2	15	6	6	9

CAUSES OF DEATHS, 1884.

DISEASES.									CLASS II.—CONSTITUTIONAL DISEASES.					
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
1			1				1	5	27	16			2	
1	2		3					1	13	7		1	1	
2	2		4				1	6	40	23		1	3	
1					1			5	33	6	6		2	1
	1				1				33	15	4		6	1
1	1				2			5	66	21	10		8	2
1	1	2	3		2			2	29	31	7	1	3	3
3		1						2	23	14	9		3	5
4	1	3	3		2			4	52	45	16	1	6	8
2		1	5		4			4	109	85	8	3	6	2
4			2		3	1	1	4	87	98	8	5	12	3
6		1	7		7	1	1	8	196	183	16	8	18	5
1		1			1				16	14	2		2	1
								1	14	13	2		3	
1		1			1			1	30	27	4		5	1
3		5	1						41	8	8		5	
3		8	6		2				34	8	5		7	
6		13	7		2				75	16	13		12	
5	3				1		2	1	103	64	7	2	3	2
2	1		1		2		2	2	92	44	5	1	6	3
7	4		1		3		4	3	195	108	12	3	9	5
3								1	42	20	6		2	1
2		1						1	31	12	5	1	8	2
5		1						2	73	32	11	1	10	3
2		1	5		1	1		4	47	24	6	5	4	4
4	1		4		1			1	30	26	7	3	3	5
6	1	1	9		2	1		5	77	50	13	8	7	9

TABLE F.—DEATHS BY COUNTIES—

COUNTIES.	CLASS II.—Continued.				CLASS III.—				
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Algoma :									
Males.....	1	13	1	.....	33	1	2	4	.....
Females.....		9	.....	.....	18	.....	1	1	3
Total.....	1	22	1	.....	51	1	3	5	3
Brant :									
Males.....	1	18	.....	1	35	6	2	1	1
Females.....	.....	17	.....	2	45	5	3	.....	.....
Total.....	1	35	.....	3	80	11	5	1	1
Brunswick :									
Males.....	2	27	.....	1	75	4	8	.....	1
Females.....	2	38	.....	.....	71	3	3	1	1
Total.....	4	65	.....	1	146	7	11	1	2
Carleton :									
Males.....	41	53	9	2	209	6	12	12	1
Females.....	40	71	8	.....	245	2	8	9	2
Total.....	81	124	17	2	454	8	20	21	3
Dufferin :									
Males.....	.....	7	.....	1	27	.....	1	.....	.....
Females.....	.....	10	.....	1	29	2	4	3	.....
Total.....	.....	17	.....	2	56	2	5	3	.....
Elgin :									
Males.....	1	21	1	1	45	3	7	2	1
Females.....	.....	23	.....	.....	43	3	3	6	1
Total.....	1	44	1	1	88	6	10	8	2
Essex :									
Males.....	2	26	2	1	109	6	5	5	.....
Females.....	3	39	.....	.....	101	4	3	2	.....
Total.....	5	65	2	1	210	10	8	7	.....
Frontenac :									
Males.....	6	27	1	3	66	6	6	2	1
Females.....	5	34	.....	.....	67	4	3	6	2
Total.....	11	61	1	3	133	10	9	8	3
Grey :									
Males.....	2	16	.....	1	62	5	5	1	4
Females.....	4	30	.....	1	79	3	5	3	1
Total.....	6	46	.....	2	141	8	10	4	5

CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalitis (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
2	1	1	1	3	2	3			6		2		1	
			1	1	2						2	1	1	
2	1	1	2	4	4	3			6		4	1	2	
	2		6	7	2	3			28		8	2	1	1
			4	11	2	3			19	1	6	2	1	2
	2		10	18	4	6			47	1	14	4	2	3
	1	1	5	6	3	6			14	2	5	2	3	1
	2	1	11	11	2	2	1		21	1	5	3	4	1
	3	2	16	17	5	8	1		35	3	10	5	7	2
	1	3	13	22	12	9	1	1	26		19	1	2	1
2	3		13	21	16	9	2		20	2	21	4	2	
2	4	3	26	43	28	18	3	1	46	2	40	5	4	1
	1		3	2		1			6	1	3			
	1		1	3	1	1			3		1		3	
	2		4	5	1	2			9	1	4		3	
		2	8	7	4	2			16	1	2	3		
	1	2	7	9	5				13		7	1	3	
	1	4	15	16	9	2			29	1	9	4	3	
		1	7	8	5	6	1	1	11	1	7	2	2	1
	2	1	5	9	1	1			9		5		2	1
	2	2	12	17	6	7	1	1	20	1	12	2	4	2
8	5	1	15	19	5	7	1	1	14	1	8	2	3	1
	5		6	15	5	3	1		14	1	4	1		
8	10	1	21	34	10	10	2	1	28	2	12	3	3	1
1	6			12	4	7		1	11	5	4	1	5	3
			3	6	6	6		1	11	1	7	1		
1	6		3	18	10	13		2	22	6	11	2	5	3

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitio (Teething).	Partus emortuus (Still Birth).
Algoma :									
Males			1			3	33	1	
Females						3	16	1	
Total			1			6	49	2	
Brant :									
Males	1	2	2	2		8	85	1	
Females		1	1	3	1	2	67	2	
Total	1	3	3	5	1	10	152	3	
Bruce :									
Males	3	3	1	1	1	6	77		4
Females					1	7	81	1	5
Total	3	3	1	1	2	13	158	1	9
Carleton :									
Males		1	1	5	2	23	174	22	19
Females	1			1	3	13	154	18	15
Total	1	1	1	6	5	36	328	40	34
Dufferin :									
Males		1	1	3		3	26		2
Females			1		1	1	26		1
Total		1	2	3	1	4	52		3
Elgin :									
Males	2		2	2		1	65		3
Females			2			5	68		1
Total	2		4	2		6	133		4
Essex :									
Males	1	2	2	3	1	10	88		7
Females	1		1	1		6	54	1	5
Total	2	2	3	4	1	16	142	1	12
Frontenac :									
Males	1	1			1	11	120		4
Females					2	8	80	4	1
Total	1	1			3	19	200	4	5
Grey :									
Males			2	3		15	95	1	4
Females			1	1	1	11	68	1	2
Total			3	4	1	26	163	2	6

CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total Number of Deaths.
Partus Interpositivus (Pre-maturo Birth).	Diseases incidental to Child-Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
4	5	3	1	8	18	5				5	28	6	185
2	5	1		9								2	58
6	5	4		17	18	5				5	28	8	193
8	7	19	1	29	4	2	1	1		5	13	5	200
6	7	21	1	37						1	1	5	188
14	7	40	2	66	4	2	1	1		6	14	10	388
2	11	32		38	8	1		3		6	18	14	251
	11	29		46	2					1	3	1	225
2	11	61		84	10	1		3		7	21	15	476
8	13	63	8	120	6			1		11	18	15	649
13	13	39	11	109	2					4	6	20	621
21	13	102	19	229	8			1		15	24	35	1270
	6	15		17	1					1	2	7	95
	6	11		18						1	1	4	92
	6	26		35	1					2	3	11	187
1	4	15	1	20	1	2		1		3	7	3	181
	4	16		21		1		1			2	2	170
1	4	31	1	41	1	3		2		3	9	5	351
9	9	17		33	7	2	1		1	10	21	6	360
3	9	27	2	47	3			1		1	5	14	313
12	9	44	2	80	10	2	1	1	1	11	26	20	673
4	5	40	3	51	7	2		3		11	23	10	312
6	5	24		40	1	1		2		3	7	16	241
10	5	64	3	91	8	3		5		14	30	26	553
1	7	31	1	38	6	1			1	4	12	10	264
2	7	27		39		1	1	1		3	6	8	230
3	7	58	1	77	6	2	1	1	1	7	18	18	494

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Group).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Haldimand :									
Males.....			1	3	1	1		4	5
Females.....	2		2	1	1			3	4
Total	2		3	4	2	1		7	9
Halton :									
Males.....			2	2		4	1	2	1
Females.....	1		1	2		3	2	3	3
Total	1		3	4		7	3	5	4
Haetings :									
Males.....	6		8	14		8	1	2	27
Females.....	13		2	6		12	1	8	24
Total	19		10	20		20	2	10	51
Huron :									
Males.....	1		4	4		4	1	8	9
Females.....	1	3	1	7	3	6	1	3	4
Total	2	3	5	11	3	10	2	11	13
Kent :									
Males.....	10	1	6	9	2	7	1	7	4
Females.....	3	1	4	5	2	8		8	5
Total	13	2	10	14	4	15	1	15	9
Lambton :									
Males.....	6		4	7	7	3	2	7	5
Females.....	8	1	3	10	1	5	4	5	6
Total	14	1	7	17	8	8	6	12	11
Lanark :									
Males.....			5	4	4	10		2	
Females.....	3		1	5	2	20	1	1	
Total	3		6	9	6	30	1	3	
Leeds and Grenville :									
Males.....	3		6	3		28		6	3
Females.....	4	1	4	3	3	38		4	11
Total	7	1	10	6	3	66		10	14
Lemnox and Addington :									
Males.....	2			2		3	1	1	13
Females.....	1		2	1		6	2	2	7
Total	3		2	3		9	3	3	20

CAUSES OF DEATHS, 1884—Continued.

DISEASES.									CLASS II.—CONSTITUTIONAL DISEASES.					
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
2		2	5						24	9	4	1	4	1
1		1						1	16	7	5		3	1
3		3	5					1	40	16	9	1	7	2
2					2			2	18	4	1		4	2
2			2				1	1	21	10	5		2	
4			2	2			1	3	39	14	6		6	2
9	2	2	1	2	30		2	2	116	29	8	4	4	5
5	3	3		1	23				101	23	11		9	3
14	5	5	1	3	53		2	2	217	52	19	4	13	8
5	3	1	5	1				3	49	26	7	2	7	3
3	2	1	6	2				1	44	31	10		5	
8	5	2	11	3				4	93	57	17	2	12	3
1			4	3			1	2	58	23	4		6	4
4		3	3	2				1	49	12	5		4	4
5		3	7	5			1	3	107	35	9		10	8
5	1	6	6	1	1		1		62	15	2	2	4	3
5		4	7					3	62	13	4		5	2
10	1	10	13	1	1		1	3	124	28	6	2	9	5
	1	1		1					28	15			4	1
				1					34	11	2		5	
	1	1		2					62	26	2		9	1
2		3	1	1					56	20	3	2	4	
3	1	1	1	1					75	12	5	1	4	
5	1	4	2	2					131	32	8	3	8	
3	1				3		1		30	15	6	1	1	
1	1				1			2	26	11	2		3	2
4	2				4		1	2	56	26	8	1	4	2

TABLE F.—DEATHS BY COUNTIES—

COUNTIES.	CLASS II.—Continued.					CLASS III.—			
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Algoma :									
Males		10			29	2	2	4	1
Females		17			33		1	2	
Total		27			62	2	3	6	1
Brant :									
Males		6			17	2	4	1	
Females	2	13		1	33	2	3	1	1
Total	2	19		1	50	4	7	2	1
Bruce :									
Males	1	32		2	85	4	5	4	2
Females	2	51		2	101	1	6	6	
Total	3	83		4	186	5	11	10	2
Carleton :									
Males	1	23			69	5	7	5	1
Females	1	42		2	91	6	8	4	1
Total	2	65		2	160	11	15	9	2
Dufferin :									
Males		30		2	69	5	4	9	2
Females	1	38	1	2	67	1	3	7	1
Total	1	68	1	4	136	6	7	16	3
Elgin :									
Males	2	28		4	60	4	4	8	
Females	1	26		5	56	6	6	8	2
Total	3	54		9	116	10	10	16	2
Essex :									
Males	2	13			35	5		3	
Females	2	27			47	5	1	1	1
Total	4	40			82	10	1	4	1
Frontenac :									
Males	4	28		1	62	6	3	4	
Females	2	41	1	2	68	2	4	3	3
Total	6	69	1	3	130	8	7	7	3
Grey :									
Males	2	12			37	1			
Females		15	1		34	1	1		
Total	2	27	1		71	2	1		

CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Necrotic (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
.....	1	.....	7	12	1	3	.....	.....	8	1	2	.....	.....	2
.....	1	.....	1	5	4	1	.....	.....	7	.....	3	.....	.....	.....
.....	2	.....	8	17	5	4	.....	.....	15	1	5	.....	.....	2
.....	1	.....	2	4	1	4	.....	.....	5	.....	2	1	3	3
.....	.....	1	3	8	.....	2	.....	.....	4	1	1	1	5	1
.....	1	1	5	12	1	6	.....	.....	9	1	3	2	8	4
.....	2	6	2	8	7	2	1	.....	21	.....	1	6	.....	1
.....	1	.....	8	11	4	3	.....	1	16	1	9	3	1	.....
.....	2	7	2	16	18	5	1	1	37	1	10	9	1	1
.....	1	2	1	6	16	6	1	1	12	.....	9	5	2	2
.....	6	.....	8	14	5	6	.....	.....	14	.....	6	1	1	5
.....	1	8	1	14	30	13	12	1	26	.....	15	6	3	7
.....	1	1	2	7	11	7	5	.....	23	1	7	.....	2	3
.....	.....	1	9	11	16	3	1	1	10	2	8	1	.....	.....
.....	1	1	3	16	22	23	8	1	33	3	15	1	2	3
.....	6	.....	4	11	2	3	.....	.....	29	1	13	.....	1	.....
.....	3	.....	5	8	3	11	.....	2	24	1	8	.....	1	1
.....	9	.....	9	19	5	14	.....	2	53	2	21	.....	2	1
.....	1	3	.....	3	10	.....	.....	.....	9	.....	3	2	1	.....
.....	2	.....	5	12	1	2	.....	.....	7	2	3	1	3	1
.....	1	5	.....	8	22	1	2	.....	16	2	6	3	4	1
.....	.....	2	9	8	8	4	.....	1	29	.....	6	5	2	1
.....	1	2	4	12	9	3	.....	.....	13	.....	5	2	3	.....
.....	1	.....	4	13	20	17	7	.....	33	.....	11	7	5	1
.....	1	.....	8	2	4	2	.....	.....	4	1	3	.....	1	.....
.....	.....	5	3	2	2	.....	.....	.....	5	2	1	1	.....	.....
.....	1	.....	13	5	6	2	.....	.....	9	3	4	1	1	.....

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder.	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitia (Teething).	Partus Emortuus (Still Birth)
Haldimand :									
Males.....	2			2	1	4	55	1	1
Females.....		2				1	28		
Total.....	2	2		2	1	5	83	1	1
Halton :									
Males.....	2	2		2		5	44		
Females.....			1	3		6	44	1	
Total.....	2	2	1	5		11	88	1	
Hastings :									
Males.....			2	6	3	9	100	3	5
Females.....			3	1		11	86	3	5
Total.....			5	7	3	20	186	6	10
Huron :									
Males.....	4	2	7	6	2	17	128	3	6
Females.....		1			3	18	107		2
Total.....	4	3	7	6	5	35	235	3	8
Kent :									
Males.....		1	5	3	3	5	107		3
Females.....	1		1	1	1	8	87		1
Total.....	1	1	6	4	4	13	194		4
Lambton :									
Males.....	1		3	1		7	98		3
Females.....		2			1	17	109		5
Total.....	1	2	3	1	1	24	207		8
Lanark :									
Males.....		1	2		1	4	48		2
Females.....						6	53		
Total.....		1	2		1	10	101		2
Leeds and Grenville :									
Males.....	2	2		4	1	6	94		1
Females.....		3	1	3		8	81	1	
Total.....	2	5	1	7	1	14	175	1	1
Lennox and Addington :									
Males.....		1	1	1		1	31	1	1
Females.....			1		1	3	26	1	
Total.....		1	2	1	1	4	57	2	1

CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total No. of Deaths.
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
1	6	8	16	10				1		2	3		121
				23						2	2		102
1	6	24		33				1		4	5		223
1	7	19	1	20	2	1				6	9	2	110
		19		28						3	3	2	131
1	7	38	1	48	2	1				9	12	4	241
2	11	31	2	43	17	3		1		13	34		378
1		27	2	49								6	343
3	11	58	4	92	17	3		1		13	34	6	721
3	12	36	1	49	7					8	15	7	317
		27		41						3	3	12	298
3	12	63	1	90	7					11	18	19	615
2	19	24	1	30	5	1		1		7	14	5	283
1		23		44	4					2	6	15	268
3	19	47	1	74	9	1		1		9	20	20	551
9	11	15	4	31	7	1		1		6	15	8	274
5		11	1	33	1					3	4	6	270
14	11	26	5	64	8	1		1		9	19	14	544
1	5	36		33	6	1				2	9	4	157
1		18		24						3	3	2	163
2	5	48		57	6	1				5	12	6	320
	11	36		37	3			1		2	6	6	261
		37	2	51						2	2	12	289
	11	73	2	88	3			1		4	8	18	550
1	6	12		15		1					1	1	115
		20		27		1				1	2	2	117
1	6	32		42		2				1	3	3	232

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Group).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Lincoln :									
Males.....	9		5	3	3	3	3	10	2
Females.....	6	1	6	2	2	3	2	3	
Total.....	15	1	11	5	5	6	5	13	2
Middlesex :									
Males.....	17		2	19	5	9	3	17	
Females.....	5		5	16	4	4	2	18	2
Total.....	22		7	35	9	13	5	35	2
Muskoka and Parry Sound :									
Males.....	2			3		5	3	4	1
Females.....	1		1	4	1				1
Total.....	3		1	7	1	5	3	4	2
Norfolk :									
Males.....	4		2	2			1	4	1
Females.....	4		1	2	1			8	
Total.....	8		3	4	1		1	12	1
Northumberland and Durham :									
Males.....	3	1	6	9	3	11	1	8	9
Females.....	5		3	13	1	9	5	6	5
Total.....	8	1	9	22	4	20	6	14	14
Ontario :									
Males.....	7		3	6		12	4	7	2
Females.....	4	1	1	2		9	1	6	3
Total.....	11	1	4	8		21	5	13	5
Oxford :									
Males.....	7		1	2		4	3	2	2
Females.....	4		4	5	1	4	1	3	1
Total.....	11		5	7	1	8	4	5	3
Peel :									
Males.....	8		1	1	2	5	2	3	
Females.....	2	1	2	2		6	1	5	3
Total.....	10	1	3	3	2	11	3	8	3
Perth :									
Males.....				6	2	1		8	2
Females.....	1		1	1	2	2	2	3	
Total.....	1		1	7	4	3	2	11	2

CAUSES OF DEATHS, 1884—Continued.

DISEASES.									CLASS II.— CONSTITUTIONAL DISEASES.					
Other Fevers.	Influenza.	Morbilli (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
1			1			1	1	1	43	19	4	1	3	2
1				2					28	13	5	1	4	6
2			1	2		1	1	1	71	32	9	2	7	8
6	1	10	9	7			1	5	111	41	11	2	15	6
2		7	3	5				3	76	32	12	2	11	3
8	1	17	12	12			1	8	187	73	23	4	26	9
2								2	22	11	4		3	1
2	1		3	2				1	17	14	2	1	3	
4	1		3	2				3	39	25	6	1	6	1
4		2	1					3	24	10	4	1	5	1
2		1	1	2				1	23	7	6		2	
6		3	2	2				4	47	17	10	1	7	1
2	1		1	3				2	60	12	6		5	3
4			1	1			1	2	56	19	9	1	8	3
6	1		2	4			1	4	116	31	15	1	13	6
7			2	2			1	1	54	15		2	1	2
2	1	1	3						31	15	8		6	2
9	1	1	5	2			1	1	88	30	8	2	7	4
9			5	2			1	2	40	14	3	2	5	
4		1	2	3				2	35	14	4		10	1
13		1	7	5			1	4	75	28	7	2	15	1
1			2				1		26	6	5		2	2
5	1		1	1				2	32	4	3		6	2
6	1		3	1			1	2	58	10	8		8	4
1			4		1		1		26	7	4	2	11	
			3					2	17	10	4		7	
1			7		1		1	2	43	17	8	2	18	

TABLE F.—DEATHS BY COUNTIES—

COUNTIES.	CLASS II.— <i>Continued.</i>					CLASS III.—			
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Lincoln :									
Males.....	1	21		1	52	6	7	4	1
Females.....	1	37	1	2	70	2	4	2	1
Total.....	2	58	1	3	122	8	11	6	2
Middlesex :									
Males.....	8	45	1	6	135	13	14	10	4
Females.....	3	62	2	2	129	6	12	11	2
Total.....	11	107	3	8	264	19	26	21	6
Muskoka and Parry Sound :									
Males.....		4	1		24	6	5	2	1
Females.....		9			29		7	1	
Total.....		13	1		53	6	12	3	1
Norfolk :									
Males.....	1	13		1	36	5	4	1	1
Females.....	1	19			35	4	3	5	2
Total.....	2	32		1	71	9	7	6	3
Northumberland and Durham :									
Males.....	4	36		1	67	8	10	7	3
Females.....	2	60	1	3	106	2	5	7	1
Total.....	6	96	1	4	173	10	15	14	4
Ontario :									
Males.....	3	31			54	1	7	5	1
Females.....	2	45			78	3	7	7	
Total.....	5	76			132	4	14	12	1
Oxford :									
Males.....		20	1	2	47	5	9	7	1
Females.....	1	27		5	62	2	5	4	
Total.....	1	47	1	7	109	7	14	11	1
Peel :									
Males.....	1	17			33	3	4	4	
Females.....		21			36		4	2	1
Total.....	1	38			69	3	8	6	1
Perth :									
Males.....	3	25		2	54	2	7	4	1
Females.....		24		3	48	5	4	2	
Total.....	3	49		5	102	7	11	6	1

CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of the Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
.....	2	.....	5	11	6	.....	.....	.....	12	1	2	.....	3	1
.....	.....	.....	5	10	4	3	.....	.....	12	1	1	3	1	.....
.....	2	.....	10	21	10	3	.....	.....	24	2	3	3	4	1
1	3	3	12	31	19	12	2	.....	53	1	18	2	7	4
3	7	2	14	23	16	13	1	.....	45	2	21	3	9	3
4	10	5	26	54	35	25	3	.....	98	3	39	5	16	7
.....	.....	.....	.....	8	1	3	.....	1	8	1	4	1	.....	.....
.....	.....	.....	4	2	1	2	1	.....	10	.....	5	.....	.....	.....
.....	.....	.....	4	10	2	5	1	1	18	1	9	1	.....	.....
.....	2	1	2	5	5	5	.....	1	21	.....	9	1	3	1
.....	3	.....	6	4	3	6	.....	.....	9	.....	2	.....	1	.....
.....	5	1	8	9	8	11	.....	1	30	.....	11	1	4	1
1	1	3	18	16	7	9	1	.....	22	3	13	6	7	2
1	4	2	16	18	14	3	.....	.....	15	.....	10	2	5	3
2	5	5	34	34	21	12	1	.....	37	3	23	8	12	5
1	3	1	10	9	5	8	.....	1	19	3	12	2	1	3
.....	2	2	2	10	4	7	1	.....	11	.....	8	3	4	3
1	5	3	12	19	9	15	1	1	30	3	20	5	5	6
.....	3	.....	13	17	3	4	.....	.....	30	.....	11	4	7	2
.....	2	1	7	10	4	6	1	.....	19	.....	6	3	1	3
.....	5	1	20	27	7	10	1	.....	49	.....	17	7	8	5
.....	2	1	5	3	3	4	.....	1	10	.....	2	3	3	3
1	2	.....	2	7	2	5	.....	.....	3	.....	2	1	3	2
1	4	1	7	10	5	9	.....	1	13	.....	4	4	6	5
.....	3	1	1	12	2	2	.....	.....	13	4	5	3	2	2
1	2	.....	5	7	3	8	.....	1	12	.....	8	2	2	2
1	5	1	6	19	5	10	.....	1	25	4	13	5	4	4

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitio (Teething).	Partus Emortuus (Still-Birth).
Lincoln :									
Males	2			1	1	10	75		8
Females			1	1		13	64		4
Total	2		1	2	1	23	139		12
Middlesex :									
Males		1	2	2	3	20	237	3	13
Females		1	3	1	3	16	217	6	5
Total		2	5	3	6	36	454	9	18
Muskoka and Parry Sound :									
Males	1	2			2	4	50	2	1
Females		1		2	2	1	39	2	3
Total	1	3		2	4	5	89	4	4
Norfolk :									
Males				1	1	3	72		1
Females			1	1		6	56		1
Total			1	2	1	9	128		2
Northumberland and Durham :									
Males	2	1	4	3	6	17	170	1	1
Females				2	3	14	127		1
Total	2	1	4	5	9	31	297	1	2
Ontario :									
Males	2	3		1		11	109		4
Females		1		1	3	4	83		4
Total	2	4		2	3	15	192		8
Oxford :									
Males			1	1	1	12	131	2	3
Females	1			2	1	13	91	1	4
Total	1		1	3	2	25	222	3	7
Peel :									
Males		1	2	2	2	2	60		3
Females			2	1		3	43		2
Total		1	4	3	2	5	103		5
Perth :									
Males		3	1	2	1	11	82		4
Females		1	2	3	1	10	81	1	2
Total		4	3	5	2	21	163	1	6

CAUSES OF DEATHS, 1881—*Continued.*

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total No. of Deaths.
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child-Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
1	.....	22	3	34	1	1	.....	2	.....	13	17	6	227
1	6	22	3	36	.....	1	.....	1	.....	3	5	7	210
2	6	44	6	70	1	2	.....	3	.....	16	22	13	437
11	.....	51	2	80	10	5	1	2	.....	15	33	13	609
13	17	50	4	95	3	.....	.....	.....	.....	1	4	19	540
24	17	101	6	175	13	5	1	2	.....	16	37	32	1149
4	.....	10	.....	17	5	.....	.....	.....	.....	9	14	3	130
1	4	6	1	17	.....	.....	.....	.....	.....	1	1	2	105
5	4	16	1	34	5	.....	.....	.....	.....	10	15	5	235
.....	.....	19	1	21	3	1	.....	.....	.....	2	6	3	162
1	8	16	2	28	.....	.....	.....	.....	.....	4	4	1	147
1	8	35	3	49	3	1	.....	.....	.....	6	10	4	309
2	.....	51	6	61	3	2	1	2	.....	10	18	7	383
1	8	47	.....	57	1	.....	.....	.....	.....	2	3	10	359
3	8	98	6	118	4	2	1	2	.....	12	21	17	742
4	.....	31	1	40	3	2	1	2	.....	6	14	8	279
1	9	37	5	56	1	.....	.....	.....	.....	2	3	9	263
5	9	68	6	96	4	2	1	2	.....	8	17	17	542
2	.....	33	1	41	6	2	.....	.....	.....	6	14	4	277
3	6	27	3	44	1	1	.....	1	.....	2	5	3	240
5	6	60	4	85	7	3	.....	1	.....	8	19	7	517
2	.....	11	.....	16	4	3	.....	1	.....	3	11	6	152
.....	2	22	1	27	.....	1	.....	.....	.....	2	3	8	149
2	2	33	1	43	4	4	.....	1	.....	5	14	14	301
4	.....	24	2	34	4	2	.....	.....	.....	2	8	5	209
1	9	35	1	49	1	.....	.....	.....	.....	4	5	7	207
5	9	59	3	83	5	2	.....	.....	.....	6	13	12	416

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS I—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Croup).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Peterborough:									
Males	1	1	2	3	2	4	1	6	12
Females	2	1	2	4	.....	4	.....	4	13
Total	3	2	4	7	2	8	1	10	25
Prescott and Russell:									
Males	8	.....	9	3	4	10	.....	5	1
Females	6	.....	6	3	.....	8	.....	8	1
Total	14	.....	15	6	4	18	.....	13	2
Prince Edward:									
Males	1	.....	1	1	2	2	.....	2	16
Females	3	.....	2	3	.....	2	.....	1	12
Total	4	.....	3	4	2	4	.....	3	28
Renfrew:									
Males	5	2	4	5	.....	11	2	2	1
Females	1	.....	1	3	.....	10	.....	3	1
Total	6	2	5	8	.....	21	2	5	2
Simcoe:									
Males	3	1	6	18	3	10	1	18	8
Females	1	.....	2	6	3	18	2	8	11
Total	4	1	8	24	6	28	3	26	19
Stormont, Dundas and Glengarry:									
Males	3	1	3	6	1	11	.....	3	4
Females	2	.....	4	7	.....	6	2	3	3
Total	5	1	7	13	1	17	2	6	7
Victoria:									
Males	1	.....	1	5	1	12	.....	2	1
Females	2	1	1	2	4	18	1	2	3
Total	3	1	2	7	5	30	1	4	4
Waterloo:									
Males	14	1	3	4	2	4	1	7	4
Females	4	1	1	4	.....	1	.....	7	1
Total	18	2	4	8	2	5	1	14	5
Welland:									
Males	10	2	1	2	2	2	.....	6	4
Females	3	.....	.....	1	.....	7	1	1	4
Total	13	2	1	3	2	9	1	7	8

CAUSES OF DEATHS, 1884—Continued.

DISEASES.										CLASS II.— CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbilli (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
5		1					1	1	40	15	2	1	1	2
6									36	9	2		3	1
11		1					1	1	76	24	4	1	4	3
5								1	46	51	4	2	1	3
3									35	40	2		3	1
8								1	81	91	6	2	4	4
5		1		2			1		34	3	3	2	3	
1		1							25	3	3	1	5	2
6		2		2			1		59	6	6	3	8	2
1	2		1				1		37	20	2	1	1	1
1	1	1							22	24	2		5	1
2	3	1	1				1		59	44	4	1	6	2
3			2	4			1		78	30	6	1	4	1
4	1		1	3				2	62	24	8	1	7	1
7	1		3	7			1	2	140	54	14	2	11	2
5			1					3	41	26	1	2	5	2
5		1	1	1				2	37	32	10		11	2
10		1	2	1				5	78	58	11	2	16	4
2				1		1	1	1	29	5	1		3	
2	1		2	1					40	10	7		1	
4	1		2	2		1	1	1	69	15	8		4	
2		1	2	1	1				47	12	2	2	2	3
1			1	2					23	14	8	3	6	1
3		1	3	3	1				70	26	10	5	8	4
6			2					1	38	6	3			2
5			4	1					27	5	1	2	4	3
11			6	1				1	65	11	4	2	4	5

TABLE F.—DEATHS BY COUNTIES—

COUNTIES.	CLASS II.— <i>Continued.</i>					CLASS III.—			
	Hydrocephalus.	Plithisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Peterborough :									
Males	3	21			45	4	6	7	1
Females		16			31	4	3	2	1
Total	3	37			76	8	9	9	2
Prescott and Russell :									
Males		18	1	1	81	4	7	9	1
Females		23		1	70	1	5	4	
Total		41	1	2	151	5	12	13	1
Prince Edward :									
Males	1	18		1	31	1	3	1	
Females	2	18	2	1	37	4	3	2	
Total	3	36	2	2	68	5	6	3	
Renfrew :									
Males		13		1	39	3	3		
Females	2	17		1	52	2	2	3	
Total	2	30		2	91	5	5	3	
Simcoe :									
Males	1	31		3	77	2	22	2	1
Females	1	33		3	78	2	7	3	
Total	2	64		6	155	4	29	5	1
Stormont, Dundas and Glengarry :									
Males	2	41		2	81	5	3	7	3
Females	4	62	1	1	123		1	4	2
Total	6	103	1	3	204	5	4	11	5
Victoria :									
Males	1	17			27	4	2	2	1
Females	2	17		3	40	1	2	4	
Total	3	34		3	67	5	4	6	1
Waterloo :									
Males		20		2	43	3	12	1	1
Females	1	30		2	65	5	8	3	2
Total	1	50		4	108	8	20	4	3
Welland :									
Males	3	11	1		26	5	5	2	
Females		24	1		40	1	3		1
Total	3	35	2		66	6	8	2	1

CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of the Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis. (Inflammation of Abdomen).
.....	1	1	6	12	3	2	.....	.....	16	1	7	.....	4	1
.....	2	.....	7	10	1	1	1	.....	9	.....	7	.....	2	1
.....	3	1	13	22	4	3	1	.....	25	1	14	1	6	2
.....	1	.....	4	5	3	.....	.....	2	6	1	2	1	4	2
.....	.....	.....	3	6	3	.....	.....	3	13	1	1	1	2	.....
.....	1	.....	7	11	6	.....	.....	5	19	2	3	2	6	2
.....	4	.....	2	10	5	3	1	1	2	3	5	.....	2	1
.....	1	.....	4	6	1	3	.....	.....	1	.....	1	1	.....	.....
.....	5	.....	6	16	6	6	1	1	3	3	6	1	2	1
.....	3	.....	5	4	1	3	1	.....	4	2	7	1	.....	.....
.....	1	.....	2	8	.....	4	.....	1	2	1	1	.....	.....	.....
.....	4	.....	7	12	1	7	1	1	6	3	8	1	.....	.....
.....	6	1	7	10	11	10	1	1	14	1	11	.....	2	3
.....	4	.....	6	14	4	12	.....	1	12	1	7	3	4	1
.....	10	1	13	24	15	22	1	2	26	2	18	3	6	4
.....	5	.....	6	7	2	1	.....	.....	12	2	7	.....	1	.....
.....	2	1	6	8	5	2	1	.....	9	1	6	1	3	.....
.....	7	1	12	15	7	3	1	.....	21	3	13	1	4	.....
1	2	.....	5	13	1	4	.....	1	11	.....	7	.....	.....	.....
.....	1	.....	2	7	1	1	.....	.....	15	.....	7	2	4	5
1	3	.....	7	20	2	5	.....	1	26	.....	14	2	4	5
.....	4	2	9	12	3	3	.....	.....	11	2	10	1	.....	.....
.....	4	.....	4	8	3	5	.....	.....	11	.....	7	1	1	4
.....	8	2	13	20	6	8	.....	.....	22	2	17	2	1	4
.....	1	1	6	10	2	3	.....	.....	19	.....	5	1	3	1
1	3	.....	4	5	2	2	.....	1	11	.....	1	.....	.....	.....
1	4	1	10	15	4	5	.....	1	30	.....	6	1	3	1

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitia (Teething).	Partus Emortuus (Still Birth).
Peterborough :									
Males.....				5	1	4	82	1	2
Females.....		1	2	2		5	62	1	4
Total.....		1	2	7	1	9	144	2	6
Prescott and Russell :									
Males.....				2	1	8	63	3	7
Females.....				1		3	47	3	2
Total.....				3	1	11	110	6	9
Prince Edward :									
Males.....	2	2	1	1		5	55	2	1
Females.....		1			1	5	34		1
Total.....	2	3	1	1	1	10	89	2	2
Renfrew :									
Males.....		3		1		6	47	1	2
Females.....					1	4	32	1	1
Total.....		3		1	1	10	79	2	3
Simcoe :									
Males.....			3	4	2	9	123	1	4
Females.....					1	12	94	1	2
Total.....			3	4	3	21	217	2	6
Stormont, Dundas and Glengarry :									
Males.....	4	1	3	4	2	5	80	1	3
Females.....	1			2	2	12	69	1	1
Total.....	5	1	3	6	4	17	149	2	4
Victoria :									
Males.....	1	3	1	4	1	5	69		6
Females.....		1	1	1	1	7	63		4
Total.....	1	4	2	5	2	12	132		10
Waterloo :									
Males.....	2	2	3	2	1	10	94	3	7
Females.....			1	1		5	73	2	5
Total.....	2	2	4	3	1	15	167	5	12
Welland :									
Males.....	1		3	5	2	7	82		
Females.....				1	1	11	48		2
Total.....	1		3	6	3	18	130		2

CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not specified.	Total No. of Deaths.
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child-Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
6		19		28	2					7	9	5	209
3	7	16		31		2		1			3	8	171
9	7	35		59	2	2		1		7	12	13	380
5		18	1	34	1					2	3	20	247
1	7	14	3	30						2	2	4	188
6	7	32	4	64	1					4	5	24	435
1		15	1	20	3			2	2	1	8	8	156
	6	17	3	27						1	1	10	134
1	6	32	4	47	3			2	2	2	9	18	290
1		14	4	22	7	2		2		7	18	9	172
5	17	19	1	44	2					2	4	12	166
6	17	33	5	66	9	2		2		9	22	21	338
3		28	4	40	10	2		1		5	18	14	350
	14	24	1	42	1					5	6	10	292
3	14	52	5	82	11	2		1		10	24	24	642
2		47	3	56	7	2				9	18	9	285
1	8	38		49						2	2	17	297
3	8	85	3	105	7	2				11	20	26	582
2		20	6	34	5	2				4	11	1	171
1	13	24	2	44						1	1	9	197
3	13	44	8	78	5	2				5	12	10	368
12		28	2	52	4	1		1		5	11	3	250
9	9	24	2	51						4	4	4	220
21	9	52	4	103	4	1		1		9	15	7	470
2		26	4	32	2	6		2		2	12	1	191
2	6	12	1	23		2					2	1	141
4	6	38	5	55	2	8		2		2	14	2	332

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Croup).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Wellington :									
Males	3	1	6	4	1	7	3	5	2
Females	6	.....	3	5	2	5	1	7	4
Total	9	1	9	9	3	12	4	12	6
Wentworth :									
Males	15	1	7	14	3	27	5	16	2
Females	4	1	9	18	2	36	5	12	3
Total	19	2	16	32	5	63	10	28	5
York :									
Males	47	6	16	62	7	24	14	42	15
Females	38	3	13	35	6	30	5	36	23
Total	85	9	29	97	13	54	19	78	38
Total :									
Males	246	21	150	209	75	323	69	274	186
Females	176	21	111	232	49	345	53	223	196
Grand Total	422	42	261	531	124	668	122	497	382

CAUSES OF DEATHS, 1884.

DISEASES.										CLASS II.— CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbilli (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
7	1	1	2	2	.....	.....	.....	.....	45	13	8	1	13	4
2	.....	1	1	1	.....	.....	.....	1	39	23	9	1	6	3
9	1	2	3	3	.....	.....	.....	1	84	36	17	2	19	7
2	.....	.....	1	1	.....	2	.....	1	97	34	5	.....	10	3
2	.....	.....	1	.....	.....	2	1	3	99	38	9	2	10	2
4	.....	.....	2	1	.....	4	1	4	196	72	14	2	20	5
12	.....	.....	7	8	1	3	6	3	273	102	10	3	27	1
13	2	3	11	13	.....	6	3	1	241	104	20	4	28	7
25	2	3	18	21	1	9	9	4	514	206	30	7	55	8
136	17	41	80	54	38	7	25	58	2099	876	173	48	187	72
110	20	40	74	54	25	8	9	43	1789	821	228	31	235	72
246	37	81	154	108	63	15	34	101	3888	1697	401	79	422	144

TABLE F.—DEATHS BY COUNTIES—

COUNTIES.	CLASS II.— <i>Continued.</i>					CLASS III.—			
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Wellington :									
Males	2	29	.....	3	73	10	12	6	.....
Females	2	54	.....	2	100	6	5	9	2
Total	4	83	.....	5	173	16	17	15	2
Wentworth :									
Males	3	49	.....	16	120	20	18	2	3
Females	3	80	1	16	161	24	12	2	.....
Total	6	129	1	32	281	44	30	4	3
York :									
Males	7	116	4	20	200	23	72	4	6
Females	10	142	3	18	336	38	50	9	11
Total	17	258	7	38	626	61	122	13	17
Total Males	112	986	23	82	2559	204	309	152	45
Total Females	102	1361	23	81	2954	162	218	149	45
Grand Total	214	2347	46	163	5513	366	527	301	90

CAUSES OF DEATHS, 1884—*Continued.*

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis. (Inflammation of Abdomen).
.....	2	.....	9	17	11	4	.....	.....	18	.....	9	1	4	1
.....	5	2	11	18	12	12	.....	1	26	.....	8	2	8	3
.....	7	2	29	35	23	16	.....	1	44	.....	17	3	12	4
3	12	5	17	29	11	17	1	1	44	1	7	5	10	10
3	12	1	9	38	11	15	.....	.....	27	.....	14	5	7	6
6	24	6	26	67	22	32	1	1	71	1	21	10	17	16
2	32	4	45	78	15	44	5	6	82	3	13	6	15	16
1	21	4	18	54	9	46	.....	5	83	2	17	11	11	24
3	53	8	63	132	24	90	5	11	165	5	30	17	26	40
25	130	40	299	486	195	214	17	22	690	44	270	70	107	73
14	105	23	236	443	187	212	11	16	565	24	242	68	98	72
39	235	63	535	929	382	426	28	38	1255	68	512	138	205	145

TABLE F.—DEATHS BY COUNTIES.—

COUNTIES.	CLASS III.— <i>Continued.</i>							CLASS IV.	
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitia (Teething).	Partus Mortuus (Still Birth).
Wellington :									
Males	2		2	3	1	19	131	2	18
Females		2		4		14	150	1	10
Total	2	2	2	7	1	33	281	3	28
Wentworth :									
Males		1	4	1	4	23	249		26
Females		2	5	2	4	19	218	2	17
Total		3	9	3	8	42	467	2	43
York :									
Males	5	6	10	22	14	32	560	11	79
Females		2	18	16	9	32	491	7	55
Total	5	8	28	38	23	64	1051	18	134
Total Males	43	48	72	111	62	361	4089	66	258
" Females	5	22	49	58	48	343	3417	63	173
Grand Total	48	70	121	169	110	704	7506	129	431

CAUSES OF DEATHS, 1884—*Concluded.*

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total Number of Deaths.
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child-Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
8	.....	41	6	75	7	2	.....	1	.....	5	15	16	355
2	10	30	2	55	6	.....	.....	1	.....	4	11	5	360
10	10	71	8	130	13	2	.....	2	.....	9	26	21	715
18	.....	36	4	84	13	3	.....	2	.....	8	26	8	584
7	14	35	.....	75	5	.....	.....	.....	.....	1	6	.....	559
25	14	71	4	159	18	3	.....	2	.....	9	32	8	1143
40	.....	78	13	221	20	14	1	6	.....	40	.....	5	1430
39	44	89	.....	234	11	.....	2	4	.....	17	34	11	1347
79	44	167	13	455	31	14	3	10	.....	57	115	16	2777
186	.....	1068	86	1664	225	75	6	40	4	263	613	267	11291
133	379	997	55	1800	45	11	3	13	.....	93	165	286	10411
319	379	2065	141	3464	270	86	9	53	4	356	778	553	21702

H. S. CREWE,

Inspector.

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Group).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Brantford :									
Males	1		1			3		1	
Females	2		2	2		4	1	3	
Total	3		3	2		7	1	4	
Walkerton :									
Males			1	1		2	1		
Females			1						
Total			2	1		2	1		
Ottawa :									
Males	14		11	39	1	3		9	5
Females	13		2	27	1	4	1	7	6
Total	27		13	66	2	7	1	16	11
St. Thomas :									
Males	7		1			3	1	3	
Females	2		2			2		3	
Total	9		3			5	1	6	
Windsor :									
Males	3		1	2		5			1
Females	1		1	2	1	6	1	2	
Total	4		2	4	1	11	1	2	1
Kingston :									
Males			5	5	1	3	1	3	
Females	1		5	1	1	2		3	2
Total	1		10	6	2	5	1	6	2
Owen Sound :									
Males	1			1	1		1		
Females								2	
Total	1			1	1		1	2	
Belleville :									
Males	3		2	2		2			18
Females	11							3	13
Total	14		2	2		2		3	31
Goderich :									
Males									6
Females					1				2
Total					1				8

TOWNS.—CAUSES OF DEATHS, 1884.

DISEASES.										CLASS II.—CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
.....	1	.....	.....	.....	2	9	5	2	.....	.....	1
.....	14	5	3	.....	3	.....
.....	1	.....	.....	.....	2	23	10	5	.....	3	1
.....	5	2	1	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	1	3	.....	.....	.....	1	1
.....	1	.....	.....	.....	.....	.....	1	8	2	1	.....	1	1
2	1	4	3	.....	.....	.....	3	95	72	5	3	4	2
3	2	1	1	.....	1	4	73	90	7	3	10	2
5	1	6	4	1	.....	1	7	168	162	12	6	14	4
.....
2	2	.....	.....	.....	.....	.....	.....	19	4	1	.....	1	.....
1	3	.....	.....	.....	.....	.....	.....	13	2	.....	.....	.....	.....
3	5	.....	.....	.....	.....	.....	.....	32	6	1	.....	1	.....
.....	1	.....	.....	2	.....	15	14	1	.....	.....	.....
.....	1	.....	.....	2	2	19	4	.....	.....	.....	.....
.....	2	.....	.....	4	2	34	18	1	.....	.....	.....
.....
2	20	8	1	.....	2	.....
1	16	10	1	1	6	2
3	36	18	2	1	8	2
.....	1	2	.....	.....	.....	.....	1	8	3	.....	.....	1	1
1	3	3	.....	.....	.....	.....
1	1	2	.....	.....	.....	.....	1	11	6	.....	.....	1	1
.....
1	1	1	1	.....	.....	.....	.....	31	3	.....	1	.....	3
1	28	4	5	.....	1	1
2	1	1	1	.....	.....	.....	.....	59	7	5	1	1	4
.....
1	7	.....	1	.....	2	.....
.....	3	.....	1	.....	2	.....
1	10	.....	2	.....	4	.....

TABLE G.—DEATHS BY CITIES AND PRINCIPAL

CITIES AND TOWNS	CLASS II.—Continued.					CLASS III.—			
	Hydrocephalus.	Phtthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Brantford :									
Males.....	1	7			16	3	1		
Females		3			14	1			
Total	1	10			30	4	1		
Walkerton :									
Males.....		1			4	1	1		
Females		2			4				
Total		3			8	1	1		
Ottawa :									
Males.....	40	41	9	2	178	5	11	12	
Females	40	59	8		219	2	7	7	2
Total	80	100	17	2	397	7	18	19	2
St. Thomas :									
Males.....	1	1			8		3	1	
Females		7			9		1	1	
Total	1	8			17		4	2	
Windsor :									
Males.....	1	3			19	1	2	3	
Females	1	5			10	2	2	2	
Total	2	8			29	3	4	5	
Kingston .									
Males.	6	11		3	31	1	2	1	1
Females	4	17			41		1	1	1
Total	10	28		3	72	1	3	2	2
Owen Sound :									
Males.....	1	2			8	3			
Females		1		1	5			1	
Total	1	3		1	13	3		1	
Belleville :									
Males.....		11			18	3		1	
Females	1	11			23	1	1	1	
Total	1	22			41	4	1	2	
Goderich :									
Males.....					3		2		
Females		3			6	1			
Total		3			9	1	2		

TOWNS—CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of the Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
.....	2	.....	2	4	.....	2	.....	.....	16	.....	2	.....	.....	.....
.....	.....	.....	3	2	.....	1	.....	.....	9	.....	.....	1	.....	.....
.....	2	.....	5	6	.....	3	.....	.....	25	.....	2	1	.....	.....
.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	.....	1	.....
.....	.....	.....	.....	.....	1	1	.....	.....	2	1	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
.....	1	3	12	18	11	7	1	1	21	.....	17	1	2	1
2	3	.....	9	14	15	7	2	.....	17	2	19	4	1	.....
2	4	3	21	32	26	14	3	1	38	2	36	5	3	1
.....	.....	.....	2	2	.....	1	.....	.....	6	1	.....	.....	.....	.....
.....	.....	.....	1	3	1	.....	.....	.....	6	.....	2	.....	.....	.....
.....	.....	.....	3	5	1	1	.....	.....	12	1	2	.....	.....	.....
.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	.....
.....	1	.....	.....	2	1	.....	.....	.....	1	.....	1	.....	.....	1
.....	1	.....	.....	3	1	.....	.....	.....	2	.....	2	.....	.....	1
.....	2	.....	9	8	2	3	.....	1	8	1	2	1	2	.....
.....	3	.....	2	10	4	2	1	.....	8	1	1	1	.....	.....
.....	5	.....	11	18	6	5	1	1	16	2	3	2	2	.....
1	.....	.....	.....	2	2	4	.....	1	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	3	2	4	.....	.....	1	.....	.....	.....	.....	.....
1	.....	.....	.....	5	4	8	.....	1	1	.....	.....	.....	.....	2
.....	2	1	3	2	2	.....	1	.....	2	.....	.....	3	.....	.....
.....	.....	.....	2	5	2	1	.....	.....	4	.....	2	1	.....	.....
.....	2	1	5	7	4	1	1	.....	6	.....	2	4	.....	.....
.....	.....	1	1	3	.....	1	.....	.....	1	.....	3	.....	.....	.....
.....	1	.....	.....	.....	1	.....	.....	.....	4	.....	.....	.....	.....	.....
.....	1	1	1	3	1	1	.....	.....	5	.....	3	.....	.....	.....

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitia (Teething).	Partus Emortuus.
Brantford :									
Males	1			1		2	36		
Females							17	2	
Total	1			1		2	53	2	
Walkerton :									
Males							5		2
Females							3		1
Total							8		3
Ottawa :									
Males			1	3	2	17	147	20	19
Females	1				1	10	125	18	15
Total	1		1	3	3	27	272	38	34
St. Thomas :									
Males							16		1
Females						1	16		
Total						1	32		1
Windsor :									
Males			2			1	12		4
Females							13	1	1
Total			2			1	25	1	5
Kingston :									
Males						1	6		3
Females						1	3	3	1
Total						2	9	3	4
Owen Sound :									
Males				1		1	17		1
Females					1	2	14		
Total				1	1	3	31		1
Belleville :									
Males			1	4		5	30	2	5
Females			2			4	26		5
Total			3	4		9	56	2	10
Goderich :									
Males							12	1	1
Females					1	1	9		
Total					1	1	21	1	1

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total No. of Deaths.
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnera (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
2	.....	10	.....	12	1	1	1	.....	.....	1	4	1	78
4	3	9	.....	18	.....	.....	.....	.....	.....	.....	.....	2	65
6	3	19	.....	30	1	1	1	.....	.....	1	4	3	143
1	.....	2	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	19
.....	2	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	13
1	2	2	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	32
7	.....	27	5	78	6	.....	.....	.....	.....	9	15	10	523
10	11	27	8	89	.....	.....	.....	.....	.....	2	2	16	524
17	11	54	13	167	6	.....	.....	.....	.....	11	17	26	1047
1	.....	1	1	4	.....	1	.....	.....	.....	1	2	1	50
.....	.....	2	.....	2	.....	.....	.....	1	.....	.....	1	.....	41
1	.....	3	1	6	.....	1	.....	1	.....	1	3	1	91
2	.....	2	.....	8	.....	1	.....	.....	.....	1	2	2	58
2	1	5	1	11	.....	.....	.....	.....	.....	.....	.....	5	58
4	1	7	1	19	.....	1	.....	.....	.....	1	2	7	116
4	.....	16	1	24	5	.....	.....	.....	.....	3	8	5	139
6	1	4	.....	15	.....	.....	.....	1	.....	2	3	14	129
10	1	20	1	39	5	.....	.....	1	.....	5	11	19	268
.....	.....	2	1	4	3	.....	.....	.....	1	.....	4	.....	41
1	.....	3	.....	4	.....	.....	1	.....	.....	.....	1	.....	27
1	.....	5	1	8	3	.....	1	.....	1	.....	5	.....	68
.....	.....	8	.....	15	1	2	.....	.....	.....	2	5	.....	99
.....	2	7	1	15	.....	.....	.....	.....	.....	.....	.....	3	95
.....	2	15	1	30	1	2	.....	.....	.....	2	5	3	194
.....	.....	3	.....	5	.....	.....	.....	.....	.....	1	1	.....	28
.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	20
.....	.....	4	.....	6	.....	.....	.....	.....	.....	1	1	1	48

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL TOWNS.—

CITIES.	CLASS I.—ZYMOTIC							
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Group).	Diarrhoea Acuta (Acute Diarrhoea)	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).
Chatham :								
Males.....	2	1	2	2	1	5	1	2
Females.....	1	.....	1	1	2	4	.....	1
Total	3	1	3	3	3	9	1	3
Sarnia :								
Males.....	.....	.....	.....	1	1	2	1	3
Females	1	.....	.....	2	.....	1	.....	1
Total	1	.....	.....	3	1	3	1	4
Perth :								
Males.....	.....	.....	.....	1	1	.....	.....	.....
Females .....	.....	.....	.....	.....	1	.....	.....	.....
Total .....	.....	.....	.....	1	2	.....	.....	.....
Brockville :								
Males.....	1	.....	2	3	.....	6	3	.....
Females	2	.....	.....	3	.....	7	2	1
Total	3	.....	2	6	.....	13	5	1
Napanee :								
Males.....	.....	.....	.....	2	.....	.....	.....	6
Females.....	.....	.....	.....	.....	.....	1	1	1
Total .....	.....	.....	.....	2	.....	1	1	7
St. Catharines :								
Males.....	3	.....	4	1	.....	.....	1	8
Females	2	1	3	2	.....	1	.....	3
Total	5	1	7	3	.....	1	1	11
London :								
Males.....	9	.....	1	6	1	3	1	7
Females	2	.....	1	6	1	1	.....	6
Total	11	.....	2	12	2	4	1	13
Cobourg :								
Males.....	.....	.....	.....	.....	.....	5	.....	1
Females .....	.....	.....	.....	.....	.....	2	.....	.....
Total .....	.....	.....	.....	.....	.....	7	.....	1
Whitby :								
Males.....	.....	.....	.....	.....	.....	1	.....	1
Females	1	.....	.....	.....	.....	.....	.....	.....
Total	1	.....	.....	.....	.....	1	.....	1

CAUSES OF DEATHS, 1884—Continued.

DISEASES.										CLASS II.—CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
									16	1			2	1
3			1					1	16	1	1		1	
3			1					1	32	2	1		3	1
		1							9	2				
1		1							6				1	
1									15	2			1	
									2	2				
									1	1				
									3	3				
		3							18	5		1		
1									16	2		1	1	
1		3							34	7		2	1	
2									10	4	3			
1								1	5	3			1	1
3								1	15	7	3		1	1
						1			18	7	1	1	1	
									12	5	1		2	2
						1			30	12	2	1	3	2
2		1		2				1	34	7	1		7	1
1			1	2				2	24	5	4	1	4	1
3		1	1	4				3	58	12	5	1	11	2
				2					8					
1			1						4					
1			1	2					12					
3									5	2		1	1	
									1	2			1	
3									6	4		1	2	

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS II.—Continued.					CLASS III.—			
	Hydrocephalus.	Phthisis.	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Chatham :									
Males		11			15		2	3	2
Females		14		1	18		1		
Total		25		1	33		3	3	2
Sarnia :									
Males		4			6			1	
Females		3		2	6	1			
Total		7		2	12	1		1	
Perth :									
Males	1	1			4			2	
Females	1	7			9		1		
Total	2	8			13		1	2	
Brockville :									
Males	1	3			10		2		
Females	1	7			12		1	1	2
Total	2	10			22		3	1	2
Napanee :									
Males		2			9				
Females		6			11		1		
Total		8			20		1		
St. Catharines :									
Males	1	8			19	3	5	2	
Females	1	20	1		32	1	1	1	1
Total	2	28	1		51	4	6	3	1
London :									
Males	6	14		3	39	5	8		
Females	2	15	1		33		7	1	
Total	8	29	1	3	72	5	15	1	
Cobourg :									
Males		3			3	1	1	2	
Females		2			2	1	1	2	
Total		5			5	2	2	4	1
Whitby :									
Males		3			7			2	
Females		8			11	1			
Total		11			18	1		2	

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Necrocephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
			3	4					2		2			
			4		2			1	1	1		1		
			7	4	2			1	9	1	2	1		
	2			1		2		1	1		1			1
	2			1		2		1	1		1			1
1				1					4		1			
	1									1	2		1	
1	1			1					4	1	3		1	
			2		2	1			5		1	1		1
		1		1					3				1	
		1	2	1	2	1			8		1	1	1	1
			6	1	1					1	1			
			3						1					
			9	1	1				1	1	1			
	2		2	8	2				4					2
			1	5		3			7					
	2		3	13	2	3			11					2
			1	8	9	7	1		12		6		3	
			2	6	4	4			18	1	12	1	2	
			3	14	13	11	1		30	1	18	1	5	
			1	1			1							
					2						1		2	
			1	1	2		1				1		2	
				2		1		1	1		1			
				1	1				2					
				3	1	1		1	3		1			

TABLE G.—DEATHS BY CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitio (Teething).	Partus Emortuus (Still Birth).
Chatham :									
Males		1		1		1	27		2
Females	1					2	14		
Total	1	1		1		3	41		2
Sarnia :									
Males						1	5		
Females						1	8		
Total						2	13		
Perth :									
Males		1			1		11		2
Females							6		
Total		1			1		17		2
Brockville :									
Males						1	16		1
Females		1				3	14		
Total		1				4	30		1
Napanee :									
Males							10		
Females			1			1	7		
Total			1			1	17		
St. Catharines :									
Males						3	33		7
Females			1			6	27		4
Total			1			9	60		11
London :									
Males		1			3	3	67		8
Females			2		2	6	68	4	2
Total		1	2		5	9	135	4	10
Cobourg :									
Males	1		1			1	11		
Females					1	2	12		
Total	1		1		1	3	23		
Whitby :									
Males				1		1	10		1
Females				1			6		
Total				2		1	16		1

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not specified.	Total Number of Deaths.
Partus Intermestivus (Pre-mature Birth).	Diseases incidental to Child Birth.	Senectus (Old Age).	Other Developmental Dis-cases.	Total Developmental Dis-cases.	Vulnra (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
1	5	3		8	1	1				3	5		71
				8								1	57
1	5	8		16	1	1				3	5	1	128
1		2		3						2	2		25
	1		1	2									22
1	1	2	1	5						2	2		47
		5		7	1	1					2		26
	2			2						1	1	1	20
	2	5		9	1	1				1	3	1	46
		2		3						2	2	4	53
	3	10	1	14								2	58
	3	12	1	17						2	2	6	111
1		1		2		1					1		32
		4		4						1	1		28
1		5		6		1				1	2		60
1		4	1	13						10	10	4	97
1	3	5	1	14				1		2	3	4	92
2	3	9	2	27				1		12	13	8	189
6		10	1	25	1	1				5	7	3	175
6	5	8	3	28	1					1	2	2	157
12	5	18	4	53	2	1				6	9	5	332
		1		1			1			1	2		25
		4		4								1	23
		5		5			1			1	2	1	48
		3		4		1				3	4		30
	1	3		4									22
	1	6		8		1				3	4		52

TABLE G.—DEATHS BY CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS I—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Croup).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentery Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Woodstock:									
Males	2			1				1	
Females				1					
Total	2			2				1	
Brampton:									
Males	4					3	1		
Females		1	1			1		1	
Total	4	1	1			4	1	1	
Stratford:									
Males						1			2
Females							1	1	
Total						1	1	1	2
Peterborough:									
Males	1			1	2	2	1	4	3
Females			1	2				1	3
Total	1		1	3	2	2	1	5	6
Picton:									
Males					1				4
Females	1			1					2
Total	1			1	1				6
Pembroke:									
Males	1			3					
Females	1			3					1
Total	2			6					1
Barrie:									
Males				5	1				2
Females						1		1	
Total				5	1	1		3	
Cornwall:									
Males			2		1	4		1	
Females				1		3		2	2
Total			2	1	1	7		3	2
Lindsay:									
Males			1			5			
Females						8	1		
Total			1			13	1		

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

DISEASES.										CLASS II.— CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
									4	2	1			
									1	1				
									5	3	1			
			1						9	1	2			
1			1					1	7	2	1			
1			2					1	16	3	3			
									3	3			2	
									2	7			3	
									5	10			5	
							1		15	1				
2									9	3			1	1
2							1		24	4			1	1
2				1					8		1	1		
									4		1			
2				1					12		2	1		
									4	1			1	1
									5					
									9	1			1	1
									8	2	1			
								1	3	2			1	
								1	11	4	1		1	
			1						9	2			1	
			1						9	2	1			
			2						18	4	1		1	
1	1			1		1	1		8					
									12	1				
1	1			1		1	1		20	1				

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS II.—Continued.					CLASS III.—			
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Brantford :									
Males		6			9		1	1	
Females		2		1	4				
Total		8		1	13		1	1	
Walkerton :									
Males	1	8			12	1	1	1	
Females		4			7			1	
Total	1	12			19	1	1	2	
Ottawa :									
Males	1	9			15		1	2	
Females		9			19	1		1	
Total	1	18			34	1	1	3	
St. Thomas :									
Males	1	7			9	1	3	1	
Females		3			8	2	1	1	
Total	1	10			17	3	4	2	
Windsor :									
Males		4			6	1	2		
Females		6	2	1	10		3		
Total		10	2	1	16	1	5		
Kingston :									
Males		1		1	5				
Females		1		1	2			2	
Total		2		2	7			2	
Owen Sound :									
Males		1		1	5	2	2		
Females		5		1	9	1	1		
Total		6		2	14	3	3		
Belleville :									
Males	1	3			7	1	1		
Females	1	4			8			2	
Total	2	7			15	1	1	2	
Goderich :									
Males	1	6			7	1		1	
Females		4		1	6		1	1	
Total	1	10		1	13	1	1	2	

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Neuroencephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of the Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis (Inflammation of Abdomen).
			1	3		1			1		1	1	2	
				3	2	1	1		3					
			1	6	2	2	1		4		1	1	2	
		1	1			2				4			2	
			1	2	1	1			2		1			
		1	2	2	1	3			6		1		2	
				1	1				1					
			1		2	1		1			1			
			1	1	3	1		1	1		1			
		1	2	3					5		2		3	1
			2	7		1	1		4		1	1	1	
		1	4	10		1	1		9		3	1	4	1
	1			2	2	1	1			1				
	1		2	2		2	1					1		
	2		2	4	2	3	2			1		1		
	2					2	1		1		1			
				2		2					1			
	2			2		4	1		1		2			
					1	3					1			
					1	1			1	1		2		
					2	4			1	1	1	2		
	1				1									
	1			1					1					
	2			1	1				1					
1			1	3							1			
			1	1					1		1		1	1
1			2	4					1		2		1	1

TABLE G.—DEATHS BY CITIES AND PRINCIPAL TOWNS.—

CITIES.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitio (Teething).	Partus Emortuus (Still Birth).
Brantford :									
Males.....						1	13		
Females.....	1					1	12		
Total.....	1					2	25		
Walkerton :									
Males.....			1				14		3
Females.....						2	11		1
Total.....			1			2	25		4
Ottawa :									
Males.....		1				2	9		2
Females.....					1	1	10	1	2
Total.....		1			1	3	19	1	4
St. Thomas ;									
Males.....				2	1	1	26	1	1
Females.....			1			3	26	1	
Total.....			1	2	1	4	52	2	1
Windsor :									
Males.....	2						13	1	
Females.....					1	3	16		
Total.....	2				1	3	29	1	
Kingston :									
Males.....						1	8		1
Females.....						1	8		
Total.....						2	16		1
Owen Sound :									
Males.....						3	12		
Females.....						3	11		1
Total.....						6	23		1
Belleville :									
Males.....	1		1				6		
Females.....	1			1		3	10	1	
Total.....	2		1	1		3	16	1	
Goderich :									
Males.....					1	1	10		
Females.....						1	9		
Total.....					1	2	19		

CAUSES OF DEATHS, 1884—Continued.

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.								
Partus Intempestivus (Pre-mature Birth).	Diseases incidental to Child-Birth.	Senectus (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnere (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.	Cause not specified.	Total No. of Deaths.
		4		4						1	1		31
	1	1		2									19
	1	5		6						1	1		50
		1		4	1	1				1	3	3	45
		3		4								1	30
		4		8	1	1				1	3	4	75
		4		6		1					1	1	35
	1	2		6								4	41
	1	6		12		1					1	5	76
		5		7						2	2	1	60
1		4		6									49
1		9		13						2	2	1	109
		1		2					2		2		31
	1	2		3						1	1	2	36
	1	3		5					2	1	3	2	67
				1				1			1		19
2	2		1	5						1	1		21
2	2		1	6				1		1	2		40
					2						2		27
	2	3		6						1	1		30
	2	3		6	2					1	3		57
1		2		3	1					2	3		28
1	1	4		7									34
2	1	6		10	1					2	3		62
1		2		3		1					1	1	30
1	1	2		4									31
2	1	4		7		1					1	1	61

TABLE G.—DEATHS BY CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS I.—ZYMOTIC								
	Cholera Infantum.	Cholera Morbus.	Cynanche Trachealis (Membranous Croup).	Diarrhoea Acuta (Acute Diarrhoea).	Dysentaria Acuta (Acute Dysentery).	Diphtheria.	Erysipelas.	Febris Typhoides (Typhoid Fever).	Scarlatina (Scarlet Fever).
Berlin :									
Males	1		1			1		2	
Females	1							1	
Total	2		1			1		3	
Guelph :									
Males	1		1	2		4	2	3	
Females				2		3		3	1
Total	1		1	4		7	2	6	1
Hamilton :									
Males	12	1	5	10	1	23	5	9	
Females	4	1	6	13	2	27	5	6	2
Total	16	2	11	23	3	50	10	15	2
Toronto :									
Males	30	1	13	56	4	9	9	41	3
Females	37		8	29	4	18	3	26	5
Total	67	1	21	85	8	27	12	67	8
Total :									
Males	96	3	54	144	17	95	26	98	54
Females	83	3	34	98	14	96	14	77	44
Grand Total	179	6	88	242	31	191	40	175	98

TOWNS.—CAUSES OF DEATHS, 1884—Continued.

DISEASES.										CLASS II.— CONSTITUTIONAL DISEASES.				
Other Fevers.	Influenza.	Morbili (Measles).	Whooping Cough.	Pyæmia.	Variola (Small Pox).	Syphilis.	Alcoholism.	Other Zymotic Diseases.	Total Zymotic Diseases.	Anæmia.	Anasarca (General Dropsy).	Asthma.	Carcinoma (Cancer).	Rheumatism.
.....	.....	1	1	.....	1	.....	.....	.....	2	4	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	6	.....	.....	.....	.....
.....	.....	1	1	.....	1	.....	.....	.....	10	10	.....	.....	.....	1
.....
1	.....	.....	.....	1	.....	.....	.....	2	16	2	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	10	5	1	.....	2	.....
1	.....	.....	.....	1	.....	.....	.....	2	26	7	1	.....	5	.....
.....
1	.....	.....	.....	1	.....	1	.....	1	69	27	2	.....	8	2
.....	.....	.....	.....	.....	.....	2	1	3	73	25	5	2	4	.....
1	.....	.....	.....	1	.....	3	1	4	142	52	7	2	12	2
.....
7	.....	.....	2	7	1	1	5	9	198	92	4	1	14	1
8	1	.....	7	11	.....	6	2	3	168	87	13	4	23	5
15	1	.....	9	18	1	7	7	12	366	179	17	5	37	6
.....
24	.....	11	12	20	2	4	9	19	688	278	28	9	50	14
29	2	4	14	16	1	8	6	19	562	278	45	12	63	16
53	2	15	26	36	3	12	15	38	1250	556	73	21	118	30

TABLE G.—DEATHS BY COUNTIES—

CITIES AND TOWNS.	CLASS II.—Continued.					CLASS III.—			
	Hydrocephalus.	Phthisis (Consumption).	Scrofula.	Other Constitutional Diseases.	Total Constitutional Diseases.	Apoplexy.	Convulsions.	Encephalitis (Inflammation of Brain).	Epilepsy.
Berlin :									
Males.....		1		1	7	1			1
Females.....		1			7			2	
Total.....		2		1	14	1		2	1
Guelph :									
Males.....	1	10		2	18	1	1	1	
Females.....	1	11		1	21		1		
Total.....	2	21		3	39	1	2	1	
Hamilton :									
Males.....	2	31	1	13	86	9	12	2	1
Females.....	3	47		14	100	14	6	2	
Total.....	5	78	1	27	186	23	18	4	1
Toronto :									
Males.....	5	88	4	21	230	22	62	4	6
Females.....	9	101	3	14	259	30	47	5	10
Total.....	14	189	7	35	489	52	109	9	16
Total :									
Males.....	72	301	14	47	813	66	126	43	12
Females.....	65	388	15	38	925	59	85	35	16
Grand Total.....	137	689	29	85	1738	125	211	78	28

CAUSES OF DEATHS, 1884—Continued.

LOCAL DISEASES.

Insanity.	Meningitis.	Nececephalus (Softening of Brain).	Paralysis (Palsy).	Valvular Disease of the Heart.	Apoplexia Pulmonalis (Congestion of Lungs).	Bronchitis.	Laryngitis.	Pleurisy.	Pneumonia.	Dyspepsia.	Enteritis (Inflammation of Bowels).	Gastritis (Inflammation of Stomach).	Hepatitis (Inflammation of Liver).	Peritonitis. (Inflammation of Abdomen).
.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
.....	1	.....	.....	1	1	1	.....	.....	1	.....	.....	.....	.....	.....
.....	2	.....	1	2	1	1	.....	.....	1	.....	2	.....	.....	.....
.....	.....	.....	4	4	2	.....	.....	.....	1	.....	1	1	2	.....
.....	3	2	4	1	3	3	.....	.....	7	.....	1	1	1	1
.....	3	2	8	5	5	3	.....	.....	8	.....	2	2	3	1
.....	10	1	4	11	8	10	1	1	29	.....	3	3	8	4
.....	7	1	5	22	6	9	.....	.....	9	.....	10	3	5	5
.....	17	2	10	33	14	19	1	1	38	.....	13	6	13	9
1	26	3	26	56	20	38	1	5	72	2	13	4	9	12
1	15	2	11	44	7	37	1	4	56	1	12	11	6	19
2	41	5	37	100	27	75	2	9	128	3	25	15	15	31
4	52	11	84	149	67	85	8	10	203	7	63	15	35	21
3	37	6	55	139	58	83	7	7	170	8	68	28	22	28
7	89	17	139	288	125	168	15	17	373	15	131	43	57	49

TABLE G.—DEATHS IN THE CITIES AND PRINCIPAL

CITIES AND TOWNS.	CLASS III.—Continued.						CLASS IV.		
	Cystitis (Inflammation of Bladder).	Diabetes.	Nephria (Bright's Disease).	Nephritis (Kidney Disease).	Abscess.	Other Local Diseases.	Total Local Diseases.	Dentitio (Teething).	Partus Emortuus (Still-Birth).
Berlin :									
Males				1		3	11		
Females							7	2	
Total				1		3	18	2	
Guelph :									
Males			1		1	6	26	1	12
Females		1		1		2	32	1	10
Total		1	1	1	1	8	58	2	22
Hamilton :									
Males			3	1	4	18	143		26
Females		1	4	2	4	12	128	2	16
Total		1	7	3	8	30	271	2	42
Toronto :									
Males	1	3	7	17	8	25	443	9	70
Females		1	17	11	9	54	411	5	52
Total	1	4	24	28	17	79	854	14	122
Total :									
Males	6	7	18	32	22	104	1250	35	172
Females	4	4	28	16	22	128	1116	41	111
Grand Total	10	11	46	48	44	232	2366	76	283

TOWNS.—CAUSES OF DEATHS, 1881—*Continued.*

DEVELOPMENTAL DISEASES.					CLASS V.—VIOLENT DEATHS.							Cause not Specified.	Total No. of Deaths.
Partus Intempestivus (Pro-mature Birth).	Diseases incidental to Child-Birth.	Scarcetis (Old Age).	Other Developmental Diseases.	Total Developmental Diseases.	Vulnere (Wounds).	Killed by Cars.	Murder and Manslaughter.	Suicide.	Execution (Hanging).	Other Violent Deaths.	Total Violent Deaths.		
3		12		15	2						2		43
2		5		9									25
5		17		24	2						2		68
1		13		27				1		3	4	1	92
		8		19	1						1		83
1		21		46	1			1		3	5	1	175
17		6	2	51	14	1				3	18	3	370
5	9	11	2	45	3					1	4	2	352
22	9	17	4	96	17	1				4	22	5	722
34		42	6	161	14	12	1	2		32	61	8	1101
35	16	58	11	177	7		2	3		12	24	15	1054
69	16	100	17	338	21	12	3	5		44	85	23	2155
84		196	18	505	53	26	3	4	3	88	177	48	3481
77	74	198	30	531	12		3	6		25	46	76	3256
161	74	394	48	1036	65	26	6	10	3	113	223	124	6737

H. S. CREWE,

Inspector.

TABLE H.—DEATHS BY AGES

COUNTIES.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Algoma :											
Males	29	5	1	4	1	1	1	.....	2	.....	2
Females	15	3	.....	.....	2	1	2	1	.....	.....	.....
Total	44	8	1	4	3	2	3	1	2	.....	2
Brant :											
Males	42	7	3	.....	3	3	1	.....	.....	.....	3
Females	40	5	6	1	2	2	1	.....	2	.....	1
Total	82	12	9	1	5	5	2	.....	2	.....	4
Bruce :											
Males	47	9	8	3	.....	5	2	2	1	2	2
Females	30	8	6	6	2	2	4	1	1	3	2
Total	77	17	14	9	2	7	6	3	2	5	4
Carleton :											
Males	294	43	17	3	9	3	4	6	5	1	2
Females	257	32	16	7	9	2	3	3	3	1	2
Total	551	75	33	10	18	5	7	9	8	2	4
Dufferin :											
Males	22	4	4	.....	1	1	2	.....	.....	1	1
Females	13	4	2	2	1	.....	2	.....	.....	2	1
Total	35	8	6	2	2	1	4	.....	.....	3	2
Elgin :											
Males	45	6	3	2	3	.....	2	.....	.....	.....	1
Females	31	3	5	.....	3	1	2	.....	1	1	.....
Total	76	9	8	2	6	1	4	.....	1	1	1
Essex :											
Males	115	29	19	13	8	2	5	9	4	3	1
Females	67	30	8	11	6	2	2	5	3	6	5
Total	182	59	27	24	14	4	7	14	7	9	6
Frontenac :											
Males	50	13	1	1	4	3	1	5	1	1	1
Females	42	13	1	4	2	3	1	1	3	1	2
Total	92	26	2	5	6	6	2	6	4	2	3
Grey :											
Males	46	11	5	9	1	3	3	4	.....	3	.....
Females	43	12	11	4	5	3	.....	.....	.....	1	1
Total	89	23	16	13	6	6	3	4	.....	4	1
Haldimand :											
Males	26	5	3	2	1	1	.....	2	.....	.....	.....
Females	14	3	1	.....	.....	3	.....	.....	.....	1	.....
Total	40	8	4	2	1	4	.....	2	.....	1	.....
Halton :											
Males	17	3	1	1	1	1	1	2	.....	.....	2
Females	19	4	2	2	.....	.....	1	.....	1	1	2
Total	36	7	3	3	1	1	2	2	1	1	4

BY COUNTIES, 1884.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
1	4			3	1	1	3		2	3	3	1	1	4
1		1	1						1	1	1	2	1	2
2	4	1	1	3	1	1	3		3	4	4	3	2	6
2	1	2	1		4	1			5	3	2	3	1	
1		1	2	1		2		5	4	1		2	2	1
3	1	3	3	1	4	3		5	9	4	2	5	3	1
1			2		3	4	2		3	3	3	2	2	2
	2		1	1	4	3	2	3	3	1	3	3	6	3
1	2		3	1	7	7	4	3	6	4	6	7	8	5
2	3	1		4	4	2		6		4	5	6	2	5
1		1	4	1	1	4	2	2	4	5	5	1	4	8
3	3	2	4	5	5	6	2	8	4	9	10	7	6	13
1	1	1		1	1		1	1		1	3			
	1	1				2	1	4	2		2	3	1	2
1	2	2		1	1	2	2	5	2	1	5	3	1	2
2			1		1	2	1		1	1	1	3	2	1
				3		3	1	2			3	5	1	2
2			1	3	1	5	2	2	1	1	4	8	3	3
5	3	1	2		1		3	1	3	3	5		5	1
3	1	1	4	2	4	5	3	1	3	3	6	5	1	4
8	4	2	6	2	5	5	6	2	6	6	11	5	6	5
4	1		3	2	4	1	1	4	5		5	2	5	4
		2		3	5	3	2		3	4	4	1	1	1
4	1	2	3	5	9	4	3	4	8	4	9	3	6	5
	1	1	1		2	2	1	1	6	2	4	3	2	4
4			2	3		5		1	2	1	2	4	1	3
4	1	1	3	3	2	7	1	2	8	3	6	7	3	7
	2				1					1	1			1
	1		2		1	1	3	1		1	2	2	2	
	3		2		2	1	3	1		2	3	2	2	1
1				1	1		1	1					3	
	1				1						1	1	3	2
1	1			1	2		1	1			1	1	6	2

TABLE H.—DEATHS BY AGES

COUNTIES.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Algoma :											
Males	5		2		1	1	1			3	
Females					1	2	2		2	1	
Total	5		2		2	3	3		2	4	
Brant :											
Males		2	1		1		1		2	2	2
Females	2		2	1		2	3	1	2	3	1
Total	2	2	3	1	1	2	4	1	4	5	3
Bruce :											
Males		2	3		1	1			5	1	1
Females	3	3	3	1	2	1	2	1	2		3
Total	3	5	6	1	3	2	2	1	7	1	4
Carleton :											
Males	2	5	4	2	3	1	2	2	3	3	3
Females	4	5	8	3	4	2	4	10	7	9	4
Total	6	10	12	5	7	3	6	12	10	12	7
Dufferin											
Males				1					1	1	
Females	2	1		1	1	1	1	1	1		
Total	2	1		2	1	1	1	1	2	1	
Elgin :											
Males	2	1	3	1	1	1	1		1	2	1
Females	2	2	2	2	5	2		3	1	1	4
Total	4	3	5	3	6	3	1	3	2	3	5
Essex :											
Males	1	1	4	1	1		1	6	2	1	
Females	1	2	1	3	3	2	4	5	2	2	
Total	2	3	5	4	4	2	5	11	4	3	
Frontenac :											
Males	3	1	2	3	1		1	2	2	2	3
Females	6		1	1	5	1	1	4		3	2
Total	9	1	3	4	6	1	2	6	2	5	5
Grey :											
Males	1	4	2	3	1		1		1	2	1
Females		4	2	3	4	2	1	2	5	3	4
Total	1	8	4	6	5	2	2	2	6	5	5
Haldimand :											
Males					1						
Females	1	1	1	2				1		3	1
Total	1	1	1	2	1			1		3	1
Halton :											
Males	1	1	2	1					1		
Females	2	5	3	1	2			1		2	1
Total	3	6	5	2	2			1	1	2	1

BY COUNTIES, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
	1	1	1	1		1	1	3			1			1
		1	2											
	1	1	3	1		1	1	3			1			1
1	2		2		1		4	1	2	2	1		3	1
1	1	2	1			1	3		1		3	1	1	
2	3	2	3		1	1	7	1	3	2	4	1	4	1
2	1	2	2	2		1	1	1	1		4	2	2	1
		1	4	3	1		3	1	1				3	
2	1	3	6	5	1	1	4	2	2		4	2	5	1
4	2	3	1	2	2	6	2	5	3	3	1	1	2	1
3	5	9	10	6	3	5	8	1	3	1	1	5	3	
7	7	12	11	8	5	11	10	6	6	4	2	6	5	1
				3	1			1				2		
1		1	1	2				1	1		1			
1		1	1	5	1			2	1		1	2		
1		1	1	1	2		2	2	1		2	2	2	
1	1	2	2	1	1	1	1	3			2	3	1	
2	1	3	3	2	3	1	3	5	1		4	5	3	
1	4	1	3	1		3	2		2	1	1	1	2	
	5	1	1	2	2	1	1	2	3	1	1		1	1
1	9	2	4	3	2	4	3	2	5	2	2	1	3	1
2	1		1	1	1	3	1	2	2	1	3	1	5	2
4	3	2					3	2		3		2	3	1
6	4	2	1	1	1	3	4	4	2	4	3	3	8	3
2		3	1	1	1	1	1	1	6	1	3	3	2	2
2	2	3	2	2		2		2	1	3	2	1	2	1
4	2	6	3	3	1	3	1	3	7	4	5	4	4	3
		1	1			1		1	1		1	2	2	1
2	1	1		1	1	1		1		2	1		2	
2	1	2	1	1	1	2		2	1	2	2	2	4	1
2	1		1		1			1				1		1
	1	2	2	1	2	3		1				2		
2	2	2	3	1	3	3		2				3		1

TABLE H.—DEATHS BY AGES.

COUNTIES.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Algoma:											
Males		1	1			2	1		1	1	1
Females				1				1		2	1
Total		1	1	1		2	1	1	1	3	2
Brant:											
Males	2		1	1	2	1	3	1	2	1	1
Females	1	1			2	2	1	3	3	2	2
Total	3	1	1	1	4	3	4	4	5	3	3
Bruce:											
Males			2	4	6	1	1	2	2	3	4
Females	5	1	1	1	2	2	2	1	1		3
Total	5	1	3	5	8	3	3	3	3	3	7
Carleton:											
Males	1	2		3	4	1	3	3	1		7
Females	5	2	2	4	3	3	2	1	4	1	4
Total	6	4	2	7	7	4	5	4	5	1	11
Dufferin:											
Males	1			1	1						1
Females		1					1		1		
Total	1	2		1	1		1		1		1
Elgin:											
Males	3		1		1	1	1		2	1	
Females	2		2							1	1
Total	5		3		1	1	1		2	2	1
Essex:											
Males	2	2	1	1					2		1
Females	1	1	2	1	3		1	3	3		1
Total	3	3	3	2	3		1	3	5		2
Frontenac:											
Males	1	2	5	1	2	1	2	2	5	2	3
Females	3	2		1	1	1	1	4	4		1
Total	4	4	5	2	3	2	3	6	9	2	4
Grey:											
Males	1	1	2	3	4	2	3	1	4	2	3
Females	1				3	6		3	1		2
Total	2	1	2	3	7	8	3	4	5	2	5
Haldimand:											
Males		1		1	3		1	1	3	1	
Females	1		1	1					2		1
Total	1	1	1	2	3		1	1	5	1	1
Halton:											
Males		1		1		1	1		1	1	2
Females	1		2	2	4	1					1
Total	1	1	2	3	4	2	1		1	1	3

BY COUNTIES, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
2				1			2		1		1	2		
1	2													1
3	2			1			2		1		1	2		1
	3	5	1	3	4	3	3	1	4	1	2	2	4	
2	2	2		3	4	3	3	2	1	5	2		1	1
2	5	7	1	6	8	6	6	3	5	6	4	2	5	1
	1	2	3	1	3	3	4	1	3	5	3	4	5	4
4	4	3	1	3		2	3	3		1	4	2	2	3
4	5	5	4	4	3	5	7	4	3	6	7	6	7	7
5	6	4	3		2	3	3	4	6	5	5	6	2	8
2	1	3	2	2	1	3	6	4	1	7	4	8	7	1
7	7	7	5	2	3	6	9	8	7	12	9	14	9	9
3		1	1	3	1	1			1	1		1		
2	1	1		2			2	1		2	2	1	2	
5	1	2	1	5	1	1	2	1	1	3	2	2	2	
1	1			1	4		2	2	2	6	3	5	4	1
	3	2	1		1			1			1	5	3	1
1	4	2	1	1	5		2	3	2	6	4	10	7	2
1	5	3	2	1	2	4	3	2	5	4		3	1	1
1	2	1	1		1	1	1	1	1		2	2	2	1
2	7	4	3	1	3	5	4	3	6	4	2	5	3	2
1	1	6	4	2	8	3	6	2	7	2	5	5	4	9
1	2	5	1	2	2	1	4	1	2		3	5	3	3
2	3	11	5	4	10	4	10	5	9	2	8	10	7	12
7	4	4	3	3	5	2	3	3	1	2	4	2	3	2
2			2	1	1	4	1	1	1	3	1	3	2	1
9	4	4	5	4	6	6	4	4	2	5	5	5	5	3
4	2	2	1	1	2	3	1	3	5	1	2		1	4
2	2	2		1	3			1	1		2	2		2
6	4	4	1	2	5	3	1	4	6	1	4	2	1	6
2	2	2	1	1	4	1			1	2	2	1	1	
4			1		1	1	1		1	2	2	2	2	3
6	2	2	2	1	5	2	1		2	4	4	3	3	3

TABLE H.—DEATHS BY AGES

COUNTIES.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Algoma :											
Males			1								
Females			1								
Total			2								
Brant :											
Males	2	3	3	3	1	2	3	1	1	1	1
Females	5	1	2	1	2	2	2	1	2	1	1
Total	7	4	5	4	3	2	5	2	3	2	2
Bruce :											
Males	6	3	2	2	1	1	3	2	1	4	1
Females	4		1	1		5	4	2	1	3	2
Total	10	3	3	3	1	6	7	4	2	7	3
Carleton :											
Males	3	1	3	2	2	4	6	4	3	2	2
Females	5	2	4		3	2	3	4	2		
Total	8	3	7	2	5	6	9	8	5	2	2
Dufferin :											
Males	2			3		1	2	1	1		1
Females	1						1	1		1	1
Total	3			3		1	3	2	1	1	2
Elgin :											
Males	1	3	2	2	1	3	2	1	1		
Females	2	2	1	2	1	3		1	2	3	3
Total	3	5	3	4	2	6	2	2	3	3	3
Essex :											
Males	2	2	1	2	2	1	2		1	2	
Females	5	1	6	1	2		5	2	1	1	1
Total	7	3	7	3	4	1	7	2	2	3	1
Frontenac :											
Males	6	1	4	3	4	8	3	2	2	1	
Females	1		2		1	2	2	1	3		
Total	7	1	6	3	5	10	5	3	5	1	
Grey :											
Males		1	1	2		3	2	1	2	4	1
Females	1	3		2	2	3	2	3	1		
Total	1	4	1	4	2	6	4	4	3	4	1
Haldimand :											
Males	3	2	1	1		1	2		1		
Females			1				1		3	1	
Total	3	2	2	1		1	3		4	1	
Halton :											
Males	4	1	2	1	3	1	4	1		2	1
Females	2		7	1		2	3			2	1
Total	6	1	9	2	3	3	7	1		4	2

BY COUNTIES, 1884—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
													21	135
													2	58
													23	193
						1							9	200
1	1			1									5	188
1	1			1		1							14	388
	2		1		1	1				1			8	251
				1	1					1		1	4	225
	2		1	1	2	1				2		1	12	476
1	2		3	2	1	1					1		20	649
				1			1			1		1	8	621
1	2		3	3	1	1	1			1	1	1	28	1270
1	1					1			1				5	
	1		1										3	92
1	2		1			1			1				8	187
	1						1						13	181
			1										14	170
	1		1				1						27	351
2	2							1				1	12	360
			1									1	15	313
2	2		1					1					27	673
3	1												15	312
1		3	1						1		1	1	17	241
4	1	3	1						1		1	1	32	553
		1	1	2	2			1					7	264
1	1				1		1		1				6	230
1	1	1	1	2	3		1	1	1				13	494
1												1	7	121
1	1												9	102
2	1											1	16	223
	2								1				8	110
		1		1									8	131
	2	1		1					1				16	241

TABLE H.—DEATHS BY AGES

COUNTIES.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Hastings :											
Males	77	15	18	12	10	5	10	4	4	3	3
Females	63	13	13	4	2	6	7	6	2	1	4
Total	140	28	31	16	12	11	17	10	6	4	7
Huron :											
Males	71	10	9	7	4	3	.....	1	.....	.....	3
Females	59	13	7	3	2	2	2	3	2	2	.....
Total	130	23	16	10	6	5	2	4	2	2	3
Kent :											
Males	73	9	5	9	4	1	3	1	5	1	1
Females	34	14	8	5	7	6	1	.....	2	3	.....
Total	107	23	13	14	11	7	4	1	7	4	1
Lambton :											
Males	86	12	8	2	2	2	2	1	4	1	1
Females	68	15	13	9	.....	4	2	4	2	.....	1
Total	154	27	21	11	2	6	4	5	6	1	2
Lanark :											
Males	37	4	4	2	7	3	2	.....	2	2	1
Females	21	6	3	3	2	2	4	2	3	1	5
Total	58	10	7	5	9	5	6	2	5	3	6
Leeds and Grenville :											
Males	41	18	7	11	6	7	.....	3	3	4	.....
Females	33	10	8	11	8	6	4	3	2	7	2
Total	74	28	15	22	14	13	4	6	5	11	2
Lennox and Addington :											
Males	25	3	5	1	4	3	1	.....	2	2	3
Females	19	3	4	3	3	.....	.....	.....	.....	.....	2
Total	44	6	9	4	7	3	1	.....	2	2	5
Lincoln :											
Males	58	10	4	.....	1	2	2	2	2	1	.....
Females	32	6	3	3	3	1	2	.....	.....	3	1
Total	90	16	7	3	4	3	4	2	2	4	1
Middlesex :											
Males	150	35	14	7	7	1	6	3	5	3	2
Females	122	37	7	7	4	1	2	3	2	3	.....
Total	272	72	21	14	11	2	8	6	7	6	2
Muskoka and Parry Sound :											
Males	29	8	3	2	.....	1	1	.....	.....	.....	.....
Females	35	6	.....	6	2	.....	1	.....	.....	.....	1
Total	64	14	3	8	2	1	2	.....	.....	.....	1
Norfolk :											
Males	40	9	3	3	1	1	.....	.....	.....	2	2
Females	14	11	7	3	1	.....	2	.....	2	.....	1
Total	54	20	10	6	2	1	2	.....	2	2	3

BY COUNTIES. 1884—Continued.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
5	1	1	2	1	3	6	6	6	2	3	2	2	7	3
2	5	5	1	7	4	6	6	3	2	7	6	10	3	1
7	6	6	3	8	7	12	6	9	4	10	8	12	10	4
2		1	1	2	1		2	5	3	3	1	7	2	
2	1	1	4	3	3	5	9	4	4	6	2	6	2	1
4	1	2	5	5	4	5	11	9	7	9	3	13	4	1
	1	1	2	1	1	3	3	2	1	3	1	1		2
1	1	1	2	3		2	2	5	4	3	3	8	5	3
1	2	2	4	4	1	5	5	7	5	6	4	9	5	5
	1		2		2	2	2		3	5	6	1	1	2
2	1	2	2			6	2	2	5	3		5	1	3
2	2	2	4		2	8	4	2	8	8	6	6	2	5
1	1					1	1		1		2	2		
3	3	1		1	1	1	1	3	3	2	1	6	1	1
4	4	1		1	1	2	2	3	4	2	3	8	1	1
2	3		1			1		1	2		2	3	2	1
2	2	3	1	2	3	3	5	4	3	5	4	2	3	7
3	5	3	2	2	3	4	5	5	5	5	6	5	5	8
			1	1	2		2	1	1	1	1			
2	1			1		1			1	1		2	1	1
2	1		1	2	2	1	2	1	2	2	1	2	1	1
1	1					3	3	2	4	1	3		3	4
		1	1		3	2	3	4	1	4	1	2	3	1
1	1	1	1		3	5	6	6	5	5	4	2	6	5
1	6	2	2	5		6	6	3	6	5	6	4	2	4
1	2	2	3	2	3	4	5	7	3	5	6	11	5	8
2	8	4	5	7	3	16	11	10	9	10	12	15	7	12
	2	1		2	2	2	1		2	2	1	1	2	
			1			2	2	1	1	1	3		1	1
	2	1	1	2	2	4	3	1	3	3	4	1	3	1
					3		1	2	1		2	2	1	3
	2		1	2	1	1	1	1			1	3	6	2
	2		1	2	4	1	2	3	1		3	5	7	5

TABLE H.—DEATHS BY AGES

COUNTIES.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Hastings:											
Males	2	2	3	1	6	2	1	2	3	2	1
Females	2	6	6				1	2	1	5	4
Total	4	8	9	1	6	2	2	4	4	7	5
Huron:											
Males	1	5	6		2					3	2
Females	4	4	1		1	1	4	4	2		2
Total	5	9	7		3	1	4	4	2	3	4
Kent:											
Males	2	2	3	2		1	1		1	2	2
Females	3	4	2	2	3	2	4	2	2	3	
Total	5	6	5	4	3	3	5	2	3	5	2
Lambton:											
Males	4	1	2	2	6	1	1	3	1	7	2
Females	6	5	3	2		6	2		3	3	2
Total	10	6	5	4	6	7	3	3	4	10	4
Lanark:											
Males	1	1	2		1	2	1		2	1	1
Females	2	1		2	1	1	1	1	2	1	2
Total	3	2	2	2	2	3	2	1	4	2	3
Leeds and Grenville:											
Males	1	1	1	3	2		3	1	2		1
Females	1	1	3	4	5	2	4	2	5	3	4
Total	2	2	4	7	7	2	7	3	7	3	5
Lennox and Addington:											
Males	1		2	1				2	1		2
Females	1	1	5	1	1	1		3	2		
Total	2	1	7	2	1	1		5	3		2
Lincoln:											
Males	3	2	2	2			2	2	2		1
Females		2	1	2		5		1	1	3	
Total	3	4	3	4		5	2	3	3	3	1
Middlesex:											
Males	3	4	3	2	4	1	7	4	2	10	2
Females	7	7	5	7	1	1	4	1	3	4	4
Total	10	11	8	9	5	2	11	5	5	14	6
Muskoka and Parry Sound:											
Males		1					1	2		3	
Females	2		1	2		1		1		2	
Total	2	1	1	2		1	1	3		5	
Norfolk:											
Males			1	1	2	1	1	2			1
Females	4	3	2	2		1	1	1	1	1	1
Total	4	3	3	3	2	2	2	3	1	1	2

BY COUNTIES, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
3	2	1	2	2	1	1	3	1	1	2	2	2	6	5
4	2	4	5	2	2	2	3	3		2	2	2	5	
7	4	5	7	4	3	3	6	4	1	4	4	4	11	5
			2			2	3		4	2	2			2
2	3	2	1	2	4		2		1	6				
2	3	2	3	2	4	2	5		2	8	2			2
5	1	2	5		1	3		1	1	2	3		1	1
2		5	2	1	4	4	4	2	2					2
7	1	7	7	1	5	7	4	3	3	2	3		1	3
	1	2		1	2	1			3	3			2	1
4	1	4	2	2	4			1		2				1
4	2	6	2	3	6	1		1	3	5			2	2
	1			1		1		1	1	1			1	
1	1			1	1	2	1	4	1		2	2	1	1
1	2			2	1	3	1	5	2	1	2	3	1	1
1		3	1				2	4	2	2	3	2	3	1
3	2	2	3		2	2	2	1			2			1
4	2	5	4		2	2	4	5	2	2	5	2	3	2
	1				3					1		1	1	2
			1					3		1		1	1	
	1		1		3			3		2		2	2	2
2		4	2	1	2				1	1	2		3	1
3	3	1		1	1	1	2	2	3	1	1	1	2	
5	3	5	2	2	3	1	2	2	4	2	3	1	5	1
3	3	3	8	1	7	1	7	2	2	6	8	4	5	4
3	5	5	12	2	10	4	4	10	1	5	3	4	4	3
6	8	8	20	3	17	5	11	12	3	11	11	8	9	7
	1	1	1	1	1	1	1	2				2	2	
1		1				1		1						2
1	1	2	1	1	1	2	1	3				2	2	2
	1	1	2	1	2	1	1	1	1	1				
3			1	1		1	1	2		1	1			2
3	1	1	3	2	2	2	2	3	1	2	1			2

TABLE H.—DEATHS BY AGES

COUNTIES.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Hastings :											
Males	5	3		6	1	1	1	1	5		4
Females	3	3	1	2	1	1		2	1	4	4
Total	8	6	1	8	2	2	1	3	6	4	8
Huron :											
Males	2	4	5	3	3	7	3	1	4		4
Females	3	1	1	1		1	3	5	4	2	5
Total	5	5	6	4	3	8	6	6	8	2	9
Kent :											
Males	3	3		1	1	2	4	1	3	2	2
Females	1	4	1	3	3	3	1	1		1	3
Total	4	7	1	4	4	5	5	2	3	3	5
Lambton :											
Males	2		3	4	2	4	3	3	1		1
Females	3	1	1	1			4	2	1	4	1
Total	5	1	4	5	2	4	7	5	2	4	2
Lanark :											
Males	1	2	1	2	1	2	2			1	2
Females		2	2	1		2	2	2			2
Total	1	4	3	3	1	4	4	2		1	4
Leeds and Grenville :											
Males				1	3		1		3	1	4
Females	3	1	2		2		3	1	3	2	2
Total	3	1	2	1	5		4	1	6	3	6
Lennox and Addington :											
Males							3				1
Females	1		2		1			1	2	2	
Total	1		2		1		3	1	2	2	1
Lincoln :											
Males	1	2	1	1	3	4	1	2	1		2
Females		2	4	4		1	8	2	5		
Total	1	4	5	5	3	5	9	4	6		2
Middlesex :											
Males	4	3	4	6	6	5	4	5	8	5	4
Females	1	4	7	3	3	2	3	6	5	1	
Total	5	7	11	9	9	7	7	11	13	6	4
Muskoka and Parry Sound :											
Males		1			1	2	2	1			3
Females							1	1	1		
Total		1			1	2	3	2	1		3
Norfolk :											
Males		2			2		2	4	2	2	1
Females		2	1		2	1		2			1
Total		4	1		4	1	2	6	2	2	2

BY COUNTIES, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
5	2	2	2	3	3	1	5	4	7	3	4	3	3	3
	1	4	2	2	3	2	2	3	4	1		2	1	
5	3	6	4	5	6	3	7	7	11	4	4	5	4	4
2	4	3	1	2	3	3	3	5	7	2	6	4	6	4
2	1		1		2	1	5	6	2	4	1	5	2	7
4	5	3	2	2	5	4	8	11	9	6	7	9	10	11
3	3	3	3	5	2	2	4	4	1	2	3	3	6	5
3	2		1	2	2		3	1	3	3	2	1	2	3
6	5	3	4	7	4	2	7	5	4	5	5	4	8	8
4	5	3	6		3	2	6		4				2	1
1	5	2	1	2	1	2	2	1	2	3	4		3	1
5	10	5	7	2	4	4	8	1	6	3	4		5	2
	2		1		1		4			1			1	1
2	3			2	3	2		2	1		1	2	2	2
2	5		1	2	4	2	4	2	1	1	1	4	1	3
1	1	3	4	2	2	1	6	2	7	4	2	4	4	3
2	1	2	1	3	1	1	3	2	4	1	4	2	3	1
3	2	5	5	5	3	2	9	4	11	5	6	6	7	4
	3			2	1	1	1				3	2	1	2
5	1	1		1	4	1	1			1	2	2		1
5	4	1		3	5	2	2			1	5	4	1	3
3			2			2	2	2	1	2	2	6	5	3
5			2		3	1	2		2	2	4	3	4	1
8			4		3	3	4	2	3	4	6	9	9	4
	5	2	1	2	7	5	3	10	11	7	6	8	11	6
4	3		6	10	11	5	5	3	3	4	6	5	8	5
4	8	2	7	12	18	10	8	13	14	11	12	13	19	9
		1	2	3	1		1	2	2			1	2	1
2	1			1				1			2	2		1
2	1	1	2	4	1		1	3	2		2	3	2	2
1	1	1	6		3		3	3	1	2	1	2	3	2
1	3	1	3	1	2		1	1		2	1	2	6	2
2	4	2	9	1	5		4	4	1	4	2	4	9	4

TABLE H.—DEATHS BY AGES

COUNTIES.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Hastings :											
Males	4	3	6	3	3	1	2	3	2	2	
Females	3	1	2	2	3	2	4	4	2	2	
Total	7	4	8	5	6	3	5	6	5	4	
Huron :											
Males	3	3	2	4	5	2	2	5	2	2	2
Females	2	6	4	3	3	2	1	2	2	1	1
Total	5	9	6	7	8	4	3	7	4	3	3
Kent :											
Males	2	3	4	2	1	2	1	2	2	2	
Females	2	4	3	1	1	1	1	2	2	1	1
Total	4	7	7	3	2	3	2	4	4	3	1
Lambton :											
Males	2		1	1	1	2	3	3			1
Females	1	2	1	2		2	1	5			
Total	3	2	2	3	1	4	3	4	5		1
Lanark :											
Males	7	2	4	1	3	4	4	4	1	2	
Females	1		2	1	1		1	3	3	3	
Total	8	2	6	2	4	4	4	5	4	2	3
Leeds and Grenville :											
Males	5	2	5	4	2	1	4	2	1	2	2
Females	2		6	2	1	3	1	3	3	2	1
Total	7	2	11	6	3	4	5	5	4	4	3
Lennox and Addington :											
Males			1		5	2	2	1	1	1	
Females			4		2	2	2	1	1		
Total			5		7	4	4	1	2	1	
Lincoln :											
Males	1	1		2	2	1	5	1	1	1	2
Females	1	1	7	1	1	1	1	2	3	3	1
Total	2	2	7	3	3	2	6	1	3	4	3
Middlesex :											
Males	4	5	11	2	5	9	4	4	4	4	2
Females	9	1	6	1	3	4	5	2	3	1	1
Total	13	6	17	3	8	13	9	6	7	5	3
Norfolk :											
Males		1	1	3	2		2				1
Females	1			2							
Total	1	1	1	5	2		2				1
Muskoka and Parry Sound :											
Males	3	1	1	2	1	3	2	1	1	2	
Females		1	1	4	4	4	2				
Total	3	2	2	6	5	7	4	1	1	2	

BY COUNTIES, 1884—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total
		1		1						1			9	378
				1	1								10	348
		1		2	1					1			19	721
1	1	1	1	1	2		1		1				11	317
3				1	1								10	298
4	1	1	1	2	3		1		1				21	615
	1			1						1	1		15	288
1				1							1		21	268
1	1			2						1	2		36	551
		1										1	6	273
													2	270
		1										1	8	544
	3	1											2	157
1	1	1	1	1									1	163
1	4	2	1	1									3	324
2			1		1			1				2	10	261
1	1	1			2								12	288
3	1	1	1		3			1				2	22	550
1	1	1											2	117
2		1		1			1						6	117
3	1	2		1			1						8	282
	1											2	17	227
1	1	1								1			15	210
1	2	1								1		2	32	437
1	1		1	1			1						15	609
1	2		1	1	1	2			2				9	540
2	3		2	2	1	2	1		2				24	1149
													12	130
													10	105
													22	235
		1			1	1							1	162
													4	147
		1			1	1							5	309

TABLE H.—DEATHS BY AGES

COUNTIES.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Northumberland & Durham :											
Males	76	12	7	5	6	3	4	4	1	4	1
Females	50	14	10	2	6	2	1	.....	2	2	3
Total	126	26	17	10	12	5	5	4	3	6	4
Ontario :											
Males	68	13	6	4	1	3	2	2	1	1	4
Females	37	7	8	1	2	4	1	1	2	3	1
Total	105	20	14	5	3	7	3	3	3	4	5
Oxford :											
Males	64	12	4	1	2	1	2	3	.....	4	1
Females	50	11	10	2	.....	3	1	2	.....	1	1
Total	114	23	14	3	2	4	3	5	.....	5	2
Peel :											
Males	41	4	1	1	2	1	2	.....	1	.....	.....
Females	14	5	2	4	2	3	2	4	.....	.....	.....
Total	55	9	3	5	4	4	4	4	1	.....	.....
Perth :											
Males	42	5	.....	3	1	1	1	1	1	1	.....
Females	36	8	5	3	1	.....	2	2	1	1	1
Total	78	13	5	6	2	1	3	3	2	2	1
Peterborough :											
Males	53	4	9	5	7	3	3	1	1	1	2
Females	30	6	5	5	2	2	4	1	2	2	2
Total	83	10	14	10	9	5	7	2	3	3	4
Prescott and Russell :											
Males	92	17	9	6	4	1	2	1	.....	1	2
Females	61	21	7	6	1	1	3	1	1	.....	1
Total	153	38	16	12	5	2	5	2	1	1	3
Prince Edward :											
Males	22	4	5	8	3	.....	2	2	1	2	.....
Females	17	2	3	2	2	3	1	2	.....	3	1
Total	39	6	8	10	5	3	3	4	1	5	1
Renfrew :											
Males	45	16	8	3	1	6	.....	2	2	1	.....
Females	39	7	4	2	4	6	2	.....	.....	3	1
Total	84	17	12	5	5	12	2	2	2	4	1
Simcoe :											
Males	53	17	13	6	8	2	4	2	1	5	3
Females	58	9	7	4	5	8	1	1	1	5	2
Total	146	26	20	10	13	10	5	3	2	10	5
Stormont, Dundas & Glengarry											
Males	57	12	8	5	1	4	2	1	.....	1	3
Females	52	11	9	3	3	1	1	1	2	2	1
Total	109	23	17	8	4	5	3	2	2	3	4

BY COUNTIES, 1884.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
1	1	3	2	2	2	4	6	1	2	6	2	3	3	4
2	4	2	3	3	2	4	2	1	6	8	4	5	8	3
3	5	5	2	3	4	8	8	2	8	14	6	8	11	7
1			3	3	4	1	1	3	2	3	1	3	2	2
1	3	1	2	3	3	5		2	3	7	6	5	2	6
2	3	1	5	3	7	6	1	5	5	10	7	8	4	8
		1	1		1	2	1	3	2		3	2	6	4
	2	3	4		1	2	3	3		6	2	1	4	4
	2	4	5		2	4	4	6	2	6	5	3	10	8
	1			1	1	1		1	2	4	2	3		
3	1	1				3	1	1	1			2	3	1
3	2	1		1	1	4	1	2	3	4	2	5	3	1
1		1	1	2	1		1	3	3	1	4	2	3	
		1	1		3		2	2	4	3		3	2	2
1		2	2	2	4		3	5	7	4	4	5	5	2
	1	4	1	1	1	2	4	1		2	2		1	1
1			2		1	1	1	5	1	1	5	5	2	1
1	1	4	3	1	2	3	5	6	1	5	7	5	3	2
1	1	1	2					2	2	2	1	5		3
		2	1	2	2		2	1	1			2	1	
1	1	3	3	2	2		4	3	3	1	5	2	1	3
1	1	2	4		1		1	3		1		3	1	2
1	2		1		1	1	3	3	4	1	2	2	5	2
2	3	2	5		2	1	4	6	4	2	2	5	6	4
2	2	3						2	2	3		4		1
1	2		3			2	1	2	2	2	2		3	4
3	4	3	3			2	3	4	5	2	6		3	5
	1	1	1	3	6	3		7	4	3	4	3	3	10
2	5		4	2	4	3	4	8	5	5	4	7	3	4
2	6	1	5	5	10	6	4	15	9	8	8	10	6	14
	3	1	1	2		2	4	1	2	3	3	2	2	6
	1		1	2	2	3	2		3	2	4	2	3	5
	4	1	2	4	2	5	6	1	5	5	7	4	5	11

TABLE H.—DEATHS BY AGES

COUNTIES.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Northumberland & Durham :											
Males	2	3	4	1	1	1	3	3	2	4	3
Females	10	3	4	4	6	1	1	2	3	4	3
Total	12	6	4	5	7	1	4	5	5	8	6
Ontario :											
Males	1	2	2	2	3	2	2	2	4	1	1
Females	1	5	2	2	3	4	2	3	1	1	2
Total	1	7	4	4	6	6	2	5	5	1	3
Oxford :											
Males	3	2	1	1	1	1	3	2	2	1	1
Females	2	1	1	3	3	1	2	4	1	1	1
Total	5	3	2	4	3	2	5	4	3	2	1
Peel :											
Males	1	3	1	1	3	2	1	1	1	1	1
Females	2	1	3	1	4	3	1	4	3	1	1
Total	3	3	3	2	7	5	2	4	3	2	2
Perth :											
Males	1	1	3	3	2	1	1	1	1	1	1
Females	3	1	2	1	1	1	1	3	2	1	2
Total	4	2	5	4	3	2	2	3	3	2	3
Peterboro :											
Males	1	3	1	1	2	1	2	1	2	1	2
Females	4	1	2	2	1	1	3	1	1	2	1
Total	4	3	3	3	3	1	5	2	3	2	2
Prescott & Russell :											
Males	2	1	2	1	1	1	1	2	1	1	1
Females	1	1	3	1	2	2	1	3	3	2	1
Total	3	1	5	1	3	2	1	5	4	2	2
Prince Edward :											
Males	2	1	1	1	1	1	2	1	2	1	1
Females	1	1	1	1	1	1	2	2	1	2	1
Total	3	1	2	2	2	2	4	3	3	2	2
Renfrew :											
Males	1	2	1	1	1	1	1	1	3	1	1
Females	1	4	3	3	2	1	1	1	1	1	1
Total	1	6	4	4	3	2	2	1	3	2	2
Simcoe :											
Males	4	3	2	1	1	1	1	1	2	6	1
Females	2	2	3	1	3	1	1	1	1	4	2
Total	6	5	5	1	3	2	1	1	2	10	3
Stormont, Dundas & Glengarry :											
Males	2	8	3	1	1	1	1	4	2	1	1
Females	7	3	10	4	7	1	1	2	2	4	3
Total	9	11	13	4	8	1	1	6	4	5	4

BY COUNTIES, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
4	3	1	.....	2	2	2	2	1	2	.....	1	2	3	1
2	1	2	6	3	3	2	3	2	.....	2	1	2	4	3
6	4	3	6	5	5	4	5	3	2	2	2	4	7	4
2	1	2	.....	.....	1	7	1	.....	1	1	2	4	3	4
5	3	1	3	1	2	1	2	1	.....	2	.....	1	1	1
7	4	3	3	1	3	8	3	1	1	3	2	5	4	5
1	2	.....	2	2	1	3	1	2	2	1	.....	.....	1	1
4	.....	2	1	2	1	.....	2	1	.....	2	1	1	.....	.....
5	2	2	3	4	2	3	3	3	2	3	1	1	1	1
.....	.....	.....	.....	1	1	.....	1	2	1	.....	.....	.....	2	1
3	.....	.....	2	2	2	.....	.....	1	1	1	.....	.....	.....	.....
3	.....	.....	2	3	3	.....	1	3	2	1	.....	.....	2	1
2	1	1	1	.....	1	.....	.....	.....	.....	3	1	.....	4	2
2	2	1	5	1	2	2	.....	4	.....	1	.....	.....	1	1
4	3	2	6	1	3	2	.....	4	.....	4	1	.....	5	3
2	1	.....	1	.....	3	.....	1	1	.....	2	2	1	.....	2
1	1	1	1	1	2	1	1	1	1	1	2	2	.....	1
3	2	1	2	1	5	1	2	2	1	3	4	3	.....	3
.....	1	1	3	.....	2	.....	2	1	1	.....	1	3	2	.....
.....	.....	1	3	.....	.....	2	1	1	1	1	2	.....	1	1
.....	1	2	6	.....	2	2	3	2	2	1	3	3	3	1
.....	.....	1	1	.....	1	2	1	.....	2	.....	1	2	.....	.....
3	.....	.....	1	1	.....	1	.....	1	.....	.....	4	.....	1	2
3	.....	1	2	1	1	3	1	1	2	.....	5	2	1	2
1	2	2	1	2	1	.....	1	1	1	.....	1	.....	.....	1
2	1	.....	2	.....	1	1	.....	1	.....	1	1	.....	1	2
3	3	2	3	2	2	1	1	2	1	1	2	.....	1	3
1	2	4	4	1	2	1	2	.....	.....	2	2	2	3	.....
2	.....	1	4	2	6	.....	2	2	1	1	.....	2	2	1
3	2	5	8	3	8	1	4	2	1	3	2	4	5	1
.....	.....	.....	1	.....	1	.....	2	.....	2	3	2	1	1	2
1	4	2	4	1	1	1	2	.....	2	2	4	2	6	3
1	4	3	5	1	2	1	4	.....	4	5	6	3	7	5

TABLE H.—DEATHS BY AGES.—

COUNTIES.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Northumberland and Durham:											
Males	1	3	4	.....	1	4	3	1	1	2	2
Females .....	.....	2	3	7	3	1	2	5	6	4	6
Total	1	5	7	7	4	5	5	6	7	6	8
Ontario:											
Males	3	1	2	2	2	.....	1	1	.....	2	2
Females	2	1	.....	3	1	.....	3	1	5	1	3
Total	5	2	2	5	3	.....	4	2	5	3	5
Oxford:											
Males	2	2	1	1	2	3	1	2	4	5	1
Females .....	.....	2	2	2	2	1	1	3	3	.....	1
Total	2	4	3	3	4	4	2	5	7	5	2
Peel:											
Males	1	.....	1	1	2	.....	1	.....	6	.....	2
Females	1	.....	.....	1	.....	.....	1	3	4	.....	1
Total	2	.....	1	2	2	.....	2	3	10	.....	3
Perth:											
Males	3	.....	1	.....	.....	2	3	3	.....	2	4
Females .....	.....	.....	1	1	1	1	4	3	2	4	1
Total	3	.....	2	1	1	3	7	6	2	6	5
Peterborough:											
Males .....	.....	2	1	3	1	1	1	1	2	.....	1
Females .....	.....	2	1	.....	.....	2	1	.....	2	1	1
Total .....	.....	4	2	3	1	3	2	1	4	1	2
Prescott and Russell:											
Males .....	.....	1	2	.....	2	1	1	.....	4	.....	1
Females .....	.....	.....	.....	4	.....	.....	.....	.....	2	.....	4
Total .....	.....	1	2	4	2	1	1	.....	6	.....	5
Prince Edward:											
Males	3	1	2	1	5	.....	1	.....	1	5	.....
Females .....	.....	1	.....	2	.....	.....	1	1	2	1	.....
Total	3	2	2	3	5	.....	2	1	3	6	.....
Renfrew:											
Males	3	.....	1	.....	2	.....	.....	.....	2	.....	.....
Females	1	1	1	2	.....	.....	3	2	2	.....	2
Total	4	1	2	2	2	.....	3	2	4	.....	2
Simcoe:											
Males	1	2	4	3	2	2	3	3	.....	2	3
Females	3	3	1	2	1	1	.....	1	3	1	2
Total	4	5	5	5	3	3	3	4	3	3	5
Stormont, Dundas & Glengarry:											
Males	1	1	2	2	.....	1	.....	2	2	.....	3
Females	3	1	1	4	1	1	1	2	3	1	2
Total	4	2	3	6	1	2	1	4	5	1	5

BY COUNTIES, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
5	2	5	2	1	3	7	7	8	11	6	9	6	10	7
4	2	.....	1	1	4	4	5	4	5	4	2	3	6	3
9	10	5	3	2	7	11	12	12	16	10	11	9	16	15
1	3	.....	1	4	2	2	1	1	2	2	1	4	5	6
2	5	3	.....	3	2	3	3	1	3	5	5	3	.....	1
3	8	3	1	7	4	5	4	2	5	7	6	7	5	7
1	5	3	3	4	.....	2	2	5	5	6	5	7	10	1
2	3	3	2	3	3	2	3	2	4	2	3	.....	4	2
3	8	6	5	7	3	4	5	7	9	8	8	7	14	3
1	.....	3	2	2	3	2	.....	.....	2	2	1	3	1	.....
2	2	.....	2	2	.....	.....	1	1	2	.....	3	1	1	3
3	2	3	4	4	3	2	1	1	4	2	4	4	2	3
2	3	2	3	3	4	1	6	5	5	6	1	2	1	5
2	1	1	2	.....	6	1	1	3	1	4	2	1	1	2
4	4	3	5	3	10	2	6	8	6	10	3	3	2	7
1	1	1	.....	3	3	.....	5	3	3	4	1	3	4	1
1	1	1	1	2	.....	.....	5	.....	4	2	1	4	.....	1
2	2	2	1	5	3	.....	10	3	7	6	2	7	4	2
.....	1	3	3	1	3	2	4	1	1	2	2	2	.....	.....
1	1	3	.....	.....	1	1	3	.....	2	.....	.....	1	1	1
1	2	6	3	1	4	3	7	1	3	2	2	3	1	1
1	2	.....	6	.....	1	1	.....	3	2	1	1	1	2	5
1	.....	1	2	1	2	1	.....	2	1	3	.....	4	2	.....
2	2	1	8	1	3	2	.....	5	3	4	1	5	4	5
3	2	.....	1	1	1	.....	.....	.....	4	3	4	2	1	.....
.....	.....	.....	.....	.....	1	.....	6	.....	1	.....	3	1	.....	1
3	2	.....	1	1	2	.....	6	.....	5	3	7	3	1	1
.....	2	1	3	3	3	1	4	3	4	2	5	3	2	2
2	1	1	4	3	.....	3	6	3	2	2	9	2	4	1
2	3	2	7	6	3	4	10	6	6	4	14	5	6	3
.....	5	5	3	2	2	1	4	3	4	5	7	4	3	3
3	4	3	1	.....	1	2	2	3	1	4	2	6	7	3
3	9	8	4	2	3	3	6	6	5	9	9	10	10	6

TABLE H.—DEATHS BY AGES

COUNTIES.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Northumberland & Durham :											
Males	6	3	2	6	6	3	9	3	3	3	1
Females	8	3	1	2	8	1	2	3	3	1	.....
Total	14	6	3	8	14	4	11	6	6	4	1
Ontario :											
Males	1	5	1	1	4	6	2	5	.....	2	1
Females	2	3	2	.....	2	3	6	1	1	1	1
Total	3	8	3	1	6	9	8	6	1	3	2
Oxford :											
Males	5	5	2	1	5	5	6	5	2	.....	1
Females	5	3	5	.....	4	.....	2	3	2	.....	3
Total	10	8	7	1	9	5	8	8	4	.....	4
Peel :											
Males	4	.....	.....	1	3	1	.....	2	.....	.....	.....
Females	2	1	1	.....	3	5	1	2	1	.....	.....
Total	6	1	1	1	6	6	1	4	1	.....	.....
Perth :											
Males	1	4	5	1	7	3	2	1	.....	1	1
Females	5	1	3	2	2	2	3	1	1	.....	1
Total	6	5	8	3	9	5	5	2	1	1	2
Peterborough :											
Males	1	3	1	2	3	2	.....	.....	2	1	.....
Females .....	.....	.....	1	.....	.....	1	4	3	2	.....	1
Total	1	3	2	2	3	3	4	3	4	1	1
Prescott & Russell :											
Males	4	.....	4	1	.....	2	3	2	4	.....	.....
Females	1	.....	1	1	1	1	1	.....	1	1	1
Total	5	.....	5	2	1	3	4	2	5	1	1
Prince Edward :											
Males .....	.....	2	5	1	.....	.....	1	1	.....	.....	.....
Females	3	1	1	.....	1	2	.....	.....	2	.....	.....
Total	3	3	6	1	1	2	1	1	2	.....	.....
Renfrew :											
Males .....	.....	1	2	.....	4	.....	2	1	1	2	.....
Females	2	.....	.....	1	.....	1	2	1	1	.....	1
Total	2	1	2	1	4	1	4	2	2	2	1
Simcoe :											
Males	2	4	3	2	1	2	3	3	4	1	2
Females	6	3	4	2	1	3	2	.....	.....	1	.....
Total	8	7	7	4	2	5	5	3	4	2	2
Stormont, Dundas & Glengarry :											
Males	7	2	5	3	4	2	3	2	4	3	2
Females	3	2	.....	3	3	2	1	4	2	1	6
Total	10	4	5	6	7	4	4	6	6	4	8

BY COUNTIES, 1884—Continued.

80 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
1		2				2							1	383
2	3		2	1			1						4	359
3	3	2	2	1		2	1						5	742
2	1	1	1	2					2				9	279
1		1		1				1					16	263
3	1	2	1	3				1	2				25	542
	1		2			1								277
	1											1	5	240
	2		2			1						1	5	517
	1				1								13	152
2	1												12	149
2	2				1								25	301
1						1							5	209
1	3	2	1		1	2		1	1				6	207
2	3	2	1		1	3		1	1				11	416
	2				1							1	4	209
1	1				1								2	171
1	3				2							1	6	380
1	1	1	1										3	247
1	1				1								2	188
2	2	1	1		1								5	435
1			1		1	1	1	1	1				5	156
1	1											1	4	134
2	1		1		1	1	1	1	1			1	9	290
1													4	172
1	1	1				1						1	3	166
2	1	1				1						1	7	338
	1						1						14	350
1	1	1												292
1	2	1						1					14	642
4	3	1	1		1							1	8	285
2	2		1	1				1				2	4	297
6	5	1	2	1	1		1					3	12	582

TABLE H.—DEATHS BY AGES

COUNTIES.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Victoria :											
Males.....	44	4	2	.....	1	3	1	3	1	.....	3
Females.....	28	10	5	2	1	3	.....	3	.....	1	2
Total.....	72	14	7	2	2	6	1	6	1	1	5
Waterloo :											
Males.....	82	11	5	3	2	2	3	.....	.....	.....	1
Females.....	56	10	4	1	.....	2	1	.....	.....	2	1
Total.....	138	21	9	4	2	4	4	.....	.....	2	2
Welland :											
Males.....	42	7	5	1	2	2	3	.....	1	.....	2
Females.....	25	7	2	2	5	.....	3	1	1	.....	.....
Total.....	67	14	7	3	7	2	6	1	2	.....	2
Wellington :											
Males.....	96	15	3	7	5	1	5	.....	.....	1	2
Females.....	72	21	8	4	1	2	2	.....	1	.....	3
Total.....	198	36	11	11	6	3	7	.....	1	1	5
Wentworth :											
Males.....	163	29	14	8	6	5	1	9	2	1	3
Females.....	139	25	10	11	10	.....	5	4	2	5	8
Total.....	302	54	24	19	16	5	6	13	4	6	11
York :											
Males.....	501	64	28	16	15	18	9	8	9	15	4
Females.....	411	71	27	21	20	11	14	13	11	10	1
Total.....	912	135	55	37	35	29	23	21	20	25	5
Total Males.....	2996	508	272	179	145	108	95	84	62	98	62
" Females.....	2246	496	257	169	131	98	89	68	57	77	62
Grand Total.....	5242	1004	529	348	276	206	184	152	119	145	124

COUNTIES, 1884—Continued.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
.....	.....	1	.....	1	.....	1	2	1	.....	2	3	1	.....	4
3	2	.....	5	2	3	4	2	2	6	3	4	5	1	2
3	2	1	5	3	3	5	4	3	6	5	7	6	1	6
1	1	.....	.....	1	.....	4	3	1	.....	1	3	2	1	3
.....	2	.....	.....	.....	1	.....	2	.....	4	6	1	2	3	2
1	3	.....	.....	1	1	4	5	1	4	7	4	4	4	5
.....	.....	.....	2	1	3	.....	3	.....	3	.....	.....	1	2	1
.....	2	1	1	1	2	1	.....	.....	.....	2	2	4	.....	1
.....	2	1	3	2	5	1	3	.....	3	2	2	5	2	2
1	2	2	1	2	2	3	1	1	.....	2	5	6	4	3
1	4	1	2	3	7	2	5	9	6	1	4	4	6	11
2	6	3	3	5	9	5	6	10	6	3	9	10	10	14
3	1	1	2	3	2	3	2	3	4	12	14	5	4	4
3	1	1	.....	2	3	4	5	4	6	3	9	6	5	6
6	2	2	2	5	5	7	7	7	10	15	23	11	9	10
5	5	4	4	6	7	5	12	11	13	14	11	12	11	8
5	1	4	5	6	4	1	9	20	13	18	13	8	14	12
10	6	8	9	12	11	6	21	31	26	32	24	20	25	20
46	52	37	46	49	68	68	79	80	93	99	125	91	86	97
49	56	40	64	58	73	97	94	116	114	122	118	149	119	123
95	108	77	110	107	141	165	173	196	207	221	243	240	205	220

TABLE H.—DEATHS BY AGES.—

COUNTIES.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Victoria :											
Males	1	4	1	1	1	1	1	1	1	1	1
Females	3	1	1	1	3	1	5	3	1	2	1
Total	4	5	2	1	4	1	5	4	1	3	1
Waterloo :											
Males	1	2	1	1	1	4	1	1	1	1	1
Females	4	1	5	1	2	1	2	7	2	1	1
Total	4	3	5	2	3	5	3	8	2	2	2
Welland :											
Males	3	3	1	1	1	1	1	3	1	1	1
Females	4	2	1	2	1	1	1	1	1	2	2
Total	7	5	1	2	1	1	1	4	1	2	3
Wellington :											
Males	2	2	8	1	2	1	1	1	1	1	1
Females	6	3	1	3	1	1	5	3	1	3	2
Total	8	5	9	4	3	1	6	4	2	4	2
Wentworth :											
Males	2	3	4	1	5	1	2	3	3	8	10
Females	6	7	6	6	9	4	4	8	6	7	5
Total	8	10	10	6	14	5	6	11	9	15	15
York :											
Males	14	17	8	11	17	4	13	12	2	11	7
Females	19	17	11	11	22	11	11	15	10	12	14
Total	33	34	19	22	39	15	24	27	12	23	21
Total Males	73	95	85	49	75	30	59	63	59	81	59
" Females	130	108	111	88	108	66	80	109	81	101	80
Grand Total	203	203	196	137	183	96	139	172	140	182	139

BY COUNTIES, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
1	2	2	5	1			2				3			
1		2	3		1		1	1	1	1		4	4	1
2	2	4	8	1	1		3	1	1	1	3	4	4	1
2	3		1		1	1		2	2	1	1	1	1	
1	2	1	1	1	1	1	1		1		1	2	2	
3	5	1	2	1	2	2	1	2	3	1	2	3	3	
	1	1				2	1	1		1	1	2	1	2
	5	2	3			1				1	1	1	1	
	6	3	3			3	1	1		2	2	3	2	2
2	1		3	1	3	1	2	2	4	2	1	1	2	
2	2	4	4	2	3	7	3	3	2		5	2	2	2
4	3	4	7	3	6	8	5	5	6	2	6	3	4	2
7	3	4	2	2	5	2	3	2	3	7	4	4	6	1
4	7	8	5		6	3	6	6	2	3	8	4	4	2
12	10	12	7	2	11	5	9	8	5	10	12	8	10	3
7	14	6	15	10	8	10	11	10	10	6	18	4	13	4
12	13	10	10	3	8	14	12	4	6	9	5	8	7	5
20	27	16	25	13	16	24	23	14	16	15	23	12	20	9
63	60	53	77	42	61	58	64	55	65	58	78	54	85	48
85	77	88	110	50	77	68	74	72	36	56	57	55	65	40
148	137	141	187	92	138	126	138	127	101	114	135	109	150	88

TABLE H.—DEATHS BY AGES

COUNTIES.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Victoria :											
Males	1	1	.....	2	.....	3	2	1	1	.....	2
Females.....	1	.....	.....	.....	.....	1	.....	.....	3	.....	4
Total	2	1	.....	2	.....	4	2	1	4	.....	6
Waterloo:											
Males .....	.....	.....	2	.....	2	.....	2	4	.....	4	4
Females.....	.....	.....	.....	1	.....	1	1	3	1	1	4
Total .....	.....	.....	2	1	2	1	3	7	1	5	8
Welland :											
Males .....	.....	1	.....	1	3	2	1	2	2	.....	3
Females.....	.....	2	1	.....	.....	.....	1	1	4	1	1
Total .....	.....	3	1	1	3	2	2	3	6	1	4
Wellington :											
Males	3	4	3	3	2	1	3	1	3	3	5
Females.....	3	.....	2	5	2	3	5	3	2	.....	1
Total	6	4	5	8	4	4	8	4	5	3	6
Wentworth :											
Males	7	3	6	8	7	6	2	3	5	2	1
Females.....	5	1	4	1	5	3	2	3	7	5	.....
Total	12	4	10	9	12	9	4	6	12	7	1
York :											
Males	14	9	10	10	8	6	11	4	13	7	7
Females.....	7	9	8	2	3	6	11	5	7	8	4
Total	21	18	18	12	11	12	22	9	20	15	11
Total Males	72	62	69	77	87	69	78	56	96	57	92
" Females	61	53	57	63	49	47	70	77	99	50	72
Grand Total.....	133	115	126	140	136	116	148	133	195	107	164

BY COUNTIES, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
3	1	1	.....	1	3	1	4	3	1	3	4	.....	1	1
3	.....	.....	.....	.....	.....	.....	1	1	1	2	4	.....	4	1
6	1	1	.....	1	3	1	5	4	2	5	8	2	5	2
.....	1	2	2	1	7	3	7	.....	6	10	3	2	3	4
5	2	1	1	2	2	1	.....	4	5	7	3	4	2	.....
5	3	3	3	3	9	4	8	4	11	17	6	6	5	4
5	3	3	.....	5	.....	1	3	2	5	4	7	2	4	1
2	.....	.....	1	2	2	2	2	2	2	3	1	1	1	3
7	3	3	1	7	2	3	5	4	7	7	8	3	5	4
2	5	5	3	4	8	6	4	1	7	3	6	7	7	2
3	3	3	.....	2	2	3	7	2	1	.....	7	3	6	1
5	8	8	3	6	10	9	11	3	9	3	13	10	13	3
3	3	3	2	5	9	3	9	3	4	9	5	8	9	8
2	4	1	4	1	2	4	5	4	8	14	6	7	5	2
5	7	4	6	6	11	7	14	7	12	23	11	15	14	10
9	12	17	5	10	11	8	20	10	14	15	12	13	13	15
6	7	5	3	7	8	7	15	9	9	18	19	10	18	15
15	19	22	8	17	19	15	35	19	23	33	31	23	31	30
82	108	101	86	86	124	81	146	101	158	135	128	135	147	121
89	76	55	50	67	82	64	110	78	81	111	120	109	115	85
171	184	156	136	153	206	145	256	179	239	246	248	244	262	206

TABLE H.—DEATHS BY AGES

COUNTIES.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Victoria:	4	.....	2	.....	3	1	2	1	.....	3	1
Males	2	1	2	2	1	.....	2	2	1	.....	.....
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	6	1	4	2	4	1	4	3	1	3	1
Waterloo:	3	.....	5	1	2	2	6	.....	1	.....	1
Males	7	.....	2	2	2	.....	1	1	1	1	2
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	10	.....	7	3	4	2	7	1	2	1	3
Welland:	2	2	1	4	1	2	5	4	.....	1	.....
Males	2	2	1	1	1	.....	1	.....	.....	.....	1
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	4	4	2	5	2	2	6	4	.....	1	1
Wellington:	4	1	3	2	4	4	6	4	1	2	1
Males	1	2	1	5	5	2	6	2	1	1	2
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	5	3	4	7	9	6	12	6	2	3	3
Wentworth:	4	1	8	3	5	4	2	2	1	1	1
Males	8	7	5	2	3	5	2	1	2	1	1
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	12	8	13	5	8	9	4	3	3	2	2
York:	6	6	10	3	6	8	3	4	5	6	1
Males	10	11	12	10	8	9	6	5	6	2	.....
Females .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	16	17	22	13	14	17	9	9	11	8	1
Total Males	114	77	115	77	97	99	115	73	59	58	30
" Females	115	65	103	56	77	76	82	57	65	32	37
Grand Total	229	142	218	133	174	175	197	130	124	90	67

BY COUNTIES, 1884—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
1	2				1								7	171
		1		1		1						1	11	197
1	2	1		1	1	1						1	18	368
1														250
	2	1			1								4	220
1	2	1			1								4	470
	1			1									1	191
1													3	141
1	1			1									4	332
	1		1		1						2	1		355
1	1		1	1	1		1						6	360
1	2		2	1	2		1				2	1	6	715
					1	1		1					15	584
					1	3								559
					2	4		1					15	1143
2	1	2		1		2		1	1				1	1430
2	1	1	1	2	2		1		1	1			8	1347
4	2	3	1	3	2	2	1	1	2	1			9	2777
28	34	13	15	12	15	13	4	6	7	3	4	10	315	11291
31	28	17	12	17	15	10	7	2	6	4	2	10	281	10411
59	62	30	27	29	30	23	11	8	13	7	6	20	596	21702

TABLE I.—DEATHS BY AGES IN THE

COUNTIES.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Brantford :											
Males	14	3	1	.....	1	1	1	.....	.....	.....	1
Females	14	2	1	1	1	1	.....	.....	.....	.....	1
Total	28	5	2	1	2	2	1	.....	.....	.....	2
Walkerton :											
Males	10	3	.....	1	.....	.....	.....	.....	.....	.....	.....
Females	2	2	.....	1	.....	.....	.....	.....	.....	.....	.....
Total	12	5	.....	2	.....	.....	.....	.....	.....	.....	.....
Ottawa :											
Males	272	36	14	3	7	1	4	3	4	.....	2
Females	244	26	13	6	6	1	3	2	2	1	2
Total	516	62	27	9	13	2	7	5	6	1	4
St. Thomas :											
Males	21	1	2	1	3	.....	1	.....	.....	.....	.....
Females	10	.....	2	.....	1	.....	1	.....	.....	.....	.....
Total	31	1	4	1	4	.....	2	.....	.....	.....	.....
Windsor :											
Males	25	3	3	2	2	.....	1	1	2	1	.....
Females	15	6	.....	3	1	.....	.....	.....	.....	2	1
Total	40	9	3	5	3	.....	1	1	2	3	1
Owen Sound :											
Males	10	4	1	2	.....	.....	.....	.....	.....	.....	.....
Females	4	2	1	1	.....	.....	.....	.....	.....	1	.....
Total	14	6	2	3	.....	.....	.....	.....	.....	1	.....
Kingston :											
Males	30	6	1	1	1	1	1	2	.....	.....	1
Females	31	6	1	2	2	2	1	.....	.....	.....	.....
Total	61	12	2	3	3	3	2	2	.....	.....	1
Goderich :											
Males	5	3	2	1	.....	1	.....	.....	.....	.....	.....
Females	1	2	1	2	.....	.....	.....	1	.....	.....	.....
Total	6	5	3	3	.....	1	.....	1	.....	.....	.....
Belleville :											
Males	19	4	5	4	2	3	7	2	.....	.....	.....
Females	24	6	4	.....	1	1	1	2	1	.....	.....
Total	43	10	9	4	3	4	8	4	1	.....	.....
Chatham :											
Males	21	4	.....	2	1	.....	1	1	3	.....	.....
Females	11	4	2	1	1	1	1	.....	1	1	.....
Total	32	8	2	3	2	1	2	1	4	1	.....
Sarnia :											
Males	8	.....	2	.....	2	.....	.....	1	.....	.....	1
Females	6	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Total	14	.....	2	1	2	.....	1	1	.....	.....	1

CITIES AND PRINCIPAL TOWNS, 1884.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
		2			1	1			4	1		2	1	
		1				2		2	3			1		
		3			1	3		2	7	1		3	1	
					1							3		
					1							3		
2	3			3	3	1		2		2	3	5	2	2
1		1	4	1	1	4	1	1	3	5	3	1	4	8
3	3	1	4	4	4	5	1	3	3	7	6	6	6	10
1						1	1					1		1
				1		2		2			1	3		1
1				1		3	1	2			1	4		2
									1					
		1		1	1	2					1	2	1	1
		1		1	1	2		1			1	2	2	1
							1		2					1
				1		2								
				1		3			2					1
2					2			2	1		4	1	3	1
		2		2	4		1		3	4	1	1	1	
2		2		2	6		1	2	4	4	5	1	4	1
1				1			1	1						
						1	1		1				1	
1				1		1	1	1	1				1	
	1		1					3		1		1	1	
	1			2	1	1	1		1	1	2	1	1	
	2		1	2	1	1	1	3	1	2	2	2	2	
				1	1	1				1	1	1		
							2	1	1	2	1	3	2	
				1	1	1	2	1	1	3	2	4	2	
	1					1				1		1		
2						1							1	
2	1					2				1		1	1	

TABLE I.—DEATHS BY AGES IN THE

COUNTIES.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Brantford :											
Males			1				1		1	2	
Females	1			1			2			1	1
Total	1		1	1			3		1	3	1
Walkerton :											
Males									1		
Females		1	1								
Total		1	1						1		
Ottawa :											
Males	1	4	4	2	3	1	2	2	1		1
Females	3	5	6	2	3	2	3	9	3	7	2
Total	4	9	10	4	6	3	5	11	4	7	3
St. Thomas :											
Males		1		1			1			1	
Females			1		2						1
Total		1	1	1	2		1			1	1
Windsor :											
Males									2		
Females	1					1		1		1	
Total	1					1		1	2	1	
Owen Sound :											
Males				2							1
Females		1		1	1						2
Total		1		3	1						3
Kingston :											
Males	1	1		2			1	1			1
Females	2				2	1		2		1	1
Total	3	1		2	2	1	1	3		1	2
Goderich :											
Males											1
Females	1										1
Total	1										2
Belleville :											
Males			1	1	4	1			1		
Females		1	2					2		3	
Total		1	3	1	4	1		2	1	3	
Chatham :											
Males			2	1							
Females	1	1	1		1	1	2				
Total	1	1	3	1	1	1	2				
Sarnia :											
Males											1
Females	1								1		
Total	1								1		1

CITIES AND PRINCIPAL TOWNS—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
1	1		1					2		1	1			1
1	1							1	1		1	1		
2	2		1					1	3		2	1		1
			1											
			1											
4	2	2	1	2	2	6	1	4	3	2	1	1		2
3	3	7	8	4	3	3	8	1	1	1		4		2
7	5	9	9	6	5	9	9	5	4	3	1	5		4
		2	1	1	1			1			1	1		1
		2	1	1	1			1			1	1		1
	3	1						1						1
	2	1			1			1		1	1			
	5	2			1			1	1	1	1			1
1									3		1	1	2	1
	1	1									1			
1	1	1							3		2	1	2	1
4		1				2	1	2					2	1
								1		1				1
4		1				2	1	3		1			2	2
								1						
								1						
1	1	1		1				1		1		1	1	1
1		2	1		2			1			1	1	1	
2	1	3	1	1	2		1	1	1		1	2	2	1
1		1	1					1		1	1			
		2	2		1									
1		3	3		1			1		1	1			
		1								1				
			1		1			1		2				
		1	1		1			1		3				

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Brantford :											
Males			1		1	1	2	1	1	1	
Females					1	2	1	2	1	1	
Total			1		2	3	3	3	2	2	
Walkerton:											
Males											
Females											
Total											
Ottawa :											
Males	1	1		3	3	1	2	3	7		7
Females	4			3	3	3	1	1	4		3
Total	5	1		6	6	4	3	4	11		10
St. Thomas:											
Males	3		1			1					
Females	1										
Total	4		1			1					
Windsor :											
Males											
Females	1							1	1		
Total	1							1	1		
Owen Sound :											
Males	1			1	1				1		
Females						2					
Total	1			1	1	2			1		
Kingston :											
Males		1	4					1	2	1	1
Females	3	2		1	1	1			3		
Total	3	3	4	1	1	1		1	5	1	1
Goderich :											
Males						1	1		1		
Females											
Total						1	1		1		
Belleville :											
Males	1			1				1	2		1
Females	1	3	1	1	1			1			
Total	2	3	1	2	1			2	2		1
Chatham :											
Males	1					1	2		1		
Females		1			1			1			
Total	1	1			1	1	2	1	1		
Sarnia :											
Males											
Females		1	1							1	
Total		1	1							1	

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
		3		1	1		3	1	1			1	2	
	1			2		1	2	1		1	1			
	1	3		3	1	1	5	2	1	1	1	1	2	
								1	1					
								1						
								2	1					1
3	5	4	2	6	1	1	3	4	4	1	1	5	2	
2	1	2	2			2	5	4		6	2	5	1	1
5	6	6	4	6	1	3	8	8	4	7	3	10	3	1
		1								1	1			
	1													
	1	1								1	1			
	1		1						1					
								1				1		
	1		1					1	1			1		
1											2			
								1						
1								1			2			
	1	4	2	1	4	1	3	1	3	1	4	1	2	
	1	3	1	2	2		3	2	1		2	1	2	1
	2	7	3	3	6	1	6	3	4	1	6	2	4	7
		1	1			1		1	2		1	1	1	1
										1			1	
		1	1			1		1	2	1	1	1	2	1
3	1	1	1			1	3		2				1	1
		2	1	1	1		2	1				1		
3	1	3	2	1	1	1	5	1	2			1	1	1
2	1	2	1	1	1		1	2		1			1	
	1			1			1		1		1			
2	2	2	1	2	1		2	2	1	1	1		1	
		1												1
		1												1

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Brantford :											
Males	1	1		3		1	1		1		
Females	1		1				1				1
Total	2	1	1	3		1	2		1		1
Walkerton :											
Males										1	
Females											
Total										1	
Ottawa :											
Males	2		8		1	2	3	4			
Females	5		4		2	1	3	2			
Total	7		12		3	3	6	6			
St. Thomas :											
Males											
Females		1									1
Total		1									1
Windsor :											
Males		1	1								
Females	1						1			1	
Total	1	1	1				1			1	
Owen Sound :											
Males											
Females		1				1					
Total		1				1					
Kingston :											
Males				2	2	1	1			1	
Females							1		1		
Total				2	2	1	2		1	1	
Goderich :											
Males	1	1									
Females											
Total	1	1									
Belleville :											
Males	1	1	1		1						
Females	2				1		3	1			
Total	3	1	1		2		3	1			
Chatham :											
Males							2			1	
Females		1				1					
Total		1				1	2			1	
Sarnia :											
Males							1			1	
Females											
Total							1			1	

CITIES AND PRINCIPAL TOWNS.—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
						1								78
	1													65
	1					1								143
														19
														13
														32
1													4	523
													15	524
1													19	1047
													1	50
						1							2	41
						1							3	91
	1												2	58
												1		58
	1											1	2	116
				1										41
	1				1									27
	1			1	1									68
1													12	139
				1									14	129
1				1									26	268
														28
													1	20
													1	48
1				1									1	99
													2	95
1				1									3	194
												1	1	71
														57
												1	1	128
														25
														22
														47

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Perth :											
Males	2	1			2	1					
Females	3	2		1		1		1			1
Total	11	3		1	2	2		1			1
Brockville :											
Males	17	6	1	1	1	4		2	1	2	
Females	10	1	3			1		1	1	1	2
Total	27	7	4	1	1	5		3	2	3	2
Napanee :											
Males	16	2	2		1	1			1		1
Females	3	1	2		1						2
Total	13	3	4		2	1			1		3
St. Catharines :											
Males	24	4	3			1		2			
Females	15	2	1	1	1	1	2			1	1
Total	39	6	4	1	1	2	2	2		1	1
London :											
Males	52	9	3	2	2		3			1	
Females	46	8	3	1			2	1		2	
Total	98	17	6	3	2		5	1		3	
Cobourg :											
Males	3		1	2	1		1			2	
Females	3	2									1
Total	6	2	1	2	1		1			2	1
Whitby :											
Males	6		2		1						
Females	4						1	1			
Total	10		2		1		1	1			
Woodstock :											
Males	6	1						1		1	
Females	5		2								
Total	11	1	2					1		1	
:											
Males	20	1	1		1						
Females	2	1	1	2	1	2					
Total	22	2	2	2	2	2					
for :											
Males	7	2			1	1	1			1	
Females	12	1	1	1							
Total	19	3	1	1	1	1	1			1	
Peterborough :											
Males	14		3	1		1		1		1	2
Females	7	1	3	2	1	1	3		1	1	
Total	21	1	6	3	1	2	3	1	1	2	2

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
									1			1		
										1			1	1
									1	1		1	1	1
									1				1	
			1				1	2	1	2	2	1	1	1
			1				1	2	2	2	2	1	2	1
					1				1					
				1									1	1
				1	1				1				1	1
	1					2	2	2	1	1	2		2	2
					2	1	3	2	1	3			1	
	1				2	3	5	4	2	4	2		3	2
				2		2	2	2		3	1	1		2
1			3		1	1	2	1		3	2	5	2	2
1			3	2	1	3	4	3		6	3	6	2	4
			1		1			1						1
								1						
			1		1			2						1
			1	1		1				1		1	1	
						1		1		2				
			1	1		2		1		3		1	1	
							1	1				1	3	1
	1					1							1	1
	1					1	1	1				1	4	2
									1	1		1		
1						1								
1						1			1	1		1		
	1				1			1	1		1	2	1	
					2		1						1	1
1					3		1	1	1		1	2	2	1
		2			1		4			1	1	3		
						1		1	1					
		2			1	1	4	1	1	1	4			

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Perth :											
Males					1				1		1
Females		1								1	
Total		1			1				1	1	1
Brockville :											
Males	1		1	1			1		1		
Females			2		1		2		1		1
Total	1		3	1	1		3		2		1
Napanee :											
Males											
Females		1		1							
Total		1		1							
St. Catharines :											
Males		1	2				2	1	1		
Females			1	2		2		1	1	1	
Total		1	3	2		2	2	2	2	1	
London :											
Males	1				1	1	2	2		3	
Females	3	1	2	2					1	1	2
Total	4	1	2	2	1	1	2	2	1	4	2
Cobourg :											
Males											1
Females											
Total											1
Whitby :											
Males											
Females		1	1			2					
Total		1	1			2					
Woodstock :											
Males							1				
Females								1		1	
Total							1	1		1	
Brampton :											
Males				1	1	2					
Females					3	2					
Total				1	4	4					
Stratford :											
Males											1
Females	1			1			1		1		1
Total	1			1			1		1		2
Peterborough :											
Males					2				1		
Females			1					1			
Total			1		2			1	1		

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
				1										
1								1						1
1				1				1						1
		1	1							1	1			
1	1					1								
1	1	1	1			1				1	1			
					1					1				
										1				
					1					2				
2		3	1		1						1		2	
1	2						1	1	1	1			2	
3	2	3	1		1		1	1	1	1	1		4	
	2	2	2	1	2	1	2			1	1		1	2
2	2	2	3		1					1	2			1
2	4	4	5	1	3	1	2			2	3		1	3
						1								1
						1								1
1		1					1						1	
	1	1				1								
1	1	2				1	1						1	
				1										
				1										
									2				1	1
2				1	1									
2				1	1			2					1	1
	1									2				
			1		1	1				1				
	1		1		1	1				3				
1	1				1						1			1
1	1	1	1				1				1	2		
2	2	1	1		1		1				2	2		1

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Perth:											
Males.....	1					1					
Females.....							1				1
Total	1					1	1				1
Brockville:											
Males.....							1				
Females.....	1								1		
Total	1						1		1		
Napanee:											
Males.....							1				
Females.....			1		1				1		
Total			1		1		1		1		
St. Catharines:											
Males.....		1	1	1	2	1		2			
Females.....			3	2		1	3	1	1		
Total		1	4	3	2	2	3	3	1		
London:											
Males.....	2	1	1	2	1	1	1		4	1	
Females.....			1	1	1		2	5			3
Total	2	1	2	3	2	1	3	5	4	1	3
Cobourg:											
Males.....		2			1		1				
Females.....					1				1		2
Total		2			2		1		1		2
Whitby:											
Males.....					1			1	2	1	1
Females.....				1							
Total				1	1			1	2	1	1
Woodstock:											
Males.....	1					1			1		
Females.....								1			
Total	1					1		1	1		
Brampton:											
Males.....	1		1						3		
Females.....									2		
Total	1		1						5		
Stratford:											
Males.....	3					1	1				1
Females.....				1			1			1	1
Total	3			1		1	2			1	2
Peterborough:											
Males.....				1		1	1	1			
Females.....		1								1	
Total		1		1		1	1	1		1	

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
							2					1		
					1									
					1		2					1		
								1				1		1
	1	1							1		2			1
	1	1					1		1		2	1		2
								1					1	1
3	1			1			1				1			
3	2			1			2				2		1	1
1			1			2	1							
					1	1			1	1	1	1	3	
1			1		1	3	1		1	1	1	1	3	
3	1	4			2		3	1	3	4	2	1		1
1		2	2	3	2	1	2	1			1	1	3	2
4	1	6	2	3	4	1	5	2	3	4	3	2	3	3
		1					1		1	1	1			1
		1			1	1	1							1
		2			1	1	2		1	2	1			2
	1					1								
				1						1	1			
	1			1		1				1	1			
1	1	1	1				1					1	1	
1				1		1	1							
2	1	1	1	1		1	1					1	1	
		1							1	1				2
	1	1	1							1	1			2
				1			1			1		1		
				1			1			1		1		
1					3					1		2	2	
	1				2			1		1		1		
1	1				5		1		1	1		3	2	

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Perth:											
Males					1						
Females											
Total					1						
Brockville:											
Males							1				
Females			1		1	2			1	1	
Total			1		1	2	1		1	1	
Napanee:											
Males		1							1		
Females		1				1					
Total		2				1			1		
St. Catharines:											
Males		1		1	1		4				1
Females	1			1	1				1	1	
Total	1	1		2	2		4		1	1	1
London:											
Males	1	3	2	1	1	1		2		1	
Females			2	1		2	1				
Total	1	3	4	2	1	3	1	2		1	
Cobourg:											
Males	1										
Females				1					1		
Total	1			1					1		
Whitby:											
Males						2					
Females					1						
Total					1	2					
Woodstock:											
Males	1				1			1			1
Females		1									
Total	1	1			1			1			1
Brampton:											
Males					2	1					
Females					3	1					
Total					5	2					
Stratford:											
Males		1			1	2					1
Females				1							1
Total		1		1	1	2					1
Peterborough:											
Males	1	2			1	1				1	
Females							3				1
Total	1	2			1	1	3			1	1

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
	2													26
														20
	2													46
								1					1	53
1	1													58
1	1							1					1	111
	1												1	32
													1	28
	1												2	60
													10	97
										1			11	92
										1			21	189
1									1				10	175
													3	157
1									1				13	332
	1													25
														23
	1													48
									1					30
														22
									1					52
														31
														19
														50
														45
														30
														75
														35
													1	41
													1	76
	1													60
1														49
1	1													109

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	Under one year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years.	10 years.
Pictou :											
Males	4	2	1	3	1		1	1			
Females	3	2	2			1				1	
Total	7	4	3	3	1	1	1	1		1	
Pembroke :											
Males	5	2	2						1		
Females	8	1			1	1					
Total	13	3	2		1	1			1		
Barrie :											
Males	9	3	1								
Females	5				1	1					
Total	14	3	1		1	1					
Cornwall :											
Males	4	7	2	3							
Females	6	3	2	1	1		1				
Total	10	10	4	4	1		1				
Lindsay :											
Males	6				2		2			2	
Females	3	1					1		1		1
Total	9	1			2		3		1	2	1
Berlin :											
Males	10	4			1						
Females	12	1								1	
Total	22	5			1					1	
Guelph :											
Males	28	4		2	2		2				
Females	20	8	2		1	1	1				1
Total	48	12	2	2	3	1	3				1
Hamilton :											
Males	121	16	13	5	7	4		5	1		3
Females	97	16	6	10	8		4	3	2	3	6
Total	218	32	19	15	15	4	4	8	3	3	9
Toronto :											
Males	412	53	25	15	14	5	7	3	2	5	2
Females	355	56	25	19	15	7	3	5	4	8	7
Total	767	109	50	34	29	12	10	8	6	13	9
Total Males	1201	184	91	51	56	25	33	25	15	16	13
" Females	981	163	78	56	44	23	26	17	13	23	26
Grand Total	2182	347	169	107	100	48	59	42	28	39	39

CITIES AND PRINCIPAL TOWNS, 1884.

11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years.	22 years.	23 years.	24 years.	25 years.
			1									1		1
									1	1	1	2	2	1
			1						1	1	1	3	2	2
1														
1	1		1					1						
2	1		1					1						
							2				1			
								2	1		1			1
						2		2	1		2			1
				1			1			1				1
				1	1				1		1	1		
				2	1		1		1	1	1	1		1
						1			1	2			1	1
2		1	2		2			2			3			
2		1	2		2	1		2	1	2	3		1	1
						1			1					
						1			1					
1		1				1	1				4	1	1	1
	3				1	1	2	2	1		1	2	1	1
1	3	1			1	2	3	2	1		5	3	2	2
2		1	4	1		1	1	3	3	5	5	4	3	2
3	2	1	2	2	2	2	5		6	3	4	3	4	3
5	2	2	6	3	2	3	6	3	9	8	9	7	7	5
1	4	3	2	5	6	5	3	10	12	13	9	10	6	6
4	4	2	4	5	3	5	6	17	11	10	8	5	12	10
5	8	5	6	10	9	10	9	27	23	23	17	15	18	16
12	10	9	10	15	17	22	17	28	29	34	32	35	27	23
15	12	9	18	17	22	29	27	37	37	37	35	33	38	33
27	22	18	28	32	39	51	44	65	66	71	67	68	65	56

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	26 years.	27 years.	28 years.	29 years.	30 years.	31 years.	32 years.	33 years.	34 years.	35 years.	36 years.
Pictou :											
Males									1		
Females			1				1			2	1
Total			1				1		1	2	1
Pembroke :											
Males									1		
Females					1						
Total					1				1		
Barrie :											
Males											1
Females		1								3	
Total		1								3	1
Cornwall :											
Males										1	
Females			1		1						1
Total			1		1					1	1
Liudsay :											
Males	2										
Females							1			1	
Total	2						1			1	
Berlin :											
Males						1	1	1			1
Females	1					1				1	
Total	1					2	1	1		1	1
Guelph :											
Males	1	1	2		1	1		1		1	
Females	1	1					1				
Total	2	2	2		1	1	1	1		1	
Hamilton :											
Males	1	3	4		4			2	2	5	7
Females	4	3	6	5	6	3	3	6	4	5	3
Total	5	6	10	5	10	3	3	8	6	10	10
Toronto :											
Males	12	14	5	10	14	4	13	10	4	9	15
Females	15	14	3	10	18	10	9	7	9	7	10
Total	27	28	8	20	32	14	22	17	13	16	25
Total Males	20	25	22	21	31	11	25	20	18	22	31
" Females	35	32	29	25	39	25	25	36	21	36	28
Grand Total	55	57	51	46	70	36	50	50	39	58	59

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

37 years.	38 years.	39 years.	40 years.	41 years.	42 years.	43 years.	44 years.	45 years.	46 years.	47 years.	48 years.	49 years.	50 years.	51 years.
.....	.....	1	.....	.....	.....	.....	1	.....	1	.....	1	1	.....	.....
.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....
.....	.....	1	1	.....	.....	.....	1	1	1	.....	2	1	.....	.....
.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
2	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1
.....	.....	2	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
.....	.....	2	1	1	1	.....	.....	.....	.....	.....	.....	2	1	.....
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	3	1	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
1	.....	.....	2	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....
.....	1	.....	1	.....	1	2	.....	.....	.....	.....	2	.....	.....	.....
1	1	.....	3	.....	1	2	.....	1	.....	1	2	.....	.....	.....
7	2	3	2	2	3	1	3	1	2	6	3	1	4	.....
3	3	4	3	.....	2	2	6	6	.....	3	4	2	3	.....
10	5	7	5	2	5	3	9	7	2	9	7	3	7	.....
6	12	3	13	9	8	6	8	9	8	5	13	4	14	3
9	9	8	9	3	7	12	8	3	3	7	4	6	6	5
15	21	11	22	12	15	18	16	12	11	12	17	10	20	8
26	29	23	25	17	19	16	21	20	19	22	30	12	32	10
31	27	36	35	10	23	26	26	18	6	19	18	17	18	10
57	56	59	60	27	42	42	47	38	25	41	48	29	50	20

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	52 years.	53 years.	54 years.	55 years.	56 years.	57 years.	58 years.	59 years.	60 years.	61 years.	62 years.
Pictou :											
Males	2		1								2
Females				2					1		
Total	2		1	2					1		2
Pembroke :											
Males											
Females											
Total											
Barrie :											
Males		1					1	1	1		
Females		1									
Total		2					1	1	1		
Cornwall :											
Males		1									
Females		1		1							
Total		2		1							
Lindsay :											
Males				2		1					
Females											
Total				2		1					
Berlin :											
Males					1			2		2	
Females											1
Total					1			2		2	1
Guelph :											
Males		1	1	1							1
Females	1			2	1		2		1		
Total	1	1	1	3	1		2		1	1	
Hamilton :											
Males	7	2	5	5	4	3	2		8	1	
Females	4		3	1	3	3	1		2	2	1
Total	11	2	8	6	7	6	3		10	3	1
Toronto :											
Males	8	7	7	7	6	3	10	1	13	6	6
Females	6	7	7		7	3	6	4	5	6	8
Total	14	14	14	7	13	6	16	5	18	12	14
Total Males	32	18	23	24	21	18	26	14	47	14	19
" Females	22	17	17	16	21	15	18	17	24	12	20
Grand Total	54	35	40	40	42	33	44	31	71	26	39

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

63 years.	64 years.	65 years.	66 years.	67 years.	68 years.	69 years.	70 years.	71 years.	72 years.	73 years.	74 years.	75 years.	76 years.	77 years.
			1								1			
									1	2		1		1
			1						1	2	1	1		1
2	1								1					
											1			
2	1								1		1			
													1	
1			1	1			1			2			1	
1			1	1			1			2		1	1	
		1											1	
						1	1							
		1				1	1					1		
	1					1		1		1				
								1	1		1		1	
	1					1		2	1	1	1		1	
			1		1	1	1		2	2	1	2		
								2		1				
			1		1	1	1	2	2	1	1	2		
		3			1	3	1		1	1	1	2	2	
1		1	2	1		2	2				1			
1		4	2	1	1	5	3		1	1	2	2	2	
1	1	7	1	2	7	1	2	1	1	3	2	3	4	3
1		4	3	6	1	1	3	1	6		1	3	3	
2	1	11	4	8	8	2	5	2	7	3	3	6	7	3
6	11	14	3	8	5	3	10	6	2	7	7	9	3	8
6	6	7	1	6	8	5	9	7	5	13	7	5	7	4
12	17	21	4	14	13	8	19	13	7	20	14	14	10	12
24	27	48	15	22	24	14	37	19	26	23	25	32	22	25
16	15	24	16	28	17	18	34	23	18	30	23	21	22	13
40	42	72	31	50	41	32	71	42	44	53	48	53	44	38

TABLE I.—DEATHS BY AGES IN THE

CITIES AND TOWNS.	78 years.	79 years.	80 years.	81 years.	82 years.	83 years.	84 years.	85 years.	86 years.	87 years.	88 years.
Picton :											
Males		1						1			
Females				1					1		
Total		1		1				1	1		
Pembroke :											
Males							1				
Females											
Total							1				
Barrie :											
Males											
Females			2			1					
Total			2			1					
Cornwall :											
Males			1							1	
Females		1					1				
Total		1	1				1			1	
Lindsay :											
Males							1				
Females								1			
Total							1	1			
Berlin :											
Males	2						2		1		
Females	1										
Total	3						2		1		
Guelph :											
Males				1	2	1	2			1	
Females					1	1	1	1			
Total				1	3	2	3	1		1	
Hamilton :											
Males	3		5	1	2			1			
Females	2	2	2		2	2	2		1		
Total	5	2	7	1	4	2	2	1	1		
Toronto :											
Males	4	4	6	3	5	3	1	1	2	3	1
Females		7	12	8	6	8	4	5	4	2	
Total	4	11	18	11	11	11	5	6	6	5	1
Total Males	18	17	24	12	21	15	20	10	5	11	3
" Females	13	15	24	13	18	21	21	10	10	5	4
Grand Total	31	32	48	25	39	36	41	20	15	16	7

CITIES AND PRINCIPAL TOWNS, 1884—Continued.

89 years.	90 years.	91 years.	92 years.	93 years.	94 years.	95 years.	96 years.	97 years.	98 years.	99 years.	100 years.	Over 100 years.	Unknown.	Total.
														31
													1	36
													1	67
														19
														21
														40
														27
														30
														57
1														28
				1										34
1				1										62
														30
														31
														61
														43
		1												25
		1												68
			1									1	2	92
		1			1								1	83
		1	1		1							1	3	175
					1								3	370
														352
					1								3	722
2	1	1				2			1				16	1101
1		1		1	1				1	1			16	1054
3	1	2		1	1	2			2	1			32	2155
6	6	1	1	2	1	3		1	2		2		64	3481
4	4	3		3	3	1			2	2		1	68	3256
10	10	4	1	5	4	4		1	4	2	2	1	132	6737

TABLE J.—DEATHS BY

COUNTIES.	Agents.		Artists.		Brickmakers.		Blacksmiths.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay								
Brant	2	59					1	78
Bruce	1	62					3	170
Carleton								
Dufferin			1	22			1	83
Elgin					1	48	3	183
Essex	1	44					1	33
Frontenac	1	65					1	89
Grey							1	26
Haldimand							2	158
Halton								
Hastings	4	232					5	256
Huron							2	68
Kent							2	124
Lambton	1	22	1	70			2	96
Lanark	1	53						
Leeds and Grenville							3	123
Lennox and Addington							2	143
Lincoln	1	59						
Middlesex	3	146					2	122
Muskoka and Parry Sound								
Norfolk	1	71					1	91
Northumberland and Durham	1	37					4	239
Ontario	1	58	1	51			2	139
Oxford	1	24	1	32			4	304
Peel	1	29	1	60			2	89
Perth	2	86					3	146
Peterborough	1	20						
Prescott and Russell								
Prince Edward							3	191
Renfrew					1	34	3	134
Simcoe	1	22						
Stormont, Dundas and Glengarry							2	55
Victoria							1	80
Waterloo								
Welland								
Wellington	4	172					2	112
Wentworth	5	207					5	264
York	11	526	1	36			1	69
Totals	44	1994	6	271	2	82	64	3685

OCCUPATIONS, 1884.

Brewers and Distillers.		Bricklayers.		Barbers.		Butchers.		Book-keepers and Clerks.		Bankers.		Bakers and Confectioners.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
				1	25	1	62	2	100	1	38		
		1	33			2	140	10	323			3	72
				1	32	1	75	1	26				
				1	43	1	39	2	65				
						2	97	3	128				
								1	21				
						1	30						
								1	34				
						1	72	5	157			1	46
								1	35				
1	33							1	21			1	31
		1	58					2	45				
1	39											1	73
						4	188	2	101				
1	59	1	73	1	50	1	60	7	276			2	91
				1	60	2	122	2	110				
				1	25	2	87	1	21			1	77
						1	67	1	59				
								3	181			2	119
				1	21							1	73
								3	92				
								1	49			1	74
				1	38								
								1	58				
								1	28	2	100		
								3	98				
1	35					1	61	3	77				
						1	59	2	57				
		1	25			1	52	3	89			1	23
1	58	2	95	1	65	2	116	4	157	2	73	1	28
3	106	3	216	4	177	5	275	28	1292			1	21
8	330	9	500	13	537	31	1664	94	3700	5	211	16	728

TABLE J.—DEATHS BY

COUNTIES.	Carpenters.		Cabinet-makers.		Coopers.		Cooks.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay.....	1	70					1	61
Brant.....	10	580			1	68		
Bruce.....	2	88	1	23	2	140		
Carleton.....	8	361	2	76				
Dufferin.....	2	148						
Elgin.....	3	182						
Essex.....	4	141						
Frontenac.....	9	664	1	54				
Grey.....	7	431						
Haldimand.....	1	45						
Halton.....	1	24	1	45				
Hastings.....	3	157			1	72		
Huron.....	5	325						
Kent.....	2	102					1	29
Lambton.....	6	320			1	52		
Lanark.....	2	151						
Leeds and Grenville.....	3	178			1	77		
Lennox and Addington.....								
Lincoln.....	7	300	1	45	1	72		
Middlesex.....	14	690	3	120	1	30		
Muskoka and Parry Sound.....	2	74	1	38				
Norfolk.....	4	192	1	85				
Northumberland and Durham.....	4	268						
Ontario.....	3	197	1	43	3	209		
Oxford.....	2	139						
Peel.....	1	72						
Perth.....	3	120			1	62		
Peterborough.....	2	93			1	53		
Prescott and Russell.....	1	33						
Prince Edward.....	2	109	1	39	2	163		
Renfrew.....	3	185	1	22				
Simcoe.....	5	290	1	28	1	62		
Stormont, Dundas and Glengarry.....	4	191			2	172		
Victoria.....								
Waterloo.....	4	237			3	205		
Welland.....	4	189						
Wellington.....	5	316						
Wentworth.....	13	611	4	199				
York.....	30	1479	4	196	2	120	3	134
Totals.....	182	9731	23	1013	23	1557	5	224

OCCUPATIONS, 1884—Continued.

Chemists and Druggists.		Clergymen.		Contractors and Builders.		Carriage and Wagon Makers.		Dentists.		Engineers.		Editors.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
				2	116	1	44			1	22	1	30
		2	151			2	134						
		1	23							1	37		
				1	64	3	228					1	73
				1	52			1	44				
		2	138	1	64								
1	25	1	68							2	135		
		2	154			1	48			1	51		
		1	83										
		1	85					1	67				
1	34			1	70					1	50		
		2	152			1	76			1	44		
		1	87			1	58			2	76		
		2	143	1	68					2	70		
1	49	1	55	1	31	1	70						
		1	46										
				2	120			1	34				
		1	32	3	143					2	117	2	81
		1	44										
		2	125										
		1	67	1	35	1	51	1	34				
		1	51										
		2	132			3	134	1	27	1	41		
		1	82					2	50				
				1	79								
		1	63					1	21				
								1	46				
		1	29										
1	32	1	88			2	67			1	44		
		2	128					1	55	1	35		
		1	74										
		1	68			2	109						
		1	77							2	80		
		1	69			2	124						
1	37	6	360	2	74					4	212		
2	64	4	273	2	115	4	178			8	374		
7	241	45	2947	19	1031	26	1388	8	311	30	1388	4	184

TABLE J.—DEATHS BY

COUNTIES.	Farmers.		Farmers' Wives.		Gardeners.		Gentlemen.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay.....	7	382	7	331				
Brant	36	2386	35	2222	2	109	7	489
Bruce	105	6639	76	4617			2	119
Carleton	53	3527	28	1734	2	119	6	479
Dufferin	34	2172	31	1848				
Elgin.....	48	3058	40	1848			2	142
Essex	57	3417	51	3228			2	139
Frontenac	57	3672	23	1567	3	178	3	243
Grey	105	6383	54	3141				
Haldimand	43	2822	36	2223	1	51	4	238
Halton	31	2076	46	2933			1	65
Hastings.....	95	5517	79	4557	2	122	7	522
Huron	114	7378	85	5199			9	677
Kent	73	4391	61	3589			12	775
Lambton	61	3487	66	3777	1	80	2	146
Lanark	44	3170	38	2503			1	84
Leeds and Grenville.	91	6221	51	3114	1	75	3	243
Lennox and Addington.....	32	1872	30	1694			4	318
Lincoln.....	37	2360	29	1842	3	207	3	167
Middlesex	155	9354	94	5734	3	140	13	870
Muskoka and Parry Sound	47	3436	22	1134			1	35
Norfolk.....	57	3634	52	3035	1	42	3	178
Northumberland and Durham	136	8956	107	6780			9	624
Ontario	70	4276	54	3464			17	1269
Oxford	93	6111	60	3965	1	52	11	718
Peel	42	2522	34	2176			4	332
Perth.....	91	5711	60	4032			13	858
Peterborough	56	3524	36	1917			3	249
Prescott and Russell.....	71	4359	41	2543			4	306
Prince Edward.....	47	2944	28	1797			5	390
Renfrew	41	2494	36	2051			1	87
Simcoe	84	5239	55	3268	2	160	2	98
Stormont, Dundas and Glengarry.....	112	7644	99	6261			3	206
Victoria	54	3314	69	3925			10	707
Waterloo	42	2823	56	3351	1	66	14	959
Welland	55	3676	24	1497	1	47	6	420
Wellington	98	6446	107	5872	2	136	9	571
Wentworth	64	4195	55	3402	4	255	9	611
York	128	8039	65	3782	10	588	16	1044
Totals.....	2666	169627	2020	121953	40	2427	221	15478

OCCUPATIONS, 1884—*Continued.*

Hunters and Fishermen.		Housewives.		Labourers.		Lumbermen.		Lawyers.		Milliners and Dressmakers.		Masons.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
		13	546	45	1659								
		55	3142	23	1172	1	47	2	77	1	68		
		18	1002	10	578								
		79	4549	61	3398			1	71	2	57	1	80
		10	477	2	132							1	89
		27	1297	8	355								
1	25	45	2312	27	1291					2	58		
1	65	65	3785	45	2473					1	21	1	75
		32	1773	12	580	1	40	1	46				
		15	708	7	462								
		24	1284	12	712							1	68
1	64	52	2286	22	1111			3	132			1	25
1	37	21	1013	23	1349					1	38	2	107
		22	1183	25	1484							1	23
		40	1942	23	1129								
		26	1286	8	409			1	34	1	26	1	90
		51	2835	17	458	1	69						
		23	1334	8	511								
		64	3720	21	1069								
		128	7058	47	2425	1	38	1	32	3	113	2	97
		6	286	2	103	3	69	1	32			1	58
		19	1098	15	723								
		51	3002	37	2025	2	85			2	52	1	80
		44	2147	22	1212			1	37				
		28	1509	20	920								
		40	2027	9	524								
		21	1224	10	486							3	216
		37	2133	17	926	2	97	1	32	2	63		
		13	572	12	567					1	70		
1	34	25	1480	11	564					1	48		
		19	1040	19	859	1	27						
		43	2372	26	1309					1	21		
		37	1886	17	761					2	108		
		16	710	10	496					1	23	1	87
		50	2815	21	1268							2	90
		35	1822	20	1243							1	87
		46	2800	23	1284					3	90	3	177
3	236	142	7687	56	2991	2	66			1	46		
		300	17242	128	6510	1	21	5	232	3	102	3	117
8	461	1782	97382	921	47528	15	559	17	725	28	1004	26	1566

TABLE J.—DEATHS BY

COUNTIES.	Machinists.		Moulders.		Millers.		Millwrights.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay.....								
Brant.....			1	50	1	40		
Bruce.....					4	216		
Carleton.....					1	68		
Dufferin.....								
Elgin.....	1	57			2	92		
Essex.....							1	70
Frontenac.....								
Grey.....								
Haldimand.....			1	40				
Halton.....			1	78	3	154		
Hastings.....					3	175		
Huron.....					2	107		
Kent.....	2	76						
Lambton.....								
Lanark.....	1	55			1	26		
Leeds and Grenville.....	2	56	1	50	1	65		
Lennox and Addington.....	1	33						
Lincoln.....								
Middlesex.....	2	56	1	65	1	80	1	58
Muskoka and Parry Sound.....								
Norfolk.....					1	81		
Northumberland and Durham.....			1	54	1	70		
Ontario.....					2	85		
Oxford.....			1	84	1	53		
Peel.....	2	42						
Perth.....					3	166		
Peterborough.....	1	67	1	60	1	51		
Prescott and Russell.....								
Prince Edward.....					2	92		
Renfrew.....							1	74
Simcoe.....								
Stormont, Dundas and Glengarry.....								
Victoria.....	1	21			1	64		
Waterloo.....	2	91						
Welland.....	1	45	1	33				
Wellington.....	2	50	2	104			2	103
Wentworth.....	5	236	6	297	1	70	1	78
York.....	3	99	3	105				
Totals.....	26	984	20	1020	32	1755	6	333

OCCUPATIONS, 1884—Continued.

Musicians.		Manufacturers.		Merchants.		Miners.		Other Occupations.		Other Mechanics.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
				2	106	1	21			1	31
				2	147					2	143
				1	25					1	65
				5	326			1	87	3	102
				1	39						
				1	73			1	50	1	43
		1	47	4	297			1	60	1	24
				6	306			1	35		
		1	24	2	126						
				3	183					1	82
		2	111	3	170	3	109	1	59		
				2	84			1	72	3	120
1	23			5	264						
		2	117	9	422			1	39	1	64
				1	64			1	74	2	64
		1	64	5	313	1	32	1	72	1	36
		2	84							1	74
		2	102	6	363			1	105	5	268
						1	48	3	241	5	328
				1	42						
1	67			2	136						
				4	200					1	24
1	36			3	110						
				3	192			2	101	2	85
				1	36					1	22
				2	83					2	126
		1	38	1	42						
				3	180						
				1	52					2	65
		1	74								
		1	54	4	241			1	39		
				3	114						
		1	88	2	67						
		3	150	1	42					1	58
				1	79						
		2	93	6	336			2	147	1	53
		14	667	15	765	1	68	1	68	9	411
1	45	5	243	22	1173	1	57	3	204	11	429
4	171	39	1956	133	7198	8	335	22	1453	58	2717

TABLE J.—DEATHS BY

COUNTIES.	Painters.		Printers		Provincial Land Surveyors.		Public Officials.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algonia and Thunder Bay								
Brant	1	44	1	21			2	140
Bruce							1	61
Carleton	2	93					15	831
Dufferin								
Elgin	1	24					4	261
Essex							2	114
Frontenac	2	100						
Grey	1	23	2	51				
Haldimand								
Halton	2	97					1	55
Hastings	1	64			1	86	2	117
Huron	2	67			2	106	2	126
Kent								
Lambton							1	66
Lanark								
Leeds and Grenville	1	53			1	61	1	32
Lennox and Addington					2	106	1	89
Lincoln					1	80	3	237
Middlesex	3	159	1	81			3	169
Muskoka and Parry Sound							1	45
Norfolk							1	95
Northumberland and Durham	1	84					3	137
Ontario							1	63
Oxford	3	159			1	72	4	315
Peel							2	125
Perth								
Peterborough								
Prescott and Russell							1	22
Prince Edward	1	33					1	62
Renfrew	1	52					2	109
Simcoe	1	36					1	53
Stormont, Dundas and Glengarry?	1	51			1	75	1	67
Victoria								
Waterloo	2	108					3	178
Welland			1	27			2	88
Wellington							4	256
Wentworth	5	211	1	72			3	191
York	8	327	6	289			16	916
Totals	39	1785	12	541	9	586	84	5020

OCCUPATIONS, 1885—*Continued.*

Physicians.		Pedlars.		Plasterers.		Railroad Employees.		Stonecutters.		Shoemakers.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
1	68	1	34			4	140			3	161
		1	64			3	111			1	62
						1	22	1	23	2	115
						4	145				
4	230	1	45	1	40	1	74	2	58	3	124
				1	54					4	250
				1	46						
2	95					1	69				
						1	45				
1	49					4	116			1	66
1	64					2	103			2	107
				1	22			1	63	1	80
2	91			1	77	5	187				
						1	35	2	92	3	179
								2	60	1	70
		1	75			1	57				
1	72					2	88			2	89
										2	104
2	76									2	118
						1	29			3	225
2	77	1	31							4	261
1	72					1	45			2	107
1	75									4	235
1	60					2	96	1	30	3	234
		1	55								
1	72									3	124
										2	78
		1	52			5	196	2	98	2	120
2	143					4	109			1	65
						3	115	1	38	1	26
										4	262
		1	23			1	27			3	207
1	54					1	40			4	230
		2	105					1	35	5	303
6	341	3	189	2	78	8	308			12	680
29	1639	13	673	7	317	56	2155	13	497	80	4682

TABLE J.—DEATHS BY

COUNTIES.	Sailors.		Saddlers and Harness-makers.		Seamstresses.		Servants.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay							2	45
Brant					1	57		
Bruce	1	87	1	41				
Carleton					1	22	5	266
Dufferin							2	113
Elgin								
Essex							1	53
Frontenac	2	98	1	65	1	31	4	179
Grey	2	86			1	36	4	162
Haldimand								
Halton	2	91			1	24		
Hastings					1	38	1	21
Huron			3	93	2	47		
Kent			1	47	1	23		
Lambton			1	30			1	34
Lanark			1	28	1	54		
Leeds and Grenville	1	42	1	59	1	29		
Lennox and Addington							1	24
Lincoln	4	211			1	34	2	53
Middlesex	5	316	1	62	3	106	2	120
Muskoka and Parry Sound								
Norfolk							2	101
Northumberland and Durham			1	78				
Ontario	1	34			1	30	2	76
Oxford								
Peel			1	60	1	22	1	24
Perth								
Peterborough			1	58				
Prescott and Russell					1	45		
Prince Edward	1	78			1	22		
Renfrew					1	59		
Simcoe					2	52	1	25
Stormont, Dundas and Glengarry	1	25					7	297
Victoria								
Waterloo			2	96			3	109
Welland			1	84	1	27	1	63
Wellington	1	28	1	30				
Wentworth	1	22	3	169	2	86	6	187
York	9	522	3	152	6	243	15	631
Totals	31	1640	23	1152	31	1087	63	2583

OCCUPATIONS, 1884.—*Continued.*

Tinsmiths.		Teamsters.		Tavern-Keepers.		Tobacconists and Cigar- Makers.		Teachers			
								Male.		Female	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
				2	102						
2	90			2	107			2	84		
				1	50			2	53	4	112
		2	120	1	37			1	80		
1	49			1	49			1	25		
		1	29					1	30		
				1	52					1	65
2	131	3	206	1	54			1	94	2	146
				2	102			1	27		
										1	39
				1	69						
1	52	1	65	1	29			2	56		
		1	54	3	157			1	23	1	42
1	27			1	50						
1	54							1	26		
								3	206		
		4	128			1	47				
				2	96						
		2	65	3	168	1	39	1	53	1	74
				2	146			2	101		
				1	62						
										2	46
		1	53	2	94						
		1	54	1	43			1	40		
		2	150	1	50						
				1	60					1	33
		1	52					1	63	1	33
				1	37			1	48		
								2	177	1	23
								1	80	1	23
								1	73		
		1	40	2	106			2	96		
		1	25	1	53			1	22	1	21
				1	48			1	35		
				1	58	1	27	1	31		
				4	252			1	74	1	23
2	70			3	175						
3	93	6	287	1	54	3	102			2	82
3	114	9	418	9	390	3	100	4	204	2	74
16	680	36	1746	53	2750	9	315	36	1802	21	404

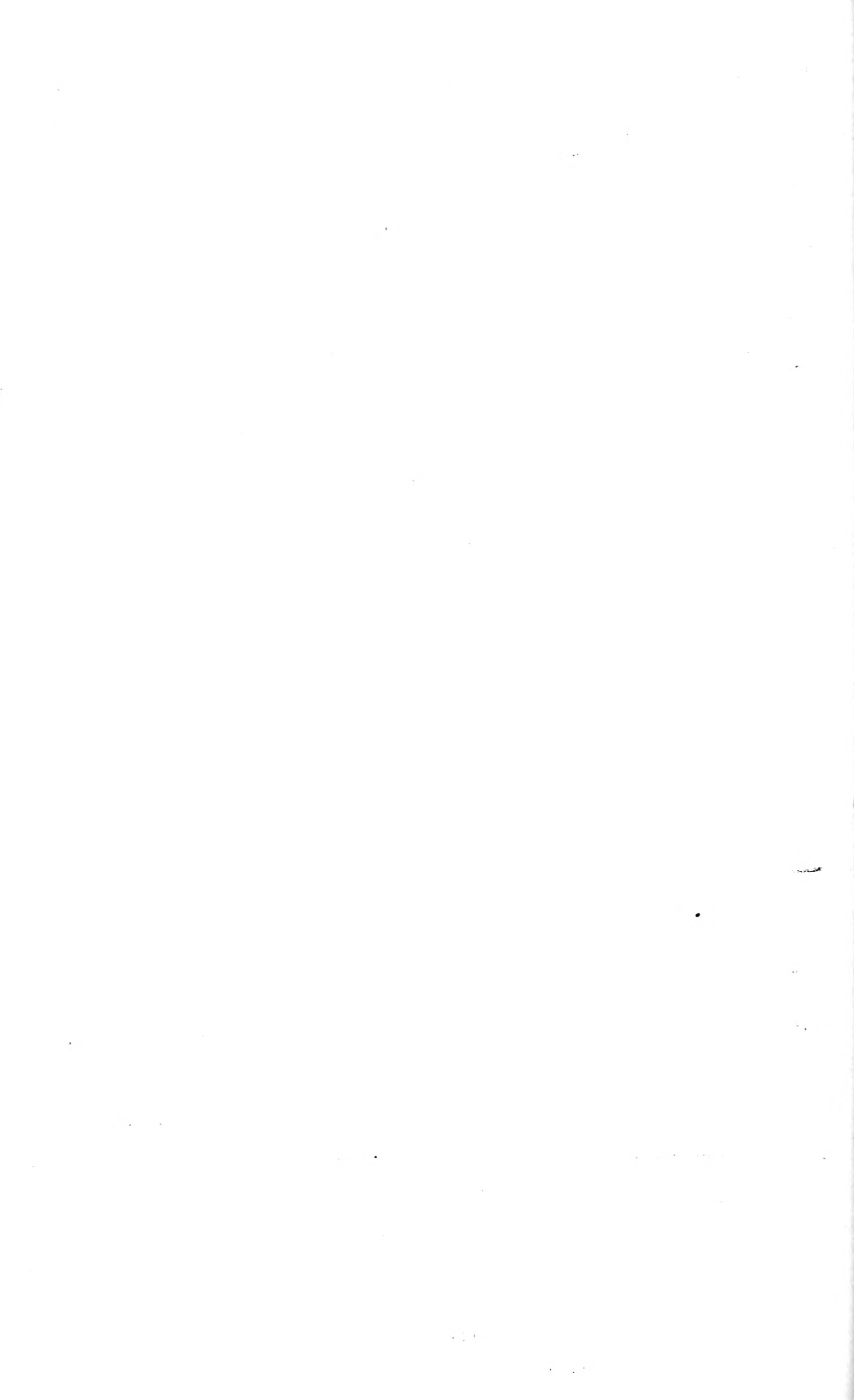
TABLE J.—DEATHS BY

COUNTIES.	Telegraph Operators.		Tailors.		Tanners and Curriers.		Undertakers.	
	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.	No.	Total Ages.
Algoma and Thunder Bay.....	1	25						
Brant.....			1	60				
Bruce.....			2	49				
Carlton.....			2	92				
Dufferin.....								
Elgin.....			1	77				
Essex.....			4	219				
Frontenac.....			5	268				
Grey.....			2	173				
Haldimand.....								
Halton.....			1	74				
Hastings.....			1	82	1	52		
Huron.....	1	24	2	81				
Kent.....	1	36	4	267				
Lambton.....								
Lanark.....			2	147				
Leeds and Grenville.....	1	22	1	70				
Lemox and Addington.....								
Lincoln.....	1	27	1	24	2	119		
Middlesex.....	1	22	4	233			1	83
Muskoka and Parry Sound.....			1	76				
Norfolk.....								
Northumberland and Durham.....			2	97	2	117		
Ontario.....					2	73		
Oxford.....			3	184				
Peel.....								
Perth.....	2	45	2	99				
Peterborough.....					1	55		
Prescott and Russell.....								
Prince Edward.....			1	56				
Renfrew.....			1	52				
Simcoe.....	1	30	1	47	1	72		
Stormont, Dundas and Glengarry.....			1	70				
Victoria.....			1	25				
Waterloo.....			2	133	1	30		
Welland.....								
Wellington.....			2	86				
Wentworth.....			9	590				
York.....	2	62	11	691				
Totals.....	11	293	70	4119	10	518	1	83

OCCUPATIONS, 1884.—*Continued.*

Volunteers, Soldiers, and Pensioners.		Watchmakers and Jewellers.		Weavers.		Total Number of Deaths.	Total Ages.	
No.	Total Ages.	No.	Total Ages.	No.	Total Ages.		Aggregate.	Average.
		1	62			93	3791	40.7 years.
1	58			1	38	211	12397	58.7 "
1	51	1	37			246	14492	58.9 "
		1	34			308	17744	57.6 "
				3	184	90	5392	59.8 "
				1	72	153	8136	53.1 "
5	392			1	81	221	12410	55.6 "
6	412					267	16112	60.3 "
1	65			2	141	248	14197	57.2 "
1	75	1	21			121	7309	60.4 "
1	78			1	82	139	8505	61.1 "
						316	16999	53.8 "
						309	17940	59.8 "
						224	12942	57.7 "
				1	85	238	12685	53.3 "
						152	9286	61.0 "
1	74					254	14922	58.7 "
1	90					109	6448	59.1 "
1	74					216	12494	57.8 "
3	168			1	64	544	31008	57.0 "
				1	81	94	5719	60.2 "
						173	10219	59.0 "
1	67					388	23941	61.7 "
						244	14256	58.2 "
2	158					263	16271	61.8 "
1	67			1	75	157	8975	57.1 "
				2	140	231	14220	61.5 "
		1	82	2	154	178	10182	57.2 "
						148	8697	58.8 "
				1	96	146	8783	60.1 "
1	73			1	74	138	7690	55.7 "
2	173	1	23	2	94	262	14841	56.6 "
		1	62			312	18829	60.3 "
2	157			1	70	182	10268	56.4 "
				2	150	230	13687	59.5 "
		1	81			173	10387	60.4 "
1	80	1	24	3	226	352	20637	58.6 "
5	284	1	44	6	385	507	28007	55.2 "
6	382	1	32	1	58	369	52887	54.5 "
43	2978	11	562	34	2390	9597	558705	57.7 years.

H. S. CREWE,
Inspector.



EIGHTEENTH ANNUAL REPORT

OF THE

INSPECTOR OF PRISONS AND PUBLIC CHARITIES

UPON THE

COMMON GAOLS,

PRISONS AND REFORMATORIES

OF THE

PROVINCE OF ONTARIO,

BEING FOR THE YEAR ENDING 30TH SEPTEMBER.

1885.

Printed by Order of the Legislative Assembly.



Toronto :

PRINTED BY THE GRIP PRINTING AND PUBLISHING COMPANY

1886.

OFFICE OF THE
INSPECTOR OF PRISONS AND PUBLIC CHARITIES, ONTARIO,
PARLIAMENT BUILDINGS, TORONTO, October, 1885.

SIR, -I have the honour to transmit herewith, to be presented to His Honour, the Lieutenant-Governor, the Eighteenth Annual Report upon the Common Gaols, Prisons and Reformatories of the Province of Ontario, being for the official year ending on the 30th September, 1885.

I have the honour to be, Sir,

Your most obedient servant,

R. CHRISTIE,

Inspector.

The Honourable

ARTHUR STURGIS HARDY, Q.C., M.P.P.,

Secretary for the Province of Ontario.

Toronto.

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COMMON GAOLS, PRISONS AND REFORMATORIES.

EIGHTEENTH
ANNUAL REPORT

OF THE

Inspector of Prisons & Public Charities

FOR THE

PROVINCE OF ONTARIO.

PARLIAMENT BUILDINGS,

Toronto, October, 1885.

To the Honourable JOHN BEVERLEY ROBINSON,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:—

Herewith I beg to submit the Eighteenth Annual Report upon the Common Gaols, Prisons and Reformatories of the Province of Ontario, being for the official year ending 30th September, 1885.

I have the honour to be,

Your Honour's most obedient servant,

R. CHRISTIE,

Inspector.

COMMON GAOLS.

For the first time since it has been my duty to annually report upon the Common Gaols of this Province, I am able to report a decrease in the number of persons committed. Since the year 1881, when the commitments numbered 9,229, there has been an increase each year, the number in 1884 reaching to 12,081. This year the total of the commitments is 11,426, a decrease of 655 or 5.42 per cent. The table which follows shews the decrease in the number of adult males committed, as compared with 1884, to be 439, or 4.45 per cent.; of boys 8, or 1.74 per cent; of adult women, 212, or 12.33 per cent. There was an increase of 4 in the number of young girls.

	Men over 16 years of age.	Boys under 16 years of age.	Women over 16 years of age.	Girls under 16 years of age.	Total.
Commitments for the year ending 30th Sept., 1869.....	3,599	294	1,680	82	5,655
“ “ “ 1870.	4,215	319	1,737	108	6,379
“ “ “ 1871.	4,586	329	1,642	58	6,615
“ “ “ 1872.....	5,006	281	1,615	56	6,958
“ “ “ 1873.....	5,745	323	1,735	74	7,877
“ “ “ 1874.....	7,298	377	1,746	67	9,488
“ “ “ 1875.....	8,048	389	1,566	70	10,073
“ “ “ 1876.....	9,005	434	1,727	70	11,236
“ “ “ 1877.....	11,053	542	1,824	62	13,481
“ “ “ 1878.....	9,537	480	1,959	54	12,030
“ “ “ 1879... ..	8,995	416	1,756	53	11,220
“ “ “ 1880.....	8,829	549	1,863	59	11,300
“ “ “ 1881.....	7,007	468	1,681	73	9,229
“ “ “ 1882.....	7,286	522	1,750	62	9,620
“ “ “ 1883.....	7,858	423	1,551	48	9,880
“ “ “ 1884.....	9,858	458	1,719	46	12,081
“ “ “ 1885.....	9,419	450	1,507	50	11,426

The next table shews the number of prisoners (male and female) committed to each gaol during 1884 and 1885, and the increase or decrease in the commitments of 1885 as compared with 1884 :—

TABLE No. 1.

NAME OF GAOL.	Number of prisoners committed in the year ended Sept. 30th, 1885.			Number of prisoners committed in the year ended 30th Sept., 1884.			INCREASE.			DECREASE.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	375	30	405	316	32	348	59		59		2	2
Berlin	71	5	76	58	5	63	13		13			
Belleville	167	26	193	151	27	178	16		16		1	1
Brantford	136	21	157	144	31	175				8	10	18
Brampton	182	4	186	143	8	151	39		39		4	4
Brockville	186	28	214	210	35	245				24	7	31
Cayuga	98	12	110	55	13	68	43		43		1	1
Cornwall	40	3	43	61	7	68				21	4	25
Cobourg	126	11	137	119	8	127	7	3	10			
Chatham	110	11	121	133	20	153				23	9	32
Goderich	53	8	61	77	13	90				24	5	29
Guelph	106	12	118	131	16	147				25	4	29
Hamilton	858	145	1003	792	162	954	66		66		17	17
Kingston	142	42	184	140	38	178	2	4	6			
London	674	114	788	849	155	1004				175	41	216
Lindsay	65	6	71	69	6	75				4		4
L'Orignal	23	5	28	21	2	23	2	3	5			
Milton	245	7	252	133	7	140	112		112			
Napawee	50	9	59	58	14	72				8	5	13
Ottawa	524	113	637	554	159	713				30	46	76
Owen Sound	208	20	228	175	25	200	33		33		5	5
Orangeville	53	10	63	48	8	56	5	2	7			
Perth	72	14	86	58	12	70	14	2	16			
Pictou	61	8	69	63	2	65		6	6	2		2
Pembroke	119	12	131	107	6	113	12	6	18			
Peterboro'	110	10	120	136	12	148				26	2	28
Port Arthur	174	12	186	828	6	834		6	6	654		654
Rat Portage	118	11	129	221	15	236				103	4	107
Simcoe	71	3	74	74	7	81				3	4	7
St. Catharines	86	13	99	85	12	97	1	1	2			
Sarnia	333	9	342	279	16	295	54		54		7	7
Stratford	139	12	151	132	23	155	7		7		11	11
Sandwich	166	36	202	197	61	258				31	25	56
St. Thomas	185	23	208	235	32	267				50	9	59
Sault Ste. Marie	41	2	43	34	3	37	7		7		1	1
Toronto	2696	701	3397	2538	713	3251	158		158		12	12
Walkerton	60	7	67	49	9	58	11		11		2	2
Woodstock	355	12	367	319	22	341	36		36		10	10
Welland	294	5	299	288	12	300	6		6		7	7
Whitby	100	12	112	95	6	101	5	6	11			
Lock-ups :												
Bracebridge	101	4	105	22	1	23	79	3	82			
Gore Bay				1		1				1		1
Little Current	12	4	16	2		2	10	4	14			
Manitowaning	10		10	18		18				8		8
Mattawa	28	1	29	41	2	43				13	1	14
Parry Sound	4		4	20	2	22				16	2	18
Silver Islet												
Minden												
Haliburton				1		1				1		1
Sudbury	11	2	13	36		36		2	2	25		25
Huntsville	31	2	33				31	2	33			
Total	9869	1557	11426	10316	1765	12081	828	50	878	1275	258	1533

It will be at once seen that the principal decrease is at Port Arthur, where the commitments have been reduced from 834 to 186, or to about the number of commitments which was usual before the extensive railway works were in operation in the District of Thunder Bay. The returns from Rat Portage also shew a decrease of 107. The gaols in the central and eastern portions of Ontario to which a less number of commitments have been made, are London, 216; Ottawa, 76; St. Thomas, 59; Sandwich, 56; Chatham, 32; Brockville, 31; Goderich, 23; Guelph, 29, etc. The chief increases are at Toronto, 146; Milton, 112; Bracebridge, 82 (caused by railway works); Barrie, 57; Sarnia, 47; Hamilton 49, etc.

The annexed tables shew the number of commitments in each of the past ten years, divided into five classifications:—

1. CRIMES AGAINST THE PERSON.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Assault, common	743	641	724	549	623	556	576	572	586	672
Assault, felonious	124	134	98	125	85	88	124	91	146	169
Cutting and wounding, stabbing and shooting with intent	127	92	71	62	63	40	73	52	50	46
Rape, and assault with intent	48	39	37	45	44	36	56	46	44	68
Murder	30	39	24	25	42	23	29	30	45	25
Manslaughter	12	7	6	60	7	7	9	12	20	12
Attempt at suicide	1	7	11	6	9	8	10	8	10	5
Miscellaneous	43	31	38	25	31	95	43	48	32	46
	1128	990	1009	847	904	853	920	859	933	1043

2. CRIMES AGAINST PROPERTY.

Arson and incendiarism	45	35	47	49	31	22	23	47	24	35
Burglary	63	58	89	103	93	44	63	61	44	51
Counterfeiting and passing counterfeit money	21	23	10	19	15	15	11	1	5	10
Destroying and injuring property	104	115	138	126	130	67	138	80	122	112
Embezzlement	21	24	29	28	23	17	19	25	36	32
Forgery	46	31	48	64	50	30	34	35	30	60
Fraud, and obtaining money or goods under false pretences	140	137	151	131	101	82	106	106	113	149
Horse, cattle and sheep stealing	75	84	89	86	70	54	73	49	63	73
Housebreaking and robbery	62	43	57	102	103	80	67	61	156	146
Larceny	1764	2070	1818	1626	1669	1363	1401	1278	1742	1589
Receiving stolen goods	54	38	64	38	42	26	45	33	34	38
Trespass	49	73	103	122	123	112	110	120	238	222
Miscellaneous	50	42	43	29	73	78	85	93	69	97
	2494	2773	2686	2523	2523	1990	2175	1989	2676	2614

3. CRIMES AGAINST PUBLIC MORALS AND DECENCY.

Bigamy	12	12	9	14	5	6	10	6	7	13
Inmates and frequenters of houses of ill-fame	129	137	197	189	236	171	194	133	183	172
Keeping houses of ill-fame	81	89	117	92	134	102	137	130	106	85
Perjury	12	32	25	25	27	15	15	8	12	19
Seduction	3	2	2	2				1		2
Indecent assault and exposure	45	27	40	41	40	38	32	45	48	40
Miscellaneous	49	116	129	86	50	67	78	13	62	45
	331	415	519	449	492	399	466	336	418	376

4. OFFENCES AGAINST PUBLIC ORDER AND PEACE.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Abusive and obscene language	71	73	101	72	95	65	55	87	76	44
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	116	90	143	130	109	83	91	137	156	117
Carrying unlawful weapons.....	13	25	37	27	34	43	42	35	49	29
Deserting employment.....	45	21	27	10	27	18	41	30	8	3
Drunk and disorderly.....	3868	4032	3785	3581	3795	3328	3497	3895	4650	3696
Selling liquor without license, and selling or giving it to Indians....	53	160	153	122	115	83	70	53	71	60
Threatening and seditious language..	83	48	36	48	48	57	26	50	22	47
Vagrancy	2128	3888	2524	2536	2210	1580	1449	1554	2130	2455
Miscellaneous	156	217	260	174	207	131	120	227	179	220
	6533	8544	7066	6700	6640	5388	5391	6068	7341	6671

5. OTHER CAUSES FOR WHICH PERSONS WERE DETAINED AS PRISONERS.

Contempt of Court.....	90	136	133	149	180	124	76	97	107	120
Debtors	72	60	67	72	86	46	59	64	53	63
Detained as witnesses.....	29	17	31	12	18	17	16	21	19	18
Lunatics and persons dangerous to be at large	348	336	307	339	346	338	432	345	433	433
Non-payment of fines and costs.....	42	41	39							
Want of sureties to keep the peace...	169	159	173	129	111	74	88	101	101	88
	750	749	750	701	741	599	688	628	713	722
Total number of persons committed for the respective years.....	11236	13481	12030	11220	11300	9229	9620	9880	12081	11426

Under the first heading, as compared with 1884, there is a large decrease in the number of commitments for murder and manslaughter, but an increase in the commitments for rape. The most noticeable feature in the second division is the reduction of the commitments for larceny. In the fourth division it will be noticed with general satisfaction that the commitments for drunkenness shew a decrease of 954, or 20.51 per cent. In the three past years the ratio which the commitments for drunkenness bear to the total commitments has been as follows:—1883, 39.42 per cent. ; 1884, 38.49 per cent. ; 1885, 32.34 per cent.

As it is a matter of interest to know in what places the decreased commitments for this offence are most noticeable, I append a table shewing the number of persons committed for drunkenness to each of the gaols during 1884 and 1885:—

GAOLS.	Commitments for drunkenness during year ending 30th Sept., 1884.	Commitments for drunkenness during year ending 30th Sept., 1885.	INCREASE OR DECREASE DURING YEAR ENDING 30TH SEPT., 1885.	
			Increase.	Decrease.
Barrie	99	31		68
Berlin	11	7		4
Belleville	50	45		5
Brantford	58	28		30
Brampton	10	24	14	
Brockville	135	80		55
Cayuga	7	18	11	
Cornwall	9	3		6
Cobourg	26	26		
Chatham	26	18		8
Goderich	4	3		1
Guelph	49	32		17
Hamilton	295	368	73	
Kingston	75	74		1
London	445	277		168
Lindsay	20	13		7
L'Orignal		3	3	
Milton	6	9	3	
Napanee	20	6		14
Ottawa	314	205		109
Owen Sound	28	36	8	
Orangeville	1	1		
Perth	7	6		1
Picton	46	41		5
Pembroke	27	11		16
Peterboro'	30	27		3
Port Arthur	544	66		478
Rat Portage	161	87		74
Simcoe	17	4		13
St. Catharines	39	29		10
Sarnia	105	130	25	
Stratford	14	17	3	
Sandwich	103	47		56
St. Thomas	82	57		25
Sault Ste. Marie	3	2		1
Toronto	1661	1707	46	
Walkerton	3			3
Woodstock	51	21		30
Welland	23	33	10	
Whitby	1	4	3	
Lock-ups:				
Bracebridge	13	67	54	
Little Current	1	7	6	
Manitowaning	11	3		8
Mattawa	11	6		5
Parry Sound	3			3
Huntsville		17	17	
Sudbury	6			6
Totals	4650	3696	276	1230
Actual decrease				954

The disposition made of the persons committed to the gaols of the Province is set forth in the table printed below:—

Acquitted on being brought to trial, and discharged.....	2300
Discharged without trial by order of judges, magistrates, and courts, including remand cases.....	1067
Detained for want of sureties to keep the peace.....	104
Detained as witnesses	18
Detained as fraudulent debtors	70
Detained as lunatics, idiots, and persons unsafe to be at large	397
Died before trial	9
Detained by civil processes other than above	39
Waiting trial and otherwise detained on the 30th September, 1885	121
Found guilty and sentenced	7301
<hr/>	
Total number of commitments.....	11426

The places of confinement to which the 7301 convicted persons were sentenced are set forth in the following statement, and similar information is given as regards the sentenced prisoners of the previous year:—

	1884.	1885.
Sentenced to the Kingston Penitentiary	133	175
do to the Reformatory for Boys	82	54
do direct to Central Prison	373	498
do to the Common Gaols and subsequently transferred to the Central Prison	337	261
do direct to the Reformatory for Females ..	102	103
do to Common Gaols and subsequently trans- ferred to the Reformatory for Females	60	40
do to the Common Gaols and there detained until expiration of sentence	6173	6170
<hr/>		<hr/>
Total.....	7260	7301

The summaries given below shew the nature of the offences committed by the convicted prisoners:—

1. *Crimes against the Person.*

	Total com- mitments for the year.	Number found guilty and sentenced.
Assault, common	672	443
Assaul, felonious	169	97
Cutting and wounding, stabbing, and shooting with intent	46	28
Rape, and assault with intent	68	30
Murder	25	2
Manslaughter	12	8
Attempt at suicide.....	5	2
Miscellaneous.....	46	21
<hr/>		<hr/>
	1043	631

2. *Crimes against Property.*

	Total commitments for the year.	Number found guilty and sentenced.
Arson and incendiarism	35	12
Burglary	51	29
Counterfeiting and passing counterfeit money ..	10	4
Destroying and injuring property	112	79
Embezzlement	32	21
Forgery	60	22
Fraud, and obtaining money and goods under false pretences	149	62
Horse, cattle and sheep stealing	73	45
Housebreaking and robbery	146	70
Larceny	1589	1027
Receiving stolen goods	38	18
Trespass	222	186
Miscellaneous	97	49
	2614	1624

3. *Crimes against Public Morals and Decency.*

Bigamy	13	5
Inmates and frequenters of houses of ill-fame ..	172	73
Keeping houses of ill-fame	85	57
Perjury	19	4
Seduction	2	..
Indecent assault and exposure	40	25
Miscellaneous	45	23
	376	187

4. *Offences against Public Order and Peace.*

Abusive and obscene language	44	32
Breaches of peace, breaches of by-laws, escapes from and obstructing constables	117	74
Carrying unlawful weapons	29	22
Deserting employment	3	1
Drunk and disorderly	3696	2861
Selling liquor without a license, and selling or giving it to Indians	60	51
Threatening and seditious language	47	25
Vagrancy	2455	1567
Miscellaneous	220	124
	6671	4757
	10704	7199
Contempt of Court	120	102
Total	10824	7301

Tables showing the periods of sentence passed on the convicted prisoners and the sex, nationalities, religious denominations, social conditions, habits, etc., of the total number of prisoners are hereto annexed:—

Periods of Sentence.

	1884.	1885.
For periods under thirty days	2954	2974
For thirty days, and up to sixty days, or two months, not including the last term	2302	2160
For sixty days, or two months	573	550
Over two months to three months	343	379
Over three months to four months	160	200
Over four months to five months	53	79
Over five months to six months	390	448
Over six months to nine months	80	63
Over nine months and up to one year inclusive	108	105
Over one year and up to two years	79	110
Over two years and up to three years in the Penitentiary	70	109
Over three years in the Penitentiary	63	66
For periods of any length in the Reformatory for Boys	82	54
Sentenced to death	3	1
“ “ corporal punishment with imprisonment . . . . .	.....	3
	<u>7260</u>	<u>7301</u>

Sex.

Male	10316	9869
Female	1765	1557
	<u>12081</u>	<u>11426</u>

Nationalities.

Born in Canada	5267	5172
Born in England	2020	1950
Born in Ireland	2840	2609
Born in Scotland	686	582
Born in the United States	896	789
Born in other Countries	372	324
	<u>12081</u>	<u>11426</u>

Religious Denominations.

Roman Catholic	4722	4286
Church of England	3801	3558
Presbyterian	1470	1468
Methodist	1390	1416
Other Denominations	698	698
	<u>12081</u>	<u>11426</u>

Social Condition.

	1884.	1885.
Married	4066	3929
Unmarried	8015	7497
	<u>12081</u>	<u>11426</u>

Habits.

Temperate	3080	3315
Intemperate	9001	8111
	<u>12081</u>	<u>11426</u>

Educational Status.

Could read and write	9395	8821
Could neither read nor write	2686	2605
	<u>12081</u>	<u>11426</u>

The number of prisoners confined in the various custodial institutions of the Province at the close of the past official year, and of the year preceding, is exhibited in the following summary:—

	1884.	1885.
In the Common Gaols	617	623
In the Central Prison, Toronto	335	360
In the Reformatory for Boys, Penetanguishene....	242	220
In the Reformatory for Females, Toronto	163	149
In the Dominion Penitentiary, Kingston	472	525
	<u>1829</u>	<u>1877</u>

GAOL EXPENDITURES.

The usual table is appended shewing the cost of maintaining the common gaols during the past, and six preceding years, under the headings of rations, clothing, fuel, salaries and wages, and repairs:—

YEAR.	Total number of prisoners in custody each year.	Cost of rations, clothing, fuel, etc., each year.		Cost of salaries and wages of gaol officials each year.		Cost of repairs.		Total gaol expenditure.	
		\$	c.	\$	c.	\$	c.	\$	c.
1878	12,030	60,217	83	63,591	11	7,307	66	131,116	60
1879	11,220	52,856	24	63,914	40	5,583	44	122,354	08
1880	11,300	49,037	14	64,084	34	3,504	96	116,626	44
1881	9,229	45,001	05	63,502	00	3,410	12	111,915	15
1882	9,620	44,768	92	63,794	30	4,665	53	113,228	75
1883	9,880	44,783	50	64,935	96	4,706	20	114,425	66
1884	12,081	51,909	89	68,446	88	7,125	50	127,482	27
1885	11,426	54,321	35	70,344	96	5,081	55	129,747	86

Notwithstanding the decreased number of prisoners, the cost of maintenance in 1885 was more than in 1884, but this is explained by the fact that the aggregate stay of the prisoners in 1884 was 249,519 days, and in 1885 267,171 days. The cost per head was actually less in 1885 than in 1884.

ESCAPES.

During the year escapes were made by fourteen prisoners, six of whom were recaptured.

From the *Cornwall* Gaol, a man named George Hutchins, who was waiting trial for stealing, escaped on the 28th March. He had been taken into the yard by the turnkey and while the latter's attention was being given to a fire which had been lighted in the yard, the prisoner made a rush for the kitchen, the door into it having been left open. Once in the kitchen the prisoner easily made his way into the Court House and from there gained his freedom. He escaped across the River St. Lawrence to the United States. The turnkey was reprimanded for his carelessness in leaving the kitchen door unlocked.

A prisoner named Peter Marks under sentence to twelve months imprisonment in the Central Prison, for larceny, escaped from the *Chatham* Gaol on the 21st September. The Sheriff reports that the prisoner was locked in the kitchen, and that after the escape all the doors and windows of the kitchen were found locked and in their usual order. The only manner in which the prisoner could possibly have escaped appeared to be by squeezing himself between the bars over the front door, which are but $6\frac{1}{4}$ inches apart. This explanation was not accepted at first as it did not seem to be possible for a man to get through such a small space. The Sheriff on making further enquiry could come to no other conclusion, more especially as the gaol surgeon and the Sheriff's book-keeper could both pass between the bars in question. The Sheriff was instructed to have the opening over the door made more secure.

Prisoner Edward Wright made his escape from the *Hamilton* Gaol on the 9th March. He was being marched with a gang of other prisoners from the wood yard to the stone yard, and being in front of the gang, he, as soon as he reached the stone yard, ran behind a heap of stones and climbed over the fence before the turnkey and other prisoners got into the yard.

From the *Port Arthur* Gaol, Thomas O'Connor, under sentence for assault with intent, escaped on the 31st July. He was one of a gang working on the new buildings outside the gaol walls. The turnkey, in despite of all rules, left the men to themselves whilst he went into the gaol, O'Conner took advantage of this to escape.

During the year, two men escaped at different times from the *Rat Portage* Gaol. The first escape was made by William Perkins on the 14th October, 1884. The prisoner was working on the gaol premises under charge of the turnkey, and was given permission to go to the water closet inside the gaol. Not returning within a reasonable time the turnkey made search for the man but could not find him. The second prisoner who escaped was at work planting potatoes in the gaol garden when he made a dash for his liberty, and succeeded in evading capture.

Charles Immell, confined on a charge of larceny, escaped from the *St. Catharines* Gaol on the 11th August. One of the corridors of the gaol required cleaning, and the gaoler took the prisoner into it by the back way and left him there, supposing the front door of the corridor to be locked. This was not the case, however, as shortly afterwards the prisoner made his way downstairs and out into the street. He was recaptured within a week.

On the 22nd July, two female prisoners escaped from the *Stratford* Gao by scaling the clothes yard fence, but were recaptured a few hours afterwards.

John Wilkinson, under sentence to the Central Prison for eighteen months, escaped from the *Sandwich* gaol on the 24th August, and was recaptured in about twelve hours. The prisoner was one of a gang working in the yard and corridor and while the turnkey's attention was diverted for a few minutes, the prisoner by

going upstairs and getting through a small trap used for passing provisions from the kitchen to the hall, succeeded in getting away.

On the 20th June, a prisoner named McCann escaped from the *St. Thomas* Gaol. He was left alone in the yard and by aid of the projecting hinges of a gate and a stick put in the crevice between two stones, succeeded in scaling the wall. He was recaptured the next day. Had the turnkey obeyed the gaol rules and not have left the prisoner alone in the yard, the escape would not, of course, have been attempted. The gate has now been altered so that its hinges offer no help to an escape.

The escape reported as having taken place from the *Welland* Gaol can hardly be classed as such, for the prisoner was not out of custody for more than five minutes. He was working under the supervision of the turnkey, in the Court House. He suddenly dropped his broom and made a run for his liberty. He was immediately followed by the turnkey and recaptured.

Two men escaped from the *Woodstock* Gaol on the 30th September. They were left alone in the yard for, as the turnkey states, less than a minute. During that time the prisoners succeeded in reaching the flat roof of the gaol and from there made their escape. The outside bars of the windows in the upper and lower corridor formed a perfect ladder to the roof. The County Council were requested to have them altered and the iron gratings put inside the window. The turnkey was of course to blame for leaving the prisoners even for only a minute alone in the yard.

STATISTICAL TABLES.

Following this portion of the report will be found the tables named in the list given hereunder:—

Table No. 2, shewing the total number of prisoners in the several gaols on the 30th September, 1885, and the nature of their imprisonment.

Table No. 3, shewing the number of prisoners over and under 16 years of age, the number of re-committals, the number of persons acquitted on being brought to trial, and the number of persons committed under civil processes.

Table No. 4, shewing the offences for which prisoners were *committed*.

Table No. 5, shewing the total number of prisoners, male and female, *committed* under each offence, during the year.

Table No. 6, shewing the number of prisoners, male and female, *sentenced* during the year, and a comparison of the same with the preceding year.

Table No. 7, shewing the number of prisoners upon whom sentence was passed, the nature and periods of the sentences, and the operation of the County Judges' Criminal Courts.

Table No. 8, shewing the offences for which prisoners were *sentenced*.

Table No. 9, shewing the total number of prisoners, male and female, *sentenced* under each offence.

Table No. 10, shewing the nationalities, religious denominations, social state, etc., of the prisoners committed.

Table No. 11, shewing the occupations, trades, or callings of the prisoners committed during the year.

Table No. 12, shewing the number of escapes and deaths, the revenue derived from prison labour, the cost of diet, the accommodation of the gaols, and the highest and lowest number of prisoners in custody in each gaol during the year.

Table No. 13, shewing how the prisoners committed during the year were maintained, the cost thereof, and the salaries of officials.

Table No. 14, shewing the daily cost per prisoner in each of the gaols of the Province, for the year ending 30th September, 1885.

Following these tables are the separate reports upon each of the Common Gaols :

TABLE No. 2.

Shewing the total number of prisoners who were in the several gaols of the Province on the evening of 30th September, 1885, and the nature of their imprisonment.

NAME OF GAOL.	CLASSIFICATION.				NATURE OF IMPRISONMENT.						Total number of persons who remained in custody on 30th Sept., 1885.
	Men.	Women.	Boys under 16 years.	Girls under 16 years.	Waiting Trial.	Under sentence for periods of two months and under.	Under sentence for periods over two months.	In default of surties to keep the peace.	Insane, idiotic or imbecile persons.	Otherwise detained.	
Barrie.....	19	6			3	7	9	1	5		25
Berlin.....	1						1				1
Belleville.....	8	4	1		5	2	4		2		13
Brantford.....	3	3				6					6
Brampton.....	5		1			3	1		2		6
Brockville.....	11	6			3	3	6		5		17
Cayuga.....	5	1			1	4			1		6
Cornwall.....	4				1				3		4
Cobourg.....	10	4	1		2	3	6	1	3		15
Chatham.....	6				2	3	1				6
Goderich.....	7	3			1	1	3		4	1	10
Guelph.....	3	2			1	1	1		1	1	5
Hamilton.....	39	10		3	4	37	8		3		52
Kingston.....	12	10			3	4	9		6		22
London.....	13	9			3	10	5		3	1	22
Lindsay.....	5	1			2	1	1	1	1		6
L'Orignal.....	1								1		1
Milton.....	7	2			3		3		4		9
Napanee.....	1	2	1		1		1		2		4
Ottawa.....	24	9	3		11	10	7		2		36
Owen Sound.....	8	2				3	4		3		10
Orangeville.....	8	7				1	10		2	2	15
Perth.....	13	4	1		1	4	9		3	1	18
Picton.....	1	1					1		1		2
Pembroke.....	9	5	2		4	4	6		1	1	16
Peterboro'.....	14	1				2	7	2	4		15
Port Arthur.....	17				7	6	3			1	17
Rat Portage.....	4	1				4	1				5
Simcoe.....	2	1			1				2		3
St. Catharines.....	12	3			6	6			3		15
Sarnia.....	10				1	5	2		2		10
Stratford.....	8	3	1			6	6				12
Sandwich.....	14	6	1		2	7	8		4		21
St. Thomas.....	11	1			1	5	5		1		12
Sault Ste. Marie.....	2	1			2		1				3
Toronto.....	90	56	3		21	81	16	1	29	1	149
Walkerton.....	3	1			2	1			1		4
Woodstock.....	8	2			3	3	2		1	1	10
Welland.....	8				4		2	1	1		8
Whitby.....	9	2			3		3		4	1	11
Lock-ups :											
Bracebridge.....											
Little Current.....	1				1						1
Manitowaning.....											
Mattawa.....											
Parry Sound.....											
Sudbury.....											
Huntsville.....											
Totals.....	436	169	15	3	104	233	152	7	116	11	623

TABLE

Shewing the number of persons committed, the number over and under 16 the peace, number of unsound mind, number acquitted on number sentenced and number com

NAME OF GAOL.	Total number committed during the year.			Number under 16 years of age.			Number over 16 years of age.			For the first time.	For the second time.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.		
Barrie	375	30	405	7	1	8	368	29	397	358	43
Berlin	71	5	76	5	1	6	66	4	70	60	11
Belleville	107	26	193	11	2	13	156	24	180	159	15
Brantford	136	21	157	11	.....	11	125	21	146	84	19
Brampton	182	4	186	1	.....	1	181	4	185	143	23
Brockville	186	28	214	1	.....	1	185	28	213	100	41
Cayuga	98	12	110	3	4	7	95	8	103	71	30
Cornwall	40	3	43	1	.....	1	39	3	42	33	6
Cobourg	126	11	137	2	.....	2	124	11	135	93	18
Chatham	110	11	121	5	1	6	105	10	115	114	.....
Goderich	53	8	61	4	.....	4	49	8	57	34	6
Guelph	106	12	118	4	1	5	102	11	113	107	10
Hamilton	858	145	1003	35	11	46	823	134	957	441	136
Kingston	142	42	184	9	.....	9	133	42	175	158	23
London	674	114	788	31	5	36	643	109	752	421	142
Lindsay	65	6	71	3	.....	3	62	6	68	65	4
L'Orignal	23	5	28	3	.....	3	20	5	25	27	.....
Milton	245	7	252	.....	.....	.....	245	7	252	197	41
Napanee	50	9	59	5	.....	5	45	9	54	40	5
Ottawa	524	113	637	23	1	24	501	112	613	557	55
Owen Sound	208	20	228	5	.....	5	203	20	223	145	40
Orangeville	53	10	63	2	2	4	51	8	59	33	11
Perth	72	14	86	1	.....	1	71	14	85	58	7
Picton	61	8	69	.....	.....	.....	61	8	69	39	10
Pembroke	119	12	131	12	.....	12	107	12	119	94	20
Peterboro'	110	10	120	4	.....	4	106	10	116	91	19
Port Arthur	174	12	186	1	2	3	173	10	183	177	9
Rat Portage	118	11	129	1	.....	1	117	11	128	106	12
Simcoe	71	3	74	1	.....	1	70	3	73	46	16
St. Catharines	86	13	99	1	.....	1	85	13	98	90	8
Sarnia	333	9	342	8	1	9	325	8	333	337	.....
Stratford	139	12	151	7	.....	7	132	12	144	100	26
San Iwich	166	36	202	6	1	7	160	35	195	132	30
St. Thomas	185	23	208	8	1	9	177	22	199	141	39
Sault Ste. Marie	41	2	43	.....	1	1	41	1	42	41	2
Toronto	2696	701	3397	131	10	141	2565	691	3256	2074	617
Walkerton	60	7	67	4	.....	4	56	7	63	62	5
Woodstock	355	12	367	12	.....	12	343	12	355	248	59
Welland	294	5	299	6	.....	6	288	5	293	197	34
Whitby	100	12	112	6	.....	6	94	12	106	79	18
Lock-ups:											
Bracebridge	101	4	105	.....	.....	.....	101	4	105	103	2
Little Current	12	4	16	.....	2	2	12	2	14	12	4
Manitowaning	10	.....	10	10	.....	10	.....	.....	.....	8	2
Mattawa	28	1	29	28	1	29	.....	.....	.....	28	1
Parry Sound	4	.....	4	1	.....	1	3	.....	3	2	1
Sudbury	11	2	13	.....	.....	.....	11	2	13	13	.....
Huntsville	31	2	33	31	2	33	.....	.....	.....	32	1
Total	9869	1557	11426	450	50	500	9419	1507	10926	7740	1621

No. 3.

years of age, the number of recommitments, the number for want of securities to keep trial, number discharged without trial, number waiting trial, *mited* under civil process.

For the third time.	For more than the third time.	For want of securities to keep the peace.	Witnesses.	Lunatics and idiots.	Fraudulent debtors.	Under civil process.	Acquitted on trial and discharged.	Discharged without trial.	Died before trial.	Waiting trial.	Sentenced for any period.	NAME OF GAOL.
4		5		27	3		150	12		3	205	Barrie.
3	2	1		9	1		14	5	1		45	Berlin.
5	14	3		10	1		43	8		5	123	Belleville.
10	44	1		6		1	28	1			112	Brantford.
9	11			3			144				36	Brampton.
17	56	2		17	1	2	12			3	177	Brockville.
4	5	1		3			14	1	1	1	90	Cayuga.
3	1	1	1	10	1	6	4	2	1	1	16	Cornwall.
9	17	3	1	12			5	15		2	99	Cobourg.
6	1	1		2	4		23	3	1	2	85	Chatham.
4	17			10	1		14	3		1	33	Goderich.
1		1		12	1		6	22		1	75	Guelph.
87	339	25		11	2		27	196		4	738	Hamilton.
3		1		11			1	30		3	138	Kingston.
102	123	1	1	20	4		189	64		3	506	London.
	2	2		8	3		12			2	44	Lindsay.
	1	1		5			3	3			16	L'Orignal.
9	5	2		11			4	188		2	45	Milton.
7	7	2		3	1			7		1	45	Napanee.
19	6		1	26	10	2	192		2	11	393	Ottawa.
14	29			9			51	4			164	Owen Sound.
6	13	2	1	4			1				55	Orangeville.
3	18	1		17		4		4		1	59	Perth.
6	14			5			51				13	Picton.
7	10	3		4	6	7	9	18		4	80	Pembroke.
2	8	6		2			3				109	Peterboro'.
		2	3	6			25	1		7	142	Port Arthur.
5	6		1	1			24				103	Rat Portage.
4	8		2	3	1	8	23			1	36	Simcoe.
1		5		10			3	10		6	65	St. Catharines.
	5			5			12	65		1	259	Sarnia..
3	22	1		6	3		4	52			85	Stratford.
18	22	1		15	2		25	11		2	146	Sandwich.
12	16			5	2	5	30	9		1	156	St. Thomas.
			1	2			12	3		2	22	Sault Ste. Marie.
310	396	26	6	54	13		1097	9	3	21	2168	Toronto.
				4	1		9			2	49	Walkerton.
27	33			9	2	3	3	237		3	110	Woodstock.
26	42	3		2	6		6	73		4	205	Welland.
4	11	1		13	1	1	16	11		3	66	Whitby.
				2							103	Lock-ups : Bracebridge.
										1	15	Little Current.
											10	Manitowaning.
				1							28	Mattawa.
	1						1				3	Parry Sound.
				1			4				3	Sudbury.
				1			6				26	Huntsville.
750	1315	104	18	397	70	39	2300	1067	9	104	7301	Totals.

TABLE

Shewing the offences for which prisoners were committed

NAME OF GAOL.												
	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault, felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.	Carrying unlawful weapons.
Barrie			3	8	7	1		1	2	3	6	
Berlin				12							1	
Belleville	1			6	3						1	1
Brantford				21							1	
Brampton				5					2			
Brockville	2			2	2			1				
Cayuga			2	3							2	1
Cornwall	1			4				1				
Cobourg	1			13							1	2
Chatham			1	7	2					4		2
Goderich	1		2	3								
Guelph			1	5	1					1	3	
Hamilton	2			117	19	2	1	1	6	1		1
Kingston	2			11	8			1				
London	7		1	52	17				2		4	2
Lindsay	3		1	11						4	1	1
L'Orignal			2	1	1							
Milton	1		1	1		1		1				3
Napanee			2	12								
Ottawa	3			57	4				26		1	
Owen Sound				15								
Orangeville				3							1	
Perth				11	3							1
Picton				10								
Pembroke				5	8							3
Peterboro'	1			12					3			
Port Arthur	1		2	13	2							
Rat Portage	1		1	7	2							
Simcoe				7							2	
St. Catharines				14	4			1			2	
Sarnia				2								1
Stratford				5	1		3				3	1
Sandwich				10	7			1				5
St. Thomas	1		3	19	2						1	1
Sault Ste. Marie			1	2				2	10	1		
Toronto	2		2	123	63	1		1		6	15	2
Walkerton				5				1		3		
Woodstock	2		3	16	1			1			4	
Welland	3		6	14	5						1	
Whitby	1		1	9								2
Lock-ups:												
Bracebridge		8		7					3			
Little Current												
Manitowaning												
Mattawa				6	1						1	
Parry Sound												
Huntsville								1				
Sudbury				6					5			
Totals	1	44	35	672	169	5	4	13	60	23	51	29

No. 4.

during the year ended 30th September, 1885.

Contempt of court.	Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting and wounding and attempting same.	Debtors.	Deserting employment.	Destroying and injuring property.	Detained as witnesses.	Drunk and disorderly.	Embezzlement.	Escaping from and obstructing constable.	Escaping from prison.	Forgery.	Fraud and obtaining money under false pretences.	NAME OF GAOL.
11				3		1		31				3	6	Barrie.
				1		1		7	1			2	4	Berlin.
		1		1		1		45	1	1		3	5	Belleville.
1	1					1		28					3	Brantford.
2								24					1	Brampton.
2				1		1		80		1			1	Brockville.
						1		18				1	1	Cayuga.
				1		3		3					1	Cornwall.
3		1				5	1	26					2	Cobourg.
2				4		2		18				2	5	Chatham.
1				1				3	1					Goderich.
1				1				32				1	1	Guelph.
				2		27		368	3	2	1	3	16	Hamilton.
								74	1					Kingston.
12		2		4	1	16	1	277	5	2	2	3	16	London.
				3				13	1					Lindsay.
3			1					3	1					L'Orignal.
2						2		9					1	Milton.
6				1		1		6						Napanee.
10	4	3	8	2	2	18	1	205	3	18		1	1	Ottawa.
9						2		36		2			4	Owen Sound.
4							1	1						Orangeville.
2			1			1		6					1	Perth.
1								41				1		Picton.
7				6				11					1	Pembroke.
1						3		27	1			1		Peterboro'.
				6				66				2	6	Port Arthur.
							1	87					8	Rat Portage.
							2	4				1	7	Simcoe.
2								29		2	1		1	St. Catharines.
1								130					2	Sarnia.
8	1		1	3		1		17				2	10	Stratford.
1	3			2				47	2	1	1	1	6	Sandwich.
4				2		1		57	1			6	3	St. Thomas.
		2					1	2					1	Sault Ste. Marie.
7	1	2		13		14	6	1707	9			19	22	Toronto.
2				1		5	2							Walkerton.
				4		1		21		1	1	4	6	Woodstock.
6						3		33	1		1	2	1	Welland.
1				1		1		4		2		1	4	Whitby.
								67						Lock-ups :
								7						Bracebridge.
								3					1	Little Current.
1								6		1			1	Manitowaning.
									1					Mattawa.
1								17						Parry Sound.
														Huntsville.
														Sudbury.
120	10	9	13	63	3	112	18	3696	32	34	7	60	149	Totals.

TABLE

Shewing the offences for which prisoners were *committed*

NAME OF GAOL.	OFFENCES												
	Gambling.	Giving liquor to Indians.	Horse, cattle or sheep stealing.	Housebreaking and robbery.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping houses of ill-fame.	Larceny.	Lunatics and persons who were unsafe to be at large.	Manslaughter.	Misdemeanour.	Murder.	Perjury.
Barrie			2	7				28	28			1	1
Berlin			2					11	10				1
Belleville			4		1			31	10			2	
Brantford		1	4	2	2		2	39	6				
Brampton			2	2				7	3				
Brockville						4		23	17		10		
Cayuga				3	2			11	3				
Cornwall			1		2			10	10			1	
Cobourg		1	2	1				23	12				
Chatham			2		1			34	2		1		
Goderich				3				6	10				1
Guelph			5					21	12			1	
Hamilton			1	23	1	4	15	126	19		5		
Kingston				2		1	2	28	11			2	
London	1	2	7	8		12	11	121	20	2	2	3	4
Lindsay								9	8		1	1	
L'Orignal								4	5				3
Milton								7	11				
Napanee								9	3				
Ottawa			6		9	16	10	110	26	2			
Owen Sound			1				1	33	9				1
Orangeville								3	4				
Perth				2				7	17	1			
Picton								2	5				
Pembroke								35	4				
Peterboro'						1	1	23	2				
Port Arthur		3		7	1	4	3	46	3			1	
Rat Portage		3						11	1				
Simcoe			4		1			12	3		1		
St. Catharines			2		1			16	10	1			
Sarnia			2	12				15	5				
Stratford			2	5		1	1	28	6				
Sandwich			8	5	1	2		42	15		1	1	
St. Thomas		2	2	1	2	2	3	34	5	1		6	2
Sault Ste. Marie							1	9	2			1	
Toronto			8	58	9	125	31	507	83	3	3	3	1
Walkerton			2	1	1			8	4				
Woodstock			1	1	1			35	9				
Welland								16	2	2		1	2
Whitby			2	3	4			26	13				1
Lock-ups :													
Bracebridge			1					6	2				
Little Current		1											1
Manitowaning		2							1				
Mattawa					1			4	2				
Parry Sound								2					
Huntsville							2	1			3	1	1
Sudbury													
Totals	1	15	73	146	40	172	85	1589	433	12	27	25	19

No. 4—Continued.

during the year ended 30th September, 1885.

Prostitution.	Rape and assault with intent.	Receiving stolen goods.	Seduction.	Selling liquor without license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful Shooting.	Vagrancy.	Want of sureties to keep the peace.	Other offences not enumerated.	Total.	NAME OF GAOL.
1	2			2	2			1		231	4	10	405	Barrie.
										17	1	4	76	Berlin.
	2	1						5		60	3	4	193	Belleville.
	2	1		1		1		3		29	1	7	157	Brantford.
3				3	3		1			135			186	Brampton.
2				1			1	1		39	2	12	214	Brockville.
	2			1						50		7	110	Cayuga.
	1			1	1					1	1		43	Cornwall.
2	1			1	1					26	3	2	137	Cobourg.
	1			1			3	1		16	1	3	121	Chatham.
	4	2		1			1			26			61	Goderich.
1	4	4		1		2	17	33		18	1	4	118	Guelph.
	1	1		1						119	13	43	1003	Hamilton.
	3									30	2	6	184	Kingston.
	1		1		1	3	13	30		116		2	788	London.
										11	2		71	Lindsay.
				2						1	1	2	28	L'Orignal.
3				1						208	2		252	Milton.
	14	2		4		7		2		7	2	6	59	Napanee.
	1	8		1		2		4		37		25	637	Ottawa.
										94		5	228	Owen Sound.
										40	2	4	63	Orangeville.
										30	1	2	86	Perth.
2				8			1			6		2	69	Picton.
							1			35	3	3	131	Pembroke.
	2	1		1		1		7		35	6	2	120	Peterboro'.
				1			3			6			186	Port Arthur.
		1				1						1	129	Rat Portage.
	2				1					20		7	74	Simcoe.
	1	3								5	5		99	St. Catharines.
	3	1								149		19	342	Sarnia.
	2			1	1			3		43	1	1	151	Stratford.
	3	2		1			2	7		17	1	11	202	Sandwich.
	1							17		12		10	208	St. Thomas.
	3	6		7	4		1	96		2		5	43	Sault Ste. Marie.
	3			2			1	7		355	26	43	3397	Toronto.
										9		20	67	Walkerton.
				2			1	7		238		7	367	Woodstock.
	1	1	3		1			3		144	3	48	299	Welland.
										26	1	2	112	Whitby.
							1			9		1	105	Lock-ups :
							1			2		4	16	Bracebridge.
	2												10	Little Current.
				3	1							2	29	Manitowaning.
													4	Mattawa.
										1		6	33	Parry Sound.
2													13	Huntsville.
														Sudbury.
17	68	38	2	45	16	17	47	222	....	2455	88	342	11426	Totals.

TABLE No. 5.

Shewing the total number of prisoners, male and female, *committed* under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Abortion.....	1	.....	1
Abusive and obscene language.....	32	12	44
Arson.....	34	1	35
Assault.....	634	38	672
Assault, felonious.....	161	8	169
Attempted suicide.....	3	2	5
Abduction.....	3	1	4
Bigamy.....	10	3	13
Breaches of the peace.....	51	9	60
Breaches of by-laws.....	20	3	23
Burglary.....	51	.....	51
Carrying unlawful weapons.....	29	.....	29
Contempt of court.....	116	4	120
Counterfeiting and passing counterfeit money.....	7	3	10
Cruelty to animals.....	9	.....	9
Cutting and wounding, and attempting same.....	13	.....	13
Debtors.....	60	3	63
Deserting employment.....	3	.....	3
Destroying and injuring property.....	105	7	112
Detained as witnesses.....	14	4	18
Drunk and disorderly.....	3096	600	3696
Embezzlement.....	32	.....	32
Escaping from or obstructing constables.....	33	1	34
Escaping from prisons.....	7	.....	7
Forgery.....	59	1	60
Fraud, and obtaining money under false pretences.....	145	4	149
Gambling.....	1	.....	1
Giving liquor to Indians.....	15	.....	15

TABLE No. 5—Continued.

Shewing the total number of prisoners, male and female, committed under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Horse, cattle and sheep stealing	71	2	73
Housebreaking and robbery	143	3	146
Incendiarism.....			
Indecent assault and exposure.....	40		40
Inmates and frequenters of houses of ill-fame.....	85	87	172
Keeping houses of ill-fame.....	22	63	85
Larceny	1445	144	1589
Lunatics and persons who were unsafe to be at large.....	291	142	433
Manslaughter	12		12
Misdemeanour	26	1	27
Murder	21	4	25
Perjury	17	2	19
Prostitution		17	17
Rape and assault with intent.....	68		68
Refusing bail.....			
Receiving stolen goods.....	32	6	38
Seduction.....	2		2
Selling liquor without license.....	37	8	45
Shooting with intent	15	1	16
Stabbing	16	1	17
Threatening and seditious language.....	46	1	47
Trespass	211	11	222
Unlawful shooting			
Vagrancy.....	2127	328	2455
Want of sureties to keep the peace.....	85	3	88
Other offences not enumerated	313	29	342
Totals	9869	1557	11426

TABLE No. 6.

Shewing the number of prisoners, male and female, *sentenced* during the year ended 30th September, 1885, and a comparison of the same with the previous year.

NAME OF GAOL.	No. of prisoners <i>sentenced</i> in the year ended 30th September, 1885.			No. of prisoners <i>sentenced</i> in the year ended 30th September, 1884.			INCREASE.			DECREASE.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Barrie	184	21	205	120	14	134	64	7	71	.....	.....	.....
Berlin	43	2	45	44	3	47	.....	.....	.....	1	1	2
Belleville	103	20	123	77	15	92	26	5	31	.....	.....	.....
Brantford	190	12	112	103	24	127	.....	.....	.....	3	12	15
Brampton	35	1	36	24	1	25	11	.....	11	.....	.....	.....
Brockville	154	23	177	170	30	200	.....	.....	.....	16	7	23
Cayuga	81	9	90	40	11	51	41	.....	41	.....	2	2
Cornwall	16	.....	16	46	2	48	.....	.....	.....	30	2	32
Cobourg	94	5	99	98	2	100	.....	3	3	4	.....	4
Chatham	78	7	85	83	15	98	.....	.....	.....	5	8	13
Goderich	29	4	33	41	7	48	.....	.....	.....	12	3	15
Guelph	68	7	75	94	8	102	.....	.....	.....	26	1	27
Hamilton	621	117	738	561	126	687	60	.....	60	.....	9	9
Kingston	103	35	138	100	31	131	3	4	7	.....	.....	.....
London	440	66	506	477	90	567	.....	.....	.....	37	24	61
Lindsay	41	3	44	52	1	53	.....	2	2	11	.....	11
L'Orignal	15	1	16	11	.....	11	4	1	5	.....	.....	.....
Milton	44	1	45	21	3	24	23	.....	23	.....	2	2
Napanee	40	5	45	37	14	51	3	.....	3	9	.....	9
Ottawa	328	65	393	315	91	406	13	.....	13	.....	26	26
Orangeville	45	10	55	42	7	49	3	3	6	.....	.....	.....
Owen Sound	154	10	164	101	17	118	53	.....	53	.....	7	7
Perth	53	6	59	43	7	50	10	.....	10	.....	1	1
Picton	9	4	13	10	.....	10	.....	4	4	1	.....	1
Pembroke	68	12	80	59	4	63	9	8	17	.....	.....	.....
Peterboro'	99	10	109	119	11	130	.....	.....	.....	20	1	21

TABLE No. 6—Continued.

Shewing the number of prisoners, male and female, *sentenced* during the year ended 30th September, 1885, and a comparison of the same with the previous year.

NAME OF GAOL.	No. of prisoners <i>sentenced</i> in the year ended 30th September, 1885.			No. of prisoners <i>sentenced</i> in the year ended 30th September, 1884.			INCREASE.			DECREASE.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Port Arthur	133	9	142	116	.....	116	17	9	26	.....	.....	.....
Rat Portage	95	8	103	171	13	184	.....	.....	.....	76	5	81
Simcoe	36	.....	36	32	2	34	4	.....	4	.....	2	2
St. Catharines	56	9	65	63	9	72	.....	.....	.....	7	.....	7
Sarnia	255	4	259	216	12	228	39	.....	39	.....	8	8
Stratford	78	7	85	66	11	77	12	.....	12	.....	4	4
Sandwich	120	26	146	155	51	206	.....	.....	.....	35	25	60
St. Thomas	139	17	156	158	23	181	.....	.....	.....	19	6	25
Sault Ste Marie	22	.....	22	22	.....	22	.....	.....	.....	.....	.....	.....
Toronto	1670	498	2168	1657	523	2180	13	.....	13	.....	25	25
Walkerton	45	4	49	25	2	27	20	2	22	.....	.....	.....
Woodstock	104	6	110	123	12	135	.....	.....	.....	19	6	25
Welland	203	2	205	219	3	222	.....	.....	.....	16	1	17
Whitby	60	6	66	64	2	66	.....	4	4	4	.....	4
Lock-ups:												
Bracebridge	99	4	103	18	.....	18	81	4	85	.....	.....	.....
Gore Bay .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Current	11	4	15	.....	.....	.....	11	4	15	.....	.....	.....
Manitowaning	10	.....	10	18	.....	18	.....	.....	.....	8	.....	8
Mattawa	27	1	28	33	2	35	.....	.....	.....	6	1	7
Parry Sound	3	.....	3	13	.....	13	.....	.....	.....	10	.....	10
Haliburton .....	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	1
Sudbury	3	.....	3	3	.....	3	.....	.....	.....	.....	.....	.....
Huntsville	24	2	26	.....	.....	.....	24	2	26	.....	.....	.....
Total	6238	1063	7301	6061	1199	7260	544	62	606	376	189	565

TABLE

Shewing the number of prisoners upon whom sentences were passed, the nature the County Judges'

NAME OF GAOL.	Total number of prisoners sentenced during the year.			WHERE SENTENCED TO.											
	Male.	Female.	Total.	To Gaol and afterwards transferred to Central Prison.	To Central Prison direct.	To Gaol and transferred to Female Reformatory.	To Female Reformatory direct.	To Provincial Penitentiary.	To Reformatory for Boys.	Died while undergoing sentence.	To Gaol and there detained until expiration of sentence or payment of fine.	Under 30 days.	30 days and up to 60, or 2 months, not including the last term.	60 days or 2 months.	Over 2 to 3 months.
Barrie	184	21	205	5	34	....	4	5	4	1	152	54	57	19	41
Berlin	43	2	45	3	5	....	....	....	....	1	34	15	11	....	6
Belleville	103	20	123	4	9	....	5	3	1	1	100	19	46	21	12
Brantford	100	12	112	....	9	....	....	9	2	....	92	36	37	6	....
Brampton	35	1	36	5	2	....	....	2	....	1	26	12	7	7	3
Brockville	154	23	177	3	8	1	4	9	1	3	148	91	18	9	16
Cayuga	81	9	90	....	....	....	....	1	....	1	88	55	20	12	2
Cornwall	16	....	16	....	3	....	....	2	....	1	10	4	3	2	2
Cobourg	94	5	99	20	3	....	....	7	....	1	68	20	25	14	5
Chatham	78	7	85	13	4	2	....	2	2	....	62	33	11	9	5
Goderich	29	4	33	....	....	....	....	2	....	....	31	8	6	6	4
Guelph	68	7	75	4	11	....	2	4	....	....	54	35	7	10	2
Hamilton	621	117	738	15	44	10	18	11	3	1	636	394	176	47	15
Kingston	103	35	138	....	15	....	7	2	7	....	107	18	51	11	14
London	440	66	506	13	26	4	8	15	8	....	432	278	79	38	30
Lindsay	41	3	44	....	1	....	1	1	....	2	39	24	13	2	....
L'Orignal	15	1	16	....	1	....	....	....	....	....	15	6	4	2	2
Milton	44	1	45	....	1	....	....	2	....	....	42	5	18	10	2
Napanee	40	5	45	....	1	4	....	....	....	1	39	23	12	2	1
Ottawa	328	65	393	10	24	5	6	7	2	....	339	258	36	....	32
Owen Sound	154	10	164	5	10	1	2	4	3	2	137	90	25	9	10
Orangeville	45	10	55	....	....	....	....	....	....	5	50	16	6	5	2
Perth	53	6	59	1	3	....	....	....	1	2	52	10	11	8	6
Picton	9	4	13	....	....	....	....	....	....	....	13	7	3	2	....
Pembroke	68	12	80	4	3	....	....	3	....	3	67	17	25	14	5
Peterborough	99	10	109	....	1	....	....	2	1	4	101	75	13	1	4
Port Arthur	133	9	142	7	7	....	....	3	1	....	124	90	18	4	5
Rat Portage	95	8	103	....	....	....	....	....	....	....	103	86	14	1	....
Simcoe	36	....	36	1	12	....	....	4	....	....	19	7	7	4	7
St. Catharines	56	9	65	....	14	....	1	5	1	....	44	23	13	5	3
Sarnia	255	4	259	1	10	....	....	1	2	....	245	169	50	15	7
Stratford	78	7	85	1	4	....	....	4	1	2	73	32	16	14	6
Sandwich	120	26	146	4	30	....	2	7	2	1	100	54	33	7	8
St. Thomas	139	17	156	3	9	....	5	6	1	....	132	71	41	8	13
Sault Ste. Marie	22	....	22	....	3	....	....	2	....	....	17	9	4	....	....
Toronto	1670	498	2168	112	116	12	34	41	5	7	1841	548	1122	169	87
Walkerton	45	4	49	....	3	....	....	3	1	1	41	31	2	5	1
Woodstock	104	6	110	6	11	1	2	1	3	....	86	17	33	17	7
Welland	203	2	205	11	44	....	1	1	1	2	145	51	52	32	9
Whitby	60	6	66	1	17	....	1	2	1	....	44	16	14	3	11
Lock-ups:															
Bracebridge	99	4	103	9	....	....	....	....	....	....	94	94	9	....	....
Little Current	11	4	15	....	....	....	....	....	....	....	15	8	7	....	....
Manitowaning	10	....	10	....	....	....	....	....	....	....	10	10	....	....	....
Mattawa	27	1	28	....	....	....	....	....	....	....	28	23	5	....	....
Parry Sound	3	....	3	....	....	....	....	....	....	....	3	3	....	....	....
Sudbury	3	....	3	....	....	....	....	....	....	....	3	3	....	....	....
Huntsville	24	2	26	....	....	....	....	....	....	....	26	26	....	....	....
Totals	6238	1063	7301	261	498	40	103	175	54	43	6127	2974	2160	550	379

No. 7.

and period of such sentences, and the disposal of those who elected to be tried at Criminal Courts.

PERIODS OF SENTENCE.											COUNTY JUDGES' CRIMINAL COURTS.			NAME OF GAOL.
Over 3 to 4 months.	Over 4 to 5 months.	Over 5 to 6 months.	Over 6 to 9 months.	Over 9 months and up to 1 year, inclusive.	Over 1 year and up to 2.	Over 2 years and up to 3 to Penitentiary.	Over 3 years and upwards to Penitentiary.	For any period to the Reformatory for Boys.	Number of prisoners sentenced to death and executed.	Sentenced to corporal punishment with imprisonment.	Acquitted on trial and discharged from custody.	Found guilty and sentenced.	Total number who elected to be tried.	
2	1	18	...	2	2	4	1	4	...	...	18	37	55	Barrie.
2	2	...	1	...	...	1	1	...	...	...	7	15	22	Berlin.
6	2	10	...	2	1	3	...	1	...	...	8	8	8	Belleville.
8	3	2	6	1	2	5	4	2	...	...	7	11	18	Brautford.
...	1	2	1	1	...	1	1	...	...	...	...	11	11	Brampton.
4	...	26	1	3	5	2	7	1	...	...	2	12	14	Brockville.
...	...	...	...	...	...	1	...	...	...	...	10	11	21	Cayuga.
...	1	...	...	2	...	1	...	...	...	...	4	4	8	Cornwall.
6	1	11	2	5	3	12	5	...	...	...	3	8	11	Cobourg.
3	...	14	1	2	3	1	1	2	...	...	6	12	18	Chatham.
2	...	5	...	...	...	1	1	...	...	...	11	2	13	Goderich.
3	1	8	2	1	2	1	1	...	...	...	7	14	21	Guelph.
6	2	32	5	10	37	11	...	3	...	...	15	17	32	Hamilton.
1	2	13	2	4	13	...	2	7	...	...	...	2	2	Kingston.
10	4	32	...	8	4	5	10	8	...	...	16	55	71	London.
1	...	1	...	1	1	1	...	...	...	...	3	3	6	Lindsay.
...	...	1	...	1	...	...	...	...	...	...	3	1	4	L'Original.
1	...	7	...	...	...	1	1	...	...	...	5	6	11	Milton.
2	...	4	1	...	...	...	...	...	...	...	...	9	9	Napanee.
23	7	...	15	12	1	6	1	2	...	...	6	7	13	Ottawa.
3	1	15	...	2	1	3	1	3	1	...	...	7	7	Owen Sound.
3	3	20	...	...	...	...	...	...	...	...	...	3	3	Orangeville.
2	...	18	1	1	1	...	...	1	...	...	2	10	12	Perth.
...	...	1	...	...	...	...	...	...	...	...	...	...	...	Picton.
...	1	13	...	2	...	3	...	...	...	...	8	17	25	Pembroke.
1	...	11	...	...	1	1	1	1	...	...	...	...	...	Peterborough.
3	9	1	5	...	3	...	3	1	...	...	11	34	45	Port Arthur.
...	1	1	...	...	...	...	...	...	...	...	1	13	14	Rat Portage.
...	...	4	...	1	1	2	2	...	...	1	5	9	14	Simcoe.
4	...	4	4	2	1	5	...	1	...	...	3	10	13	St. Catharines.
4	...	5	...	4	1	...	1	2	...	1	13	17	30	Sarnia.
3	...	8	...	...	1	4	...	1	...	...	1	3	4	Stratford.
4	1	14	3	6	7	...	7	2	...	...	1	5	6	Sandwich.
...	...	9	...	7	...	2	4	1	...	...	2	12	14	St. Thomas.
...	1	3	...	3	...	1	1	...	...	...	1	...	1	Sault Ste. Marie.
36	16	109	7	18	10	35	6	5	...	...	47	61	108	Toronto.
1	...	3	...	...	1	2	1	1	...	1	4	10	14	Walkerton.
11	...	12	5	...	4	...	1	3	...	...	10	1	11	Woodstock.
31	18	5	1	2	2	1	...	1	...	...	2	7	9	Welland.
8	2	5	...	2	2	2	...	1	...	...	6	19	25	Whitby.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Lock-ups:
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bracebridge.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Little Current.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Manitowaning.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Mattawa.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Parry Sound.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Sudbury.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	Huntsville.
200	79	448	63	105	110	109	66	54	1	3	240	483	723	Totals.

TABLE

Shewing offences for which prisoners

NAME OF GAOL.													
	Abortion.	Abusive and obscene language.	Arson.	Assault.	Assault, felonious.	Attempted suicide.	Abduction.	Bigamy.	Breaches of the peace.	Breaches of by-laws.	Burglary.	Contempt of Court.	Carrying unlawful weapons.
Barrie				6	6	1		1	2		5	11	
Berlin				5									
Belleville		1		5	2			1					1
Brantford				16									
Brampton				2								2	
Brockville		2		19	7							2	
Cayuga				3							2		1
Cornwall		1		2									
Cobourg		1		13								2	1
Chatham				7	2				2			8	2
Goderich		1	1	1								1	
Guelph				4					1	2		1	
Hamilton		2		70	9	1			3	1			
Kingston		2		9	4			1					
London		6	1	33	11				1			11	2
Lindsay		3		8					4	1			1
L'Orignal			2	1	1							3	
Milton			1	1						1		2	
Napanee			2	7								6	
Ottawa		4		31	4				19	3			
Owen Sound				10								9	
Orangeville				3								4	
Perth				9	2							2	1
Picton				4								1	
Pembroke				1	7							5	
Peterboro'		1		12					3			1	
Port Arthur		1	1	11	1								
Rat Portage				7	2								
Simcoe				3						1			
St. Catharines				9	3					1		2	
Sarnia				1								1	1
Stratford				3						3		8	
Sandwich				7	4			1				1	4
St. Thomas		1	2	15	1					1		3	1
Sault Ste. Marie			1	2					5	1			
Toronto		1		80	25				5	7		5	5
Walkerton				5				1		3		2	
Woodstock				8	1						2		
Welland		1	1	8	3					1		6	
Whitby		1		8								1	2
Lock-ups :													
Bracebridge		2		11					3				
Little Current													
Manitowaning												1	
Mattawa		1			2								
Parry Sound												1	
Sudbury													
Huntsville										1			
Totals		32	12	443	97	2		5	33	22	29	102	22

No. 8.

were sentenced during the year.

Counterfeiting and passing counterfeit money.	Cruelty to animals.	Cutting, wounding and attempting same.	Deserting employment.	Destroying and injuring property.	Drunk and disorderly.	Embezzlement.	Escaping from and obstructing constable.	Escaping from prisons.	Forgery.	Fraud, or obtaining money under false pretences.	Gambling.	NAME OF GAOL.
				1	16			1		1		Barrie.
					1	1			1	1		Belleville.
1		1		1	30		1			1		Belleville.
					25					1		Brantford.
				1	7				1			Brampton.
				1	18		1			1		Brockville.
					3							Cayuga.
		1		3	23					1		Cornwall.
				1	15				1	1		Cobourg.
					3							Chatham.
					24				1			Goderich.
				23	328	3		1	1	10		Guelph.
					50	1						Hamilton.
				12	193	2	2		1	3	1	Kingston.
					13							Lindsay.
		1			2							L'Orignal.
				1	1							Milton.
1		5	1	11	6	2	11					Napanee.
		3		2	156	2						Ottawa.
					28	2				4		Owen Sound.
					1							Orangeville.
					6					1		Perth.
					1				1			Pictou.
					8					1		Pembroke.
				3	27							Peterboro'.
					66				1	2		Port Arthur.
					70					4		Rat Portage.
									1			Simcoe.
					27							St. Catharines.
					116					2		Sarnia.
1		1		1	10				1	3		Stratford.
					45	1	1	1		3		Sandwich.
				1	53	1			3	1		St. Thomas.
1	2			12	1					1		Sault Ste. Marie.
					1262	6			4	11		Toronto.
					5	2						Walkerton.
					9		1	1	3	2		Woodstock.
				3	24			1		1		Welland.
				1	3				1	2		Whitby.
					67		1					Lock-ups :
					7							Bracebridge.
					3					1		Little Current.
					6		1			2		Manitowaning.
					1							Mattawa.
					3							Parry Sound.
					17							Sudbury.
												Huntsville.
4	4	12	1	79	2861	21	19	5	22	62	1	Totals.

TABLE

Shewing offences for which prisoners

NAME OF GAOL.	Giving liquor to Indians.	Horse, cattle and sheep stealing.	House-breaking and robbery.	Indecent assault and exposure.	Inmates and frequenters of houses of ill-fame.	Keeping houses of ill-fame.	Larceny.	Manslaughter.	Miscemeanour.	Murder.	Perjury.
Barrie		1	1				23	1			
Berlin		2					10				
Belleville		2		1			20				
Brantford	1	3	2	2			28				
Brampton		2	2				6				
Brockville					4		18		7		
Cayuga			2				3				
Cornwall							6				
Cobourg	1	1	1				15				
Chatham		1					26				
Goderich			1				1				
Guelph		4					10			1	
Hamilton		1	13	1	1	10	80		3		
Kingston					1	1	23				
London	2	6	3		7	9	84	1	1	1	
Lindsay							3				
L'Original							4				1
Milton							4				
Napanee							4				
Ottawa			3	4	3	7	78				
Owen Sound						1	23				1
Orangeville							3				
Perth			2				4	1			
Picton							2				
Pembroke							22				
Peterboro'					1	1	22				
Port Arthur	3		5	1	4	3	26				
Rat Portage	3					2	10				
Simcoe		3		1			4				
St. Catharines		2		1			13	1			
Sarnia		1	7				9				
Stratford					1	1	10				
Sandwich		6	3	2			36		1		
St. Thomas	1	2	1		2	2	31	1			
Sault Ste. Marie							2	1			
Toronto		4	20	6	48	19	296	2	2		1
Walkerton		1	1	1	1		8				
Woodstock				1			18				
Welland							13				
Whitby		2	3	3			18				
Lock-ups :											
Bracebridge		1					6				
Little Current	1										1
Manitowaning	2										
Mattawa				1			4				
Parry Sound							1				
Sudbury											
Huntsville						1			3		
Totals	14	45	70	25	73	57	1027	8	17	2	4

No. 8—Continued.

were sentenced during the year.

Prostitution.	Rape and assault with intent.	Receiving stolen goods.	Selling liquor without license.	Shooting with intent.	Stabbing.	Threatening and seditious language.	Trespass.	Unlawful shooting.	Vagrancy.	Other offences not above enumerated.	Total.	NAME OF GAOL.	
1			2	2			1		115	8	205	Barrie.	
									15	2	45	Berlin.	
		1	1				3		53	3	123	Belleville.	
				1					27	1	112	Brantford.	
3			3	2					13		36	Brampton.	
2			1						38	11	177	Broc ville	
	2		1						50	5	90	Cayuga.	
2	1		1						1		16	Cornwall	
	1		1			3	1		24	2	99	Cobourg.	
	1		1						13		85	Chatham.	
	1		1						23		33	Goderich.	
1	1	2	1		1	16	28		19	4	75	Guelph.	
		1	1						103	24	738	Hamilton.	
				1	2				39	5	138	Kingston.	
							23		87		506	London.	
									11		44	Lindsay.	
			2							1	16	L'Original.	
3			1						32		45	Milton.	
	1	1	3				2		7	8	45	Napanee.	
		8			2		4		30	13	393	Ottawa.	
									62	5	164	Owen Sound.	
									40	4	55	Orangeville.	
									30	1	59	Perth.	
2			4			1			3		13	Picton.	
						1			26	4	80	Pembroke.	
	2		1		1		7		35	2	109	Peterboro'	
			1			3			6		142	Port Arthur.	
											1	103	Rat Portage.
	1			1					18	5	36	Simcoe.	
	1								4		65	St. Catharines.	
		1					2		114	6	259	Sarnia.	
									39	1	85	Stratford.	
	2		1				6		13	7	146	Sandwich.	
	2	1	1				16		7	6	156	St. Thomas.	
	1								2	3	22	Sault Ste. Marie.	
	1	1	6	1			81		243	11	2168	Toronto.	
	3								9	7	49	Walkerton.	
			1						54	2	110	Woodstock.	
1	1	2		1					132	8	205	Welland.	
									14	2	66	Whitby.	
						1			9	2	103	Lock-ups :	
									2	4	15	Bracebridge.	
	2									1	10	Little Current.	
			3	1					1	6	28	Manitowaning.	
											3	Mattawa.	
											3	Parry Sound.	
									4		3	Sudbury.	
											26	Huntsville.	
15	30	18	37	10	6	25	186		1567	175	7301	Totals.	

TABLE No. 9.

Shewing the total number of prisoners, male and female, *sentenced* under each offence during the year.

OFFENCES.	Male.	Female.	Total.
Abortion			
Abusive and obscene language	27	5	32
Arson	12		12
Assault	418	25	443
Assault, felonious	97		97
Attempted suicide	1	1	2
Abduction			
Bigamy	2	3	5
Breaches of the peace	33		33
Breaches of by-laws	20	2	22
Burglary	29		29
Contempt of court	98	4	102
Carrying unlawful weapons	22		22
Counterfeiting and passing counterfeit money	3	1	4
Cruelty to animals	4		4
Cutting, wounding and attempting same	12		12
Deserting employment	1		1
Destroying and injuring property	73	6	79
Drunk and disorderly	2371	490	2861
Embezzlement	21		21
Escaping from or obstructing constable	19		19
Escaping from prisons	5		5
Forgery	22		22
Fraud, and obtaining money or goods under false pretences	60	2	62
Gambling	1		1
Giving liquor to Indians	14		14
Horse, cattle and sheep stealing	45		45
Housebreaking and robbery	69	1	70
Incendiarism			
Indecent assault and exposure	25		25
Inmates and frequenters of houses of ill-fame	35	38	73
Keeping houses of ill-fame	14	43	57
Larceny	886	141	1027
Manslaughter	8		8
Misdemeanour	16	1	17
Murder	2		2
Perjury	3	1	4
Prostitution		15	15
Rape and assault with intent	30		30
Refusing bail			
Receiving stolen goods	17	1	18
Seduction			
Selling liquor without license	29	8	37
Shooting with intent	10		10
Stabbing	5	1	6
Threatening and seditious language	24	1	25
Trespass	179	7	186
Unlawful shooting			
Vagrancy	1322	245	1567
Other offences not above enumerated	154	21	175
Totals	6238	1063	7301

TABLE No. 10.

Shewing the nationalities, religious denominations, social status, and habits of the prisoners committed during the year.

NAME OF GAOL.	NATIONALITIES.						RELIGIOUS DENOMINATIONS.					SOCIAL AND EDUCATIONAL STATE HABITS.				
	Canadian.	English.	Irish.	Scotch.	United States.	Other countries.	Roman Catholic.	Church of England.	Presbyterian.	Methodist.	Other denominations.	Married.	Unmarried.	Neither read nor write.	Temperate.	Intemperate.
Barrie	142	85	124	31	12	11	142	131	78	37	17	121	284	66	56	349
Berlin	36	6	4	5	6	19	19	7	13	12	25	25	51	11	36	40
Belleville	119	22	40	2	9	1	61	38	16	78	....	65	128	62	85	108
Brantford	96	27	8	7	13	6	24	71	10	24	28	55	102	51	79	78
Brampton	61	55	45	11	11	3	55	64	30	23	14	23	163	17	50	136
Brockville	116	16	51	6	15	10	104	55	26	18	11	82	132	42	31	183
Cayuga	49	19	11	5	11	15	23	31	10	34	12	20	90	17	41	69
Cornwall	37	1	1	....	2	2	21	5	8	9	....	15	28	18	23	20
Coboarg	77	32	14	5	6	3	30	49	17	34	7	51	86	22	31	106
Chatham	72	15	10	5	15	4	23	22	21	46	9	58	63	20	85	36
Goderich	27	12	13	8	....	1	11	16	20	9	5	21	40	17	21	40
Guelph	62	15	28	8	4	1	31	27	35	21	4	32	86	26	49	69
Hamilton	421	201	239	57	65	20	399	311	137	101	55	431	572	153	99	904
Kingston	99	25	43	9	7	1	94	59	13	17	1	45	139	58	26	158
London	289	129	240	59	65	6	237	255	110	153	33	232	556	106	293	495
Lindsay	51	6	10	2	1	1	20	17	12	15	7	24	47	16	28	43
L'Orignal	22	1	5	....	....	....	20	2	2	1	3	17	11	14	16	12
Milton	60	72	75	29	11	5	53	106	61	22	10	24	228	36	90	162
Napanee	46	5	3	1	4	....	11	14	3	28	3	31	28	14	27	32
Ottawa	423	53	113	9	18	21	454	104	43	18	18	264	373	200	126	511
Orangeville	22	8	27	2	1	3	6	35	10	7	5	16	47	28	22	41
Owen Sound	96	49	38	26	18	1	42	63	60	30	33	103	125	65	84	144
Perth	49	7	15	6	5	4	32	19	26	6	3	32	54	21	37	49
Picton	48	7	9	1	3	1	23	22	5	16	3	22	47	15	15	54
Pembroke	81	15	14	3	2	16	72	29	10	8	12	29	102	63	56	75
Peterborough	54	21	38	5	1	1	52	22	16	27	3	48	72	24	50	70
Port Arthur	100	30	17	8	20	11	94	43	22	9	18	47	139	33	38	153
Rat Portage	86	14	12	5	9	3	33	45	17	6	28	52	77	35	21	108
Simcoe	47	10	7	2	3	5	12	21	2	19	20	28	46	18	34	40
St. Catharines	56	9	15	8	7	4	40	25	12	18	4	28	71	14	22	77
Sarnia	178	23	64	20	56	1	137	111	42	20	32	55	287	149	155	187
Stratford	69	25	30	12	11	4	41	44	28	26	12	73	78	21	90	61
Sandwich	105	11	13	6	56	11	75	22	16	69	20	77	125	52	94	108
St. Thomas	112	16	38	10	26	6	53	38	29	51	37	66	142	44	84	124
Sault Ste. Marie	22	5	5	1	7	3	12	15	9	5	2	12	31	7	24	19
Toronto	1282	699	961	161	207	87	1391	1290	343	259	114	1370	2027	811	761	2636
Walkerton	34	8	14	8	....	3	7	22	18	14	6	27	40	12	42	25
Woodstock	150	95	65	20	30	7	97	121	66	51	32	69	298	74	155	212
Welland	124	54	68	9	36	8	94	113	29	44	19	60	239	62	91	208
Whitby	64	15	17	6	7	3	27	30	24	23	8	34	78	20	60	52
Lock-ups :																
Bracebridge	27	18	50	2	4	4	52	27	11	6	9	11	94	40	60	45
Little Current	14	....	....	....	2	....	9	2	1	1	3	6	10	6	7	9
Manitowaning	8	....	2	....	....	....	6	2	2	....	....	7	3	4	4	6
Mattawa	23	....	4	....	....	2	25	4	....	....	....	10	19	11	11	18
Parry Sound	1	2	1	....	....	....	1	1	2	....	....	1	3	1	3	1
Sudbury	7	1	1	....	2	2	8	....	....	....	5	5	8	7	4	9
Huntsville	8	11	7	2	1	4	13	8	3	1	8	5	28	2	4	29
Total	5172	1950	2609	582	789	324	4286	3558	1468	1416	698	3929	7497	2605	3315	8111

TABLE

Shewing the occupations, trades or callings

NAME OF GAOL.	Agents and Commercial Travellers.	Auctioneers.	Bakers.	Barbers.	Partenders.	Blacksmiths and Boilermakers.	Boot and Shoemakers.	Boys (no occupation).	Brewers and Distillers.	Brickmakers and Bricklayers.	Broom, Brush and Basket-makers.	Butchers.	Cabinetmakers and Upholsters.	Carpenters and Joiners.	Carriage and Waggomakers.	Cigarmakers.	Clerks, Bookkeepers and Students.
Barrie.....	3	1	1	1	.....	6	6	3	1	.....	.....	1	1	2	.....	.....	.....
Berlin.....	2	.....	1	1	1	1	.....	.....	.....	.....	.....	1	1	4	.....	.....	2
Belleville.....	3	.....	1	1	1	1	2	5	.....	.....	.....	4	3	8	3	.....	5
Brantford.....	2	.....	1	4	.....	2	2	14	.....	1	1	.....	.....	7	1	.....	.....
Brampton.....	1	.....	2	.....	1	3	5	1	.....	1	.....	1	3	5	.....	2	1
Brockville.....	.....	.....	.....	2	1	1	4	4	.....	.....	1	.....	1	5	1	.....	.....
Cayuga.....	.....	.....	.....	3	1	5	2	2	.....	.....	.....	.....	2	2	.....	.....	.....
Cornwall.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cobourg.....	2	.....	.....	1	.....	2	2	.....	.....	3	.....	2	1	4	.....	.....	.....
Chatham.....	.....	.....	.....	.....	.....	2	4	2	.....	2	.....	1	1	6	.....	.....	4
Goderich.....	1	.....	.....	.....	.....	4	.....	3	.....	.....	.....	.....	1	3	.....	.....	.....
Guelph.....	1	.....	.....	.....	1	6	3	5	.....	.....	.....	1	5	.....	.....	.....	.....
Hamilton.....	2	1	8	20	.....	13	15	33	2	2	4	6	4	27	3	15	11
Kingston.....	.....	.....	2	.....	.....	2	4	.....	.....	.....	.....	.....	.....	7	1	.....	6
London.....	11	.....	7	7	3	17	5	31	2	9	2	5	6	23	1	23	19
Lindsay.....	.....	.....	.....	.....	.....	3	3	.....	.....	.....	.....	.....	.....	5	.....	.....	.....
L'Original.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Milton.....	1	.....	.....	.....	.....	4	1	1	.....	.....	.....	.....	1	8	.....	.....	1
Napanee.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	4	.....	.....	1
Ottawa.....	3	.....	4	4	1	3	7	23	.....	3	1	7	15	.....	6	.....	14
Owen Sound.....	1	.....	.....	1	.....	5	4	.....	.....	.....	.....	2	8	6	2	.....	3
Orangeville.....	.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	.....	.....	2	.....	.....	.....
Perth.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Picton.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Pembroke.....	.....	.....	.....	4	.....	2	3	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Peterborough.....	1	.....	1	.....	1	2	.....	.....	2	4	.....	.....	.....	5	.....	.....	1
Port Arthur.....	.....	.....	8	3	2	3	3	.....	.....	.....	.....	3	.....	12	.....	1	.....
Rat Portage.....	.....	.....	2	.....	.....	1	2	.....	.....	.....	.....	.....	.....	1	.....	.....	4
Simcoe.....	3	.....	1	1	.....	.....	1	1	.....	2	.....	.....	.....	2	.....	1	1
St. Catharines.....	.....	.....	3	3	.....	.....	2	1	.....	.....	.....	1	.....	2	.....	.....	3
Sarnia.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	.....	4	.....	.....	.....
Stratford.....	2	6	.....	1	.....	2	1	.....	.....	1	.....	1	1	7	.....	.....	4
Sandwich.....	.....	.....	1	3	.....	1	1	6	.....	.....	1	.....	8	.....	.....	2	5
St. Thomas.....	2	.....	1	3	.....	6	3	1	.....	.....	2	1	2	7	.....	2	8
Sault Ste. Marie.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Toronto.....	40	2	19	29	7	31	90	50	.....	36	4	29	22	87	3	25	81
Walkerton.....	.....	.....	.....	.....	.....	.....	1	5	.....	1	.....	.....	.....	1	.....	.....	2
Woodstock.....	4	.....	5	5	.....	17	7	7	1	.....	.....	7	4	2	.....	4	5
Welland.....	1	1	1	2	.....	7	7	.....	.....	1	.....	3	3	1	1	1	1
Whitby.....	1	.....	.....	1	.....	.....	1	5	.....	.....	.....	1	.....	6	.....	.....	3
Lock-ups :	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bracebridge.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Current.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manitowaning.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mattawa.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parry Sound.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sudbury.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huntsville.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals.....	89	11	73	100	20	157	202	203	8	66	16	81	94	267	22	76	191

No. 11.

of the Prisoners committed during the year.

Collectors.	Contractors.	Constables.	Coopers.	Dentists.	Doctors and Druggists.	Dressmakers.	Engravers.	Engineers and Machinists.	Farmers and Yeomen.	Gardeners.	Grocers.	Harness and Trunkmakers.	Hatters.	Hotelkeepers and Licensed Victuallers.	Householders.	NAME OF GAOL.
.....	1	3	.....	.....	2	.....	.....	25	.....	.....	.....	.....	2	.....	Barrie.
.....	1	.....	.....	.....	.....	.....	3	.....	.....	1	.....	.....	.....	Berlin.
.....	1	.....	.....	.....	17	1	.....	.....	.....	.....	2	Belleville.
.....	1	1	1	.....	.....	.....	17	.....	.....	.....	.....	4	.....	Brantford.
.....	1	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	Brampton.
.....	4	11	1	1	.....	.....	11	Brockville.
.....	18	.....	.....	.....	.....	.....	.....	Cayuga.
.....	7	.....	.....	.....	.....	.....	.....	Cornwall.
.....	2	.....	1	.....	.....	.....	14	.....	1	.....	.....	.....	.....	Cobourg.
.....	4	12	.....	.....	.....	1	.....	Chatham.
.....	7	.....	.....	.....	.....	.....	.....	Goderich.
.....	1	2	.....	.....	.....	3	.....	.....	7	1	1	2	.....	.....	.....	Guelph.
.....	4	.....	3	.....	.....	.....	3	3	6	7	5	.....	2	Hamilton.
.....	1	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	Kingston.
.....	1	3	7	.....	5	3	1	6	48	6	3	1	1	5	24	London.
.....	6	.....	.....	.....	.....	.....	.....	Lindsay.
.....	4	.....	.....	.....	.....	.....	.....	L'Original.
.....	1	.....	1	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	Milton.
.....	9	.....	.....	1	.....	.....	2	Napanee.
.....	1	1	.....	.....	25	1	.....	2	.....	.....	2	Ottawa.
.....	6	.....	.....	1	.....	.....	29	2	.....	.....	.....	.....	6	Owen Sound.
.....	3	.....	.....	.....	.....	.....	.....	Orangeville.
.....	1	.....	.....	.....	.....	.....	.....	.....	1	9	.....	1	.....	.....	.....	Perth.
.....	1	.....	.....	.....	.....	.....	11	.....	.....	2	.....	.....	.....	Picton.
.....	12	.....	.....	.....	.....	.....	.....	Pembroke.
.....	1	.....	.....	.....	.....	.....	.....	.....	3	7	.....	1	1	.....	65	Peterborough.
.....	1	.....	.....	.....	.....	.....	.....	.....	3	3	.....	.....	.....	.....	6	Port Arthur.
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	Rat Portage.
.....	1	.....	.....	.....	.....	.....	2	12	3	.....	.....	.....	.....	Simcoe.
.....	1	.....	.....	.....	.....	.....	.....	.....	1	3	1	.....	.....	.....	.....	St. Catharines.
.....	6	2	.....	.....	.....	.....	1	Sarnia.
.....	2	.....	.....	.....	.....	.....	2	17	.....	.....	.....	.....	1	Stratford.
.....	4	.....	2	5	2	.....	16	.....	.....	.....	.....	.....	.....	Sandwich.
.....	4	30	2	1	1	.....	2	St. Thomas.
.....	3	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	1	Sault Ste. Marie.
2	1	3	11	.....	8	13	7	55	23	19	4	6	11	.....	2	Toronto.
.....	1	.....	.....	8	.....	.....	.....	.....	.....	1	Walkerton.
.....	2	.....	.....	.....	.....	.....	.....	7	12	.....	1	.....	.....	2	Woodstock.
.....	2	.....	.....	.....	.....	.....	8	14	.....	2	1	.....	3	Welland.
.....	1	1	.....	.....	.....	.....	1	11	.....	.....	1	.....	1	Whitby.
.....	Lock ups :
.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	Bracebridge.
.....	3	.....	.....	.....	.....	.....	.....	Little Current.
.....	2	.....	.....	.....	.....	.....	.....	Manitowaning.
.....	1	.....	.....	.....	.....	.....	.....	Mattawa.
.....	Parry Sound.
.....	Sudbury.
.....	2	.....	.....	.....	.....	.....	1	Huntsville.
2	7	14	49	2	25	30	11	171	478	40	19	29	20	43	157	

TABLE

Shewing the occupations, trades or callings

NAME OF GAOL.	Labourers.	Lawyers.	Lumbermen.	Masons and Stonecutters.	Merchants and Traders.	Millwrights and Wheelwrights.	Millers.	Moulders.	Pedlars and Hawkers.	Printers.	Plumbers and Painters.	Photographers.	Prostitutes.	Railway Employees.	Ropemakers.
Barrie.....	275	1		5					2		2				
Berlin.....	23			3	1	2		3	2				1		
Belleville.....	75		1	5	1			2			3		21		
Brantford.....	55			1				4					2		
Brampton.....	122			1				5	2		5	1			
Brockville.....	101			1				4	1		10				1
Cayuga.....	46														
Cornwall.....	27				1		1								
Cobourg.....	57			1				5			3				
Chatham.....	51			1	3						5				
Goderich.....	28														
Guelph.....	49			3	1			3		1	5			1	
Hamilton.....	393			18	2	2	1	38	10	5	23		1	5	
Kingston.....	65			2	2			5	1						
London.....	247		5	4	1	2	3	24	5	3	28			12	
Lindsay.....	38			1		1		1							
L'Orignal.....	11				1										
Milton.....	174		2	1				3							
Napanee.....	24										3				
Ottawa.....	280			5	10		1	3	3	3	13		41		
Owen Sound.....	86			5							3		4	2	
Orangeville.....	34										1				
Perth.....	47							2			1				
Picton.....	34			4				1			3				
Pembroke.....	69		7	1				1	1					6	
Peterboro'.....						2				1	9				
Port Arthur.....	94									1	3		2	2	
Rat Portage.....	77	2	2		2				2	2	1		5		
Simcoe.....	27							3	1		2				
St. Catharines.....	35							1			4		5	1	
Sarnia.....	313			1	2						2				
Stratford.....	71							3	1		2			3	
Sandwich.....	85			4					4		4		2	1	
St. Thomas.....	73	1		2	1	1	1		1	1	4			2	
Sault Ste. Marie.....	19				1										
Toronto.....	1153	1	4	19	18	1		38	46	42	97	2	301	20	1
Walkerton.....	25							1			1				
Woodstock.....	186			2				16	1		10				
Welland.....	177			7	1	1		6		1	10			2	
Whitby.....	47	1	2		2			3		2	1		1		
Lock-ups:															
Bracebridge.....	78		4	2										13	
Little Current.....	2													1	1
Manitowaning.....															1
Mattawa.....	18		1					1						1	
Parry Sound.....															
Sudbury.....									6				2		
Huntsville.....	17												1		
Totals.....	4908	6	28	99	50	12	7	176	89	62	260	3	389	72	4

No. 11.—Continued.

of the Prisoners committed during the year.

	Sailors and Fishermen.	School and Music Teachers.	Servants and Washerwomen.	Tailors.	Tanners and Curriers.	Teamsters, Drivers and Grooms.	Telegraph Operators.	Tinsmiths.	Watchmakers and Jewellers.	Weavers and Woolworkers.	Whitewashers and Plasterers.	Woodturners.	No Occupation.	Other Occupations not enumerated.	Total.	NAME OF GAOL.	
7	.....		28	4	.....		1	5	.....			2	4	11	405	Barrie.
1	.....		3	1	.....		.....	.....	.....	2	1	.....	.....	3	76	Berlin.
11	.....		2	.....	2	3	.....	.....	.....	1	5	.....	3	1	193	Belleville.
1	.....		12	.....	.....	.....	.....	.....	.....	3	.....	.....	12	6	157	Brantford.
6	.....		3	.....	.....	.....	1	1	.....	4	.....	.....	1	2	186	Brampton.
7	.....		15	.....	.....	.....	.....	.....	.....	.....	2	.....	2	24	214	Brockville.
4	.....		7	.....	.....	2	.....	.....	.....	.....	.....	.....	1	15	110	Cayuga.
.....			3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	43	Cornwall.
7	.....		6	3	.....	3	.....	.....	1	4	.....	.....	2	4	137	Cobourg.
2	.....		9	2	.....	1	1	.....	.....	.....	.....	.....	1	5	121	Chatham.
.....			.....	.....	.....	.....	.....	.....	.....	1	.....	.....	8	5	61	Goderich.
1	.....		2	1	.....	.....	.....	.....	.....	2	.....	.....	7	3	118	Guelph.
15	.....		136	13	2	12	2	6	2	1	2	4	8	71	1003	Hamilton.
12	.....		9	3	1	.....	.....	.....	.....	.....	1	1	45	4	184	Kingston.
6	.....		91	23	2	19	4	1	3	1	1	4	10	5	788	London.
.....			6	1	.....	.....	.....	.....	.....	1	.....	.....	1	4	71	Lindsay.
.....			1	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....	28	L'Orignal.
6	.....		7	7	1	.....	.....	.....	1	6	.....	.....	.....	10	252	Milton.
2	.....		6	.....	.....	.....	.....	1	.....	.....	.....	.....	2	4	59	Napanee.
7	.....	2	24	9	3	11	.....	9	2	.....	8	.....	4	31	637	Ottawa.
15	.....		12	2	.....	4	.....	3	.....	.....	2	.....	6	5	228	Owen Sound.
.....			7	1	1	.....	.....	.....	.....	.....	.....	.....	3	6	63	Orangeville.
.....			7	1	.....	.....	.....	2	.....	1	.....	.....	.....	2	86	Perth.
2	.....		8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	69	Picton.
.....			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	.....	131	Pembroke.
2	.....		2	3	.....	.....	1	1	.....	.....	.....	.....	2	2	120	Peterboro'.
13	.....		8	.....	.....	1	1	.....	.....	.....	3	.....	5	2	186	Port Arthur.
.....			1	.....	.....	.....	1	.....	.....	.....	.....	.....	18	3	129	Rat Portage.
.....			.....	1	.....	.....	.....	.....	.....	1	.....	.....	4	4	74	Simcoe.
15	.....	2	4	.....	2	.....	.....	1	1	.....	.....	.....	2	3	99	St. Catharines.
1	.....		3	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2	342	Sarnia.
.....			4	2	.....	1	1	1	.....	.....	.....	.....	7	5	151	Stratford.
2	.....		29	1	.....	2	2	1	.....	.....	.....	.....	3	5	202	Sandwich.
3	.....		17	3	1	1	1	.....	.....	.....	.....	.....	2	14	208	St. Thomas.
4	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	43	Sault Ste. Marie.
49	.....	5	218	62	4	107	3	13	8	10	23	11	265	156	3397	Toronto.
5	.....		1	.....	.....	.....	.....	.....	.....	.....	1	.....	8	5	67	Walkerton.
11	.....	2	8	6	.....	9	.....	2	.....	2	3	.....	10	3	367	Woodstock.
10	.....		4	2	.....	7	.....	.....	.....	1	.....	.....	.....	9	299	Welland.
.....			6	2	.....	.....	.....	1	1	.....	.....	.....	5	4	112	Whitby.
.....			.....	4	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	105	Lock-ups:
.....			1	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	1	16	Bracebridge.
.....			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	10	Little Current.
.....			1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	29	Manitowaning.
.....			.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	4	Mattawa.
.....			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	13	Parry Sound.
.....			.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	33	Sudbury.
.....			33	Huntsville.
227	13	710	162	22	188	20	49	20	42	52	28	489	463	11426	Totals.		

TABLE

Shewing the number of escapes and deaths, the revenue derived from prison and lowest number of prisoners

NAME OF GAOL.	Prisoners who escaped and evaded recapture.	Prisoners who escaped and were recaptured.	Prisoners who died.	Actual cash revenue derived from prison labour.
Barrie.....			1	00
Berlin.....			2	
Belleville.....			1	
Brantford.....				
Brampton.....			1	
Brockville.....			3	
Cayuga.....			1	
Cornwall.....	1		2	
Cobourg.....			1	
Chatham.....	1		1	
Goderich.....				
Guelph.....			1	
Hamilton.....	1		1	
Kingston.....				
London.....				
Lindsay.....			2	
L'Orignal.....				
Milton.....				
Napanee.....				
Ottawa.....			2	
Owen Sound.....			2	
Orangeville.....			5	
Perth.....			2	36 75
Picton.....				
Pembroke.....			3	
Peterboro'.....			4	
Port Arthur.....	1			115 00
Rat Portage.....	2			
Simcoe.....				
St. Catharines.....		1		
Sarnia.....				
Stratford.....		2	2	
Sandwich.....		1	1	
St. Thomas.....		1		
Sault Ste. Marie.....				
Toronto.....			10	
Walkerton.....			1	
Woodstock.....	2			260 00
Welland.....		1	2	
Whitby.....				
Lock-ups :				
Bracebridge.....				
Gore Bay.....				
Little Current.....			1	
Manitowaning.....				
Mattawa.....				
Parry Sound.....				
Sudbury.....				
Huntsville.....				
Totals.....	8	6	52	411 75

No. 12.

labour, the cost of diet, the accommodation of the various gaols, and the highest in custody during the year.

Cost of daily rations for prisoners.	Are regulations with respect to dietary observed?	Number of cells in each gaol.	Number of distinct corridors or wards in each gaol.	Greatest number of prisoners confined in gaol at any time during the year.	Lowest number of prisoners confined in gaol at any time during the year.	NAME OF GAOL.
Cts.						
10	Yes.	24	8	52	15	Barrie.
9	Yes.	25	5	10	.....	Berlin.
7 1-2	Yes.	18	4	28	10	Belleville.
6 3-4	Yes.	24	6	21	1	Brantford.
6 4-5	Yes.	25	4	11	3	Brampton.
5 2-4	Yes.	29	3	31	16	Brockville.
10	Yes.	14	4	18	2	Cayuga.
13 1-2	Yes.	17	5	7	1	Cornwall.
9 3-4	Yes.	24	5	23	6	Cobourg.
6 1-2	Yes.	26	4	18	2	Chatham.
9	Yes.	12	4	15	8	Goderich.
8	Yes.	36	8	18	4	Guelph.
6 1-4	Yes.	60	6	63	22	Hamilton.
9	Yes.	53	9	33	13	Kingston.
6 3-4	Yes.	57	9	68	15	London.
6 1-2	Yes.	18	4	12	2	Lindsay.
9	Yes.	18	6	9	.....	L'Original.
6 1-10	Yes.	23	4	22	1	Milton.
6 1-4	Yes.	18	4	11	.....	Napanee.
6 3-4	Yes.	96	8	65	19	Ottawa.
10 3-5	Yes.	31	6	37	6	Owen Sound.
8 3-4	Yes.	23	6	27	10	Orangeville.
7	Yes.	18	4	25	8	Perth.
7 4-5	Yes.	26	6	6	.....	Picton.
6 3-4	Yes.	24	4	25	7	Pembroke.
13	Yes.	18	4	19	9	Peterboro'.
14 1-4	Yes.	15	3	30	10	Port Arthur.
24 1-2	Yes.	7	2	12	2	Rat Portage.
7	Yes.	24	8	12	3	Simcoe.
9	Yes.	40	8	15	3	St. Catharines.
9 1-2	Yes.	19	5	23	8	Sarnia.
8 1-2	Yes.	24	6	22	6	Stratford.
9 3-4	Yes.	32	4	27	4	Sandwich.
10 3-5	Yes.	17	4	25	7	St. Thomas.
15	Yes.	14	3	13	1	Sault Ste. Marie.
7	Yes.	184	12	241	115	Toronto.
7 5-8	Yes.	24	8	11	2	Walkerton.
10 1-2	Yes.	32	5	41	6	Woodstock.
7 1-2	Yes.	50	5	47	6	Welland.
8	Yes.	25	5	23	6	Whitby.
30	Yes.	5	3	8	1	Lock-ups ;
30	Yes.	5	2	.....	.....	Bracebridge.
30	Yes.	5	2	.....	.....	Gore Bay.
30	Yes.	5	4	3	.....	Little Current.
30	Yes.	5	1	3	1	Manitowaning.
30	Yes.	5	1	6	1	Mattawa.
30	Yes.	5	4	2	1	Parry Sound.
30	Yes.	5	2	3	.....	Sudbury.
7	Yes.	7	1	7	1	Huntsville.

TABLE

Shewing the number of prisoners, how maintained, cost of maintenance, and

NAME OF GAOL.	HOW MAINTAINED.					Cost of food, fuel and clothing.		Cost of official salaries.	
	Total number of prisoners committed during the year.	Number of prisoners whose maintenance was defrayed by Province.	Number of prisoners whose maintenance was defrayed by the Municipalities.	Number of days custody of Government prisoners.	Number of days custody of Municipal prisoners.	§	c.	§	c.
Barrie.....	405	106	299	3292	6781	2606	39	1972	45
Berlin.....	76	25	51	557	1187	427	87	1200	00
Belleville.....	193	71	122	2030	4816	705	00	1400	00
Brantford.....	157	66	91	1380	3153	1386	69	1650	00
Brampton.....	186	13	173	682	1795	529	15	1150	00
Brockville.....	214	39	175	1088	7418	1002	65	1749	00
Cayuga.....	110	27	83	599	1746	744	66	1185	00
Cornwall.....	43	25	18	760	429	678	74	1340	00
Cobourg.....	137	45	92	1616	3491	1336	40	1580	00
Chatham.....	121	53	68	1808	1835	498	80	1556	25
Goderich.....	61	18	43	872	2911	971	75	1370	00
Guelph.....	118	42	76	1367	1503	550	36	1350	00
Hamilton.....	1003	166	837	3490	11819	2697	18	2843	46
Kingston.....	184	52	132	1398	6875	1644	04	1550	00
London.....	788	162	626	4965	10336	2734	38	3559	75
Lindsay.....	71	19	52	775	1671	430	89	1180	00
L'Orignal.....	28	11	17	569	336	252	66	750	00
Milton.....	252	16	236	498	2818	376	00	1015	60
Napanee.....	59	19	40	725	1209	713	19	1050	00
Ottawa.....	637	162	475	6281	8037	3124	38	2262	50
Owen Sound.....	228	46	182	1276	5059	1690	00	1750	00
Orangeville.....	63	9	54	133	5753	858	55	1250	00
Perth.....	86	17	69	439	5057	1375	82	1440	00
Picton.....	69	7	62	218	618	357	97	871	00
Pembroke.....	131	51	80	2373	2806	674	37	1281	50
Peterborough.....	120	13	107	890	3871	1121	49	1350	00
Port Arthur.....	186	186	.....	6379	.....	1867	89	1675	00
Rat Portage.....	129	129	.....	1826	.....	605	80	1844	00
Simcoe.....	74	33	41	715	1447	467	96	1050	00
St. Catharines.....	99	44	55	1211	1443	1082	16	1675	00
Sarnia.....	342	36	306	746	4878	1552	34	1400	00
Stratford.....	151	31	120	1236	3230	1210	49	1250	00
Sandwich.....	202	76	126	2238	3404	525	00	2100	00
St. Thomas.....	208	90	118	3297	2112	843	34	1815	80
Sault Ste. Marie.....	43	43	.....	1567	.....	528	90	1071	50
Toronto.....	3397	503	2894	11467	56592	10415	77	8618	07
Walkerton.....	67	25	42	758	1133	531	50	1325	00
Woodstock.....	367	60	307	1743	5517	1638	50	1800	00
Welland.....	299	44	255	1299	5505	1965	15	1509	68
Whitby.....	112	59	53	1633	2484	881	40	1605	00
Lock-ups:									
Bracebridge.....	105	105	.....	869	.....	236	62	200	00
Gore Bay.....	.....	.....	.....	.....	.....	44	80	200	00
Little Current.....	16	14	2	180	14	112	30	200	00
Manitowaning.....	10	10	.....	64	.....	82	70	200	00
Mattawa.....	29	13	16	263	6	194	35	360	00
Parry Sound.....	4	4	.....	53	.....	20	00	200	00
Huntsville.....	33	5	28	15	71	.....	.....	200	00
Minden.....	.....	.....	.....	.....	.....	.....	.....	150	00
Haliburton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sudbury.....	13	13	.....	.....	.....	25	.....	300	00
Totals.....	11426	2803	8623	77640	191166	54321	35	70344	96

No. 13.

salaries of the various gaol officials, for the year ended 30th September, 1885.

EXPENDITURE.					SALARIES OF				NAME OF GAOL.
Cost of repairs.	Total gaol expenditure for the year.	Average cost per prisoner for food, clothing, fuel and repairs.	Average cost per prisoner for salaries and wages.	Average cost per prisoner for entire gaol expenditure.	Gaolers.	Turnkeys.	Matrons.	Gaol Surgeons.	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
219 00	4797 84	6 97	4 87	11 84	800 00	470 65	210 65	200 00	Barrie.
.....	1627 87	5 63	16 03	21 66	560 00	400 00	140 00	100 00	Berlin.
60 00	2165 00	3 96	7 25	11 21	600 00	450 00	200 00	150 00	Belleville.
75 23	3111 92	9 31	10 51	19 82	650 00	500 00	300 00	200 00	Brantford.
17 08	1696 23	2 93	6 18	9 11	500 00	400 00	200 00	50 00	Brampton.
28 69	2780 34	4 82	8 17	12 99	1000 00	400 00	150 00	100 00	Brockville.
413 23	2342 89	10 52	10 77	21 29	600 00	365 00	80 00	140 00	Cayuga.
.....	2018 74	15 76	31 16	46 92	740 00	300 00	100 00	200 00	Cornwall.
538 00	3454 40	13 68	11 53	25 21	800 00	500 00	200 00	80 00	Cobourg.
123 73	2178 78	5 14	12 86	18 00	650 00	430 00	200 00	175 00	Chatham.
119 64	2461 39	17 89	22 46	40 35	600 00	500 00	150 00	120 00	Goderich.
.....	1900 36	4 66	11 44	16 10	600 00	450 00	200 00	100 00	Guelph.
165 72	5706 36	2 85	2 83	5 68	1000 00	1300 00	350 00	250 00	Hamilton.
283 70	3477 74	10 42	8 42	18 84	800 00	400 00	200 00	150 00	Kingston.
702 58	6996 71	4 36	4 51	8 87	700 00	2153 50	456 25	250 00	London.
77 00	1687 89	7 15	16 62	23 77	500 00	400 00	200 00	80 00	Lindsay.
5 00	1007 66	9 20	26 78	35 98	600 00	.....	100 00	50 00	L'Orignal.
16 30	1407 30	1 55	4 03	5 58	500 00	365 00	100 00	50 00	Milton.
100 00	1863 19	13 78	17 79	31 57	475 00	400 00	100 00	75 00	Napanee.
189 58	5576 46	5 20	3 55	8 75	600 00	1000 00	350 00	200 00	Ottawa.
100 75	3540 75	7 85	7 68	15 53	700 00	500 00	300 00	250 00	Owen Sound.
51 75	2160 30	14 45	19 84	34 29	600 00	400 00	150 00	100 00	Orangeville.
15 00	2830 82	16 17	16 74	32 91	800 00	400 00	160 00	80 00	Perth.
26 38	1255 35	5 57	12 62	18 19	400 00	300 00	100 00	60 00	Picton.
.....	1955 87	5 30	9 78	15 08	600 00	456 50	125 00	100 00	Pembroke.
48 09	2519 58	9 74	11 25	20 99	650 00	400 00	150 00	150 00	Peterboro'.
65 90	3608 79	10 39	9 10	19 49	600 00	800 00	175 00	100 00	Port Arthur.
16 15	2465 95	4 82	14 29	19 11	900 00	744 00	.....	200 00	Rat Portage.
139 43	1657 39	8 20	14 19	22 39	400 00	350 00	200 00	100 00	Simcoe.
33 88	2791 04	11 27	16 90	28 17	720 00	420 00	200 00	300 00	St. Catharines.
391 45	3343 79	5 68	4 09	9 77	650 00	400 00	200 00	150 00	Sarnia.
.....	2460 49	8 01	8 27	16 28	450 00	425 00	250 00	125 00	Stratford.
197 00	2822 00	3 57	10 39	13 96	600 00	1050 00	250 00	200 00	Sandwich.
64 08	2723 22	4 36	8 73	13 09	600 00	865 80	200 00	150 00	St. Thomas.
16 88	1617 28	12 69	24 92	37 61	400 00	371 50	100 00	200 00	Sault Ste. Marie.
123 10	19156 94	3 10	2 54	5 64	1700 00	3850 00	610 00	1000 00	Toronto.
21 20	1877 70	8 25	19 77	28 02	650 00	375 00	200 00	100 00	Walkerton.
381 27	3819 77	5 50	4 90	10 40	800 00	500 00	200 00	300 00	Woodstock.
203 26	3678 09	7 25	5 05	12 30	600 00	450 00	254 00	100 00	Welland.
32 00	2518 40	8 15	14 33	22 48	850 00	430 00	125 00	200 00	Whitby.
.....	.....	.....	.....	.....	.....	.....	.....	.....	Lock-ups :
4 00	440 62	2 29	1 90	4 19	200 00	.....	.....	.....	Bracebridge.
.....	244 80	.....	.....	.....	200 00	.....	.....	.....	Gore Bay.
4 50	316 80	7 30	12 50	19 80	200 00	.....	.....	.....	Little Current.
1 50	284 20	8 42	20 00	28 42	200 00	.....	.....	.....	Manitowaning.
.....	494 35	6 70	10 34	17 04	300 00	.....	.....	.....	Mattawa.
9 50	229 50	7 38	50 00	57 38	200 00	.....	.....	.....	Parry Sound.
.....	200 00	.....	6 06	.....	200 00	.....	.....	.....	Huntsville.
.....	150 00	.....	.....	.....	150 00	.....	.....	.....	Minden.
.....	.....	.....	.....	.....	150 00	.....	.....	.....	Haliburton.
.....	325 00	1 92	23 08	25 00	300 00	.....	.....	.....	Su ibury.
5081 55	129747 86	5 19	6 15	11 34	.....	.....	.....	.....	Totals.

TABLE No. 14.

Shewing the daily cost per prisoner in each of the gaols, excluding the district lock-ups, for the year ending the 30th September, 1885.

NAME OF GAOL.	Number of prisoners committed during the year.	Total days stay of prisoners during the year.	Cost of fuel, food and clothing.		Average cost per day for each prisoner.
			\$	c.	Cents.
Barrie	405	10073	2606	39	25·87
Berlin	76	1744	427	87	24·53
Belleville	193	6846	705	00	10·21
Brantford	157	4533	1386	69	30·51
Brampton	186	2477	529	15	21·36
Brockville	214	8506	1002	65	11·78
Cayuga	110	2345	744	66	31·70
Cornwall	43	1189	678	74	57·08
Cobourg	137	5107	1336	40	26·17
Chatham	121	3643	498	80	13·70
Goderich	61	3783	971	75	25·60
Guelph	118	2870	550	36	19·17
Hamilton	1003	15309	2697	18	17·61
Kingston	184	8273	1644	04	19·87
London	788	15301	2734	38	17·87
Lindsay	71	2446	430	89	17·65
L'Orignal	28	905	252	66	27·91
Milton	252	3316	376	00	11·33
Napanee	59	1934	713	19	36·87
Ottawa	637	14318	3124	38	21·82
Owen Sound	228	6335	1690	00	26·66
Orangeville	63	5886	858	55	14·50
Perth	86	5496	1375	82	25·03
Pictou	69	836	357	97	42·82
Pembroke	131	5179	674	37	13·02
Peterboro'	120	4761	1121	49	23·55
Port Arthur	186	6379	1867	89	29·28
Rat Portage	129	1826	605	80	33·17
Simcoe	74	2162	467	96	21·64
St. Catharines	99	2654	1082	16	40·77
Sarnia	342	5624	1552	34	27·60
Stratford	151	4466	1219	49	27·10
Sandwich	202	5642	525	00	9·30
St. Thomas	208	5409	843	34	15·59
Sault Ste. Marie	43	1567	528	90	33·75
Toronto	3397	68059	10415	77	15·30
Walkerton	57	1891	531	50	28·10
Woodstock	367	7260	1638	50	22·57
Welland	299	6804	1965	15	28·88
Whitby	112	4117	881	40	21·40
Total	11216	267171	53605	58	20·10

SEPARATE REPORTS UPON COMMON GAOLS.

BARRIE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	225	348	405
<i>Greatest number confined at any one time.</i>	29	40	52
<i>Number of re-committals.</i>	44	55	47
<i>Total cost of maintaining gaol</i>	\$4,508.25	\$3,545.93	\$4,797.84

I inspected the Barrie Gaol on the 8th June, and found twenty-one prisoners therein, sixteen males and five females. Three of the males had been committed as lunatics, and two as idiots; two were waiting trial for murder and rape respectively, the others were under sentence, one for assault, one for larceny, and seven for vagrancy.

Of the females, one was under sentence for black-mailing, and the others for vagrancy.

The books shewed a large increase in the number of males committed as compared with the corresponding period of last year. It is accounted for by the fact that many of the prisoners appear to have been employed on the extension of the line from Gravenhurst.

The gaol was found to be in a good state of order and cleanliness, and the books properly kept. My attention was called to the limited accommodation provided for the matron, and it was suggested that a partition between two of the cells in the south upper ward of the old portion of the gaol be removed, and the small room thus improvised allotted to the matron in addition to the one she now has. As this part of the gaol has not been in use since the erection of the new part, and as it cannot now be occupied by female prisoners, the alteration proposed would not trench upon the accommodation of the gaol proper, and the extra room it would give the matron would only meet her reasonable requirements. The Sheriff was desired to bring this matter to the notice of the Gaol Committee, and also to represent the necessity of repairing the floors in the upper and lower wards on the male side.

I made my second inspection of the Barrie gaol on the 25th September. There were twenty-two prisoners in custody on that date, seventeen males and five females. One of the former was under sentence for manslaughter, two for larceny, one had been committed charged with attempting suicide, one for breach of the Scott Act, one for cutting and destroying timber, two for want of sureties to keep the peace, three as insane, and one as an idiot. The others were sentenced for vagrancy and minor offences. One of the females had been committed as insane, and the other four as vagrants.

I found the gaol and premises thoroughly clean and well kept throughout. The improvements pointed out as desirable on a former inspection had been made in a substantial manner, and the matron's apartments are now sufficiently commodious. The turnkey's bedroom, however, stands much in need of a new floor, the present one being in a dilapidated condition. The cost of a new floor would be very little, and the Sheriff is requested to bring the matter to the notice of the committee in charge with a view to having the work done.

BERLIN GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year....</i>	96	63	76
<i>Greatest number confined at any one time.</i>	11	11	10
<i>Number of re-committals</i>	38	13	16
<i>Total cost of maintaining gaol.....</i>	\$1,707.51	\$1,535.33	\$1,627.87

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:—

“I inspected the Berlin gaol on the 17th June. There were only three prisoners in custody on that date, namely, one male serving a sentence of two months for drunkenness, and two females under sentence for vagrancy.

“The new floors so much wanted in this gaol are, I was pleased to learn, about to be laid. The building was found to be in its usual good order.”

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to make the second inspection of this gaol. Mr. Mann reported to Dr. O'Reilly as follows:—

“I beg to report that as instructed by you I inspected the Berlin gaol on the 23rd September, when there were three men in custody, one was sentenced to the Central Prison for four months for larceny, one was held for disorderly conduct, and one insane.

“New hard wood floors have been laid in the halls and corridors, and are a great improvement upon the old pine floors.

“The heating furnace is nearly worn out and will soon require to be replaced with new heating apparatus.

“The books were in their usual state of good order, and the gaol clean in all departments.”

BELLEVILLE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year....</i>	178	178	193
<i>Greatest number confined at any one time.</i>	22	24	28
<i>Number of re-committals.....</i>	62	44	34
<i>Total cost of maintaining gaol</i>	\$2,086.00	\$2,096.00	\$2,165.00

An inspection of the Belleville gaol was made by me on the 22nd April. There were then twenty-four prisoners in custody, eighteen males and six females. Of the former, one had been committed as a lunatic, one was charged with rape, two with horse-stealing, three with larceny, one with fraud and one with forgery; the rest had been committed for vagrancy, etc. Of the females, one was committed as a lunatic, and the others were charged with minor offences.

The gaol was thoroughly clean and in excellent order throughout. There was every evidence of strict attention to duty on the part of the gaoler and his subordinates.

The water-closet in the working yard is only some sixteen feet from the kitchen. There appears to be no trap in the drain leading from the closet, and as the drain extends a quarter of a mile or so and receives all the sewage from the buildings along its course to the river, the result is that the gaol premises are exposed to the effluvia therefrom. A trap should be put in the branch drain and properly ventilated to remedy this condition of things. It might, however, be deemed more desirable to do away with the present water-closet, and substitute an earth closet at a greater distance from the kitchen.

During the past six months I found that the gaol population had averaged over twenty-six prisoners, while there were only twenty-four cells. This has necessitated the occupation of one of the corridors by the number in excess of the cell accommodation. One of the corridors occupied by male prisoners overlooks the female airing yard, but with the present lack of room this objectionable arrangement cannot be avoided. It is gratifying to note that the Council have under consideration the question of increasing the gaol accommodation.

My second inspection of the Belleville gaol was made on the 23rd of September. I saw the sixteen prisoners it contained, eleven men and five women. Of the former, one had been committed charged with rape, one with perjury, three with larceny, two with assault, one with drunkenness and two with insanity. One of the females had been committed charged with murder, three with vagrancy and one with insanity.

The gaol and premises were in good order, with many evidences that the prisoners were well attended to, discipline maintained and the rules observed.

I found that the closet referred to in my last report had been removed and an earth closet substituted.

BRANTFORD GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.</i>	216	175	157
<i>Greatest number confined at any one time.</i>	18	27	21
<i>Number of re-committals.</i>	105	90	73
<i>Total cost of maintaining gaol.</i>	\$2,886.48	\$2,960.80	\$3,111.92

The first inspection of this gaol was made by Mr. Hayes, who reported upon it to Dr. O'Reilly as follows :—

“Acting under your instructions I visited the Brantford gaol on the 29th December, finding fourteen male and three female prisoners in custody. The latter and five of the former were under sentence for vagrancy. Of the rest of the males, six were under sentence, three for larceny and three for destroying property, wife beating and robbery respectively. The prisoner convicted of the last named offence was under sentence for one year in the Central Prison. One man was on remand charged with assault, another was waiting trial for robbing a till, and the remaining one was in custody in default of finding sureties to keep the peace. These prisoners were all seen, and no complaints were received from them. There was not much work for them to do, but it was stated that a supply of wood was due, and when it was delivered the sentenced men could be all employed.

“The books were found to be well kept. In the Surgeon's book there are entries of frequent visits and instructions.

“Two wants were much felt in this gaol, namely, iron bedsteads and a proper bath-room. It is to be hoped that the County Council will see its way to supplying these needs at an early day. So far as order and cleanliness were concerned, the condition of the gaol was quite satisfactory.”

Copies of the reports made upon this gaol to the Government by Dr. O'Reilly are annexed :—

“The Brantford gaol was inspected by me on the 11th February. There were twelve male and four female prisoners in custody on that date. None were charged with very serious offences. Two of the males were waiting trial for petty

larceny, and one for trespass. All the others, both male and female, were either vagrants or of the "drunk and disorderly" class.

"The gaol was in its usual good condition of cleanliness and order."

"I made another inspection of this gaol on the 22nd September.

"It contained four male and three female prisoners on that date. Two of the males were under sentence for larceny, one for assault, and one for drunkenness.

"One of the females was sentenced for larceny, and two for drunkenness.

"Everything about the gaol was found to be in proper order."

BRAMPTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.....</i>	109	151	186
<i>Greatest number confined at any one time.</i>	25	19	11
<i>Number of re-committals.....</i>	52	59	43
<i>Total cost of maintaining gaol.....</i>	\$1,463.02	\$2,027.09	\$1,696.23

Dr. O'Reilly instructed Mr. Mann, of the Inspector's Department, to make an inspection of this gaol. Mr Mann reported to Dr. O'Reilly as follows:—

"I beg to report that, as instructed by you, I inspected the Brampton gaol on the 29th September, when there were three men and one boy in custody. One man was under sentence for larceny, and one drunk and disorderly, one was a lunatic waiting removal to an asylum, and the boy is an idiot.

"The books were properly kept and the gaol was clean and in good order."

BROCKVILLE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.....</i>	215	245	214
<i>Greatest number confined at any one time.</i>	34	30	31
<i>Number of re-committals.....</i>	81	119	114
<i>Total cost of maintaining gaol.....</i>	\$2,503.87	\$2,663.51	\$2,780.34

My first visit to the Brockville gaol was made on the 24th April. I saw the prisoners then in custody, namely, sixteen males and six females. Three of the former had been committed as lunatics and were fully certified to as being insane, another had been committed charged with manslaughter, and the remainder with minor offences. One of the females had also been committed as a lunatic.

I found the gaol in good order and the books perfectly kept. No change worthy of note had taken place in the condition of the gaol since the date of my previous visit.

My second inspection of this gaol was made on the 30th October. I saw all the prisoners then in custody, namely, fifteen males and four females.

Three of the males were under sentence for larceny, four for vagrancy, and one for contempt of court. Three had been committed as lunatics, one was charged with forgery, and the others with minor offences.

Three of the females had been committed as lunatics, and the other as a vagrant.

The record shews that for the year ending 30th September, 1884, the number of committals to this gaol was 245, while for the corresponding period of this year there were 214, shewing a decrease of 31. Notwithstanding this reduced number,

however, the days' stay of prisoners is considerably increased in consequence of the difference in the terms of sentence.

I found the premises in an excellent state of cleanliness and order. The books also were neatly and properly kept. Everything about the premises indicated the strictest attention to duty on the part of the gaoler and his turnkey.

CAYUGA GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	42	68	110
<i>Greatest number confined at any one time.</i>	9	13	18
<i>Number of re-committals.</i>	10	27	39
<i>Total cost of maintaining gaol.</i>	\$1,662.32	\$1,912.65	\$2,342.89

A copy of the report made to the Government by Dr. O'Reilly upon this gaol is annexed:—

“The first inspection of the Cayuga gaol for the year was made by me on the 21st April. There were then four male prisoners and one female in custody. All were vagrants, except one male who was undergoing a sentence of one month for forgery.

“The gaol was found to be in its usual satisfactory condition of cleanliness, and everything was in excellent order.

“In consequence of complaints which have been made to the Department in reference to the sanitary condition of that part of the gaol which is most closely connected with the Court House, I made an inspection of the basement of that building and found it to be much in need of renovation. The sills and flooring are very much rotted, and there were evidences of dampness prevailing throughout. Moreover, the basement is used for cellarage purposes for the gaol, and large quantities of potatoes, turnips, etc., were found there. The potatoes were germinating, as they are certain to do at this season of the year, producing a most unwholesome atmosphere. There is no good reason for this state of things, as from the situation of the gaol perfect drainage could easily be obtained. If the rotten floor in the basement were taken up, and the filth, which doubtless lies underneath, be cleared away and a solid concrete floor put down, there should be no further cause for complaints. I would also suggest that some other place be found for the storage of vegetables than the space under the Court room and County offices.”

Dr. O'Reilly instructed Mr. Hayes to make the second visit to this gaol. A copy of the report he made is annexed:—

“According to instructions I inspected the Cayuga gaol on the 4th September. The books were examined. The register, dietary book, etc., had been well kept. No punishment had been recorded for several years. The gaol Surgeon has made no entry in his book since the 17th April last, although it is stated that he makes frequent visits to the gaol.

“There were three prisoners in custody, one man and two women. The former was under sentence for robbing the post office. One of the women was under sentence for prostitution, and the other has been committed as being of unsound mind and a vagrant. The latter case is rather a peculiar one. The woman, who appears to be quite respectable, is eighty-four years old, and was, I believe, living with some relatives and was by them committed to the gaol. It is stated that she has an income of \$50 a year paid by the executors of her late husband.

“The south furnace in the gaol being worn out, a new one is being put in. Owing to this work going on some portion of the gaol and yards were not as clean and orderly as they should be.

“The wooden floors of the cellars in the the basement of the Court House have been taken up and replaced by concrete. The cellars have also been drained and are now quite free from smells.”

CORNWALL GAOL.

	1883	1884	1885
<i>Prisoners committed during the year</i>	53	68	43
<i>Greatest number confined at any one time</i>	5	9	7
<i>Number of re committals</i>	21	14	10
<i>Total cost of maintaining gaol</i>	\$1,608.98	\$1,800.05	\$2,018.74

I made an inspection of the Cornwall gaol on the 22nd April, and found only one prisoner in custody. He had been committed on the 19th December, 1883, for placing obstructions on the railway. He is an imbecile and unfit to be at large.

The gaol premises were clean and in good order. The corridors and cells which were not in use, and were therefore left unheated, were damp and unwholesome, shewing the necessity for the improvements in the ventilation now going on.

The kitchen of the turnkey's quarters opens out from the basement into the gaol-yard where the well is and where his supply of fuel is stored, and his family are consequently obliged to make frequent use of this entrance. While it was thus in use, a prisoner had, a short time previous to my visit, effected his escape through it and the turnkey's rooms by making a run through the yard for some distance. Although the turnkey was then in charge of the prisoner, he made good his escape over the ice to the American side of the river. While it is manifest that the gate and door leading from the yard should never for a moment be left unlocked, yet from the attending circumstances in this case, it is obvious that the turnkey could not be personally chargeable to any extent with culpable neglect. It is equally apparent that but for the structural defects referred to, the escape could not have been made. It will be desirable, therefore, while the alterations and improvements are going on, to extend the wall enclosing the yard in question to the turnkey's quarters. The Sheriff was requested to call the attention of the Gaol Committee to this matter with a view to having such alteration made as will prevent further escape in this way.

A second inspection of the Cornwall gaol was made by me on the 16th July, when there were four male prisoners in custody—no female.

One of the prisoners had been committed as an idiot, one was under sentence for larceny, one was awaiting trial for assault, and one was held for want of sureties to keep the peace.

In consequence of the building operations going on, the premises were in considerable disorder, and there were accumulations of dust everywhere. A little more attention to dusting and sweeping would have helped to make the premises more presentable.

An examination of the books of record was made, and the register found to be in a dilapidated condition. I suggested that this book be divided into two volumes, one to be formed of the portion in which the records have been made, and the other of the unused portion of the book. No entry has been made in the dietary book since the 1st June last, and no sufficient reason for this dereliction

of duty appears, as space enough remains for making full entries for that month at least. The attention of the Sheriff was called to this omission, with the request that he would see that this book be properly kept in future.

The erection of the county buildings, and the alterations to be made in the gaol conjointly therewith, were progressing very satisfactory, the work being substantially done.

In order to more effectually isolate the passages from the gaol into the male and female yards, authority was sought to place the wall dividing those inclosures from four to five feet further west than shewn on the plans of alterations to the gaol premises. This change will enlarge the yard for female prisoners and much improve it, while the yard for the males will not suffer any detriment by the alteration.

A question has arisen as to the desirability of connecting the sewer from the gaol premises with the main sewer of the town, and in order to avoid any difficulty in this way the suggestion to connect the closet pits on the gaol premises with the sewer to the south on Water street was approved of. The closet in the male yard will be built about the centre of it, and the sewer from it can be flushed with water from the canal which will obviate the difficulty arising in connecting it with the town sewer, the objection in the case being a lack of water to keep the sewer clean. With the construction of the drain as now arranged for, no apprehension need exist as to the water supply, the only thing necessary will be to have regular attention paid to the flushing.

COBOURG GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year....</i>	121	127	137
<i>Greatest number confined at any one time</i>	24	24	23
<i>Number of re-committals.....</i>	32	30	44
<i>Total cost of maintaining gaol.....</i>	\$3,074.75	\$2,721.82	\$3,454.40

An inspection of the Cobourg gaol was made by me on the 30th April. There were then thirteen prisoners in custody, twelve males and one female. Of the former, one was committed charged with rape, one for assault, one as insane, and the others for minor offences. The female had been committed as a lunatic and was certified by the examining authorities to be insane.

Since the date of my previous visit all the corridors, except those in the female ward, had been thoroughly scrubbed and whitewashed. The floor of the basement corridor was being concreted. The work of cleaning, concreting, etc., furnished much needed employment for the prisoners, as the work was largely done by them.

I made a second inspection of the Cobourg gaol on the 24th September, and found nine prisoners in custody, seven males, and two females. One of the males had been committed for shooting with intent, three for larceny, one for want of sureties to keep the peace, and one for being drunk and disorderly. Of the females one had been committed as insane and the other as a vagrant.

I found the gaol in excellent order, and the prisoners properly attended to.

A short time ago a serious assault was made by one of the prisoners upon the turnkey evidently for the purpose of effecting his escape; and at the time of my visit the marks of the wounds received by the turnkey were quite distinct, and evidence given by other prisoners subsequently, when leaving the gaol, shewed that a preconcerted plan had been arranged for the escape of a number of them, and that they expected outside assistance. Their plan was happily frustrated, however, by the determined resistance of the turnkey and gaoler.

CHATHAM GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	117	153	121
<i>Greatest number confined at any one time</i>	13	16	18
<i>Number of re-committals</i>	5	9	7
<i>Total cost of maintaining gaol</i>	\$2,132.31	\$2,032.21	\$2,178.78

Copies of the reports made to the Government by Dr. O'Reilly upon this gaol are annexed :

"The first inspection of the Chatham gaol for the year was made by me on the 12th February. I had been called to Chatham in consequence of a resolution which had been passed by the County Council with reference to converting the building, formerly occupied as a residence by the gaoler, into a place for keeping lunatics. A new house had been built for the gaoler and the old one abandoned because of its unsanitary condition and general unfitness for a residence, the first intention being to convert it into a gaol laundry, store-room, etc. I informed the County Council that a building which had been abandoned because of its unfitness for occupation and its incapacity for being made fit, could not be regarded as a satisfactory place of residence for lunatics, and that in my opinion the provisions of the law with reference to the care of lunatics would not permit such action as they proposed to take.

"On the occasion of this visit there were ten male prisoners in the gaol and three females. One of the males was waiting trial for forgery, and another was waiting extradition. The rest of the men, excepting a lunatic, were vagrants and persons committed for drunkenness and disorder. Of the three females, one was an imbecile girl and the others were vagrants.

"The gaol was found to be clean and in good condition in all respects, except in one instance where I found the frame of a door in one of the corridors in need of repair.

"I again inspected this gaol on the 9th September, and found three males and two females in custody.

"One of the males had been found guilty of larceny and was awaiting sentence, one was on remand charged with false pretences, and the other was held for debt. Of the females, one was under sentence for selling liquor illegally, and the other for assault.

"My attention was called on this occasion to the defective condition of the drainage of this gaol, and I directed the Sheriff to bring the matter to the notice of the county authorities with a view to having the defects removed."

GODERICH GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	58	90	61
<i>Greatest number confined at any one time</i>	15	18	15
<i>Number of re-committals</i>	22	34	27
<i>Total cost of maintaining gaol</i>	\$2,012.07	\$2,610.22	\$2,461.39

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :

"I inspected the Goderich gaol on the 14th May, when I found nine male and two female prisoners in custody. The most important prisoner among them

was one who was waiting trial on a charge of rape. Two other male prisoners were mild cases of insanity. The remainder, both males and females, were of the vagrant class.

“The gaol was in its usual condition of good order and cleanliness. All books were examined and found to be correctly kept.

“On this occasion my attention was specially called to the cottage in which the gaoler lives, and I therefore made a very thorough examination of it. This cottage, which is only one storey high, is enclosed within the walls of the gaol, thus excluding the sunlight to a very great extent; it is placed so low that the floor is scarcely, if at all, above the level of the ground surrounding it; the plastering is done on the bare walls instead of upon laths, and the house is either undrained, or the drainage is so imperfect that the water is not drawn from the cellar, there being several inches of water in it at the time of my inspection. All these defects combine to make the building a very unsatisfactory place of residence from a sanitary point of view: the dampness in the house is so great that clothing hung upon the walls soon becomes mildewed. Apart from these objections the house does not afford sufficient accommodation for the gaoler's family, and he is obliged to make use of some of the rooms in the gaol. The remedy which suggests itself to my mind is to put an additional storey on the building, which would provide safe and comfortable sleeping rooms for the family; have new drains made or the old ones repaired; and remove some portion of the wall surrounding the cottage and which is not at all needed for the safety of the prisoners, thus allowing the sun and air to act more freely upon it. The raising of the house would also make the chimneys, which are now almost useless owing to the proximity of the higher building, more efficient for the ventilation of the lower storey of the gaoler's cottage.”

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to make the second inspection of this gaol. Mr. Mann reported to Dr. O'Reilly as follows:—

“I beg to report that as instructed by you I inspected the Goderich gaol on the 22nd September, when I found seven men and three women in custody, who were committed for the following offences: rape (one), vagrancy (one), debtor (one), and one man and three women were insane.

“The improvements to the gaoler's cottage which were recommended by you in your last minutes of inspection have not yet been carried out.

“The books were properly kept, and the gaol was clean and tidy throughout.”

GUELPH GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.....</i>	187	147	118
<i>Greatest number confined at any one time</i>	28	18	18
<i>Number of re-committals.....</i>	34	23	11
<i>Total cost of maintaining gaol.....</i>	\$2,592.27	\$2,677.03	\$1,900.36

Copies of the reports made to the Government upon this gaol by Dr. O'Reilly are annexed:

“The Guelph gaol was inspected by me on the 16th May. There were in custody on that day five male and two female prisoners. One of the male prisoners was a debtor, one was waiting removal to the Central Prison, to which place he had been sentenced for horse-stealing, one was certified to be insane and was waiting transfer to the asylum, one had been committed for trespass, but was

suspected to be insane, and the other was a vagrant. One of the female prisoners was certified to be a lunatic and the other was a vagrant."

"The second inspection of this gaol was made on the 8th October. There were only three prisoners in custody on that date, one male and two females.

"The male prisoner is an idiot. One of the females is insane, and the other was undergoing sentence on a charge of vagrancy.

"The gaol premises were found to be in satisfactory order, and the books in good shape."

HAMILTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	898	954	1,003
<i>Greatest number confined at any one time</i>	62	62	63
<i>Number of re-committals</i>	507	524	562
<i>Total cost of maintaining gaol.</i>	\$4,433.00	\$5,170.00	\$5,706.36

Copies of the reports made to the Government upon this gaol by Dr. O'Reilly are annexed :

"The first statutory inspection of the Hamilton gaol during the official year was made on the 1st July. There were then in custody thirty male prisoners and seven female. Two of the males were waiting trial for burglary, one was waiting transfer to the Central Prison to serve out a six months' sentence there. All the other male prisoners, with the exception of three committed as lunatics, were of the vagrant and disorderly classes. Of the females, one was insane, one was under sentence to the Reformatory for Females for larceny, and all the others were committed for drunkenness and vagrancy.

"Since my last inspection, Mr. Henry, the very efficient gaoler, has died. His successor has not been yet appointed, but the gaol is being very satisfactorily managed by the chief turnkey.

"The better securing of the basement windows, to which I called attention in my last minutes of inspection, has been very nearly completed, and forms a very important improvement. My suggestion to make a doorway through the wall of the airing yard has also been carried out. Male prisoners can now reach the work yard without passing through the female part of the gaol.

"I found that in places the concrete on the floors and the plaster on the walls needed repair. This will no doubt be done when the attention of the gaol committee is called to it. The gaol was otherwise in excellent order in all departments.

"On the occasion of this visit, I enquired about the escape of a prisoner named Wright, who had got away by scaling the wooden wall of the work yard. Through an oversight, I presume, the wall had been left in a condition which rendered it possible for an active man to climb it. The defect, however, has to some extent been remedied since the escape took place, but the wall is not yet perfectly secure. A little more vigilance on the part of the turnkey while in charge of prisoners in this yard would no doubt have prevented the escape, but the circumstances did not, upon investigation, seem to me to warrant recourse to the extreme measure of dismissal."

"Another inspection of the Hamilton gaol was made by me on the 2nd October, being the first occasion of my visiting this gaol since the appointment of the new gaoler, Mr. Ogilvie. I found everything in a very satisfactory condition.

“The prisoners in custody were forty-two males and thirteen females, none of whom were held for very serious crimes. Those under sentence were chiefly for petty larceny, drunkenness, etc. One male and one female were held as insane.”

KINGSTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	153	178	184
<i>Greatest number confined at any one time,</i>	23	28	33
<i>Number of re-committals</i>	19	28	26
<i>Total cost of maintaining gaol</i>	\$3,683.89	\$5,134.33	\$3,477.74.

My first inspection of the Kingston gaol during the official year was made on the 24th April, when there were twenty-five prisoners in custody, fifteen males and ten females. Four of the men and two of the women had been committed for lunacy. Two of the males were men from the “B” Battery, who had been sentenced by a Court Martial. Two of the women had been sentenced to the Reformatory for Females and were waiting removal thereto. All the other prisoners, both male and female, were under sentence for various minor offences.

The gaol premises were found in their usual condition of thorough order and cleanliness.

I instructed Mr. Hayes to make the second inspection. Copy of his report is annexed:

“I have the honour to report that as instructed by you I made an inspection of the Kingston gaol on the 18th August. I am glad to be able to state that so far as their condition depended upon the gaol staff, the prison and premises were in good order, cleanliness and neatness prevailing everywhere. One or two deficiencies were noticeable, namely, the want of iron bedsteads, and of a proper metal bath for men, in place of the present wooden tub; the pointing of the stone walls round the yards, and the repairing of the gate in the north-east wall of the working yard. I would recommend these matters to the favourable notice of the County Council. If the walls be not attended to they will suffer considerable damage during rains and frost.

“The inmates of the gaol numbered ten men and eight women, all of whom were seen. No complaints were received. Three of the men are insane, the other seven were under sentence, having been convicted of the following offences; drunkenness, vagrancy, wounding with intent, stealing, striking superior officer, and larceny. Of the women three are insane, three are under sentence for vagrancy and two for drunkenness. All the lunatics, except one female, are quiet and work with the prisoners. The sentenced prisoners are kept at work, the men in cutting wood, pumping water, attending to the Court House grounds, etc., and the women in washing, sewing, etc.

“The books were found to be well kept. Only nine punishments since the beginning of 1885 are recorded. The gaol surgeon makes frequent visits.

“An additional supply of blankets will be required before the winter sets in.”

LONDON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	806	1,004	788
<i>Greatest number confined at any one time.</i>	61	77	68
<i>Number of re-committals</i>	277	382	367
<i>Total cost of maintaining gaol</i>	\$7,284.75	\$7,517.35	\$6,996.71

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :

"I made my first inspection of the London gaol on the 22nd April, when there were forty males and five females in custody. Of the male prisoners the following were waiting trial; three for stabbing, two for rape, one for perjury and one for forgery. All the other male prisoners were of the drunken, disorderly and vagrant class, except one, who was charged with insanity.

"Of the female prisoners, one was insane, one is an idiot and one is under sentence for keeping a house of ill-fame. The other two were vagrants."

Instructions were given to Mr. Hayes to make the second inspection of the gaol. He reported to Dr. O'Reilly as follows:—

"As instructed by you, I made an inspection of the London gaol on the 23rd September. The prisoners then in custody numbered twenty-three, thirteen males, ten females. Of these, four had been committed as insane, one man and three women. Two men were under sentence for larceny and all the rest with one exception, were under sentence for vagrancy and drunkenness in about equal proportions. The exception referred to was the prisoner Simmons, who is under sentence of death for murder. The precautions taken for his safe-keeping were explained to me, and they seemed to be all that is necessary.

"The books were properly kept. But few punishments have been awarded for some time past and those were within the regulation. The gaol Surgeon's register contains full record of his instruction.

"The gaol was in good condition. Iron bedsteads are badly wanted, as the present wooden contrivances harbour vermin. It would be well also to cover the hot air ducts with gratings, as at present they form good hiding places. Also to rail in the entrance to the furnace. I would suggest that the Sheriff be requested to bring the matters to the notice of the County Council.

"The yards were visited. A quantity of stone has been broken by the prisoners and there is still plenty of wood for them to cut. The shed portion of a disused privy was in the working yard close to the wall. The gaoler was desired to move it to the middle of the yard or, if not required, to have it taken away.

"The prisoners were all seen and had no complaints to make.

"The bread, meal and potatoes were examined. The quality appeared to be good."

LINDSAY GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.</i>	39	75	71
<i>Greatest number confined at any one time</i>	9	17	12
<i>Number of re-committals.</i>	2	6	6
<i>Total cost of maintaining gaol.</i>	\$1,595.58	\$1,718.54	\$1,687.89

My first inspection of this gaol was made on the 4th May, when I saw the prisoners in custody, namely, four males and two females. One of the males was under sentence for carrying unlawful weapons, one for larceny and the others for minor offences. One of the females had been committed as a lunatic and was certified to be insane. The other was a vagrant.

The gaol was found to be in good order. The books were properly kept, but the register was in a dilapidated condition. The Sheriff was requested to have it rebound.

I made my second inspection of the Lindsay gaol on the 1st October. I saw all the prisoners then in custody, namely, five men and one woman. Of the former, one was awaiting trial for murder, one for rape, one had been committed for want of sureties to keep the peace, and one for being drunk and disorderly. The remaining male prisoner was insane. The female prisoner had been committed for vagrancy.

The gaol presented a much improved appearance since the date of my last visit, the ceilings having been renewed in each of the corridors, and the whole premises thoroughly cleaned internally. The books I found in good order.

L'ORIGINAL GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	23	23	28
<i>Greatest number confined at any one time</i>	7	7	9
<i>Number of re-committals</i>	1	4	1
<i>Total cost of maintaining gaol</i>	\$1,423.81	\$1,063.62	\$1,007.66

A copy of the report made to the Government by Dr. O'Reilly upon this gaol is annexed.

"I inspected the L'Original gaol for Mr. Christie on the 10th July.

"There were in custody on that date four male prisoners—no females. One was under sentence for three months for cutting and wounding, another for one month for larceny, another for three months for larceny and the fourth was a lunatic waiting removal to the asylum.

"The gaol was found to be in a thoroughly satisfactory condition."

MILTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	97	140	252
<i>Greatest number confined at any one time</i>	16	21	22
<i>Number of re-committals</i>	22	17	55
<i>Total cost of maintaining gaol</i>	\$1,234.15	\$1,287.00	\$1,407.30

Copies of the reports made to the Government upon this gaol by Dr. O'Reilly are annexed :

"My first inspection of the Milton gaol was made by me on the 14th July. There were on that date five prisoners in custody, two males and three females. One of the male prisoners was insane and the other was on remand charged with bigamy. The three female prisoners were all lunatics, two only of them being fit subjects for the asylum.

"The interior of the gaol was found to be in excellent order, everything being as clean and tidy as could be desired. Outside, the old dilapidated fence which enclosed the work yard has been pulled down and a new fence is in progress. It will be as good as a fence of wood can be made, but it would have been more satisfactory in the end to have had it built of stone like the existing walls. The wooden one will last for a few years and then require to be renewed."

"The second inspection of this gaol was made on the 19th September, when I found only five prisoners in custody, namely, two males and three females, all of whom were said to be insane and were waiting examination."

NAPANEE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	64	72	59
<i>Greatest number confined at any one time</i>	13	9	11
<i>Number of re-committals</i>	28	26	19
<i>Total cost of maintaining gaol</i>	\$1,218.11	\$1,485.56	\$1,863.19

I inspected the Napanee gaol on the 29th April, when there were three male and one female prisoners in custody. One of the males had been committed for assault; the other two were vagrants. The female is an idiot.

The premises were found to be in a satisfactory condition and the books were in good order.

A second inspection of the Napanee gaol for the current year was made on the 22nd September. Five prisoners were in custody, namely, three males and two females.

Of the former, two were serving short term sentences for assault and one for vagrancy.

One of the females had been committed, and was fully certified to, as a lunatic, and the other is an idiot.

I found the gaol clean and in good order, and the books properly kept.

OTTAWA GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	710	713	637
<i>Greatest number confined at any one time</i> . .	58	47	65
<i>Number of re-committals</i>	107	97	80
<i>Total cost of maintaining gaol</i>	\$6,564.30	\$6,351.10	\$5,576.46

I made an inspection of the Ottawa gaol on the 7th May, and found that there were forty one prisoners in custody, thirty males and eleven females. Of the men, three were under sentence to the Penitentiary and were waiting removal thereto, three had been sentenced to the Central Prison, six were on remand, and the remaining eighteen were undergoing short sentences. Of the women, two had been committed as insane, seven were under sentence, and two were on remand.

The records were found to be properly kept. The discipline and order maintained showed strict attention to duty on the part of the gaoler and the turnkeys. No punishment had been recorded since the previous 14th November, notwithstanding that there had been a considerable number of prisoners in charge since then.

I was given to understand that the structural alterations previously recommended would be considered by the County Council at the June session of that body.

I made my second inspection of the Ottawa gaol on the 2nd October, There were on that date twenty-eight male and nine female prisoners in custody. Of the former, four had been committed as insane, one had been committed charged with murder, eight were awaiting trial charged with rape, eight were undergoing short sentences for larceny, two were on remand for larceny, one was awaiting trial for uttering false coin, and the others were committed for vagrancy and drunkenness. Four of the females had been committed as insane; of the other

one was under sentence for keeping a house of ill-fame, one for larceny, one for receiving stolen goods, one for drunkenness, and one for vagrancy.

In consequence of the number of important prisoners in custody, the Sheriff had been authorized to employ an additional turnkey temporarily. The necessity for this precaution was shown at the time of my visit, as an adroit attempt to escape had been made by one or more of the prisoners. A nicely finished key made of hardwood, which would unlock one of the principal gates, was discovered, together with a number of other appliances, under a window sill. The sills in this ward are made of wood and beneath some of them are openings where such things can easily be secreted. The sill could be raised almost at pleasure. The Sheriff was desired to call the attention of the County Council to this matter, with a view to having the wooden sills replaced by stone ones. If this key and other implements had not been discovered at the time they were, serious charges for escapes would, no doubt, have been the result.

I noted that the visits of the gaol Surgeon had been very infrequent, and one of the prisoners appealed to me to obtain for him the medical treatment which I have no doubt he required. On enquiry I learned that this man had previously spoken to the Sheriff about his ill-health, and the Sheriff had written the Surgeon requesting his attendance. No visit had been made, however, and the prisoner complained in consequence. On examining the Surgeon's book I found that thirteen visits were made in July, ten in August, and three in September. In view of the fact that there were at the time of my visit eight lunatics in the gaol it is obvious that three visits in a month is not sufficient for the proper observation and treatment of such cases by the Surgeon. The Sheriff was therefore instructed to secure the services of some other medical practitioner without further delay in order that the sufferings of the ailing prisoners might be alleviated; he was also authorized to bring to the notice of the chairman of the committee the present condition of matters in this respect, with a view to securing the more frequent and regular attendance of the gaol Surgeon.

The gaol and premises were found to be in good order, and the books well kept.

A considerable improvement was being made in the principal yard by excavating the rock on the surface and filling it in with earth, and thus bringing the whole yard to one level. This work, besides furnishing employment for the prisoners, will produce a large quantity of broken stone of considerable value.

OWEN SOUND GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	130	200	228
<i>Greatest number confined at any one time</i>	20	27	37
<i>Number of re-committals</i>	45	72	83
<i>Total cost of maintaining gaol</i>	\$3,439.92	\$3,467.54	\$3,540.75

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:

"The Owen Sound Gaol was inspected by me on the 21st May. There were eighteen prisoners, all males, in custody on that day. Four of them were insane, but only one of these was, upon examination, found to be a fit person to be transferred to a curative asylum. All the other prisoners were of the vagrant and drunken class, with the exception of one boy and his was a pitiable case. This child, for he is but seven years old, has no father and his mother is a prisoner in the

Reformatory for Females. He is therefore thrown upon the charity of the community and has been lodged in gaol, there being no other place in the county where he could be cared for. The Sheriff was requested to bring this case to the notice of the County Judge, with a view to the lad's removal, under the provisions of the Act, to the Reformatory for Boys.

"I was pleased to see that the Council are providing new iron bedsteads of the most approved modern pattern. The gaol was found to be in excellent order in every respect."

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to make the second inspection of this gaol. Mr. Mann reported to Dr. O'Reilly as follows:—

"I beg to report that, as instructed by you, I inspected the Owen Sound gaol on the 2nd Sept., at which time there were eleven men and one woman in custody, Of these, nine were undergoing sentence as follows: larceny (one), contempt of court (one), assault (one), drunk and disorderly (one), vagrancy (3), malicious wounding (one), unlawful wounding (one), and three, two men and one women, were insane.

"The iron bedsteads which have been procured give good satisfaction. The entrance for teams to the gaol yard has been closed up by the additions being made to the Court House. The gaol was clean, and the books properly kept."

ORANGEVILLE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.....</i>	43	56	63
<i>Greatest number confined at any one time</i>	14	16	27
<i>Number of re-committals.....</i>	6	16	30
<i>Total cost of maintaining gaol.....</i>	\$1,913.00	\$1,972.89	\$2,160.30

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed:

"I inspected the Orangeville Gaol on the 21st May. There were ten male and four female prisoners in custody, every one of whom, with three exceptions, were suitable for residence in a county poor-house, but were improper inmates of a county gaol. The three exceptions referred to were one man convicted of an assault, and two convicted of petty larceny.

"The interior of the gaol was found to be in very good order. I noticed that the temporary wooden wall, which was put up around the work yard, is becoming dilapidated and very much in need of repair. It will be found cheaper and more satisfactory in the long run to have this fence replaced at once by a proper stone wall."

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to make the second inspection of this gaol. Mr. Mann reported to Dr. O'Reilly as follows:—

"I beg to report that as instructed by you I made an inspection of the Orangeville gaol on the 2nd September, when there were fourteen prisoners, eight men and six women, in custody; of these, six men and five women were under sentence for vagrancy, and two of the men and one woman were lunatics. The fence around the wood yard is still in a very dilapidated condition, and should be replaced by a new one.

"The books were properly kept, and the gaol building was very clean and in good order.

PERTH GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	68	70	86
<i>Greatest number confined at any one time</i>	20	29	25
<i>Number of re-committals</i>	22	24	28
<i>Total cost of maintaining gaol</i>	\$2,270.03	\$2,617.07	\$2,836.82

I inspected the Perth gaol on the 5th May, when eleven prisoners, eight males and three females, were found in custody. Two of the males were under sentence for felonies, one had been committed as insane, and the others for drunkenness and vagrancy. One of the females had been committed as a lunatic, and the others as vagrants.

The gaol and premises were in excellent order, and the books were properly kept.

I made my second inspection of the Perth gaol on the 2nd October.

The prisoners numbered fifteen males and four females. Of the former, three were awaiting trial for larceny, one for assault, one for house-breaking, and the others for minor offences; three also were held as insane. One of the females had been committed as insane, the others were vagrants.

Since the date of my last inspection the prisoners have been kept fully employed in cutting wood and breaking stone, the latter is sold to the corporation. The gaol and premises bore evidence of care and attention on the part of the gaoler and his turnkey in the discharge of their duties. The books were in excellent order.

PICTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	89	65	69
<i>Greatest number confined at any one time</i>	8	6	6
<i>Number of re-committals</i>	44	28	30
<i>Total cost of maintaining gaol</i>	\$1,064.63	\$1,079.97	\$1,255.35

I made an inspection of this gaol on the 9th July. There were two prisoners in custody, a man and a woman. The male prisoner was under sentence for vagrancy, but was evidently of unsound mind. The woman was certified to be insane.

The gaol was found to be thoroughly clean and in excellent order. The books also were properly kept. All the surroundings indicated that the officials were thoroughly attentive in the discharge of their duties.

PEMBROKE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	78	113	131
<i>Greatest number confined at any one time</i>	16	20	25
<i>Number of re-committals</i>	26	43	37
<i>Total cost of maintaining gaol</i>	\$1,530.14	\$1,732.07	\$1,955.87

My first inspection of the Pembroke gaol was made on the 6th May, when sixteen males and two females were in custody. One of the men had been committed as a lunatic, the others were committed for petty larceny and other minor offences. The two women were under sentence for vagrancy.

I found that there was not a sufficient number of night-buckets and other utensils for the prisoners then in gaol. There was only one suit of the regulation female uniform in stock. The Sheriff was therefore desired to make a requisition upon the County Council for the necessary supplies.

PETERBOROUGH GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	181	148	120
<i>Greatest number confined at any one time</i>	23	25	19
<i>Number of re-committals.</i>	35	48	29
<i>Total cost of maintaining gaol.</i>	\$2,708.81	\$2,580.98	\$2,519.58

I made an inspection of the Peterborough gaol on the 5th May, and saw the nine prisoners, eight males and one female, who were in custody. Two of the men had been committed as lunatics and were certified to be insane. All the other prisoners were vagrants.

An examination of the books shewed them to be kept in good order, and the corridors, cells and premises generally were in excellent condition. A large amount of painting had been done in the corridors, halls and kitchen. The other portions of the gaol are also to be painted at an early day, and when the whole work is completed, it will have a very pleasing effect.

I made my second inspection of the Peterborough gaol on the 1st October.

There were fourteen males and one female in custody. Four of the males were under sentence for larceny, two were held for want of sureties to keep the peace, one for disturbing religious services, and the others for vagrancy and drunkenness. Four of the males and the female had been committed as insane.

The closets in the gaol premises are being rebuilt with improved pans and fittings. The painting of the corridors and cells is also being proceeded with from time to time, as prison labour can be made available for the work. The portion already completed has been done in a most satisfactory manner, and when finished throughout the premises will present a very neat and tidy appearance.

SIMCOE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	108	81	74
<i>Greatest number confined at any one time</i>	10	11	72
<i>Number of re-committals.</i>	44	29	28
<i>Total cost of maintaining gaol.</i>	\$1,623.48	\$1,795.03	\$1,657.39

A copy of the report made to the Government by Dr. Reilly upon this gaol is annexed:

"The Simcoe gaol was inspected by me on the 21st April. There were then five male prisoners and two females in custody. The latter were both imbeciles waiting removal to the Idiot Asylum. Of the males one was a vagrant and the others were larceny and assault cases.

"I found that the new floor that I had instructed the Sheriff to have laid in the lower corridor had been completed, very much to the improvement of that part of the gaol.

"The wooden flats which are used in this gaol in lieu of bedsteads are very objectionable, inasmuch as they harbour vermin, and become exceedingly dirty.

While they remain in use it will be next to impossible to keep the cells free from these pests. I would suggest to the gaol committee the advisableness of supplying proper iron bedsteads which can be done at a small expense."

Dr. O'Reilly instructed Mr. Hayes to make the second inspection of this gaol. Annexed is a copy of the report made by him:

"In accordance with directions received, the Simcoe gaol was visited by me on the 4th September. It was in good order, cleanliness prevailing. Twelve iron bedsteads have been ordered by the County Council, to replace an equal number of the old wooden ones. The walls round the yards have recently been repaired, and a projecting cap placed over each buttress.

"The prisoners numbered five, males two, females three. One of the former and two of the latter are idiots waiting removal to the Asylum for Idiots. The other two prisoners, a male and a female, were awaiting sentence and trial respectively for horse-stealing.

"The books were in good order, and were entered up to date. It would be well if the gaol Surgeon were to make the entries of his visits a little fuller, giving, for instance, the name of the prisoner prescribed for, or whom he saw under punishment.

"The bread supplied to the gaol was examined and found to be good."

ST. CATHARINES GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year.</i>	132	97	99
<i>Greatest number confined at any one time.</i>	14	15	15
<i>Number of re-committals.</i>	16	7	9
<i>Total cost of maintaining gaol.</i>	\$2,349.63	\$2,666.70	\$2,791.04

Copies of the report made to the Government by Dr. O'Reilly upon this gaol are annexed:—

"An inspection of the St. Catharines gaol was made by me on the 20th April, when there were only five prisoners in custody, all of whom were males. One was waiting trial for burglary, one for manslaughter, one for assault, one for larceny, and one was insane. The only prisoner calling for any remark is the last-named. He is an old man who is undoubtedly unable to take care of himself, but he is not a fit subject for admission to a lunatic asylum, and as his is a case of senile dementia there is no hope of good resulting from asylum treatment were he given it. He is very dirty in his habits, arising from his inability to restrain his secretions, and consequently his person is at times very filthy. Unfortunately this condition of things is beyond remedy by the gaoler, from the fact that there are no facilities in the gaol for bathing prisoners. Attention has been called to this want several times, but it has not yet been supplied. In view of the excellent water works with which the city of St. Catharines is provided, it is difficult to understand why this large gaol should be without the means of bathing a prisoner. It is to be hoped that it will not continue so much longer."

"This gaol was again inspected by me on the 3rd October. There were on that date twelve male and three female prisoners in custody.

"Three of the male and one of the female prisoners were said to be insane. Two of the male prisoners were under sentence to the Kingston Penitentiary, one for burglary, and the other for burglary and shooting, five years each. One man was awaiting trial for bigamy, the others were vagrants and drunkards.

"I was very glad to find that the County Council had at last provided a bath for the gaol which had been so long needed. It is to be regretted, however, that they had not consulted an expert in the business of constructing such things, as they would have had better baths for less cost.

"The gaol was found to be in excellent order throughout, and the books well kept."

SARNIA GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	227	295	342
<i>Greatest number confined at any one time.</i>	20	22	23
<i>Number of re-committals.</i>	8	21	5
<i>Total cost of maintaining gaol.</i>	\$3,512.80	\$3,334.75	\$3,343.79

Copies of the reports made to the Government upon this gaol by Dr. O'Reilly are annexed:—

"The Sarnia gaol was inspected by me on the 25th May, when there were six males and one female in custody. Of the male prisoners one was a lunatic, two were under sentence for smuggling and robbery respectively. The others were of the drunken and disorderly class. The one female prisoner had been sentenced to six months' imprisonment, for vagrancy, and she had given birth to a child since her commitment. This is a painful case, and it does seem that for the poor of this country, a better place for a maternity hospital ought to be found than the Common Gaol.

"Attention has been frequently called to the want of yard accommodation at this gaol, and I have again brought the matter to the notice of the County authorities.

"The gaol was very clean and thoroughly well kept in every respect. The want of iron bedsteads is an urgent one, as perfect cleanliness is impossible with the existing arrangements. It is therefore most desirable that the gaol should be equipped with iron bedsteads as soon as possible."

"The second inspection of the Sarnia gaol was made on the 7th September, when there were thirteen male prisoners in custody, no females.

"One was under sentence for assault and rape. In addition to imprisonment he is to receive thirty-six lashes. One was under sentence for obtaining goods under false pretences; and one, a young lad, had been sentenced to three years in the Reformatory for larceny. All the others were of the usual drunken, disorderly and vagrant classes.

"The gaol and premises were in a satisfactory condition in all respects."

STRATFORD GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	132	155	151
<i>Greatest number confined at any one time.</i>	13	16	22
<i>Number of re-committals.</i>	27	54	51
<i>Total cost of maintaining gaol.</i>	\$2,296.44	\$2,225.21	\$2,460.49

Copies of the reports made to the Government by Dr. O'Reilly upon this gaol are annexed:—

"I had occasion at the request of the Council of the County of Perth to go to Stratford on the 17th March and inspect a site chosen for the proposed new Court

House and Gaol, and I took the opportunity of inspecting the existing gaol on the same day.

“There were in custody twelve male prisoners and one female. None of them were of any particular importance. One was waiting trial for bigamy and another for a petty counterfeiting transaction, two were under sentence for larceny and one was insane and was waiting transfer to the asylum. The others were vagrants. The female prisoner was under four months' sentence for petty larceny.

“The gaol was in its usual condition of cleanliness and good order, and an examination of the books shewed them to be properly kept.”

“This gaol was again inspected on the 8th October, when there were seven male and four female prisoners in custody. One of the male prisoners was under four years' sentence to the Reformatory for larceny, and was awaiting removal. Another was on remand charged with forgery. The others were vagrants.

“Of the female prisoners, one was insane, one was under sentence for prostitution, and the remaining two were vagrants.

“The condition of this gaol continues as good in all respects as circumstances permit. The books were found to be well kept.”

SANDWICH GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	262	258	202
<i>Greatest number confined at any one time.</i>	33	31	27
<i>Number of re-committals</i>	22	45	70
<i>Total cost of maintaining gaol</i>	\$2,708.14	\$4,484.64	\$2,822.00

Copies of the reports made to the Government upon this gaol by Dr. O'Reilly are annexed:—

“The Sandwich gaol was inspected by me on the 26th May. There were fifteen males and six females in custody. Some of the prisoners were of considerable importance, one being a burglar, one was under sentence for embezzlement, one was waiting extradition for forgery, and two for robbery from the person. Two were insane and one was an idiot. Of the female prisoners, three were insane, one was under sentence for counterfeiting, and the others for being drunk and disorderly.

“I was very glad to find that this gaol presented a much cleaner and neater appearance than formerly. A soft water cistern is very much needed, as there is insufficient water available on the premises for all purposes of cleanliness. The unsatisfactory character of this structure has been frequently commented on. The yard accommodation is quite insufficient, even for the male prisoners, and there is no yard at all into which the female prisoners can be sent for an airing. I am sorry to say that from present appearances, any improvement on this state of things is as far off as ever.”

“This gaol was again inspected by me on the 9th September. I found twenty-three prisoners therein, namely, fifteen males and eight females. Nearly all of the former were of the class usually found in this gaol, owing to its contiguity to the frontier, being thieves, burglars, etc. One of the males was insane, and one an idiot.

“Of the female prisoners, two were insane, one was under sentence for larceny, and the remainder were of the drunken and disorderly class.

“Owing to the want of many facilities, which this gaol should be supplied with, it is very difficult to keep it in good order. I found it, however, in as good condition as could be fairly expected under the circumstances.”

ST. THOMAS GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	193	267	208
<i>Greatest number confined at any one time.</i>	20	27	25
<i>Number of re-committals</i>	60	96	67
<i>Total cost of maintaining gaol.</i>	\$2,509.28	\$2,618.04	\$2,723.22

A copy of the report made to the Government by Dr. O'Reilly upon this gaol is annexed:—

“The first inspection of the St. Thomas gaol was made on the 28th February, on which date there were in custody twelve male and three female prisoners. These twelve men completely filled up that portion of the gaol set apart for males, and an unusually large proportion of them were prisoners of considerable importance. Two were waiting trial for murder, four for forgery, one for arson and one for larceny. Of the three females, one was held on a charge of murder, one had been committed for keeping a house of ill-fame, and the other was a vagrant.

“During the winter the new system of heating the gaol by hot water has had a thorough trial, and has worked very satisfactorily. The gaol was as well kept as could be expected, considering that it is nearly always full to overflowing. At the time of this visit there was but one vacant cell, and the books shewed that on some occasions since the last inspection, the gaol has had more than double the number of prisoners in it than it has accommodation for.

“At this time I met a special committee of the County Council appointed to confer with me in reference to the enlargement of the gaol. A full report of the conference has been forwarded to the Government.”

Instructions were given to Mr. Hayes to make the second inspection. His report to Dr. O'Reilly was as under:—

“I beg to report that, as instructed by you, I visited the St. Thomas gaol on the 25th September.

“The gaol was only in fairly good order. Whitewashing was required in some parts. On the door of the dark cell were some pictures which had been pasted there by a prisoner. The gaoler was told to have these washed off at once. The basement of the gaol is still damp and there is an unwholesome smell in it. The yard used by the female prisoners was in an untidy state. The gate between it and the next yard is in want of repairs, as it can only be opened and shut with great difficulty. Since the last escape from this gaol, the large gate into the working yard has been altered. It is now hung on the outside of the yard, so that the projecting hinges cannot be used by prisoners as steps. The gate does not, however, fit properly, and large spaces are left open through which articles can be passed through into the yard. The gaoler was instructed to have this yard searched every morning before prisoners are allowed into it. The Council should be asked to have this defect in the gate remedied.

“The prisoners numbered twelve, ten men, two women. Four of the men were waiting trial, two for arson, one for rape, and one for assault. All the other prisoners were under sentence for minor offences. One of the sentenced prisoners was not dressed in gaol clothing. The gaoler was instructed to have this done at once. The prisoners, except one who was in court, were all seen.

“There does not seem to be a proper method of keeping the keys at this gaol. The key of one gate could not be found at all.”

SAULT STE. MARIE GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	24	37	43
<i>Greatest number confined at any one time.</i>	7	12	13
<i>Number of re-committals</i>	5	1	2
<i>Total cost of maintaining gaol</i>	\$1,481.73	\$1,434.12	\$1,617.28.

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to visit this gaol. Mr. Mann reported to Dr. O'Reilly as follows:—

"I beg to report that as instructed by you, I inspected the Sault Ste. Marie Gaol on the 4th September.

"There was only one prisoner in custody, a man who was undergoing sentence for obtaining money under false pretences.

"The books were properly kept, and the gaol was clean and neat."

TORONTO GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	2,633	3,251	3,397
<i>Greatest number confined at any one time.</i>	162	216	241
<i>Number of re-committals</i>	1,117	1,553	1,323
<i>Total cost of maintaining gaol</i>	\$16,001.56	\$18,347.69	\$19,156.94

I made an inspection of the Toronto gaol on the 26th March, and found that there were 217 prisoners in custody, 168 males and 49 females. Of the former, twenty-three were under sentence for indictable offences, and 115 for minor breaches of the law, such as drunkenness, disorderliness and vagrancy. There were twelve males waiting trial for indictable offences, two of whom were charged with murder, one with manslaughter, two with rape. Ten were on remand charged with various crimes, and four with minor offences. Of the females, three were under sentence for indictable offences, and thirty-one for vagrancy, etc. One was waiting trial charged with manslaughter, and four more were on remand, two being charged with indictable offences and two with disorderliness.

There were committed as lunatics four males and ten females, all of whom were fully certified to, and were waiting removal to the Asylum.

The register shewed that during the past six months the commitments to the gaol numbered 1,409, being an excess of 164 over the corresponding period of the former year, and an increase of 474 as compared with the parallel time in 1882 and 1883. This largely increased population has necessitated the use of the lower corridors on the female side by male prisoners. The isolation is, however, thorough, and there can be no objection to the arrangement on such grounds, but the crowded condition of the gaol interferes with the good classification formerly noticed, and this cannot be restored while there continues to be so large a number of prisoners to provide accommodation for.

Since the date of my previous inspection a decided improvement has been made in the gaol by lighting it throughout with gas.

All the apartments, corridors and cells were found to be in an excellent condition of order and cleanliness, and in this respect present a superior appearance to the entrance hall and offices. Painting would greatly improve these official

quarters, and if reasonably well done would make the whole interior uniform in this respect.

I made a second inspection of this gaol on the 12th September. The gaol population comprised 116 males and 40 females, making a total of 156. Of the males, seventy-one were under sentence, nine were waiting trial, and eighteen were on remand. Twenty-nine of the females were under sentence for various offences. The remaining eleven, as well as eighteen of the males, had been committed as insane. They were waiting until the additional asylum accommodation then being fitted up was in readiness for their reception.

The number of committals to this gaol has been on the increase for the last two or three years, and those for the current year will exceed any former year by about 150.

The gaol premises were found to be clean and in their usual state of good order. The classification of the prisoners is as well maintained as the accommodation will admit of.

The number of infirm, ailing, and demented people in custody was a noticeable feature of the population of the prison. A large proportion of the male prisoners, however, were active, able-bodied men whose enforced idleness cannot be favourable to their reclamation from former associations in vice and crime.

WALKERTON GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year</i>	47	58	67
<i>Greatest number confined at any one time.</i>	10	10	11
<i>Number of re-committals</i>	3	7	5
<i>Total cost of maintaining gaol</i>	\$1,728.14	\$2,340.25	\$1,877.70

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :—

“The first inspection of the Walkerton gaol during the official year was made by me on the 15th May. Six prisoners were in custody, four males and two females. One of the males was under sentence to six months' imprisonment for embezzlement, and another was held in default of payment of fine. All the others, both male and female, were vagrants.

“I observed that the wooden floor in the bath-room in the basement was so far decayed as to endanger the health of those within the building. I suggested to the Gaol Committee that this floor be taken out, and a concrete one substituted. In all other respects the gaol was exceptionally well kept.”

Dr. O'Reilly instructed Mr. Mann of the Inspector's Department to make the second inspection of this gaol. Mr. Mann reported to Dr. O'Reilly as follows :—

“I beg to report that, as instructed by you, I inspected the Walkerton gaol on the 21st September, when there were three men and one woman in custody. Two of these were undergoing sentence for non-payment of fine, and one for larceny. The woman was a lunatic awaiting transfer to an Asylum.

“The floor of the bath-room is in a very rotten state, although previously brought to the notice of the County Council.

“The books were in good order and the gaol building clean and neat.”

WOODSTOCK GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	198	341	367
<i>Greatest number confined at any one time</i>	29	35	41
<i>Number of re-committals.</i>	87	129	119
<i>Total cost of maintaining gaol.</i>	\$4,209.78	\$3,437.50	\$3,819.77

A copy of the report made to the Government upon this gaol by Dr. O'Reilly is annexed :

"The Woodstock gaol was inspected by me on the 21st April. There were in custody on that day twelve men and two women. Of the former, two were debtors, two were under short sentences for larceny, one was under sentence for trespass, one was insane and the others were vagrants. One of the females was an idiot and the other was insane.

"My attention was called to the condition of the hot-air furnaces which are so far worn out as to be very much in need of renewal. I pointed this out to the gaol committee and asked that the necessary action might be taken.

"The gaol was found to be in fairly good order. Some of the floors are in such a condition that it is very difficult to keep them in anything like a satisfactory state of cleanliness ; but the best is done that is possible under the circumstances.

"Attention has frequently been called to the need of iron bedsteads in this gaol, but so far without result. It is to be hoped they will be supplied ere long. The books were examined and found to be correctly kept."

Instructions were given to Mr. Hayes to make the second inspection of this gaol. The report he made to Dr. O'Reilly was as follows :—

"I beg to report that, as instructed by you, I visited the Woodstock gaol on the 25th September. The prisoners in custody numbered five males and two females. The two latter are idiots, one being a deaf mute. Four of the men were under sentence for vagrancy, and one was waiting trial for bigamy. There was no work for the sentenced prisoners except keeping the gaol clean.

"The gaol was in good order throughout. Its appearance would be improved by some painting being done in one or two places.

"Enquiry was made about the escape on the 3rd September of two prisoners named Lynn and McGrath, both committed for burglary. The circumstances are these : After dinner on that day, the turnkey let the prisoners in question with others, into the yard, collected the dishes, gave them to a boy confined in another ward, locked him in and then went into the yard. He affirms that this did not take more than a minute. When he reached the yard the two prisoners had gone. There seems to be no doubt about the manner of their escape. The windows of the upper and lower corridors are in a line and only a short distance apart, and the top of the upper one is about two feet from the roof. The iron gratings to these windows are on the outside and form, with the window sills, a perfect ladder. The prisoners climbed up by them and reached the flat roof of the gaol. They went over to the north side and let themselves down on the outside of the wall, and so escaped. The turnkey is to blame for the escape, as he broke the gaol rule (No. 40) by allowing the prisoners to remain in the yard alone. He gives as an excuse the shortness of the time, but I think he must be mistaken on that point. Even if he is right, he is equally blameworthy. I warned him not to allow a breach of this rule again.

“The Sheriff should be requested to bring to the notice of the County Council the method in which the escape was made, and to ask that an effectual stop be put to such a recurrence by having the iron gratings sunk in the stone work of the windows inside the corridors instead of outside.”

WELLAND GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year. . . .</i>	235	300	299
<i>Greatest number confined at any one time</i>	43	81	47
<i>Number of re-committals.</i>	85	116	102
<i>Total cost of maintaining gaol.</i>	\$3,315.13	\$3,805.00	\$3,678.09

A copy of the report made to the Government by Dr. O'Reilly upon this gaol is annexed :

“I inspected the Welland gaol on the 21st April. There were eighteen male prisoners in custody. The offences for which these men had been committed were for the most part of a trivial nature. No less than ten of them were vagrants, who reside, with more or less constancy, in the gaol the year round.

“This gaol is made to serve the purpose of a poor-house to a very great extent, and the county, in addition to the cost of maintaining those prisoners who really should be in a poor-house, has to pay a considerable sum every year in constables' fees, etc. It will perhaps be worthy of consideration by the county authorities whether it would not be better to make direct provision for their indigent poor than to continue the existing arrangement with its attendant unnecessary expenses.

“The report of the gaol officials shews that the steam heating system, which was in use during the winter for the first time, has been thoroughly satisfactory, with the exception of some slight defects which no doubt can be easily remedied in the future.

“The gaol is provided with nothing but buckets for use by the prisoners. The attention of the gaol committee is specially called to the desirability of providing earth closets instead of the buckets, which would not only be found a very great convenience, but add very much to the sanitary condition of the gaol.

“The interior of the building was in a satisfactory condition as to cleanliness and order.”

As instructed by Dr. O'Reilly, Mr. Hayes made the second inspection of this gaol. Annexed is a copy of the report he submitted.

“Acting under your instructions, I made an inspection of the Welland gaol on the 4th September. There were twelve prisoners, all males, in custody, Of these, six were under sentence for the following offences: larceny, one; burglary, one; vagrancy, two; bringing stolen goods into Canada, one; drunkenness, one; three were waiting trial charged with assault, forgery and receiving stolen goods respectively; one was detained for want of sureties, one was on remand charged with murder, and one was insane. The prisoners were all in bed when I arrived at the gaol, which appeared to be cleanly and properly kept. In one of the wards the air was somewhat foul, showing a want of proper ventilation. The gaol committee has had two earth closets supplied to the gaol, and if these give satisfaction it is intended to place one in each ward.

“The books were found to be well kept. Three punishments only are recorded since the beginning of 1885. The gaol surgeon, under bye-law of the Council, has to make at least three visits to the gaol each week, and at such other times as he may be needed.”

WHITBY GAOL.

	1883.	1884.	1885.
<i>Prisoners committed during the year....</i>	116	101	112
<i>Greatest number confined at any one time.</i>	15	20	23
<i>Number of re-committals.....</i>	46	41	33
<i>Total cost of maintaining gaol.....</i>	\$1,950.79	\$2,004.82	\$2,518.40

I made an inspection of this gaol on the first May, finding four male and two female prisoners in custody. Two of the males were certified to be insane; the others were under sentence for minor offences. One of the females was under sentence for perjury and the other for vagrancy.

The gaol was found to be in a good condition of cleanliness and order. The removal of the foul and saturated earth from under the east corridor had greatly improved its condition, the disagreeable smell formerly so noticeable there having disappeared.

There was a sufficient supply of stone in the yard to keep the prisoners employed at breaking it, and a fair amount of work appeared to be done by them.

Since the date of the previous inspection, the county architect had been instructed to submit two sets of plans with specifications and estimates for a gaol kitchen. These plans were submitted to me, one is to provide for placing the structure on the west side of the gaol and the other on the east side. The object in having two plans prepared was for the purpose of determining which position would be most desirable in regard to cost. If erected on the east side, the new kitchen will be used as the gaol kitchen; if on the west side it would be used by the gaoler, and the basement now used jointly for the gaoler and the prison would be used exclusively for prison purposes. After making a careful examination of the plans, I came to the conclusion that the one shewing the kitchen on the west side had advantages over the other, particularly as regards the safe keeping of the prisoners, for by providing a new kitchen at the west side, the basement kitchen could be used for the gaol purposes solely, and by closing up the stairway and the opening made for communicating with it, would be entirely isolated. The discipline of the gaol and the control over the prisoners would be much improved by this alteration, and the officials spared much anxiety for their safe keeping.

A second inspection of this gaol was made by me on the 24th September. Twelve prisoners were in custody, nine males, three females. Five of the men were waiting trial for forgery, fraud, horse-stealing, contempt of court and vagrancy respectively. Three men and one woman were insane and one man was an idiot. Of the other two women, one was charged with perjury and the other with vagrancy.

The gaol and premises were in good order, and the books well kept.

The building operations which it was expected would be proceeded with this year, have not been undertaken, neither has the ventilation of the corridors been effected, and, as a consequence, the smell in the men's west corridor was simply disgusting and unbearable. Six prisoners were necessarily confined in this corridor and this I apprehend caused the air in the somewhat confined space to be more foul than I had previously found it. I am not aware of any reason for the continued delay in having so important a matter as the proper ventilation of the corridors attended to.

MANITOULIN ISLAND LOCK-UPS.

Dr. O'Reilly instructed Mr. Mann of the Inspector's department to make an inspection of these lock-ups. Mr. Mann reported to Dr. O'Reilly as follows:—

MANITOWANING LOCK-UP.

“As instructed by you, I made an inspection of the Manitowaning Lock-up on the 3rd September.

“There were no prisoners in custody nor had there been any since July 27th. This lock-up was not in as clean a shape as it should be, and I called the keeper's attention to that fact. Water has to be carried for some distance, the well having gone dry.”

GORE BAY LOCK-UP.

“I made an inspection of the Gore Bay lock-up on the 3rd September, but on account of the darkness did not see as much of it as I should have liked to. I, however, learned that the lock-up was in good order.

“There had not been any prisoners in custody during the year.”

LITTLE CURRENT LOCK-UP.

“I made an inspection of the Little Current Lock-up on the 3rd September, and although there were no prisoners in custody, there had been quite a number during the year. Everything was found to be in good order.”

CENTRAL PRISON.

The most important event in the history of the prison during the year ending 30th September, 1885, was the appointment of a Commission to enquire into its management, and into the truth of certain charges preferred, chiefly through a section of the press, against the Warden. The Commission, which was given full powers to take evidence under oath, to compel the attendance of witnesses, etc., was composed of His Honour, Judge Sinclair, Mr. J. W. Langmuir, formerly Inspector of Prisons, and D. O'Sullivan, barrister. The first meeting was in July, and numerous sittings were held in that month, and in the following one. After hearing all the evidence presented to them, the Commission visited numerous prisons in the United States, so that the members of it might have an opportunity of comparing the various systems in force there with that in operation at the Central Prison, and thus aid them in making their report as they were desired, not only to report upon the result of their enquiry into the charges preferred, but also to suggest, if they saw fit, the manner in which improvements in the management of the prison could be carried out. Up to this time the report of the Commissioners has not been sent in to the Government, and consequently I am unable to speak of their finding. I have no doubt, however, that the report will be impartial and a valuable one, and will contain many suggestions of importance.

Although the appointment of the Commission and the evidence elicited at its sessions did much good in shewing to the public that reports and rumours of cruelties, etc., practised upon the inmates of the Central Prison were without foundation or had been grossly distorted, magnified, or exaggerated, the effects in the prison itself were of an opposite character. Order and discipline, and the routine of the workshops were much interfered with by the summoning of numbers of the inmates to give evidence. This, of course, produced excitement, not only amongst these prisoners, but also among those whose attendance was not required, and who were eager to hear details from the others. This led to breaches of the rules and subsequent punishments. The prisoners had to be convinced that although a Commission might be appointed to enquire into the management of the prison, they had still to respect its laws and obey its officers. Notwithstanding this feeling of excitement and unrest, which prevailed from the time of the appointment of the Commission, the industries of the prison were carried on with vigour and success. The discipline, too, although interfered with, has been restored. The returns again shew an increase of revenue, and the number of days spent by the prisoners in profitable labour is larger than heretofore.

It is therefore evident that the prison continues to do a useful work, and is successfully filling its place in the chain of provincial penal institutions. That the judiciary still consider it a right place for criminals is shewn by the fact that during the year under report a larger number than ever were sentenced to it direct.

An important structural addition is being made to the prison in the shape of a separate building containing kitchen, bakery, store-room, etc. The work, which is approaching completion, has been done by prison labour. The space now occupied by the present kitchen can, when the new one is completed, be used for additional cells and an improved bath-room.

The usual statistical tables, shewing the general operations of the prison, are given hereunder.

The first shews the discharges, committals etc., during the past three years:—

	1883.	1884.	1885.
In custody at commencement of year (1st October)	324	273	335
Committed during the year.....	669	723	761
Recaptured.....	1	1	...
Retransferred from asylum.....	1	...	...
Total number in custody during year	995	997	1,096
Discharged on expiration of sentence.....	650	622	704
“ “ payment of fine	46	24	15
“ by remission of sentence	8	6	4
Retransferred to common gaol as unfit for labour	1	1	4
Died in the Prison Hospital.....	2	3	...
Transferred to a lunatic asylum	7	2	2
Escaped	6	4	3
Conviction quashed	2	...	4
Total discharges, deaths, etc.	722	662	736
Remaining in custody at close of year (30th Sept.)	273	335	360

It will be seen that during the year just closed a larger number of prisoners were committed to the prison than in either of the two preceding ones. Also that as regards the discharges, there was a considerable falling off in the number released on payment of fine. It will be noticed, too, that there were no deaths in the prison during the year. The number of prisoners sentenced direct to the prison, and of those sentenced to the gaols and afterwards removed to the Central Prison, is shewn in the following summary, which also gives similar information as regards 1883 and 1884:—

	1883.	1884.	1885.
Sentenced direct	286	374	513
Transferred from gaols	383	349	248
	669	723	761

The table shewing the periods of sentence passed upon the prisoners received into the prison since the opening of it, is annexed:—

SENTENCE.		1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884	1885.
One month and under		15	6	17	11	7	11	17	171	125	140	81	51
Over 1 month and up to 2		10	2	23	2	35	16	23	101	127	105	88	76
“ 2 months “ 3		73	90	45	40	100	40	45	38	91	95	118	128
“ 3 “ 4		110	127	46	43	65	43	46	38	60	43	61	66
4 months		66	76	47	59	47	59	47	53	60	43	61	66
5 “		7	12	11	11	11	11	11	5	10	9	14	31
6 “		18	179	214	224	214	224	186	174	199	151	203	213
7 “		205	2	6	2	6	2	6	5	4	5	6	3
8 “		1	1	4	1	7	6	3	5	6	5	4	3
9 “		4	1	20	1	22	20	27	20	15	9	18	21
10 “		1	4	6	4	4	4	3	1	4	1	5	1
11 “		1	2	2	2	1	4	3	2	4	2	5	1
12 “		38	45	91	88	94	93	87	72	69	67	75	101
13 “		1	1	1	2	1	1	1	1	1	2	2	1
14 “		1	1	7	1	5	1	6	4	3	3	2	7
15 “		2	1	1	1	2	1	4	1	1	2	1	2
16 “		1	1	1	1	1	1	1	1	1	1	1	1
17 “		10	27	17	27	30	17	23	23	11	13	13	24
18 “		1	1	1	1	1	1	1	1	2	2	2	4
19 “		2	1	1	1	1	2	2	3	2	2	2	4
20 “		1	1	1	1	1	2	2	2	2	2	2	3
21 “		1	1	1	1	1	2	1	2	2	2	7	3
22 “		4	3	8	20	8	7	10	12	20	5	13	19
23 “		10	14	8	18	8	3	9	7	11	10	8	8
24 “		1	1	1	1	1	1	1	1	1	1	1	1
48 “		1	1	1	1	1	1	1	1	1	1	1	1
2½ years	Boys transferred from Reformatory owing to incorrigibility.	1	1	1	1	2	1	1	3	1	1	723	761
3 “		3	3	3	3	3	3	3	3	3	3	3	3
3½ “		1	1	1	1	1	1	1	1	1	1	1	1
4 “		5	5	5	5	5	5	5	5	5	5	5	5
4½ “		1	1	1	1	1	1	1	1	1	1	1	1
5 “	4	4	4	4	4	4	4	4	4	4	4	4	4
Totals		370	426	637	655	636	567	560	745	767	669	723	761
Average period of sentence each year		6 12-30 Months.	7 3-30 Months.	6 20-30 Months.	5 22-30 Months.	7 10-30 Months.	7 3-30 Months.	7 14-30 Months.	5 12-30 Months.	5 12-30 Months.	4 28-30 Months.	6 18-30 Months.	6 20-30 Months.

GENERAL STATISTICS.

Statistics relating to the total number of prisoners committed to the prison, as well as to those sentenced during the year, are appended :—

NATIONALITIES.	Committed during the year.	Total commitments.
Canadian.....	372	3,505
Irish.....	118	1,282
English.....	128	1,310
United States.....	93	818
Scotch.....	27	383
Other countries and unknown.....	23	226
	<hr/> 761	<hr/> 7,524

RELIGIOUS DENOMINATIONS.

Church of England.....	245	2,782
Roman Catholic.....	274	2,626
Presbyterian.....	94	799
Methodist.....	99	907
Other denominations, etc.....	49	410
	<hr/> 761	<hr/> 7,524

CIVIL CONDITION.

Married.....	221	2,341
Single.....	540	5,183
	<hr/> 761	<hr/> 7,524

SOCIAL HABITS.

Temperate.....	144	1,595
Intemperate.....	617	5,929
	<hr/> 761	<hr/> 7,524

EDUCATIONAL STATUS.

Could read and write.....	571	5,606
Could read only.....	80	813
Could neither read nor write.....	110	1,105
	<hr/> 761	<hr/> 7,524

The most noticeable item in these statistics is the increase in the number of prisoners who, in the year just ended, are reported to be of temperate habits. They represent 18.92 per cent of the number committed. In the preceding year, the percentage of temperate men was 11.75 per cent. The number of totally uneducated men committed to the prison has decreased, the percentage this year being 14.45, in the preceding year it was 15.62.

MAINTENANCE EXPENDITURE.

The next table shews the cost of maintaining the prison during the two years ending on the 30th September, 1884 and 1885, respectively:—

SERVICE.	Year ending 30th Sept., 1884.		Year ending 30th Sept., 1885	
	Total expenditure.	Average daily cost per prisoner.	Total expenditure.	Average daily cost per prisoner.
	\$ c.	cts.	\$ c.	cts.
Medicine and medical comforts	220 30	0.020	103 76	0.079
Meat and fish	9,147 20	8.571	9,494 56	7.237
Flour, bread and meal	4,305 35	4.034	5,628 17	4.290
Groceries	4,182 85	3.919	3,851 59	2.936
Bedding, clothing and shoes	6,781 62	6.354	7,493 90	5.712
Fuel	3,314 32	3.105	3,915 08	2.984
Gas, oil and candles	1,016 18	0.952	1,144 51	0.872
Laundry, soap and cleaning	1,101 81	1.032	2,068 48	1.577
Stationery, advertising and printing	390 18	0.365	727 83	0.555
Library, school and religious instruction	700 00	0.655	700 00	0.335
Water	2,160 37	2.024		
Furniture and furnishings	415 25	0.389	433 55	0.330
Stable expenses, forage, etc.	386 91	0.362	1,255 43	0.957
Repairs, ordinary	529 15	0.495	622 23	0.474
Unenumerated	981 27	0.919	1,481 56	1.130
Farm and grounds	141 12	0.132	780 74	0.595
Salaries and wages	19,484 69	18.258	18,975 68	14.463
Total.....	55,258 57	51.781	58,677 07	44.724

The aggregate cost of the prison during the latter year was larger than during the former, owing to the larger population, but the average daily cost was much lower. Had the payment been made of the water account, which is in dispute, the daily cost would have been about 46 $\frac{3}{4}$ cents per day, or five cents lower than in the previous year:—

MANUFACTURING OPERATIONS.

A statement of the amounts expended in carrying on the manufacturing operations of the prison is annexed:—

	1884.	1885.
Carpenter and cabinet shop	\$815 52	\$771 93
Tailoring shop	4,881 91	4,719 90
Shoe shop	3,283 75	3,539 74
Blacksmith's shop	367 98	471 66

Broom shop	\$629 62	\$436 33
Woodenware department	82 90	248 67
Brickyard	3,415 64	3,858 10
Stationery, advertising and printing..	149 02	319 79
Miscellaneous	767 82	363 95
Salaries and wages	4,935 66	5,291 26
	<hr/>	<hr/>
Manufacturing expenditure	\$19,329 82	\$20,128 98
Maintenance expenditure	55,258 57	58,677 07
	<hr/>	<hr/>
Total expenses	\$74,588 39	\$78,806 05

There is nothing in the figures relating to the industrial department calling for special comment.

The revenue of the various industries is shewn in the following summary:—

	1884.	1885.
Broom shop, hire of prisoners.....	\$7,882 89	\$9,488 29
Woodenware shop, hire of prisoners	2,105 96	7,213 27
Brickyard sales	13,169 13	12,549 48
Tailoring shop, sales.....	6,478 79	6,700 46
Shoe “ “	4,111 64	3,732 39
Carpenter's shop, sales.....	143 60	195 32
Blacksmith's “	97 80	175 37
Miscellaneous	452 75	563 22
	<hr/>	<hr/>
	\$34,442 56	\$40,617 80

Here there is cause for congratulation, as every department, except two, shews an increase of revenue. These two are the brickyard and the shoe shop. The total increase in the revenue of 1885 over 1884 is \$6,175.24.

Deducting this revenue from the cost of maintaining the prison and carrying on the industries, it will be found that the actual cost was \$38,188.25, or 29.10 cents per day.

The table appended shews the manner in which the prisoners were employed, and the number of days' work which was performed at the different industries:—

	1884.	1885.
In the broom shop for contractors	24,913	23,383 days.
“ woodenware shop for contractors.....	14,852	28,566 “
	<hr/>	<hr/>
Total contract work	39,765	51,949 “
In the brickyard	11,543	13,768 “
“ tailoring shop.....	4,407	5,658 “
“ shoe shop.....	1,920	2,463 “
“ carpenter's shop	2,414	2,560 “
“ tinsmith and engineer's shops	1,164	1,328 “
“ blacksmith's shop	593	602 “
In permanent improvements and work on Prison and Reformatory grounds.....	7,568	10,905 “
	<hr/>	<hr/>
Number of days of productive labour.....	69,374	89,233 “
“ “ domestic work	14,191	14,045 “
	<hr/>	<hr/>
Total number of days worked	83,565	103,278 “

The proportion which the number of days of productive labour bears to the total stay of the prisoners during the two years will be seen in the following summary:—

1885.

Total stay of prisoners	131,196 days.
Number of days' productive labour	89,233 "
Proportion	68.01 per cent.

1884.

Total stay of prisoners	106,592 "
Number of days' productive labour	69,374 "
Proportion	65.08 per cent.
Difference in favour of 1885	2.93 "

TRANSFER OF PRISONERS.

The table which follows shews that the cost of bringing each prisoner to the Prison by the Bailiff appointed for that purpose, was \$5.72, or thirty-two cents per head less than in the preceding year:—

WHEN TRANSFERRED.	Number Transferred.	Prisoners fares to the Prison.		Travelling expenses and salary of Bailiff.		Cab hire and food for prisoners.		Total.	
		\$	c.	\$	c.	\$	c.	\$	c.
October, 1884.....	77	141	00	183	75	49	15	573	90
November, "	102	221	15	192	25	58	35	471	75
December, "	83	237	15	195	90	50	25	483	30
January, 1885	59	163	00	196	70	39	05	398	75
February, "	42	112	90	171	35	34	50	318	75
March, "	31	75	70	167	40	29	00	272	10
April, "	45	71	40	162	65	32	75	266	80
May, "	50	87	90	159	75	32	85	280	50
June, "	78	113	10	161	60	48	25	322	95
July, "	64	169	80	198	95	47	75	416	50
August, "	44	60	85	148	00	24	50	233	35
September, "	69	169	15	201	90	48	75	419	80
Totals.....	744	1,623	10	2,140	20	495	15	4,258	45
Average expenses incurred per prisoner		2	18	2	88	66		5	72
Preceding year	723	2	21	3	11	72		6	04

DISCHARGED PRISONERS.

Of the 736 prisoners discharged throughout the year, 366 were returned to the places from which they were committed. Particulars of the expenditures incurred are subjoined :—

WHERE SENT.	Number of Prisoners.	Amount paid.
		\$ c.
Barrie	18	39 90
Belleville	13	31 55
Berlin	2	3 65
Bracebridge	2	7 80
Brantford	10	20 60
Brockville	11	48 40
Chatham	11	56 10
Clifton	12	29 15
Cobourg	17	27 90
Cornwall	5	31 90
Galt	2	3 20
Guelph	13	21 80
Hamilton	41	49 20
Kingston	12	47 70
Lindsay	1	2 10
London	21	69 35
Michipicotan	1	10 00
Milton	1	95
Napanee	1	3 10
Orangeville	1	1 45
Ottawa	16	92 95
Owen Sound	10	35 55
Parry Sound	1	7 25
Pembroke	9	53 05
Perth	4	23 35
Peterboro'	7	16 60
Picton	1	3 90
Port Arthur	3	75 00
St. Catharines	14	27 10
St. Thomas	8	27 85
Sarnia	8	27 75
Sault Ste Marie	3	14 90
Simcoe	7	15 00
Stratford	1	2 75
Walkerton	2	8 20
Welland	30	80 85
Whitby	11	12 40
Windsor	25	125 00
Woodstock	11	28 70
Total	366	1,184 05

INSPECTIONS.

Copies of the minutes recorded by me in the books of the prison after my various visits of inspection are appended. In addition to the visits named in these records, I made many others for specific purposes, of which no formal record was made :—

“An inspection of the Central Prison was made by me on the 16th, 17th, and 20th days of April. On the second day of my visit there were 349 prisoners in custody, and their distribution was as follows :—

Broom shop	82
North shop	92
Brickyard	31

Garden and grounds.....	7
Tailoring shop	19
Shoe shop	10
Carpenters, machinists, etc.....	19
Permanent improvements.....	13
Mercer Reformatory	5
Domestics	50
In Hospital.....	11
Convalescent	5
Under punishment	5
	349
Total	349

“ Since the date of my previous inspection, I have had opportunities during visits to the prison of observing the excellent health of the prisoners generally, and this favourable condition continues up to the present time. With the exception of one case, the others reported in the Hospital are not receiving treatment for any very serious ailments, and when the large number of prisoners that have necessarily been kept in the prison premises during the past winter is taken into account, this good state of health is evidence of the excellent sanitary condition of the institution.

“ The principal industries carried on were found to be in a very satisfactory state. The labour in the shops is very well systematised, and the work is being carried on in harmony with the general rules and regulations governing the prison.

“ The descriptions of labour at which the prisoners are employed are also favourable to them, handiness and a measure of regularity in their movements are necessary while working at them. Order and system are also indispensable in carrying on these industries successfully, and a most noticeable characteristic of prisoners is an absence of these qualities.

“ The work-shop is now fully fitted up, and the various operations in wood-working are accomplished by the use of 48 machines adapted for the manufacturing of the different descriptions of wares turned out. While attending to these machines the prisoners are taught to do correctly and deftly what the great majority of them would not voluntarily attempt, and by the knowledge acquired in this way many of them are fitted to earn a living on leaving the prison.

“ Notwithstanding their favourable surroundings, however, the number of cases of insubordination occurring of late gives evidence of the disturbed and rancorous feelings of a number of the prisoners. The causes for unruly conduct on the part of some of them are, no doubt, due to depraved character and habits which, under any circumstances, would be exhibited to some extent; but certain conditions favour those disposed to disregard authority, and the crowded state of the prison during the past six months has afforded special opportunities to those inclined to create disturbances.

“ The records shew that the greatest number of prisoners in custody during the past winter was 444, but there are in all only 336 cells, four of which are dark or punishment cells. A like number are reserved for new arrivals and two for supplies, which leaves but 326 for ordinary occupation, the result is that 118 cells which are only calculated for a single occupant have to accommodate two prisoners each. Although the greatest care is taken in pairing the men, the opportunities which in this way are afforded them for plotting, scheming, and quarrelling is taken advantage of, and the discipline and order of the prison suffers materially in consequence. The rules rightly require them ‘to preserve absolute

silence,' and 'no conversation between them is allowed.' Under the circumstances, however, it is obvious that the prisoners neither will nor can be made to observe these rules, and the preservation of good order and quiet in the cell blocks is consequently an impossibility.

"The increasing number of sentences direct to the Central Prison would also indicate the necessity for more accommodation and for consideration as to the character thereof, having due regard to the internal arrangement of the prison, so that the best results to its discipline might follow.

"It has been publicly stated that reasons for insubordination and discontent on the part of the prisoners exist on account of the treatment which they receive from the Warden and his subordinates, and it is alleged that unjust and undue punishment, unfair, partial, and cruel treatment on the part of the officials, has irritated the prisoners and created general distrust in the management.

"The commission of enquiry which is to investigate into these things will no doubt discover if such causes exist, and, pending that inquiry, it would be improper to anticipate the result.

"The location of the new kitchen for which an appropriation has been made, has been selected at such distance from the main building as will insure the best practical isolation and leave the approach to the cell-block doors unobstructed. The general internal arrangements have also been decided upon. The Provincial Architect will furnish a plan, and the work will be proceeded with immediately. When the new building is completed the present kitchen will afford space in which quite a number of additional cells will be constructed, and the bathing room also, both of which will prove to be of great advantage not only in affording increased accommodation, but in having it conveniently situated as well.

"The improvements which were made in connection with the broom shop industry last season have given good satisfaction. The dry kiln proved to be of great advantage, and the scraper driven by steam power does its work more effectually than when turned by hand in the former laborious way. The result of these improvements is that the work turned out has been superior in every respect, and it has given the contractors and their customers good satisfaction. With the exception of the smoke-house, which is considerably out of repair and too small as well, everything about this branch of the prison industry is in first-rate working order.

"Repairs to the heating boiler in the south shop will require to be made before it can safely be kept in use for another year. It has been in use for eleven years and has been reported against by the Inspector of boilers. When it is replaced the Warden is requested to consult with the engineer as to the best plan for placing side by side the three which are to be used for heating purposes, with a view of economizing the fuel and the labour in handling it."

"I made a second inspection of the Central Prison for the official year on the 20th May, and on that day there were 286 prisoners under charge. Their distribution and employment was as follows:—

Broom shop.....	79
North shop.....	87
Brick yard.....	4
Garden and grounds.....	19
Tailoring shop.....	13
Shoe shop.....	8
Carpenters, machinists, etc.....	7
Permanent improvements.....	10

Female Reformatory.....	6
Domestics.....	37
In hospital.....	8
Convalescent.....	5
Under punishment.....	3
Total.....	286

“The health of the prisoners remains good. There are eight now in the hospital, none of whom are afflicted with serious illness.

“An examination of the punishment book would indicate that the discipline of the prison has been fairly well maintained of late, as the record does not shew an increased number of offences, nor that the greater number of those enumerated were for the more serious breaches of prison rules. The largely reduced population must be taken into account, however, when estimating as to the number or gravity of the offences committed, and in this regard it is worthy of note that the present population is sixty-three less than it was on the 16th April last (the date of my previous inspection,) and 158 of a reduction from the largest number in custody during the past winter. An over-crowded condition is beyond doubt adverse to order in the prison, and sufficient accommodation largely conduces to it. A rapid and great change in the number of prisoners has also disadvantages in this way, but the industrial operations are now particularly affected by the discharge of a large number who have become more or less trained to the different descriptions of work and system of doing it. In consequence of the present decrease in the number, one branch of the industries, that of brick-making, must of necessity be discontinued for a short time at least, as there are not more than a sufficient number of prisoners now in custody to keep the shops in full operation.

“Orders for manufactured wares have been received which will keep the number of men employed in the shops up to the full complement at disposal, and this condition of matters is evidence of the good position of the industries and of the satisfactory character of the work turned out.

“The building operations to be undertaken during the present season have been commenced, and the excavation for the foundation of the kitchen is nearly completed. Some delay, however, may take place in carrying on its construction, as there is no bricklayer nor mason among the prisoners in custody.

“Plans for the re-setting of the heating boilers in the south shop were approved, and after their repair, when the three are placed side by side and properly connected, the expense for this service will be considerably reduced. The labour of firing will be lessened, the room economized, the space for the storage of coal increased, and the re-arrangement generally will add to its safety.

“An examination of the books and records of the prison in the different departments shewed them to be kept with care, and that they exhibited full statements of its affairs.

“On the occasion of this visit the usual examination of the food supplied was made, and all the different articles of dietary were found to be good in quality and well prepared.”

“I made a third inspection of the Central Prison on Sunday, the 19th July, for the purpose more especially of seeing the prisoners assembled, and noting their general conduct and condition, the discipline and order observed, and by interviews to learn whether they were generally satisfied with the treatment they were receiving.

“The Protestant prisoners were assembled in the chapel when I arrived, and with them about twenty laymen who were engaged in advising with and instruct-

ing the prisoners in classes. The most cordial feelings appeared to prevail between the prisoners and their instructors, and the best order and respectful demeanour was not only generally observed, but no trespass on the strictest propriety was noticed by me in any single case.

“ It is obvious that the gentlemen who visit the prison every Sunday morning do so at the expense of considerable time, personal comfort, and convenience, but the interest shewn in the prisoners by this voluntary act of goodwill on the part of those undertaking the duty has a good effect on the prisoners, and many of them receive the attention bestowed upon them in this way with much satisfaction. The evidence upon which this opinion is based appeared not only on the occasion of this visit, but in every case where prisoners have expressed themselves, their statements have been uniformly in favour of the work and manner in which the instructions have been conducted.

“ During the parade in the square, which follows the services and instructions in the chapel in the morning, an opportunity is afforded each prisoner to make any statement to the Warden which he may choose, and I noticed that 18 men had communications to make to him. Their interviews appeared to take place with confidence on the part of the prisoners and without restraint in any way. I also heard statements from eleven of the prisoners who wished to make them to me personally. Three of them were in regard to punishments awarded for offences which the prisoners had claimed had not been committed by them. Three others complained that they had been wrongfully charged by guards with a breach of prison rules, and punished without sufficient enquiry being made into the occurrences, otherwise they would have been able to have proven that they were unjustly blamed. One complained of his food: that he was sick and did not receive the diet which the surgeon had ordered, that water was mixed with the syrup given to him; another, that the Warden had threatened to punish him if he did not do his allotted task in the broom shop, which was more than he was able for. Another pleaded for my intercession to secure his release from punishment to be inflicted by order of the Court, and the last one complained of the work in the broom shop injuring his health, owing to his physical condition. The statement of this last prisoner was made in a straightforward manner without any bad feeling, and evidently with the full conviction of the truthfulness of the representations made by him. The next preceding also did not give expression to any malevolent feelings in making his request, but the others, with one or two exceptions, uttered their statements with abundant evidence of acrimony and resentful feelings toward the Warden and some of his subordinates. Nevertheless, it would be a mistake to suppose that such feelings against the official staff prevailed, or that they were entertained by any considerable proportion of the prison population. On the contrary, the great majority of the 324 now in custody appeared to be well satisfied with the treatment received, and after a thorough enquiry on this point it does not appear that the disaffected number more than seven or eight per cent. Among them are ranked nearly all the men whose sentences shew that they belong to the more advanced criminal classes, and they are fully competent to keep the prison in a state of disturbance and excitement either in one way or another when they are so inclined.

“ Of course, it would be absurd to suppose that in every case prisoners receive an exact measure of justice, or that in some individual cases grounds for complaint could not be found, but such cases are of rare occurrence, and, so far as my observation extends, the prisoner in each of them was almost wholly responsible for their existence.

“ The mid-day meal supplied on the day of my visit was in excellent condition. The grounds were well kept, and the surroundings of the prisoners in other

respects were equally good, all of which, together with the attention given to their physical and moral well-being, should produce a greater measure of contentment than appears to exist."

"I made a fourth inspection of the Central Prison for the official year on the 26th, 27th, and 28th October.

"On the first day of my visit there were 365 prisoners in custody. On the corresponding day of the previous year there were 325, shewing an increase of 40, when compared with the former date.

"The distribution of the prisoners on the first day of my visit was as follows:—

Broom shop.....	87
North shop.....	95
Brick yard.....	38
Farm and grounds.....	20
Tailoring shop.....	16
Shoe shop.....	6
Carpenters and machinists.....	12
Bricklayers and helpers.....	7
Female Reformatory.....	6
Domestics.....	49
Sick in hospital and convalescent.....	10
Unfit for work ("Crank")......	6
Under punishment and confined in cells.....	13
Total.....	365

"The general health of the prisoners was good, and few of them were complaining. Four were in hospital, however, and one of them was seriously ill with lung disease, to which he had been predisposed, before entering the prison. A large number had recently been successfully vaccinated, and the operation is being proceeded with as rapidly as circumstances will permit, without disarrangement of the ordinary routine and work of the institution.

"Since the date of my last visit a noticeable improvement in the general conduct of the prisoners has taken place. A much quieter and more docile spirit appears to prevail, more uniform obedience to the prison rules has been observed, and of course fewer punishments for acts of insubordination have followed. This improved condition of matters has been more fully developed since the fact became known that a very large proportion of the prison population did not sympathise with those who have so vigorously denounced the treatment received, and the injustice and cruelty alleged to have been inflicted upon them. On the contrary, they have maintained that, irrespective of nationality or creed, justice has been administered without any discrimination, and that all reasonable leniency and indulgence, consistent with their position, has been extended to them.

"At present one of the principal difficulties to be contended with in maintaining the strictest order and observance of prison rules, arises through the number of prisoners now under sentence who are mentally unfit to observe prison discipline. Physically, a number of them are, no doubt, able to perform the hard labour involved in their sentence, but there are now at least five men, received within the past four months, who are quite imbecile and "cranks" to such a degree that it is impossible to get them to comprehend order and prison rules. To work out the object for which the prison was established satisfactorily, it should not be made chargeable and burdened with the oversight of incapable prisoners from whom obedience to ordinary rules cannot be exacted.

“The progress of the building for the new kitchen has been considerably delayed, owing to the absence of any men skilled in the mason or bricklaying trade, but the building is nearly completed by the labour of prisoners who had to be instructed in the work, and it is satisfactory to note that notwithstanding this want of skilled labour, and also the necessary loss of time occasioned by attendance at the sittings of the Commission, the building is nearly finished and the work has been well and substantially done. It is commodious and will, no doubt, prove to be of great advantage in carrying on the culinary work satisfactorily and with economy. Its construction will also afford room in the main building for some additional cells which are much needed. The erection of them will be proceeded with as soon as the new building can be occupied and the present kitchen vacated. The space which can be utilized for new cells will contain twenty-eight, and, besides the advantage of additional accommodation, will add to the means for preserving order and discipline by the removal of the four dark cells from their present location in the wings.

“An examination of the cooking utensils shews some of them to be much worn and unfit for further repairs, and consequently they cannot be removed from their present position to the new kitchen. The Warden will therefore make enquiry and submit for approval the description and cost of such new steam kettles and vegetable steamers as may be required to replace those which cannot be repaired satisfactorily.

“When the new kitchen is occupied, the room now used by the cook as a store-room will be no longer required for that purpose, and the Warden’s suggestion to fit it up as a bath-room for the prisoners has been approved. This change can be effected as soon as the Engineer can attend to the work, as no new material is required for it.

“An examination of all the different departments of the prison shewed them to be well kept and in good order. The cells and cell blocks especially were very neat and tidy, and the several workshops were also in a commendable state of arrangement and the work well systematised. The advantage resulting from the increased room in the north shop is now apparent in many ways, but more especially by affording sufficient space to prevent overcrowding the shop with material in process of manufacture. The improved condition in this respect is very marked, and only at one point, namely, near the west door-way in the new addition to the shop, is there an accumulation in excess of the amount which might reasonably be kept in one place. In this particular locality, however, the bulk and weight was greater than it ought to be, and attention was called to the matter so that a portion of the material might be removed at once.

“The root and vegetable crops grown during the past season have been large and of excellent quality, and they are used to advantage in the diet of the officers, employees, and prisoners, by increasing the variety of the food supplied at a reduced cost, and the meals are better, more relished, and the officials and prisoners are better satisfied with the change.

“On the several days of my visit I found all the food well prepared, of good quality, and ample in quantity.”

The following documents are appended :

The report of the Warden.

Statistical tables.

The report of the Superintendent of the Sunday School.

Statement of the Prisoners’ Aid Association.

The report of the Surgeon.

REPORT OF THE WARDEN.

CENTRAL PRISON OF ONTARIO,

TORONTO, September 30th, 1885.

ROBERT CHRISTIE, Esq.,

Inspector of Prisons and Public Charities, Ontario :

SIR,—I have the honour to submit the Twelfth Annual Statistical Report of the Central Prison for the year ending 30th September, 1885.

At the commencement of the fiscal year there were 335 prisoners in custody, and since received 761, a total of 1,096 ; of these 736 were discharged, leaving at this day 360 in custody. Throughout the year the average number per day was 359, the highest average since the prison was opened. When the capacity of the prison is remembered—330 cells all told, and that as many as 440 prisoners had to be accommodated in them—some idea may be formed of the obstacles in the way of working out anything toward classification, and the hindrances such a crowded state put in the way of maintaining good discipline.

I do not purpose to report at any length now, but there are a few matters which are worthy of notice as affecting the working and operations of the Prison. First is the number received under direct sentence, it being a little over two-thirds of the total, while last year, with a total of 723 received, those under direct sentence were only 25 over those sentenced to the common gaol, and afterwards transferred. This would indicate a considerable increase of crime, since heretofore it was largely the more aggravated offenders who were sentenced direct. Not being in possession of the criminal statistics for the year I am unable to say how far this is the case. An examination of the schedules of crimes for the two years will show that while there were about the same number received for larceny and robbery in each year, there is a falling off this year under the head of "drunks" of 67, and an increase under vagrancy of 75. From information gathered from the prisoners received under sentence of vagrancy I learn that in the great majority of such cases they were forced to that condition in consequence of being unable to obtain employment. The question then is, is it right to force a man whose only offence is that of being unable to obtain employment to become the associate of the professional thief and *habitué* of criminal and penal institutions? And again, is it right or defensible for municipalities to get relief from the demands of their poor in that way? The Central Prison is not an almshouse, does not partake in any manner of one, and was not intended for that purpose, and it is a great wrong on the unfortunate vagrant (for in a great many cases that word must be taken, when applied to them, with considerable qualification). Once incarcerate a man in a penal institution without distinction from the veriest rascal and you break forever his self-respect, and his descent into crime is the certain result, and the rapidly-increasing army of criminals is thereby added to. It is well known that the professional in crime takes a special delight in expatiating on his achievements, and poisoning the minds of all who will listen to his account of what is ever uppermost in his mind. And the Central Prison has its full quota of accomplished rascals, as fully demonstrated by those who appeared in the witness box in the Court House last month. If the Central Prison is hereafter to shelter all the tramps and vagrants in addition to the criminals of the Province then it will require to be greatly enlarged, but in its present shape it is very objectional and detrimental to its proper management to have it overcrowded every winter with the class to which I have referred, and in addition to have to put up with a lot of cranks, imbecile and insane, who harass and annoy the officers night as well as day. Again I repeat the Central Prison is neither an almshouse nor an insane asylum, and should not be used as such simply to relieve municipalities of their burdens.

The other divisions of the statistics do not call for any special remark further than that no death has taken place among the prisoners, and but three escaped, or correctly speaking but two, one having escaped twice, and was recaptured once, within the year.

The several industries have been carried on with a fairly satisfactory degree of success, and as the financial returns are the best evidence of results, the statement that the sum of \$40,617.80 has been deposited to the credit of the Provincial Treasurer, with about \$5000 of earnings for the year outstanding, will best convey what has been accomplished. This is the highest returns reached in any year since 1881, when the accumulated stock of brick was sold, and taken as the actual results of the year: it is the best yet attained. I am unable to predict what may be expected next year, but as the several industries are in good working order, and as financial returns are in most institutions of a similar character considered to be the best evidence of the management, with every enlarging experience, not less satisfactory returns may reasonably be expected. The goal—a self-supporting prison—may not be reached for some time, but it shall nevertheless be kept constantly in view.

Since the date of my last report the buildings and other improvements then under way have all been completed, and the workshops occupied are highly satisfactory in all particulars, in so far as convenience and arrangement for what is carried on in them. The ever-increasing demands upon the contractors for the goods they produce make it imperative that as far as practicable the necessary facilities to meet their requirements should be provided, and a sufficient sum to cover the cost of a dust exhauster and the necessary pipes for the North Shop should be included in the capital estimates, together with the erection of a landing for trucks and the gearing for elevating to the upper flat at the west end of the shop. It would then be complete as to working facilities and the cause of complaint about the injurious effects of dust upon their lungs by the prisoners, and the greater danger from fire in consequence of the shavings accumulating, removed. An estimate of the cost is given below.

The new kitchen is well under way, but it will be towards the end of the year before it is completed. The ovens are yet to build, and there is also much other work which can only be done by skilled workmen, but the number of that class among the inmates being limited, prevents any very rapid progress being made. When finished it will be a model of perfect convenience in a compact space for a very little expenditure.

The overcrowded state of the Prison, and the increase that may be expected during the next four months, make it very desirable that the erection of the contemplated additional cells should be proceeded with at the earliest moment, and I hope before the close of the year to have them well under way. In this connection the appropriation will have to be supplemented, as the work will be expensive and I estimate the additional outlay below.

The repairs upon the boilers used for heating the Prison premises, the resetting of them alongside each other, and the replacing of the steam pipes all over the square is nearing completion, and will be a very great improvement in convenience and economy. Great credit is due to the Engineer for the manner in which he has conducted his part of the work, the forethought and care with which he has on this occasion, and on all others, conducted his department. And in this connection I desire to put on record the manner in which all the work done in building and repairs has been executed by the foremen in charge. I am not prepared now to give a correct estimate of the value of the work done by them since my last report, but it is a very considerable item added to the Prison premises, and it is work that will bear inspection. The three most important industries, broom-making, wood-working, and brick-making, have been well conducted, and closely looked after by the guards in charge, and the discipline well maintained under them.

Looking back over the year just closed, it has in some respects been a remarkable one in the history of the Central Prison. The management has been attacked and assailed with charges of all sorts in language of the bitterest malignity through the "press" and otherwise. Insidious and persevering efforts have been put forth to subvert authority and discipline by certain officials, aided by influence from outside, whose malicious machinations were calculated to injure and hinder the proper working of the Prison, and yet with all this to contend against the Central Prison has closed one of the most successful year's operations in its history, and may well court comparison with any prison or penitentiary in America, on every point.

The galvanized iron roofing on the main building and the wings is so far decayed that it cannot be repaired, and during next summer will have to be replaced. I estimate

the cost at \$1,500. The erection of cells in the present kitchen and dining hall, with the accompanying alterations (additional), \$1,500. Gratings for doors and windows of kitchen, \$600. Exhauster and pipes for North Shop, \$1,100. Landing for trucks and alteration of the switch, \$650: in all \$5,350, necessary to be appropriated on capital account.

I have the honour to be, Sir,

Your obedient servant,

JAMES MASSIE, Warden.

ANNUAL RETURN OF THE CENTRAL PRISON, 1885.

Remaining in custody September 30th, 1884.....	335
Committed during the year.....	761
Total.....	— 1096
Discharged on expiration of sentence.....	704
“ “ payment of fine.....	15
“ by remission of sentence.....	4
Retransferred to Common Gaols.....	4
Transferred to Lunatic Asylum.....	2
Convictions quashed.....	4
Escaped.....	3
Total.....	— 736
Remaining in custody September 30th, 1885.....	— 360

NATURE OF SENTENCE.

To Central Prison.....	513
To Common Gaol.....	248
Total.....	— 761

SOCIAL CONDITIONS.

Married.....	177
Single.....	540
Widowers.....	44
Total.....	— 761

EDUCATION.

Read and write.....	571
Read only.....	80
No education.....	110
Total.....	— 761

AGES.

Under 18.....	42
From 18 to 20.....	94
“ 20 “ 30.....	328
“ 30 “ 40.....	157
“ 40 “ 50.....	81
“ 50 “ 60.....	49
“ 60 “ 70.....	10
Total.....	— 761

NATIONALITIES.

England.....	128
Ireland.....	118
Scotland.....	27
Canada.....	372
United States.....	93
Other countries.....	23
Total.....	— 761

RELIGIONS.

Church of England.....	245
Roman Catholics.....	274
Presbyterians.....	94
Methodists.....	99
Baptists.....	39
Lutherans.....	3
Congregationalists.....	1
Hebrews.....	1
No religion.....	5
Total.....	— 761

HABITS.

Temperate.....	144
Intemperate.....	617
Total.....	— 761

CRIMES.

Assault, common.....	43
“ indecent.....	16
“ aggravated.....	4
“ with intent to kill.....	1
“ and carrying fire arms.....	2
“ and battery.....	2
“ felonious.....	4
“ malicious.....	2
“ and doing actual bodily harm.....	4
“ and robbery.....	2
“ with intent to rob.....	1
“ and obstructing police.....	6
Attempt at horse stealing.....	1
“ “ larceny.....	1
Arson.....	3
Bigamy.....	1
Bringing stolen property into Canada.....	6
Burglary.....	13
“ and larceny.....	1
Carrying unlawful weapons.....	4
Counterfeiting.....	1
Car breaking with intent to commit larceny.....	2
Drunk.....	38
“ and disorderly.....	4
“ “ assault.....	2
“ “ malicious injury.....	1

Deserting police force	1
Disorderly	6
Distillation, illicit	1
Embezzlement	5
Escaping from custody	1
Felonious wounding	1
Forgery	8
Frequenting disorderly house	11
Felony	9
Fraud	6
False pretences	22
Giving liquor to Indians	2
Gaol-breaking	2
House-breaking	15
Horse stealing	9
Keeping disorderly house	3
" house of ill-fame	3
Larceny	272
" and receiving	2
Misdeameanor	15
Manslaughter	1
Malicious injury to property	2
Perjury	1
Receiving stolen property	3
Robbery	4
" highway	2
" from the person	1
Refusing to support family	4
Rioting	3
Trespass	4
Unlawful wounding	5
Uttering counterfeit coin	1
Vagrancy	171
Total	761

SENTENCES.

One month and under	51
Over 1 and up to 2 months	76
" 2 " 3 " 	128
4 months	6
5 " 	31
6 " 	213
7 " 	3
8 " 	3
9 " 	21
10 " 	1
12 " 	101
15 " 	7
16 " 	2
18 " 	24
20 " 	4
22 " 	3
23 " 	19
2 years	8
Total	761
Average duration of sentence	6.20-30 months.

OCCUPATIONS.

Actors	1	Land Surveyors	1
Brewers	1	Letter carriers	1
Barbers	22	Lumberers	4
Bakers	12	Masons	2
Blacksmiths	7	Moulders	9
Butchers	19	Machinists	11
Brushmakers	1	Newsboys	1
Brakesmen	2	Painters	18
Bricklayers	9	Pedlars	3
Brickmakers	1	Printers	4
Bartenders	3	Polishers	1
Boiler-makers	1	Plumbers	1
Basket-makers	1	Plasterers	3
Boot-blacks	1	Piano-makers	1
Carpenters and woodworkers..	36	Porters	1
Clerks and bookkeepers	23	Photographers	1
Cooks	18	Paintmakers	1
Cabinetmakers	5	Ropemakers	1
Conductors	1	Roofers	2
Coopers	4	Rubber turners	1
Cigar-makers	5	Shoe finishers	1
Confectioners	2	Shoemakers	21
Carters and teamsters	12	Sailors	28
Constables	1	Salesmen	2
Commercial travellers	2	Storekeepers	1
Carvers	1	Steamfitters	3
Curriers	1	Stonecutters	3
Dentists	1	Slaters	2
Engine-drivers and engineers..	3	Spinners	1
Engravers	1	Tanners	1
Firemen	9	Tailors	31
Farmers	6	Tinsmiths and tinkers	7
Fishermen	1	Varnishers	2
Furcutters	1	Veterinary Surgeons	1
Gardeners	11	Waiters	10
Grooms	6	Weavers	2
Harness-makers	3	Woodturners	2
Hackdrivers	2	Watchmakers	2
Hat finishers	1	Wagon makers	1
Horse trainers	1	Wall paperers	1
Jewellers	2	No occupation	2
Lathers	2	Total	761
Labourers	328		

COUNTIES.

Algoma	3	Hastings	12
Brant	13	Kent	18
Bruce	3	Lambton	11
Carleton	35	Lanark	3
Elgin	13	Leeds	15
Essex	32	Lennox	1
Frontenac	16	Lincoln	13
Grey	16	Middlesex	32
Halton	1	Norfolk	13

Northumberland and Durham.	29	Stormont, Dundas & Glengarry	2
Oxford	17	Thunder Bay.	11
Ontario	19	Waterloo	8
Perth	4	Welland.	56
Peterboro'	2	Wellington.	16
Peel	7	Wentworth.	56
Prescott and Russell	1	York	236
Renfrew	7		
Simcoe	40	Total	761

INDUSTRIAL DEPARTMENT.

Return shewing the number of days' work rendered for the year ending September 30th, 1885:—

Broom shop	23,383
Tailor “	5,658
Shoe “	2,463
Wood-working shop	28,566
Brickyard	13,768
Carpenters	2,560
Tinsmiths, engineers and machinists	1,328
Blacksmiths and helpers	602
Bricklayers and bricklayers' labourers, making permanent improvements	4,939
General work in yard and grounds	1,363
Mercer Reformatory	825
Farm labourers in garden and on farm grounds	3,778
Total	89,233

DOMESTIC DEPARTMENT.

Return shewing the number of days domestic employment from October 1st, 1884, to September 30th, 1885:—

October, 1884	1,155
November, “	1,160
December, “	1,192
January, 1885	1,193
February, “	1,188
March, “	1,187
April, “	1,185
May, “	1,170
June, “	1,154
July, “	1,116
August, “	1,150
September, 1885	1,155
Total	14,045

Return shewing the number of days prisoners were in hospital, confined in cells, sick in cells, convalescent and unemployed, from October 1st, 1884, to September 30th, 1885:—

MONTH.	Hospital.	Confined in Cells.	Unemployed.	Sick in Cells.
	Days.	Days.	Days.	Days.
October, 1884	130	69	50	104
November, "	121	61	76	124
December, "	175	72	210	137
January, 1885	256	77	115	136
February, "	206	76	340	102
March, "	309	74	370	76
April, "	213	68	235	74
May, "	192	63	162	33
June, "	205	65	78	49
July, "	118	58	156	69
August, "	250	58	145	122
September, "	135	66	55	135
Totals	2,310	807	1,992	1,161

HOSPITAL.

Average number of patients in Hospital per day, from October 1st, 1884, to September 30th, 1885:—

October, 1884	4.19
November, "	4.03
December, "	5.64
January, 1885	8.25
February, "	7.35
March, "	9.97
April, "	7.10
May, "	6.19
June, "	6.83
July, "	3.80
August, "	8.06
September, "	4.50

Monthly average for the year 6.33

Prisoners in hospital September 30th, 1885 6.

TABLE

Shewing the daily population of the Central Prison during the year ending September 30th, 1885.

	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.
1	332	335	381	420	435	429	396	327	299	312	325	338
2	332	335	380	418	435	424	392	322	299	312	325	342
3	328	332	388	419	431	422	395	322	302	306	324	338
4	333	327	384	419	431	421	385	310	301	316	322	348
5	333	326	389	417	430	420	385	307	314	316	321	345
6	329	333	387	414	444	420	381	310	309	313	321	345
7	326	331	387	413	442	419	386	306	309	318	319	350
8	334	339	385	419	442	419	379	305	310	313	317	348
9	339	339	389	417	443	416	376	304	308	323	317	355
10	334	338	388	413	442	412	378	298	303	323	317	354
11	333	335	400	413	442	411	368	298	305	318	315	350
12	333	346	400	425	439	410	368	293	303	318	313	360
13	331	346	400	424	439	414	368	301	301	317	318	360
14	329	357	400	425	436	409	366	299	301	313	317	360
15	332	354	399	428	436	409	360	298	301	323	321	360
16	330	354	399	426	436	410	354	294	299	321	321	358
17	327	353	401	432	435	408	349	294	298	326	318	356
18	333	355	400	432	431	402	349	291	291	324	319	354
19	333	367	412	432	428	404	349	289	306	324	319	359
20	330	367	409	432	434	404	349	286	301	321	316	359
21	331	363	409	430	430	400	342	284	301	322	315	358
22	332	359	407	430	430	400	339	296	307	322	322	365
23	333	359	429	435	430	399	337	291	306	327	322	364
24	330	358	428	433	429	396	333	291	306	327	321	372
25	328	357	428	433	424	401	340	288	313	327	321	369
26	328	371	425	432	430	400	340	294	308	327	320	366
27	325	368	423	433	435	400	336	294	313	327	328	366
28	332	378	423	430	429	395	338	295	313	332	328	364
29	326	384	419	436	.....	395	333	298	318	330	340	362
30	325	384	421	436	.....	394	328	296	315	328	340	360
31	334	.....	420	435	.....	394	.....	296	.....	327	340	.....
Total.....	10255	10549	12510	13201	12168	12657	10799	9277	9160	9953	9982	10685

Total number for the year.....	131196
Highest any one month.....	13201
Highest any one day.....	444
Lowest any one month.....	9160
Lowest any one day.....	284
Average per month.....	10933
“ per day.....	359

GENERAL SUMMARY of distribution of prisoners in the Central Prison from October 1st, 1884, to September 30th, 1885.

Industrial Department.....	89,233
Domestic “.....	14,045
Sick in hospital.....	2,310
Sick in cells and convalescent.....	1,161
Confined in cells.....	807
Unemployed.....	1,992
Sundays and holidays (unemployed).....	21,648
Total.....	131,196

REPORT OF THE SUPERINTENDENT OF THE SUNDAY SCHOOL.

TORONTO, 10th October, 1885.

R. CHRISTIE, ESQ.,

Inspector of Prisons and Public Charities, Ontario, Toronto.

SIR,—I have the honour herein to report upon the work carried on in the Sunday School at the Central Prison during the year ending on the 30th ultimo.

Our methods of operation and the general features of the work remain unchanged from year to year, so that it is impossible in a formal report to present any thing new. I may say, however, that the teachers remain faithfully at their posts, and with unabated zeal and patience seek to make known to the inmates the glad tidings of salvation. It is not ours to know the results of the work, but we are encouraged to learn from the Warden that it has at any rate a marked effect for good upon the discipline of the Prison.

The Warden, Deputy Warden and Guards have throughout the year, as always before, been most courteous and obliging in their intercourse with us.

I have the honour to remain, Sir,

Your obedient servant,

HAMILTON CASSELS,

Supt. C. P. S. S.

REPORT FROM THE PRISONERS' AID ASSOCIATION OF CANADA.

To R. CRISTIE, ESQ.,

Inspector of Prisons and Public Charities.

SIR,—As requested we present herewith reports for the year ending September 30th, 1885; we also desire to present the following facts in regard to the work of this Association.

The Prisoners' Aid Association of Canada has been in existence since the year 1868. It has grown steadily and usefully, until, in 1884, it supported two houses, one for male and one for discharged female prisoners, where those anxious to retrieve themselves are taken care of until suitable provision can be made for them. In addition to this it aided 726 discharged prisoners last year, nearly all of whom must otherwise have been a heavy financial charge upon the country, and out of this number found employment for 384; gave furniture to 68 families; gave food and board to 380; sheltered 250; paid rent for 24; paid fare to homes or to where work was offered for 29; distributed 339 articles of clothing, and 59 of tools; lent \$552.34, and received repayment of \$416.91.

This is the practical side of our work. In addition to this we maintain Sunday Schools in the County Gaol, Central Prison, and Mercer Reformatory, having seventy voluntary helpers in this work, in which great good has been accomplished. We also support a paid Agent and a Schoolmaster for the Central Prison.

Visitors from the Mother Country and from the United States afford us some gratification by stating, that the work of the Association is second to none in its usefulness and efficiency.

I have the honour to remain,

Your obedient servant,

SAMUEL E. ROBERTS, Hon. Secretary.

PRISONERS' AID ASSOCIATION.

Disbursements for the year ending September 30th, 1885 :—

Aid to ex-prisoners in food, clothes, tools, furniture, railway fares, rent, etc.....	\$1,372 87
Central Prison night school, Master's salary, books, etc.....	194 55
Central Prison and Andrew Mercer Reformatory Sunday Schools, books, etc.....	50 55
Printing, advertising, stationery, postage, etc.....	71 79
Broom industry.....	6 50
On building, insurance and interest.....	278 50
Water, light and fuel.....	74 26
Agents' salaries.....	500 00
Sundries.....	40 90
Total.....	\$2,589 92

Receipts for the year ending September 30th, 1885.

By Government grant.....	\$1,000 00
“ City grant.....	300 00
“ County grants.....	289 75
“ Subscriptions.....	487 50
“ Broom industry.....	25 50
“ Collected at annual meeting.....	22 70
“ Loans refunded.....	416 91
Total.....	\$2,542 36

AGENT'S DIARY OF ONE DAY'S WORK.

AUGUST 5th, 1885.

C. M. who has been the past eighteen months in the Magdalene, called this morning and desired me to send her to a situation in the country, that she may avoid meeting any of her former companions: she said she had not now the least desire for liquor, and if she could get a place away from the city, she felt that with God's help she would be able to get along comfortably. I desired her to wait or call again in an hour, as I was expecting a gentleman from W—who was wanting such a woman. I afterwards saw Mr. T—, of W—, told him her previous character and failings, and her determination and hope for the future: he decided to give her a trial, and engaged her to go to W—, by the first train in the morning.

H. D. called, and I informed him I had heard from his sister, and there was £110 due to him by his grandfather's will, at the death of his mother, which event took place last February, that she wished to know how he would like it sent. He desired me to ask her to forward £15 to buy an outfit and pay his passage home, as he intended to return to England: this I did.

I went to the branch of the D. B. to enquire if they had received an answer to the draft from K—, in favour of C. E. S. (at present a prisoner): was informed they had, and that the money awaited his order at the chief office.

Called on Mrs. L—, and desired her to pack the clothing etc., belonging to Mrs. C—, (now a prisoner) and I would send for them to-morrow, she promised to have them ready.

Mrs. A. sent to say she wished to see me, I called on her—, when she told me that she had been informed I. T. was a dreadful character, and only a short time from the Central prison, she did not feel it was safe to have him in the house. I explained matters to her, told her how anxious he seemed to alter his course of life, that he had constant employment and was working steadily, that we had strong hopes of his reformation, etc., to which she replied, “I should be sorry to deprive him of the opportunity of doing better, and will allow him to remain here so long as he conducts himself properly.”

I spent an interesting evening amongst the men in the Central Prison.

Received the following letter from the poor old man whose fare home I paid on the 18th ult. “Enclosed you will find \$1.60 or its equivalent, I am sorry I could not send it sooner. Ah, sir, I cannot express how grateful I am to you for your kindness. At your earliest opportunity, I hope you will please mention to the governor, that I send him my sincere thanks for giving me a note to you. Trusting that God may reward you for your kindness to me in my real want, I am dear sir, your grateful and much obliged servant, J— T—.”

THE SCHOOL-MASTER'S REPORT.

To the President and Members of the Prisoners' Aid Association.

GENTLEMEN,— I beg to submit the following, as my fifth report of the Central Prison Secular School:—

I am informed that 761 men have been admitted into the Prison during the twelve months ending with September, 1885: out of which number 571 could read and write, 80 read only, and the remaining 110 had no education.

The number of the names upon the school roll, with average attendance, compared with the population of the prison upon the first day of each month, when the new pupils are admitted, were as follows:—

	Number in prison on 1st of month.	Discharged during month.	Number on the school roll.	Pupils discharged during month.	Average nightly attendance.
October, 1884.....	332	73	47	2	39
November, “.....	334	61	47	1	41
December, “.....	384	45	60	3	54
January, 1885.....	420	44	63	7	52
February, “.....	435	49	57	3	51
March, “.....	429	66	57	7	49
April, “.....	394	110	60	5	59
May, “.....	328	84	71	4	54
June, “.....	296	62	64	5	60
July, “.....	315	55	70	4	58
August, “.....	327	30	79	1	71
September, “.....	340	51	85	1	66

Temporary ailments were the chief causes of absence from class ; only three men have been struck off for inattention, or bad conduct in the school ; a few have lost their privileges for misbehaviour outside of school ; whilst some I regret to say, have during the last three months, especially in September, absented themselves on account of the largeness of the classes, and my inability to attend to their individual needs during the short time at my disposal.

During the year the classes have been augmented by the attendance of 142 new pupils, making a total of 336 men who have attended the school since its inauguration in April, 1883. Thus it will be seen, when we bear in mind the facts that in no case is attendance compulsory, but on the other hand is a privilege to be earned and retained by general good conduct, that the school is duly appreciated by the majority of those it is intended to benefit.

All of which is respectfully submitted,

Your obedient servant,

J. J. PRITCHARD,

Schoolmaster.

Toronto, October 1st, 1885.

REPORT OF THE SURGEON OF THE CENTRAL PRISON FOR THE YEAR
ENDING SEPTEMBER 30th, 1885.

ROBERT CHRISTIE, ESQ.,

Inspector of Prisons, etc., Ontario.

Sir,—I respectfully represent that it is desirable that the prisoners engaged as shoemakers and tailors should be permitted to spend a short time in out-door exercise every day ; twenty or thirty minutes thus occupied would be a great benefit to them.

Frequent complaints of indigestion, constipation, and loss of appetite would be lessened by this course, and the health of this class certainly improved.

Many of these prisoners, owing to their sedentary life would like to have daily, as a lighter food than the ordinary prison diet. Many other prisoners without grinders would also like to have porridge. Dietary might with advantage be modified so as to meet the conditions of these men.

There are always several epileptics in the prison. There is a standing order that these men are not to work in the machine shops for fear of accidents during a convulsion, and are to occupy cells on the ground floor for fear of falling from any of the galleries and to be more immediately under the observation of the corridor guard. Many of these epileptics are more or less insane, before or after the attack, and may not then be responsible for their acts ; certainly some of them are not, and the crimes which sent them here may have been committed while in this temporary insanity.

I have frequently drawn attention to the number of convicts who are found on admission, or shortly afterwards, to be insane, and have explained how easily the mental malady in these cases may have escaped the notice of the convicting justice or the gaol surgeon.

One not familiar with the inner life of the Central Prison cannot readily understand how much injury these prisoners occasion. They are often insubordinate, noisy, quarrelsome, and even dangerous when teased by other prisoners. By their shouting at night they may keep all the other men awake. If by day they are allowed out they are liable to distract the attention of those at work. If kept in their cells their health may become impaired.

It is therefore advisable that provision be made for the removal of all insane from

the Central Prison, whether admitted as such or becoming so during the term of their sentence.

There is no suitable place here for their treatment. They cannot be taken into the Hospital to disturb and endanger the sick. It seems a pity to be repeatedly convicting these men as criminals and sending them to gaol or Central Prison, when they should be sent to a Lunatic Asylum.

Sometimes the insanity is due to some old injury, such as fracture of the skull, but much more frequently self abuse.

I again wish to point out the impropriety of having two prisoners occupy the same cell, as it is well known that in prison life sodomy often results from this practice.

The Prison from time to time receives old men incapable of hard labour. It may be difficult for authority to decide what should be done with such, but it is quite useless to sentence them to the Central Prison to be nursed till the expiration of their sentences.

There were many cases of rheumatism during the year, especially in the months of February, March and April; our average in Hospital is greater than usual. It may be borne in mind, however, that the total number of prisoners is greater than formerly.

A prisoner sick in the hospital and not well able to leave at the expiration of his sentence, is not forced to go away, but allowed, if he be so disposed, to remain till recovered.

There was no death during the year, and the general health of the prison inmates is good.

The following list indicates the applications made by prisoners at work for treatment, and the diseases they complained of:—

DISEASE.	No.	DISEASE.	No.
Abrasions	2	Corneitis	10
Acne	16	Coughs and colds	987
Abscess	50	Cramps	128
Ague	18	Debility	123
Aguish	23	Diarrhoea	188
Anorexia	189	Dysentery	20
Asthma	20	Dyspepsia	24
Boils	20	Dysuria	36
Bronchitis	15	Epistaxis	12
Burns and scalds	4	Epilepsy	40
Bubo	14	Eruptions	93
Catarrh. nasal	89	Feverishness	18
Complaining, general	130	Flatulence	16
Conjunctivitis	68	Frost bites	6
Constipation	1610	Gout	2
Contusions and wounds	108	Goitre	6

Diseases.—*Continued.*

DISEASE.	No.	DISEASE.	No.
Gonorrhœa	50	Pediculi	26
Gleet	23	Phthisis	3
Hæmoptysis	17	Pleurisy	8
Hæmorrhoids	64	Ringworm	10
Headache	161	Rheumatic pains	239
Heart disease	1	Rheumatism, inflammatory	26
Hernia	21	Scabies	34
Hydrocele	2	Sciatica	4
Indigestion	217	Sleeplessness	51
Insanity	17	Scrofula	4
Inflammation of fingers	6	Sore throat, simple	79
“ ankle joint	3	“ syphilitic	8
“ wrist “	4	Spermatorrhœa	45
“ knee “	1	Sprains	26
“ tendons	6	Stricture	60
“ glands	10	Syphilis, primary	20
“ bowels	2	“ secondary	99
Irritability of bladder	13	Toothache	140
Lumbago	96	Ulcers	48
Nervousness	28	Vertigo	2
Neuralgia	118	Varicocele	2
Neuralgia, alleged	309	Varicose veins	23
Orchitis	7	Vomiting	21
Otorrhœa	27	Whitlow	20
Paralysis, partial	4	Worms	10

The following list shews the number of prisoners admitted into hospital, and diseases for which they were treated :—

DISEASE.	No.	DISEASE.	No.
Albuminuria	1	Inflammation of lungs.....	1
Abscess	5	“ bowels.....	1
Asthma	6	“ glands.....	2
Ague	1	Lumbago.....	3
Bronchitis.....	2	Neuralgia	3
Burns	1	Otorrhea	1
Bubo.....	1	Pleurisy	2
Contusions and wounds.....	14	Phthisis	1
Coughs and colds	26	Rheumatism.....	21
Conjunctivitis	1	Sore throat	7
Complaining.....	7	Stricture of urethra.....	1
Diarrhœa.....	16	Sciatica	1
Debility.....	5	Syphilis	4
Dyspepsia.....	1	Typhoid fever	1
Dysentery.....	3	Ulcer	1
Dysuria	1		
Eruptions	2	OPERATIONS.	
Epilepsy	2	Amputation of fingers	2
Feverish	8	Hæmorrhoidal	1
Frost bite	1	Teeth extracted	86
Hæmoptysis.....	4	“ and replaced	12
Hæmorrhoids.....	6		
Hesperes zostu	1	DEATHS.—None.	
Insane	1		

Average number of patients in hospital per day for each month.

October, 1884	4.19
November, “	4.03
December, “	5.64
January, 1885	8.25
February, “	7.35
March, “	9.97
April, “	7.10
May, “	6.19
June, “	6.83
July, “	3.80
August, “	8.06
September, “	4.50

Average per day for the year

Number of patients in hospital Sept. 30, 1885..... 6

I have the honour to be,

Your obedient servant,

W. T. AIKINS, M. D.

ANDREW MERCER REFORMATORY FOR FEMALES.

That the establishing of the Reformatory for Females was a wise step, is shewn with greater clearness as each further year of its existence passes by. The demoralizing effects of idleness were never more clearly demonstrated than in some of the female wards of the larger gaols before the time the Reformatory was opened. There, women, some of whose sentences were as long as two years, were congregated, generally in complete idleness and without an effort being made to bring them into a better way of life. Of course, it is not claimed that the Reformatory effects a complete cure upon every prisoner brought within its walls, but at all events its inmates do not suffer the degradation of utter idleness. This change alone would have an elevating tendency, but in addition there are the effects of order and discipline, the efforts of the Reformatory staff to instil better habits, and the influence of religious teaching: all these are brought to bear upon these women committed to the Reformatory, and there are many upon whom these things have a lasting impression. The nature of the ground to be worked upon is not, however, very promising. It must be remembered that the inmates of the Reformatory represent the worst portion of the female population of the country, and that many of these do not come within the reach of reformatory influence until after a course of vice or crime of many years' duration. During the year ending on the 30th September last, 142 women were committed to the Reformatory. Of these 57, a good deal more than one-third, were over years of age. This fact alone speaks volumes. Then, too, the period of stay in the Reformatory is often very short. Of the number committed during the year, 86 were sentenced to less than one year's confinement.

The Refuge for Girls continues to do a useful work. I regret that its population was less than last year, the commitments being largely reduced in number. Could I but feel that there were really no fit candidates for admission, the regret above expressed would be misplaced, but I am sure that there are in the streets of our larger cities and towns many young girls who might be saved from ruin by a timely transference from their present surroundings to the Refuge. I would that this institution were better known to the members of the judiciary throughout the Province and to those endeavouring to rescue the waifs and strays of humanity. The Refuge offers a comfortable home and good training for those unfortunate children who, often through no fault of their own, are to be seen growing up about us without control or education.

I cannot close this portion of my report without referring to the great loss which the Reformatory and Refuge have sustained by the death of Mrs. Laird. She filled the position of assistant superintendent from the date of the opening of the institution (August, 1880), until the day of her death in May last. The Government has lost a faithful servant; the Reformatory and Refuge will long feel the loss of her good judgment, tact and energy, and the inmates have lost a warm-hearted friend—one who ever had their welfare to heart, and who gave her best talents to the promotion of anything that would tend to lift up the fallen and help those in distress.

Below will be found a summary of the movements of the inmates both of the Reformatory and Refuge during the year under report, and also, for the purpose of comparison, during the previous one:—

REFORMATORY.

	1884.	1885.
Number of inmates at beginning of year.....	102	120
“ “ since admitted	156	142
Re-transferred from Lunatic Asylum	1	....
Total number in custody during year	259	262
Discharged on expiration of sentence	127	141
“ payment of fines	5	1
“ remission of sentence	2	3
Re-transferred to Common Gaol .....	....	1
Transferred to Lunatic Asylum.....	3	....
Died.....	2	....
Escaped .....	....	2
	139	148
In custody at close of year.....	120	114

REFUGE.

Number of inmates at beginning of year.....	36	43
“ “ since admitted	16	3
Returned from apprenticeship .....	....	1
Total number in residence	52	47
Discharged on expiration of term	3	2
“ warrant of Lieutenant-Governor.....	1	4
Apprenticed by order of Inspector	4	5
Ran away	1	....
Transferred to Reformatory .....	....	1
	9	12
In residence at close of year	43	35

As regards the Reformatory, it will be noticed that the commitments during 1885 were 142 against 156; the discharges 148 against 139, leaving 114 in residence on the 30th September, 1885, against 120 on the corresponding day in 1884.

The chief feature in the Refuge statistics is the great decrease in the commitments from 16 to 3.

Following the Superintendent's report are tables which give full particulars of the nationalities, religious denominations, ages, offences, etc. of the women and girls committed, and following them again is the report of the Surgeon. He is able to state that on the whole the health of the inmates has been good, and that no death occurred in the Reformatory or Refuge during the year.

MAINTENANCE EXPENDITURE.

A table shewing the expenditures in the past two years is annexed:—

SERVICE.	YEAR ENDING 30TH SEPTEMBER, 1884.		YEAR ENDING 30TH SEPTEMBER, 1885.	
	Total Expendi- ture.	Average daily cost per inmate.	Total expendi- ture.	Average daily cost per inmate.
	§ c.	cents.	§ c.	cents.
Hospital expenses.....	169 47	0.30	174 39	.29
Butcher's meat and fish.....	2,875 36	5.23	2,703 17	4.59
Flour, bread and meal.....	1,758 90	3.20	1,690 67	2.87
Groceries.....	3,292 74	6.00	3,228 81	5.49
Bedding, clothing and shoes.....	1,859 94	3.40	2,360 01	4.01
Fuel.....	3,111 16	5.66	2,875 97	4.89
Gas, oil, candles and matches.....	649 41	1.18	766 43	1.30
Laundry, and cleaning appliances and water.....	3,888 33	7.07	1,631 68	2.77
Stationery, advertising, printing and postage.....	571 35	1.04	402 18	.69
Library, schools and lectures.....	444 50	0.81	423 71	.73
Furniture and furnishings.....	510 84	0.93	641 22	1.09
Stable expenses, forage, etc.....	205 85	0.37	324 32	.55
Repairs, ordinary.....	278 04	0.50	308 29	.52
Ground and garden.....	544 91	1.00	465 89	.79
Unenumerated.....	628 83	1.14	835 26	1.42
Salaries and wages.....	8,239 93	15.00	8,708 89	14.80
Totals.....	29,029 56	52.83	27,540 89	46.80

As compared with that of 1884, the expenditure of 1885 shews a decrease of \$1,488.67, and the average daily cost has been reduced from 52.83 cents per head to 46.80 cents. These decreases are partly accounted for by the fact that during 1885 a certain proportion of the water account was charged to the Industrial Department. In addition to this, many other items of expenditure shew a considerable decrease:—

INDUSTRIAL DEPARTMENT.

Work in this department was carried on with vigour during the year. The addition to the laundry was completed and found to materially help in the proper working of that branch. A statement shewing the number of days worked in each branch and the revenue derived therefrom is given below:—

Sewing Department.

No. of days worked, 3,798.		
Total revenue.....	\$1,091	64
Less cost of material.....	188	22
	<hr/>	
Net revenue.....		\$903 42
Daily earnings per inmate employed, 23 $\frac{3}{4}$ cents.		

Laundry Department.

No. of days worked, 7,446.		
Total revenue.....	\$3,431	55
Less cost of material.....	507	24
	<hr/>	
Net revenue.....		\$2,924 31
Daily earnings per inmate employed, 39 $\frac{1}{4}$ cents.		

Knitting Department.

No. of days worked, 2,842.		
Total revenue.....	\$233	68
Less cost of material.....	16	26
	<hr/>	
Net revenue.....		\$217 42
Daily earnings per inmate employed, 7 $\frac{2}{3}$ cents.		

Making up Clothing for Inmates.

4,376 days at 30 cents per day.....	\$1,312	80
Clothing for inmates leaving Reformatory and Refuge.	153	20
	<hr/>	
	\$1,466	00

The gross and net earnings of the different departments were :—

	Gross.	Net.
Sewing department.....	\$1,091 64	\$ 903 42
Laundry ".....	3,431 55	2,924 31
Knitting ".....	233 68	217 42
	<hr/>	
Total revenue.....	\$4,756 87	\$4,045 15
Making clothes for inmates....		1,312 80
Making clothing given to in- mates on leaving.....		153 20
		<hr/>
Total net revenue.....		\$5,511 15

MINUTES OF INSPECTION.

Copies of the Minutes recorded by me after my visit of inspection to the Reformatory and Refuge are given hereunder. In them reference is made to many matters of detail connected with the management of these two places :—

"I made an inspection of this institution on the 10th April, 1885, and then found that there were 121 inmates in custody.

There were employed in work from which revenue is derived.....	57
Learning sewing, etc.....	9
Mending and washing clothes for Reformatory use.....	4
House-cleaning, cooking and baking.....	23
Dining-room attendants.....	4
Laundry work.....	11
Nursery and Hospital.....	4
Incapable.....	3
Sick.....	6
Total.....	121

"The general health of the inmates remains good, the only serious case of illness is one of the four reported in the Hospital, who is suffering from lung disease, the others are complaining from temporary causes only.

"The quietness and general discipline of the institution has for some time past been exceptionally good, and although there are five inmates now in the refractory ward, their separate position there is due more to physical causes than to any necessary discrimination in consequence of incorrect conduct of any kind, some of them are epileptic, and others are afflicted with ailments on account of the nature of which they can receive closer attention where they are than if placed in the general wards.

"A good supply of material for the work-rooms is on hand, sufficient for the active employment of those who are adapted for the different kinds of work, and the laundry work is also ample for all the available labour in that department, so that the industrial arrangements are in a very satisfactory state. The general condition and order of the building internally was found to be satisfactory, and the inmates' quarters were thoroughly clean and tidy. The boiler-room, work-shop and coal cellar, however, were not found in that condition of order and neatness which might reasonably be expected, and instructions were given to have those apartments cleaned up at once and afterwards kept in proper shape.

"Arrangements were authorized to relay the coal shed drain with larger tile, as that in use is insufficient to carry off the surface water together with the out-flow from the new laundry which now empties into it, and arrangements were also completed for the erection of the addition to the stables for the purpose of storing straw, and for which provision has been made in the estimates.

Refuge for Girls.

"I saw all the girls in charge, 40 in number. They were all in good health and their appearance in dress and general bearing shewed that they were being properly cared for, and that due attention continues to be paid to their general training and instruction.

"I noted the progress made by some of the younger and later entrants in the class room, and found that their progress in two of the elementary branches was very satisfactory indeed, and indicates the general progress made.

"The apartments were in an excellent condition of order and cleanliness."

"I made another inspection of the Reformatory for Females for the official year, on the 19th September. On that day there were 166 women and 4 infants in charge. Their general health was good. With the exception of two, who are

imbecile, and consequently incapable, and five who were in the sick room, I found the inmates actively engaged in the routine work of the institution. Two only of those on the sick list were suffering from severe illnesses, and one of those from chronic disease of long standing.

“Since the date of my last visit the routine work of the Reformatory has been carried on without any marked change of importance.

“The laundry addition has been completed and occupied for some time past. It is much better fitted and more convenient in every respect, and affords the necessary room for carrying on the work to the best advantage, and the work done continues to give good satisfaction. The employment also is very desirable for a large number of the inmates who cannot otherwise be kept busy.

“An ample supply of needle work was found to be on hand for the inmates more fitted for that class of work, and satisfactory progress appears to be made in this branch also, both in regard to the quantity and quality turned out.

“When the Reformatory was erected it did not appear that accommodation would have to be provided for any number of infants with their mother inmates, consequently only one small room has heretofore been available for them, and this is now and has formerly been overcrowded to such an extent as to indicate the necessity for its enlargement. The removal of the surgery from its present location, and the partition running through the adjoining apartment, would arrange both of them, together with the room now occupied, so that when required the three could be utilized as a nursery and afford the necessary accommodation. A more convenient place for the surgery can be had by enclosing a small part of the west hallway on the third flat, and in order to effect these changes the necessary arrangements will be made to have the work done immediately.

“The Reformatory in all its apartments was found to be clean and tidily kept, and the household arrangements in this regard are systematically carried on.

“An examination of the books showed them to be neatly and properly kept.”

Industrial Refuge for Girls.

“I also made an inspection of the Refuge for Girls on the 19th September.

“There were 35 girls then in charge, and they were all engaged either in the usual work of the institution or receiving instruction in the school room. Their health generally remains good, and their appearance indicates that they are being well cared for and properly looked after while employed in their daily domestic work.

“Their progress in the school room is reported to be satisfactory. That they are attentive and diligent, and that their general conduct has been correct, and as an evidence of their good deportment, only two discredit marks are recorded against any of the scholars since July last.

“All the apartments in the Refuge were found to be strictly clean and in the best of order.

“The play shed in the airing yard has been finished since the date of my last visit, and it affords sufficient scope for outdoor exercise in bad and stormy weather, and in this regard supplies a long felt want.

“The yard also has been levelled and sodded, and this, too, adds to the general comfort and cleanliness of the institution.”

The usual reports of the Superintendent, Surgeon, etc., of the Reformatory will be found in the following pages :—

REPORT OF THE SUPERINTENDENT.

TORONTO, October 10th, 1885.

R CHRISTIE, Esq.,

Inspector of Prisons and Public Charities, Ontario.

SIR,—I have the honour herewith to transmit the fifth annual report of the Andrew Mercer Ontario Reformatory for Females and Refuge for Girls, for the year ending September 30th, 1885.

In referring to the statistical tables appended, you will find in custody October 1st, 1884, 120 inmates; received during the year 142, making a total of 262.

Discharged on expiration of sentence, 141. Of these :—

Taken in charge by the Ladies of the Sunday-school.....	10
Went to Magdalen Asylum, Toronto.....	1
“ to Haven, Seaton Street, Toronto.....	3
“ to Convent of the Good Shepherd, Parkdale.....	3
Sent to relations.....	64
Placed in situations by officers and attendants of the Reformatory.....	14
Provided themselves with situations.....	4
Met by parents or friends at Reformatory.....	9
Returned to old life.....	29
Lost all trace of.....	4
Total.....	141

Of those placed in situations I am happy to say that a number have given satisfaction to their employers. I endeavour to keep in view as much as possible the discharged inmates; some of them have been happily and respectably married, from these I frequently receive very satisfactory letters.

Inmates who have been in the Reformatory for twelve months and over, whose conduct has been good, and who have worked diligently at their several occupations, are on their discharge given sufficient clothing to enable them to make a respectable appearance. There are some few whose friends provide them with clothing and who consequently require nothing from the Reformatory.

Industries.

During the year the work done in the work-shops and laundries has been most satisfactory; the majority of the inmates work diligently and well.

Here I may call attention to the fact that a number of women are sent to the Reformatory who are totally unfit for work of any kind, and who consequently interfere with the discipline of the House. The number of these incapables was, on an average, $2\frac{2}{3}\frac{5}{8}\frac{7}{5}$ per day.

From May 28th until June 23rd there was none of the usual work supplied by the wholesale houses, during that time the women were employed knitting for the Reformatory.

The laundries have done good work, washing and ironing are favourite occupations among the inmates. I regret the withdrawal in June of the Canadian Pacific Railway Company, laundry work. The company expressed entire satisfaction with the way in which the linen was laundried, but it had been decided to have all laundry work done in Montreal.

We have the following returns from the different industries.

List of articles made :

Pants	3389	Underware	198
Shirts	680	Socks pairs	486
Overalls	116	Mitts	257
Dresses	124	Stockings	87
Skirts	154	Quilts	1
Waists	54	Infants' clothing	66
Aprons	51	Towels	23

Religious Services.

The spiritual wants of the Protestant inmates have been faithfully attended to by the Clergymen of the various Protestant denominations in the city. Every Sunday morning Sunday-school has been carried on by a number of earnest lady workers under the able superintendency of W. H. Howland, Esq. The Roman Catholic portion have had the attendance of a priest from St. Michael's Cathedral who has celebrated mass and preached every Sunday morning at 10.30. As the influence of religion is the most powerful aid in reformatory work, we gratefully acknowledge these services.

Punishments.

The cases of punishment are fewer than last year. I find 126 cases recorded against 131 of the year preceding. Only 24 of these were confined in the dark cell, while the number of those punished in this way the year before was 29, shewing that the offences of this year were of a trivial nature, being generally disobedience and impertinence. I am also glad to note that the use of profane language has very much decreased.

Night School.

Classes in reading and writing were held four evenings in the week, for the older women who desire to be taught. These classes were very well attended. The younger women, those under eighteen years of age, had an hour and a half's instruction every morning before beginning their daily work.

Nursery.

On October 1st, 1884, there were three infants in the nursery. During the year three were born in the Reformatory, three were brought in by their mothers, one infant died. Four were taken out at the expiration of their mothers' term of imprisonment, leaving at present four infants in the nursery, making a daily average of $3\frac{5}{6}\frac{6}{5}$.

Hospital.

There were no deaths among the inmates during the year; their general health has been good.

Escapes.

Two inmates made their escapes during the year. On the evening of October 14th, while religious service was being held, two women succeeded in eluding the vigilance of the attendants on duty, and made their escapes from the bath-room window of Corridor H. which is in the fourth storey. They broke the iron grating on the window; having sewed sheets together they tied one end to the pipes of the bath tub, and let themselves down to the yard, they then got over the fence by means of a plank. At the time of this escape new water-closets were being put in, and the bath-rooms and closets were of necessity left open. As soon as this work was completed every place was made secure. Every effort was made to re-capture the escaped women but without success. I have since ascertained that they are now in the United States.

Improvements.

The new laundry and drying room, which was in course of erection at the time of my last report, have been finished, and are in good working order. The grounds and garden have been much improved this year.

Library.

We have had no additions to the library since its opening. The inmates have taken good care of the books, nevertheless they are now very much worn, and the addition of a number of new volumes is much needed. Copies of the Franklin Square and Sea Side Libraries are now nearly all gone: I would like to see them renewed, as in that way good reading matter can be obtained at very little cost, and if put into stiff pasteboard covers would last a long time.

Changes in Staff.

The Reformatory has sustained a great loss in the death of Mrs. Laird. She filled the office of Assistant-Superintendent from the opening of the Reformatory, August, 1880, until time of her death, May 15th, 1885. I lost an able co-worker, and the inmates a warm and sympathizing friend, ready on all occasions to assist them in their efforts to lead a better life. Mrs. Coad was appointed to fill this vacancy, July 1st. Frederick Sherman, Assistant-Engineer, died July 26th. In November last, James Kenny was added to the staff, having been appointed out-side night watchman.

I gratefully acknowledge the assistance rendered me by every member of the staff, both officers and attendants, in maintaining the discipline of the Reformatory.

INDUSTRIAL REFUGE FOR GIRLS.

During the present year only three girls have been admitted to the refuge. The small number of committals is to be regretted: it appears that those having authority to commit children here are not aware of the advantages which the Government has provided for friendless and homeless children.

It is of the greatest importance to have children sent here when they are young, under twelve years of age, before they have contracted habits of sin, they would then be more likely to benefit by the training and discipline of the Refuge, and less likely to contaminate the young and innocent children we have already under our charge.

I see that we have had twenty-three girls under eighteen years of age committed to the Reformatory last year. If we had had these girls under training five years ago in the Refuge, the chances are they would now be fitted to fill situations in respectable families, instead of being numbered among criminals.

The year opened with forty-three girls: three entered during the year. Classes in reading, writing, arithmetic, geography, history of Canada and dictation, have been regularly carried on for four hours each day. As a rule, the progress in these studies is marked. It requires great care and labour to teach many of these girls, some of whom are of weak intellect, though physically strong, others are merely dull, stupid children, but all require the closest attention, as they have all lacked that early training so necessary to develop the mind. Naturally children who have been totally neglected are more difficult to teach than children who have had good home training, nevertheless I am well satisfied with the progress made. I may here specially note the very intelligent manner in which these girls read.

Girls do not attend school regularly after they know how to read and write well, then special attention is paid to their domestic training. The results in this department are most satisfactory; great care is taken that they learn to wash, iron, scrub, bake bread and cook, even the younger children have a certain amount of house-work allotted to them; they are never overtaxed, however. In addition they are taught to make and mend their clothes; to knit and darn their stockings,—the girls who do the best darning receive special rewards.

List of articles made by the girls during the year :—

Stockings.....	106	Sheets.....	14
Underware.....	134	Pillow-cases.....pairs	8
Skirts.....	63	Towels.....	104
Night dresses.....	22	Garters knit.....	75
Dresses.....	56	Unenumerated.....	32

The number of girls discharged and apprenticed during this year is larger than it was last. Seven were apprenticed under the provision of the Refuge Act. Out of this number five are now doing well, of whom I have heard most satisfactory accounts. The conduct of the remaining two was, I regret to say, so bad that I found it necessary to have them brought back to the Refuge, where they are now kept isolated as much as possible.

Four were discharged and given over to their parents' care, these parents having comfortable homes in which to receive them, and having given assurances of good character.

Two girls were released on the expiration of short sentences, one of six months, this girl has since been sent to the Reformatory. The other a two years' sentence, on the expiration of which every effort was made by the Prisoners' Aid Association to have her recommitted, but without avail. This girl is under twelve years of age. I have since learn that she has been committed for vagrancy. I considered her while at the Refuge a most promising child; I regret that she had not been sent to us for the usual term of five years. In conclusion, I beg to say that the officials at the Refuge have worked together harmoniously, their sole aim being the good of the children under their charge.

I have the honour to be, Sir,

Your obedient servant,

M. J. O'REILLY,

Superintendent.

ANNUAL STATISTICAL REPORT OF THE ANDREW MERCER ONTARIO REFORMATORY FOR THE YEAR ENDING SEPTEMBER 30TH, 1885.

Number of inmates October 1st, 1884.....	120
“ “ since received.....	142
Total number of inmates.....	—262
Discharged on expiration of sentence.....	141
“ “ payment of fine.....	1
“ by remission of sentence.....	3
Transferred to gaol, County of York.....	1
Escaped.....	2
Remaining in custody, September 30, 1885.....	114
	—262

Nature of Sentences.

Sentenced direct to Reformatory.....	104
“ to common gaols.....	37
Transferred from Refuge branch.....	1
	—142

Nationalities.

England.....	20
Ireland.....	30

Scotland.....	4
Canada.....	74
United States.....	11
France.....	1
East Indies.....	1
Malta.....	1
	—142

Religious Denominations.

Episcopalians.....	48
Roman Catholics.....	56
Presbyterians.....	11
Baptists.....	5
Methodists.....	21
Unknown.....	1
	—142

Social Condition.

Married.....	40
Single.....	102
	—142

Temperate or Intemperate.

Temperate.....	48
Intemperate.....	94
	—142

Education.

Read and write.....	65
Read only.....	40
Neither read nor write.....	37
	—142

Ages.

Under 18.....	23
From 18 to 20.....	15
“ 20 “ 30.....	47
“ 30 “ 40.....	33
“ 40 “ 50.....	17
“ 50 “ 60.....	5
“ 60 “ 70.....	2
	—142

Sentences.

For 3 months.....	2
“ 4 “.....	3
“ 6 “.....	77
“ 8 “.....	1
“ 9 “.....	3
“ 12 “.....	19
“ 15 “.....	4
“ 18 “.....	9
“ 20 “.....	5
“ 23 “.....	13

For 1 year and 360 days	3
“ 1 “ “ 364 “	1
“ 2 years	1
“ 3 “	1
	—142

Average 10.72 months per inmate.

Crimes.

Abandoning her infant	1
Attempting to commit suicide	1
Cruelty to a child	1
Drunkenness	19
Drunk and causing a disturbance	1
“ “ disorderly	2
Drunkenness and vagrancy	1
“ “ “ and prostitution	1
Forgery	1
Frequenting a disorderly house	3
Inmate of a house of ill-fame	5
“ “ disorderly house	4
Keeping a house of ill-fame	4
“ a disorderly house	3
Larceny	31
“ and receiving stolen goods	2
Misdemeanor	1
Perjury	1
Prostitution	4
Receiving stolen goods	3
Vagrancy	42
“ and prostitution	11
	—142

Occupations.

Charwomen	2
Cook	1
Dressmaker	1
Housekeepers	9
Laundresses	3
Living with parents	1
Prostitutes	45
No occupation	8
Seamstresses	2
Servants	68
School girl	1
Storekeeper	1
	—142

COUNTIES from which Inmates were received.

COUNTIES.	Sentenced direct to Reformatory.	Sentenced to Common Gaols and subsequently removed.	Total.
Carleton	8	7	15
Elgin	5		5
Essex	2		2
Frontenac	6		6
Grèy	2	1	3
Hastings	6		6
Kent		2	2
Lanark		2	2
Leeds and Grenville	4	1	5
Lennox and Addington		3	3
Lincoln	1		1
Middlesex	5	3	8
Ontario	3		3
Oxford	2	1	3
Peterborough	1		1
Simcoe	3		3
Victoria	1		1
Wellington	2		2
Welland	1		1
Wentworth	19		26
York	32	12	44
	103	39	142

NUMBER OF DAYS' WORK DONE BY INMATES DURING YEAR.

Industrial Department.

Knitting to fill orders	2,842 $\frac{1}{2}$
Shirt and pant making	3,798 $\frac{1}{2}$
Laundry (City, Canadian Pacific Railway, and Central Prison)	7,446 $\frac{1}{2}$
	—————14,087 $\frac{1}{2}$

Domestic Labour.

Corridor cleaning	3,117
Cooks	929
Bakers	931
Dining room	1,452 $\frac{1}{2}$

Laundry (inmates', officers', and attendants')	2,851
Learning to sew and to run machine	1,839 ¹ / ₄
Learning to knit	736
Sewing, mending, and knitting for Reformatory	4,535 ³ / ₄
" " own clothing	351
Nursery, attending infants	1,125
Nurses (hospital)	398
	—18,265 ¹ / ₂

Daily average number of Infants and Children in the Reformatory during the Year ending September 30th, 1885.

Day of Month.	October, 1884.	November.	December.	January, 1885.	February.	March.	April.	May.	June.	July.	August.	September.
1	33	33	1	12	33	33	33	33	33	5	5	4
2	33	33	1	12	4	33	33	33	33	4	5	4
3	33	33	1	12	4	33	33	33	33	4	5	4
4	33	33	1	12	4	33	33	33	33	4	4	4
5	33	33	1	12	4	33	33	33	33	4	4	4
6	33	33	1	12	4	33	33	33	33	4	4	4
7	33	12	1	12	4	33	33	33	33	4	4	4
8	33	12	1	12	4	33	33	33	33	6	4	4
9	33	12	12	12	4	33	33	33	33	33	4	4
10	33	12	12	12	4	33	33	33	33	33	4	4
11	33	12	12	12	4	33	33	33	33	33	4	4
12	33	12	12	12	4	33	33	33	33	33	4	4
13	33	12	12	12	4	33	33	33	33	33	4	4
14	33	12	12	12	4	33	33	33	33	33	4	4
15	33	12	12	12	4	33	33	33	33	33	4	4
16	33	1	12	12	4	33	33	33	33	33	5	4
17	33	1	12	12	4	33	33	33	33	33	5	4
18	33	1	12	12	4	33	33	33	33	33	5	4
19	33	1	12	12	4	33	33	33	4	5	4	4
20	33	1	12	12	4	33	33	33	4	5	4	4
21	33	1	12	12	4	33	33	33	4	5	4	4
22	33	1	12	12	33	33	33	33	4	5	4	4
23	33	1	12	12	33	33	33	33	4	5	4	4
24	33	1	12	12	33	33	33	33	4	5	4	4
25	33	1	12	12	33	33	33	33	5	5	4	4
26	33	1	12	12	33	33	33	33	5	5	4	4
27	33	1	12	12	33	33	33	33	5	5	4	4
28	33	1	12	12	33	33	33	33	5	5	4	4
29	33	1	12	12	33	33	33	33	5	5	4	4
30	33	1	12	12	33	33	33	33	5	5	4	4
31	33	.....	12	33	.....	33	.....	33	.....	5	4	.....
	93	51	54	73	104	93	90	93	108	141	127	120

Total..... 1,147
 Average per day 3⁵²/₃₃₅
 Average per month..... 95 ⁷/₁₂

Daily Population of the Reformatory during the year ending September 30th, 1885

Day of Month.	October, 1884.	November.	December.	January, 1885.	February.	March.	April.	May.	June.	July.	August.	September.
1	120	122	135	136	128	129	124	114	105	102	104	117
2	119	120	133	136	131	129	123	114	105	101	104	117
3	122	120	135	134	131	130	122	114	103	100	104	117
4	121	120	138	133	131	130	121	114	105	100	104	116
5	120	119	138	133	131	130	119	114	103	100	103	116
6	121	122	139	132	131	130	119	117	102	100	103	115
7	120	123	138	132	129	130	119	115	102	99	103	115
8	120	128	138	131	129	130	119	113	101	100	103	116
9	120	127	138	130	129	130	119	113	101	102	103	116
10	120	127	138	130	129	130	121	111	103	102	103	116
11	120	127	137	129	129	130	121	111	102	102	103	116
12	120	128	137	129	128	126	119	115	104	102	103	118
13	120	128	137	129	128	125	119	115	103	102	106	117
14	120	129	135	133	128	125	119	114	103	102	105	117
15	118	129	135	130	128	125	118	111	103	102	105	116
16	118	128	135	130	128	125	118	110	104	109	104	116
17	118	128	135	129	128	125	117	109	104	109	104	116
18	118	128	135	128	128	125	117	109	104	109	104	116
19	118	133	135	128	128	125	117	108	104	106	103	116
20	118	135	135	128	128	125	117	107	104	106	104	116
21	119	135	135	129	128	125	117	106	104	106	104	116
22	119	134	135	129	127	125	115	104	104	109	104	116
23	119	133	134	130	127	127	114	104	104	107	104	116
24	119	133	134	129	127	127	114	101	103	107	104	114
25	123	135	134	129	127	128	113	101	105	107	104	114
26	122	135	134	129	126	128	113	101	105	106	109	114
27	122	135	133	129	129	127	113	103	104	106	109	113
28	125	135	133	129	129	127	115	105	103	106	115	113
29	124	135	133	129	.....	124	115	105	103	105	115	113
30	126	135	136	129	.....	124	114	105	102	105	114	115
31	126	.....	136	129	.....	124	.....	105	.....	104	114	.....
	3735	3866	4200	4040	3600	3940	3531	3388	3102	3323	3271	3469

Total	43,465
Average per day	119
Average per month	3,622
Lowest number	99
Highest number	139

REFUGE FOR GIRLS.

ANNUAL STATISTICAL REPORT.

Number of inmates 1st October, 1884.....	43
“ “ since received.....	3
“ returned from apprenticeship in 1884.....	1
	—47
Since discharged by expiration of sentence.....	2
“ “ “ Lieut.-Gov.’s warrant.....	4
Apprenticed by Inspector, seven (two of whom were returned).....	5
Transferred to Reformatory.....	1
Remaining in custody Sept. 30th, 1885.....	35
	—47

Nature of Sentence.

Direct to Refuge.....	3
	— 3

Nationalities.

Canada.....	2
Scotland.....	1
	— 3

Religious Denominations.

Church of England.....	1
Presbyterian.....	1
Methodist.....	1
	— 3

Education.

Read and write.....	1
Read only.....	1
Neither read nor write.....	1
	— 3

Offences.

Vagrancy.....	2
Larceny.....	1
	— 3

Sentences.

Indefinite.....	3
	— 3

Ages.

Thirteen years.....	2
Twelve “.....	1
	— 3

Counties.

York.....	2
Lennox and Addington.....	1
	— 3

Daily Population of the Refuge.

October. 1884.	November.	December.	1885. January.	February.	March.	April.	May.	June.	July.	August.	September.
43	44	44	43	43	41	40	36	35	34	34	35
43	44	44	43	43	41	40	36	35	34	34	35
44	44	44	43	43	41	40	36	35	34	34	35
44	44	44	43	43	41	40	36	35	34	34	35
44	44	44	43	43	41	40	36	35	34	34	35
45	44	44	43	43	40	40	36	35	34	34	35
45	44	44	43	43	40	40	36	35	34	34	35
45	44	44	43	43	40	40	36	35	34	34	35
45	44	44	43	43	40	40	36	35	34	34	35
44	44	44	43	42	40	40	36	35	34	34	35
44	44	44	43	42	40	40	36	35	34	34	35
44	44	44	43	42	40	40	36	35	34	34	35
44	44	44	43	42	40	39	34	35	34	34	35
44	44	44	43	42	40	39	34	35	34	34	35
44	44	44	43	42	40	39	34	35	34	35	35
44	44	44	43	42	40	38	34	35	34	35	35
44	44	44	43	42	40	38	34	35	34	35	35
44	44	44	43	42	40	38	34	35	34	35	35
44	44	44	43	42	40	38	34	35	34	35	35
44	44	44	43	41	40	38	34	35	34	35	35
43	44	43	43	41	40	38	34	35	34	35	35
43	44	43	43	41	40	38	34	35	34	35	35
43	44	43	43	41	40	38	34	35	34	35	35
43	44	43	43	41	40	37	34	35	34	35	35
43	44	42	43	41	40	36	34	35	34	35	35
43	44	42	43	41	40	36	34	35	34	35	35
43	44	42	43	41	40	36	34	35	34	35	35
43	44	42	43	41	40	36	34	35	34	35	35
43	44	42	43	41	40	36	35	35	34	35	35
43	44	42	43	..	40	36	35	35	34	35	35
43	44	42	43	..	40	36	35	34	34	35	35
43	..	42	43	..	40	..	35	..	34	35	..
1354	1320	1343	1333	1175	1245	1152	1082	1049	1054	1070	1050

Total number of days.....	14,227
Highest population.....	45
Lowest ".....	34
Average daily population.....	38 $\frac{357}{46}$

REPORT OF THE SURGEON.

TORONTO, 1st October, 1885.

ROBERT CHRISTIE, Esq.,

Inspector of Prisons and Public Charities.

SIR,—I have the honour of herewith submitting to you my Annual Report as Surgeon of the Andrew Mercer Ontario Reformatory for females, and Industrial Refuge for girls, for the year ending September 30th, 1885.

Reformatory.

I am pleased to be able once more to report that considering the number of inmates, the sources from which they come, and other circumstances, the health generally has been good. Aside from the many ailments common to both sexes, an institution of the character of the Reformatory will necessarily have those ailments peculiar to the female

sex, in addition to a greater liability to a certain class of disease on account of the life of physical prostitution led by a large proportion of those admitted. Hence it might naturally be expected that the percentage of those sick requiring treatment would be greater than in other institutions. The admission of pregnant women and mothers with young children, as well as insane women, and women so debilitated by debauch, disease, or advanced years, as to render them chronic invalids, tends to make the percentage of inmates under treatment much larger than it would under ordinary circumstances, still the exhibit is a fair one. The average daily number of inmates during the year was 119.24; while the daily average number under treatment was 13.73 or 11½ per cent of the whole; and the daily average of those sick and wholly incapacitated for work was, in Hospital 2.04, and temporarily sick, .72, making a total of 2.76, or less than 2½ per cent. on a daily average, were sick.

The daily average of cases presenting for treatment during the year was 6.43, excluding inmates of the Hospital and Syphilitic wards; while the daily average of those presenting who were so sick as to be incapacitated for work was .72. Of the total casuals presenting themselves as sick and requiring treatment, there were 140 who were either pretending sickness, or else something very frivolous had existence, and did not require treatment.

On August 27th an insane patient was admitted as an inmate, that should never have been committed to the Reformatory, and on the 1st of September I made out a certificate of her insanity, and subsequently secured another from a city practitioner, and she was taken before the county Judge for examination; commitment papers were made out, but at the close of the year she was still an inmate of the Reformatory.

The necessities of circumstances have given rise to the establishment of a nursery, a feature evidently not contemplated at the organization of the Reformatory; what with the births occurring as a result of commitment of pregnant women, and the admission of babes with mothers, an average daily infantile population has been maintained of 3. During the year there were four births, three living children, 2 girls and 1 boy, and the birth of a dead child. One infant died from marasmus, the remaining ones were all healthy infants. With the existence of the nursery there is an irregularity of discipline inaugurated which is unavoidable so long as there can be no attendant with nursery duties assigned. The mothers at frequent intervals must leave their work to nurse or care for their infants, and more or less confusion ensues; and with the proximity of the nursery to the Hospital ward we have a perpetual source of annoyance to the patients, as well as the occupancy of room required for special cases. It is most desirable that a change in location should be made, for sanitary as well as disciplinary reasons.

During the year 29 inmates spent some portion of their term of sentence in the Reformatory Hospital, being 9 less than the previous year. Of these, 15 spent from 1 to 10 days' time as patients thereof; 8 spent from 11 to 20 days' time; 1 spent 24 days. With the remaining 5 cases the days spent by each severally, with the disease or ailment treated, were:—

48 days.....	Convulsions.
51 "	Dislocation of Elbow.
56 "	Menorrhagia.
173 "	Chronic Bronchitis.
201 "	Asthma and Chronic Bronchitis.

The daily average of inmates in the Hospital for the year was 2.04 or .53 less than the preceding year.

The past year there were 13 cases of syphilis in the specific ward, as against 24 the previous year, nearly all of which were new cases, although 2 or 3 had previously occupied that ward, but left before being cured, on account of expiration of sentence. A few of those formerly treated and discharged cured, were recommitted to the Reformatory, but not admitted to the specific ward. Of the 13 cases, 7 were in the 2nd stage, and nearly all were young girls, from 16 to 20 years of age; while the remaining 6 had the disease in its late stages. These were women of middle age. Of the thirteen inmates, two were in

at the beginning of the year, or were retained the whole of the year just concluded, on account of the progress the disease had made in the system. There were 11 cases admitted to the ward during the year. At the close of the year 9 of the total remained under treatment. Of the 4 who left the ward 2 were apparently cured, while the other 2 left on account of expiration of sentence. This class of cases must from the nature of things continue to be isolated as a measure of sanitary precaution against the spread of this loathsome disease to other inmates; still these inmates cannot be rated as hospital cases, owing to their general capability for some kind of work, while inmates of the hospital are sick or injured and wholly incapacitated for work while retained there.

The daily average cost per inmate of the Reformatory for medicines and medical supplies was the extremely low sum of less than three mills.

The vaccination of inmates is a matter which as a precautionary measure has been adopted by me since the opening of the institution. Not only have all the officials, attendants and employees been vaccinated, but every inmate on being admitted, is examined as to the physical evidence of having had small-pox, or having been vaccinated. Of the 142 admissions during the year which were examined, it was found that 48 possessed no such physical evidence, and they were consequently vaccinated. The benefits of adopting this course have been not only protection to the Reformatory, but protection is afforded to the health and life of the inmates when they mingle with the general populace of the country.

I am pleased to report that the year passed without the record of a single death among the inmates.

A determined attempt was made by one inmate to commit suicide, but its accomplishment was frustrated by the appearance of a guard, who fortunately interposed her aid in sufficient time to save life.

From time to time I have made inspections of corridors, cells and closets, and uniformly found everything satisfactory.

At unexpected and irregular intervals, I have entered the dining-room, and taken by chance the dinner placed for an inmate, and partaken thereof, to satisfy myself of its quality, and invariably found it good in quality, and ample in quantity.

Only one or two complaints were made by inmates, and upon careful investigation they were proved foundationless.

The Reformatory staff was unfortunate in losing, by death, the Deputy Superintendent, Mrs. Laird, on the 15th of May last. Her illness was brief, and her death to most of those who knew her was a surprize, for, added to the fact of her being in the prime of life, she possessed an excellent physique. The disease to which she succumbed was Acute Diabetes Mellitus. The unfortunate of her sex had no truer friend than she. She was devoted to her task, respected by the inmates, and had the confidence and esteem of not only the members of the Reformatory staff, but that of a wide circle of acquaintances as well.

The death of Mr. Sharman the Assistant Engineer, took place at his own home on the 26th July. He had not reported himself as sick to me, but before going home in the evening told one of the attendants he was not feeling well. He quickly got worse, and the nearest doctor was called in. He died in the morning from what is generally known as Canadian Cholera.

I am glad to be able to report that the Chief Attendant (who is solely entrusted with the care of medicines, their administration, and responsible for carrying out professional directions, both in the hospital and throughout the different wards, as well as the Industrial Refuge for Girls) has now attained a good knowledge of the various, and in some cases peculiar, duties devolving upon her, and has attained a competency to act in cases of emergency. Intelligence, care and training are absolutely essential in the attendant holding that position, and frequent changes are fraught with not only great inconvenience, but detriment to the Institution.

I am pleased to note the fact, that from the opening of the Reformatory to the present time, my relations with the various officials have been pleasant, and without cause for dissension.

Presentations for treatment during the year ending September, 1885, excluding hospital cases.

DISEASE.	No.	DISEASE.	No.
Abrasions	11	Insect bite	1
Abscess	12	Irritable bladder	6
Acne	3	Leucorrhœa	16
Alcoholism	1	Lumbago	4
Amenorrhœa	22	Lupus	9
Anœmia	3	Malaria	2
Asthma	2	Malingers and Frivolous	140
Bilious	266	Masturbation	2
Barborismus	2	Meno-pause	2
Bronchitis (Sub Acute)	3	Menorrhagia	22
“ (Chronic)	4	Metritis	19
Burns	3	Metrorrhagia	1
Cancer	3	Nausea	6
Caries	2	Neuralgia	55
Cephalalgia	53	New Inmates (for inspections as to disease and vaccination)	142
Chancroids	5	Operations	6
Chapped Hand	3	(Extracting stick from hand 1; needle from finger 1; removing cancer from forehead 1; reducing dislocated elbow 1; and knee 1; and removing tumor from neck 1)	
Chromophytosis	1	Otitis	2
Cold (Simple)	91	Ovaritis	6
“ (Severe)	49	Pains (alleged and simple in various parts of body)	179
Congestion (Kidney)	12	Palpitations	13
“ (Liver)	1	Paralysis (partial)	1
“ (Ovary)	2	Pedicule	4
Conjunctivitis	10	Pharyngitis	4
Constipation	247	Phthisis (chronic)	2
Contusions and wounds	14	Piles	7
Convulsions	6	Pleurisy	2
Corneitis	8	Pregnancy (disorders of)	2
Coryza	2	Prurigo	6
Cramps	34	Pruritis	4
Cough	63	Rheumatism (acute)	1
Cystitis	2	“ (chronic)	65
Diarrhœa	31	Scald	1
Dysentery	1	Sore throat (simple and severe)	56
Dysmenorrhœa	37	Sprain	14
Dyspepsia	2	Synovitis	1
Earache	22	Syphilis, (primary)	1
Eczema	16	“ (secondary)	44
Endometritis	19	“ (tertiary)	31
Epilepsy	4	“ (inherited)	1
Erysipelas	1	Teeth extracted	61
Erythema	4	Toothache	21
Febriculæ	16	Tonsillitis	8
Gastralgia	3	Tumor	2
Goitre	4	Ulcers	6
Gonorrhœa	17	Urticaria	2
Hæmoptysis	2	Uterus, (displacements of)	6
Hæmorrhoids	6	“ (enlargement of)	4
Hernia (Abdom)	1	“ (ulceration or erosion)	17
Housemaids' Knee	3	Vaccinated	48
Hysteria	7	Vaginitis	3
Incontinence Urine	2	Varicose veins	7
Indigestion	105	Vertigo	5
Icturus	2	Weakness or Debility	75
Impetigo	2		
Inflammation (of face)	8		
“ (glands)	21		
“ (upper extrem)	5		
“ (lower extrem)	7		
Insanity	3		
Insomnia	1		

Monthly Record of Cases, other than Hospital Cases.

MONTHS.	CASUALS OR ORDINARY CASES PRESENTING.				DARK CELL.	SYPHILITIC WARD.	
	Total Cases Seen.	Daily Average of Cases.	Total Cases Sick.	Daily Average Sick.	Visits to Inmates of.	Total Inmates.	Daily Average.
October.....1884	121	3.90	17	.54	1	3	3.00
November. "	227	7.56	11	.36	2	4	3.16
December..... "	219	7.06	11	.35	0	4	3.80
January.....1885	268	8.64	44	1.41	1	4	3.83
February..... "	220	7.85	29	1.03	0	5	4.03
March..... "	196	6.32	29	.93	0	7	5.22
April..... "	162	5.40	19	.63	0	7	7.00
May..... "	182	5.89	19	.61	0	8	6.80
June..... "	167	5.56	17	.56	2	7	6.26
July..... "	168	5.41	9	.29	0	6	5.54
August..... "	149	4.80	14	.45	0	9	5.58
September..... "	264	8.80	46	1.53	0	9	9.00

Cases Treated in the Reformatory Hospital.

DISEASE.	No.	DISEASE.	No.
Asthma.....	1	Epilepsy.....	1
Acute bronchitis.....	1	Fracture (fibulæ).....	1
Acute Rheumatism.....	2	Hysteria.....	1
Anæmia.....	1	Menorrhagia.....	1
Alcoholism.....	1	Neuralgia.....	2
Abdominal hernia.....	1	Ovaritis.....	1
Convulsions.....	1	Operations (cancer).....	1
Chronic Bronchitis.....	3	Do. (tumor).....	1
Childbirth.....	4	Severe cold.....	4
Crushed finger.....	2	Sprained knee.....	1
Dislocated elbow.....	1	Do. ankle.....	1
" knee.....	1		

Monthly Record of Hospital Cases.

MONTHS.	Total inmates.	Total days.	Average inmates per day.
October 1884.....	3	21	.67
November ".....	2	28	.93
December ".....	7	142	4.58
January 1885.....	4	73	2.35
February ".....	5	49	1.75
March ".....	4	62	2.00
April ".....	4	76	2.53
May ".....	6	70	2.25
June ".....	5	83	2.76
July ".....	4	53	1.70
August ".....	2	38	1.26
September ".....	5	58	1.73

Industrial Refuge for Girls.

The health of the girls in the Refuge has been excellent throughout the whole year. One or two were confined to bed a few days, the result of severe cold and sore throat; and one girl was unfortunately the offspring of syphilitic parents, and at times was compelled to suffer for the sins of her parents; with these exceptions the health has been all that could be desired. The Refuge has been singularly fortunate, in that not a single case of death has occurred within its walls since it was first opened.

Every sanitary precaution that has had existence in the Reformatory has had existence here, and every other matter of vital interest has had due consideration.

The solitary vice, which at one time threatened to work serious mischief here, has been almost eradicated without resort to extreme measures. The course adopted has been to speak with candor, and to point out the grave results which must follow the practice, and appeal to their self respect. In one or two exceptional cases the fear of punishment and extreme measures were exhibited as a deterrent.

Regular habits of life and the proper and equitable division or apportionment of time for the purposes of labour, refreshment, instruction, recreation and sleep, has made the Refuge a model institution, which will successfully bear the inspection or criticism of all interested in the reformation of the young girls sent to the Refuge.

Following are the diseases or ailments treated during the year, with the number of girls afflicted with each :

DISEASE.	No.	DISEASE.	No.
Bilious.....	1	Scrofula.....	1
Cold (simple and severe).....	8	Sore throat.....	2
Constipation.....	6	Syphilis (hereditary).....	1
Cough.....	3	Teeth extracted.....	9
Diarrhœa.....	2	Toothache.....	1
Febriculæ.....	1	Ulcers.....	3
Indigestion.....	2	Vaccinated.....	7
Masturbation.....	2	Weakness.....	1
Pain.....	1	Wound.....	1
Peritonitis.....	1		

I have the honour to be, Sir,

Your obedient servant,

JOHN S. KING, M.D..

Surgeon.

ANDREW MERCER REFORMATORY SUNDAY SCHOOL, FIFTH ANNUAL REPORT.

The Sunday-school in this Institution has been continued regularly throughout the year. A session was held every Sunday, and the teachers are grateful to God, that in so many instances good results have followed their labours.

Owing to the absence of our Secretary, through illness, and the fact that her successor was not appointed until January, 1885; our statistical report dates only from that period. The number of names on the roll during second quarter, beginning January, 1885, was 90; average attendance 63; scripture verses recited 361. Third quarter, number on the roll 80; average attendance 63; verses recited 489. Fourth quarter, number on the roll 89; average attendance 59; verses recited 711. Average attendance of whole school, including children of the Refuge and teachers, 100. Total number of verses recited during the nine months, 1,561. One class in the Refuge alone, reciting 1,301 of this number. The staff of regular teachers numbers 20.

The teachers have provided situations for ten of the discharged inmates. Several of these are doing well, one in particular having remained almost a year, as a servant in a Christian family. We are also in constant correspondence with other inmates discharged during this and previous years. Cast-off clothing has been provided for many, it being the desire of the teachers to make those going to situations as comfortable as possible.

Through kindness of the Upper Canada Bible Society, we have been able, as in former years, to present a copy of the Scriptures to every inmate. Christmas cards were given by the teachers, and leaflets, Sunday-school papers, cards, etc., were distributed by

the kindness of S. H. Blake, Mr. Wm. Gooderham, Mrs. Grey, Brampton ; Mrs. Nanton, Toronto, and others.

Miss McBrome's Saturday afternoon class is much appreciated. Her gentleness, and simple presentation of Gospel truth are very winning, and we have abundant testimony of the helpful nature of her work. The quarterly sessions of the school have been turned into evangelistic services, and these were always most encouraging to the Christian friends conducting them. The singing of the "White Brothers," was specially delightful, and in many instances the falling tears and convulsive sob marked the appreciation of the inmate.

With pleasure we again give expression to our gratitude for the sympathy and assistance accorded to the teachers in their work by Mrs. O'Reilly, Miss Elliott, and the other officers and attendants. In this connection we desire also to place on record an expression of our sorrow at the great loss we have sustained in the sudden death of Mrs. Laird, the Assistant Superintendent. The experience and personal knowledge of the inmates, possessed by Mrs. Laird, were at the disposal of the teachers, and her suggestions and advice were of incalculable assistance, especially to those in charge of the school. We miss her presence, but are comforted by the fact that our loss is her gain.

The appointment of Mrs. Lucy Coad, as Deputy Superintendent successor to Mrs. Laird, and of Miss McIntyre as attendant, has given universal satisfaction.

In closing, we call attention to the large number of young girls, apparently under the age of twenty years, at present in the Institution. The arrest and commitment of these girls are proof positive that they had fallen into the ranks of criminals. As such, we regard their presence in the Institution, at the beginning of their criminal life, a hopeful sign of future reformation, and we urge authorities throughout the Province, who desire the reformation of young female criminals, to commit, and for long terms, to the Refuge or the Reformatory.

W. H. HOWLAND, Superintendent.

L. J. HARVIE, Assistant Superintendent.

E. Y. SAMS, Secretary.

REFORMATORY FOR BOYS.

It is a sign of the well-being of this institution, when I have to open my report upon it by stating that there is nothing unusual in its history, during the year just closed, for me to comment upon. Unusual occurrences, though sometimes of interest, are generally productive of excitement amongst the boys, and retard their advancement in the schools, and with their work. Since writing my last report, in which I referred to the very unusual occurrence of an outbreak of epidemic sickness, all has gone on smoothly with the Reformatory. Progress has been continued along the route referred to in my report for the year 1882, in which I described the change of system introduced by my predecessor. We have not gone back, but have, I hope, materially advanced, as greater privileges are now allowed to the boys, and I am glad to be able to state that they have not abused the confidence placed in them. The attempts at escape which were made were not a result of this increased liberty. Even if they were, it is no reason why the Reformatory should be hardly judged. It should be remembered that some of the boys are not committed to the Reformatory until they are fifteen or more, years old, and that previous to their being sentenced, they had not been subject to any control for years. It is but natural that to these boys and to others in whom the roving or adventurous spirit is strong, times will come when they feel they must throw off all trammels, and, often on the spur of the moment and without preparation or forethought, they make an effort to be free. The many instances on record of boys running away from comfortable homes, prove that the spirit referred to is not confined to the boys who are sent to Penetanguishene.

The efforts made of late years to give the lads such instruction and practical training as would benefit them in after life, have not been relaxed. The system and rules established with this end in view have during the past year been well carried out. As scholars in their classes, a good majority of the boys appear to have made fair progress in acquiring the rudiments of an English education. The training of the boys in the shoe, tailor and carpenter's shops, and engine room, and also in the necessary domestic work, has been carefully attended to. A good distribution of the boys at these several branches of work is made, so that each one may have a fair opportunity to gain practical knowledge in the work for which he may be most adapted.

The occupations which, no doubt, are most conducive to the physical and moral well-being of the boys, are those of agricultural labour in all its branches, and of garden work in the variety of useful and interesting knowledge which may be acquired while the work of cultivation is in progress. In the garden, the results during the year were very satisfactory. The vegetable, root and fruit crops are equal, both in quality and variety, to any that could reasonably be expected in an exposed situation such as that of the Reformatory grounds.

The farm does not, however, make so good an exhibit. The operations are limited, and the returns from the land under cultivation are not large, nor are they composed of such variety as it is desirable they should be for the purpose of instructing the lads in general agricultural operations.

When all the advantages to be gained from a good practical training in farm work are taken into account, it is to be regretted that so little of the land attached to the Reformatory can be made available for general cultivation, and that a still smaller area of it under the most favourable circumstances can be cultivated with profit. However, the best is done that can be, and the most made out of the limited resources at our disposal; and there is no doubt that many of the lads learn much that is very useful to them after their discharge.

The following summary shews the committals to, and discharges from, the Reformatory during the year under report and the preceding one:—

	1884.	1885.
Number of boys at beginning of year (1st October)	245	242
Admitted during the year	81	51
Returned after attempted escape	1	2
Total in residence during the year	327	295
Discharged	54	59
Transferred to the Central Prison	1	..
Reprieved	25	14
Died	3	..
Escaped	2	2
	85	75
Number at close of year (30th September)	242	220

The most noticeable features are the large decrease in the commitments, and the fact that no deaths took place during the year 1885.

The maintenance expenditures during the two past years are given in the subjoined table:—

SERVICES.	YEAR ENDING 30TH SEPT., 1884.		YEAR ENDING 30TH SEPT., 1885.	
	Total expenditure.	Annual cost per inmate.	Total expenditure.	Annual cost per inmate.
	\$ c.	\$ c.	\$ c.	\$ c.
Salaries and wages	15810 62	65 60	15804 18	66 68
Rations	7368 21	30 57	5332 25	22 50
Bedding and clothing	4465 90	18 53	4848 70	20 46
Fuel, light and cleaning	5486 92	22 77	5446 31	22 98
Furniture and furnishings	733 46	3 04	988 70	4 17
Farm expenditure	1875 64	7 78	2655 45	11 21
Ordinary repairs	1018 40	4 23	1309 95	5 53
Stationery, postage, telegrams and advertising	738 97	3 07	709 84	3 00
Workshop, tools and fixtures	415 94	1 73	681 33	2 88
Hospital expenses	104 52	0 43	54 37	0 23
Chapel, school and library expenses	384 52	1 59	441 62	1 86
Officers' travelling expenses	216 43	0 90	36 45	0 15
Recovering escaped boys	230 75	0 95	249 24	1 05
Rent of cottages for guards	474 87	1 98	481 36	2 03
Freight	344 24	1 43	299 50	1 26
Sundries	856 73	3 55	753 73	3 18
Total	40526 12	168 15	40093 48	169 17

The increased number of boys in residence accounts for the slight increase in the per capita cost.

INSPECTIONS.

I annex copies of the minutes recorded by me after my visits of inspection:—

“On the 14th and 15th of May I made an inspection of the Reformatory for Boys and found that there were 233 boys in charge. On the first day of my visit they were distributed as follows :

	A. M.	P. M.
Carpenter's shop.....	4	1
Tailor's ".....	7	6
Shoe ".....	14	7
Engine and boilers.....	6	7
Stables.....	7	5
Farm.....	4	4
Garden.....	10	9
Cooks.....	4	1
Dining hall.....	5	10
Wash-house.....	7	6
Gate.....	2	2
Cleaners.....	18	12
Superintendent and Deputy Superintendent's houses ..	2	1
Teaming.....	4	3
Outside work.....	12	8
Play-room.....	24	22
Protestant School, Senior.....	19	32
" " Junior.....	35	31
Catholic ".....	38	38
Hospital.....	7	8
Wing.....	4	1
Band practice.....	..	19
Total.....	233	233

“The general health of the lads has been well maintained since the date of my visit: few have been on the sick list and none of those have been seriously ill. At present there is one of the number only whose condition requires his confinement to bed in the hospital.

“The Superintendent speaks most encouragingly of the general good behaviour of the boys, of their docile and tractable condition of which there are many evidences in their daily conduct and deportment towards each other and the officials of the Reformatory generally.

“A short time devoted in examining into the progress made in some of the classes in the school room shews that substantial improvement is being made by quite a number of them. Their writing and composition are very creditable and with few exceptions their requirements in this way have resulted from instructions imparted at the Reformatory.

“The evidences that good discipline and order continue throughout the institution are to be found in various ways, but especially by noting the decreasing number of punishments recorded, and that the penalties imposed have mainly been for trivial offences.

“The attention of the Public Works Department will be called to the necessity for some improvements and repairs required which have mainly been caused by the storms and unusual severity of the past winter. The matter of more immediate importance in this connection is the construction of a drain to secure the foundation of the new laundry building. The tile being furnished, the work will be done by Reformatory labour.

“The old established roads leading to the Reformatory from the village of Penetanguishene although very good in summer are frequently rendered impassable in winter by snow drifts which are formed on the exposed positions.

“In view of the representations regarding the expenditure incurred by the Municipality in extending the street or roadway on the level ground and the request for a certain amount of Reformatory labour to complete it, the Superintendent is authorized to arrange with the Council for work on the line with the boys, in all not to exceed an amount equal to 200 days.

“The general condition of the institution was found to be satisfactory, except in the store department, which was not so neat and orderly as it should have been. The books especially were dilapidated and were not kept in such system and method as to enable me to ascertain readily the true condition of the department. The Bursar was instructed to procure a new set of books and, after taking stock of the stores in hand, to commence the use of the new set on the first of July next, after which he will from day to day see that the entries are regularly made by the storekeeper in charge.”

“I made a second inspection of the Reformatory for the official year on the 17th and 18th of September, when there were 221 lads in residence. They were employed as follows:—

Carpenter's shop	4
Tailor's "	12
Shoe "	12
Engine room	8
Stables	6
Farm	2
Garden	7
Cooks	4
Dining hall	6
Wash house	2
Cleaners	16
Gate house	2
Superintendent's house	1
Deputy Superintendent's house	1
Teaming	4
Outside gang	9
Playing	67
Protestant school, senior	23
" " junior	34
Hospital	1
Total	221

“The health of the lads was excellent, only one out of the whole number complaining of any ailment. The care for their comfort on the part of the officials has conduced greatly towards this happy condition of things. The scholars were reported to be making satisfactory progress under their respective teachers.

“An examination of the dormitories and all the apartments of the institution showed them to be in good condition and well kept. Proper supervision appears to obtain in this respect.

“The boys, so far as appearance goes, were comfortable, quiet and contented. Since the date of my last visit, however, three escapes have been effected, and several attempts frustrated. These occurrences would indicate that a spirit of unrest exists among some of the boys at least; but after due enquiry I could not find that any unusually exciting cause existed. The first escapes took place on the 9th August, the time selected being Sunday forenoon, when two left simultaneously, one from the dining-room and the other from the kitchen. There was no evidence to show that it was premeditated for any length of time, or that they had informed others who might be in sympathy with them as to their movements. From the nature of their duties I do not think the attendant in charge could be held responsible for this escape. The next two who escaped left the stables on the 14th August, got into a boat about five miles away from the Reformatory and rowed some twenty miles north-east to a point where the boat was recovered five days after, but the boys have not since been heard of. The next was an attempt, made by three boys, who were working outside the Reformatory, enclosure—August 17th. They dashed away from the guard, who had a gang of twelve under his charge at the time. Two of the boys were recaptured two days after, but the third, a coloured boy, who was the ringleader, managed to elude his pursuers and no trace of him has since been obtainable. The last to attempt to escape were three boys employed in the dining-room. On the afternoon of the 8th August they burrowed a hole under the outside fence of the enclosure in a secluded spot, only one of them at a time working at the opening until it was large enough for exit, when they all took their departure. Two of them were brought back during the night and the third next morning.

“The freedom and confidence with which it is necessary, in the general interests of the institution, to treat the lads leads to the abuse of that confidence at times, especially by those who have served a length of time and are verging upon manhood. The extensive forests near the Reformatory afford shelter and are therefore a great temptation to escape, and at this season of the year the abundance of wild berries, with an occasional meal of potatoes got from an out-lying field, afford sufficient sustenance while the runaways are within reasonable reach of recapture by the officials. Punishment to such an extent as to act as a deterrent, on the more advanced lads especially, would be a retrograde step, and tend to give the institution a penal character, and thus detract from its position as a Reformatory school.

“As regards the boys concerned in these escapes it is worthy of note that their early training and habits have been such as to foster in them a vagrant spirit, and desire for roving about free from all restraint. This condition of matters, however, cannot be allowed to continue, and such means will be devised as will be calculated to frustrate such attempts in the future.

“The condition of the buildings was found to be generally good, and in a fair state of repair. The floor in the dining-room, however, is becoming so delapidated that no ordinary repairs will put it in proper condition; but until an appropriation can be had for the purpose, some temporary work upon it is necessary, and the Superintendent is authorized to have this done at the earliest possible date. The new kitchen is now in use, and from its convenient position, ample light and ventilation, and proper fittings, it is giving every satisfaction.

“An examination of the books shewed them to be properly kept and well looked after. The stores also were in proper order.”

EXAMINATION OF SCHOOLS.

The schools connected with the Reformatory were again examined by Mr. Morgan, the Public School Inspector of the District. He reported upon them to the Minister of Education as follows :

I have the honour again to lay before you a report on the educational status of the Penetanguishene Reformatory for Boys. The interest I take in the lads who are I feel being really "educated" there, is such that I have given more than twice the time to them that inspectors are called upon to give to the ordinary Public Schools. As a result I have had very ample opportunities to judge of the correctness of the conclusions, and of the recommendations made in my former reports, and I may say at once that time only confirms me in the opinion which I at first formed.

I cannot but regret that the name of the institution does not better describe what seems to me to be its true office. The name "the Reformatory School for Boys" would exactly describe the work done under its present management, and (so great is the power of a name) might even be instrumental in bringing about in the public mind some idea of the aim and intention of the establishment, and might in this way prepare for some of the changes which I am quite certain must be effected before an adequate return can be made to the country for the large amounts expended.

My former report will have prepared you for the statement that the schools are but little below the average standard in rural public schools, a condition of things explicable only because of the enforced regularity of attendance here, as compared with the attendance in rural schools where the compulsory law is more honoured in the breach than in the observance.

I must compliment the management on the exceedingly satisfactory work now being done by Mr. Mahony in the separate school, and I sincerely trust that the era of constant changes in this school has come to an end. There is more improvement noticeable in this room than in either of the two others (although the absolute attainment is not generally so high as in Mr. Murphy's room). This is due partly no doubt to the fact that there was more room for improvement, but it is also attributable to the first-rate work which Mr. Mahony is doing, and to the more modern methods which he brings with him from the outer world. The highest room in the Protestant school will have to look to its laurels. Mr. Mahony's room is painfully small for the scholars, and there is a great deficiency of blackboard, and an almost total lack of anything like apparatus, good maps, globes, etc. I found 45 boys attending the morning school in classes I. and II., and 40 in the afternoon in classes III., IV. and V., the 5th class being really only a lower fourth according to the public school standard. The reading here has decidedly improved, but still lacks in clearness and expression, the spelling also shows improvement, and arithmetic, which was hopelessly bad last time, shows a decided advance, although the mental work is still unsatisfactory. In writing they were marked from one to five, five being the best, the average mark was 2.85. The portion of the work which gave me the least satisfaction was the English. Even in the construction of simple sentences there was but little good work done. Half a dozen words were given on which to construct sentences or a sentence, and in so simple an exercise no slate was faultless, seven had one mistake each, ten had two each, and twenty-three had three or more each. As my object was to test the essentials alone, I did not examine the History at all, but believe it to be up to the standard of the other subjects.

I must here emphasize a remark made in my last report. Out of 45 boys questioned 31 had been to school less than six months before entering the "Reformatory school," and of these 31, sixteen had never been to school at all.

Passing to the senior room in the Protestant school, I found an equally encouraging state of affairs, for whilst the progress has not been so rapid the absolute condition is somewhat higher. This room is decidedly too large for the number attending Mr. Murphy's classes, and its size has a bad effect on the teaching of this division, which is still low and indistinct, although there has been some improvement in expression. I found 24 boys in the morning all in class IV., and 36 in the afternoon in class III. Here also mental

arithmetic and English are not satisfactory, and must be worked up. In writing, the average was 2.88, and in the English test as applied to class III. alone, no slates were faultless, seventeen had one mistake each, thirteen had two each, and six had three or more. The result was of course decidedly better in class IV.

Whilst Mr. Murphy's and Mr. Mahony's rooms are a source of much encouragement to me as showing what is being done to better the future condition of the boys, I am forced to say that nothing but disappointment awaited me in the junior room of the Protestant school.

It is only fair to say that the lack of apparatus, blackboard, etc., and a slight physical defect, may to a certain extent be held responsible for the existing state of things, and it may be that on my next inspectorial visit I may find considerable improvement.

A few general considerations in addition to those mentioned in my last report suggest themselves.

(1) Teachers should, where possible, be permitted to attend conventions in order to keep up with more modern methods. If it be objected that they cannot leave their schools, I cannot but think that they might leave as easily for a convention as to pursue "escapes," a course of action which is of course occasionally necessary.

(2) They should be supplied with two or three live educational journals, and should have a small library of reference, such as is now prescribed for every High School, and recommended for the public schools.

(3) There should be regular promotion examinations (the same for both schools, if the evil of separation continue), on the result of which the boys should pass from one class to another, and which SHOULD also be taken into consideration on determining a partial commutation of their sentences.

(4) I would also strongly recommend that a prize, say of the value of one dollar in books, be given to every boy who succeeds in passing the Entrance Examinations to High Schools, that coloured certificates be granted to every boy who passes the examination for promotion from one class to another, and that a grant of \$20 or \$25 be made to meet these expenses.

This recommendation may seem somewhat fanciful to an unobservant person, but the advantages (from an educative as well as an "Educational" point of view) of having these lads constantly looking forward to a life of usefulness when discharged, and of encouraging them to exercise unremittingly every mental faculty, can scarcely be over-estimated. Give them plenty of *wholesome* brain-work, and you lessen the chances of plotting escapes; encourage them to look upon honest study as *one* of the means whereby they may themselves assist in winning their freedom at an earlier date than otherwise, and you not only remove the temptations which are inseparable from idleness, but you supply one of the strongest incentives to steadiness, obedience, and trustworthy self-reliance which can be found outside of religious principle.

When the Millennial period for the "Reformatory School" arrives, not only will this principle be adopted, not only will the three schools be merged into one properly graded, but the boys will know that the length of their term depends not so much on the sentence of a magistrate, who (whatever the absolute legal justice of his decision), has, in many cases, scant opportunities of judging of the peculiar circumstances and the personal characteristics of each boy; not so much, I repeat, on this original sentence, as on the good conduct, the steadiness and the educational improvement of the boys whilst in the institution. These lads will then know that every act brings its reward or its punishment with absolute certainty, and whilst laziness and wrong-doing will be punished, each honest endeavour will meet with constant encouragement from the Superintendent, and be one more step towards freedom.

I must in conclusion thank all the officers of the Reformatory School for their constant assistance, and express my warm appreciation of the personal courtesy shown me by the Superintendent and the Deputy.

Trusting that you may see your way clear to making at least a part of the improvements suggested in this report, and reminding you in connection therewith that "He gives twice who gives promptly,"

The Report of the Superintendent (with statistical table attached), and other officers of the Reformatory, are annexed:—

SUPERINTENDENT'S REPORT.

PENETANGUISHENE.

R. CHRISTIE, Esq.,

Inspector of Prisons, etc.

SIR,—I have the honour, herewith, to submit the Twenty-sixth Annual Report of the Ontario Reformatory for Boys for the year ending 30th September, 1885.

Reference being made to the statistical tables, below appended, it will be seen that at the close of this year the number of inmates in residence was 220. Examination of the tables for the past five years will shew this to be the lowest number reached since 1880, when at the end of that year, only 216 were in charge. In the intermediate years dating from 1880, the figures 250, 263, 245, 242, represent respectively the number in residence at the close of each year. Conclusions in respect to vital facts, can in no way be drawn from these fluctuations in population, as these fluctuations are altogether governed by the number of committals for each year (last year 81 were admitted, this year 51 only), the variety in the length of the sentence imposed, the number discharged according to, or through remission of, sentence; therefore it were idle to dwell longer on this feature.

This year no structural improvements worthy of note have been made or undertaken, still, our staff of working boys connected with the carpenter and paint shops have not been idle, for besides finishing up arrearages from last year many minor, but much needed improvements have been made to the buildings proper, as well as to the surrounding dwellings.

Matters material have during the year progressed favourably. The Reformatory grounds and roads leading thereto have had considerable labour expended on them, and the intelligent application of this labour has produced such results, in respect to ornamentation, as to compel both visitors and passers-by to pause in astonishment and ask themselves: Are we really in the backwoods? or rather, are we not in the highly improved suburb of some large city?

The farm has given fair return for the labour expended on it. The garden, owing to the propitious season, has been unusually productive.

The advance noted last year in the number and character of the horned cattle and pigs has been maintained, and the attention given to improvement in breeding has been substantially repaid.

For the first time since my appointment I have been enabled to give my charges a treat dear to the heart of all boys. During the month of June a circus and menagerie visited the town, and it was resolved that they should attend. Their surprise on hearing of this unusual and unexpected treat was only equalled by the intensity of their pleasure. In granting it we were more than repaid by the good behaviour they manifested. It was given generously and spontaneously, just as if it were their due; no irksome restraint was put upon them, nor was the fulness of their enjoyment marred by lecturing them beforehand as to the manner in which they should conduct themselves when in the amphitheatre. Attended but by four guards and headed by their band, they from the start maintained an unbroken line during their three mile march to the town, and when in the

tents they compelled even the habitual faultfinders, and the acknowledged pessimists to admire their uniformly good conduct and modest bearing. The exactitude with which their applause was given or withheld, according as the performance of the various feats met with their approval or non-approval was to the rest of the audience, a revelation.

The exemplary conduct displayed by the boys when visiting the circus demanded from me substantial acknowledgment, therefore I determined, when the opportunity was favourable, to give them a further treat in the shape of an excursion to the islands of the Georgian Bay: and this I was, through the kindness of two warm-hearted residents of the town—one of them placing a large scow at my disposal, the other, his tug—enabled to accomplish without making any inroad on the then almost, but now completely, exhausted exchequer of the institution.

To the many camping parties on the islands, our passage to the particular one selected for our picnic was, indeed, a surprise. The spectacle presenting itself of some 220 boys, *inmates of a Reformatory*, out in the open waters in the full enjoyment of their band or singing in full chorus as they sailed by, elicited from the transient sojourners in these islands looks of astonishment and ejaculations of wonderment. Needless to say that the day was spent joyously; fishing, bathing and berry-picking being indulged in to satiety. When the whistle signalled the *return* there were no stragglers, and the homeward voyage was as hilarious and as joyous as was the outward.

The utilitarian, on reading the foregoing paragraph, will in his matter of fact way ask for what purpose was this indulgence granted, and will demand to be informed as to the results realized or expected from this, to him, waste of precious time in the pursuit of vain pleasure. To such the answer might well be: That the experiment was worth the making, but that the immediate or future results hoped for from such experiments cannot, under any given circumstances, be measured by line and rule, nor can the probabilities be calculated with that exactness requisite to satisfy the unsentimental querist. (It is a subject for thankfulness that the narrow-minded and the heartlessly materialistic classes do not represent the majority of the active workers in the hive of our common humanity, else the idea conveyed in the maxim that "All work and no play make Jack a dull boy" would have to be reversed, and restless exuberant boyhood be governed according to the inexorably matter-of-fact system acceptable to the Gradgrinds of to-day.)

It may here be asked why I dilate so profusely on such apparently unimportant topics. Were they so it would indeed be unwise if not indefensible to waste so much time, ink and paper in discussing them. But I am not prepared to admit this proposition, for, in common with the benevolent-minded, I am convinced that reasonable relaxation is to man and boy, *but more particularly to the boy*, one of the surest means to secure a continuously healthy tone of mind and body. Yet another ingredient, sentimental in character, is needed to ensure the perfect health of these organizations. Hopefulness is that ingredient, and nowhere is that healing element more necessary of application than in a Reformatory. But how to obtain this much needed essential, and if obtained to ensure its continuous application, is a problem which must be solved sooner or later.

To all humanity, hope is an indispensable aid in the attainment of a better state of being. It is the great excitant to perseverance in well doing. Withhold it, then recklessness, indifference and worse, will fill the void. This being admitted with respect to humanity in general, how much more does hope become an essential to the unfortunate and misguided youths relegated, through their misdeeds, to a Reformatory. Since the establishment of this Reformatory its inmates, past and present, have been in a great measure bereft of this, to them, "indispensable aid" towards the betterment of their moral condition; and that such should have been and still be the case, is to be deplored.

Readers less patient than yourself would have called on us, ere this, to cease wailing and to indicate without more ado, the object aimed at in the foregoing remarks; and ask if it be intended to convey that hope, the potent incentive to the attainment of all good, has no abiding place in the institution referred to. To this, reply may be made that that *fulness of hope* necessary to stimulate to earnest endeavour in the "putting off of the old and in putting on the new," which encourages the growth of self-respect, which sustains the weak and erring when endeavouring to do better, and impels them to renewed efforts towards self-improvement; the hope which inspires all workers, more particularly the

youthful ones, the hope of receiving tangible and prompt reward is, in a great measure, denied. But instead of that invigorating hope, we have the "Hope deferred, which maketh the heart sick," which begets and fosters restlessness and discontent, and bars the way to progress. This lamentable condition of affairs is wholly due to defective legislation, and this legislation has been, is, and will continue to be, until intelligently amended, productive in numerous instances, of results the reverse of cheering. At this point the question might well be asked, why was not legislation better adapted to meet the wants of all concerned, sought for and secured ere this? An answer to this query, in as concise terms as is possible for me, it will be my endeavour to give in the succeeding paragraph.

It will not be unknown to you that in 1880, in conjunction with the change from the penal to the paternal system of discipline, to render the introduction of the latter more effective in achieving the end desired, the Government of this Province sought for and obtained from the local Legislature an act entitled "An Act respecting the Ontario Reformatory for Boys." Although some of the salutary clauses of this Act were impaired by amendments in its passage through the House, still it was sufficiently comprehensive to meet the end in view. The assent of the Federal Parliament being necessary to give it effect, it was there subjected to another amending process which resulted in making the Act much less comprehensive and salutary; besides, a restrictive clause vesting the pardoning power in the Governor-General in Council, was inserted in the Bill, which left matters almost in the same condition as they had been ere the Province initiated the legislation intended to be remedial. The Province aimed at vesting the pardoning power, the pivotal centre of all reforming agencies, in the Ontario Executive, and, when it is considered that the whole expense of the maintenance, management, structural enlargement and improvement of the Reformatory has to be shouldered by the Province, and that its Executive has to assume the sole responsibility in respect to its operations, this design could have not been styled unreasonable. Further, it could not well be considered irrational to infer that the Government so intimately connected with all matters pertaining to the institution should have everything to say in connection with all that affects its inmates. Instead, through the restrictive clause referred to, the Ottawa Executive retains the pardoning power, and were it not that all that pertains to the *Criminal Law* is centered in the Dominion authorities, such retention might well be deemed an absurd and illogical arrangement, particularly when it is clear that beyond exercising control over the pardoning power in its application to the worthy in this Reformatory, it has no further identification whatever with the institution, nor any active, living interest, present or future, in respect to its inmates. Through the retention of this power by the Executive at Ottawa many difficulties arise and much serious delay takes place when remissions for good conduct are sought for, and this is owing to one fact amongst many others, that the same cumbersome *modus operandi* has to be observed in regard to boys confined here—the great majority being guilty only of the pettiest offences—as has to be pursued when seeking for the release of felons from the Penitentiary.

All law being based on common sense it is but reasonable to expect that common sense should guide it in its operations. Let us then examine the procedure in regard to the law of pardon, and see how far common sense prevails in its application. In respect to the inmates of this Reformatory two modes only are available, the first through action, by petition to the Governor-General in Council, from without; the second, from within, by action on the part of the Superintendent to move the Ontario Executive to apply to the Executive of the Dominion. The first being the most practicable, and, if unsuccessful, the least likely to create heart-burnings and discontent on the part of those most immediately interested, is put into operation in regard to a certain boy who has merited by good conduct that his sentence be remitted. To this end the boy is encouraged to write to his parents, or guardians, as the case may be, and suggest that if a petition to the Ottawa authorities were prepared, the requisite number of signatures obtained, and then forwarded to the Federal capital, that he had reason to hope when reference would be made to the Superintendent that he would report favourably. Pre-supposing that the initial steps are properly taken, that influential parties take charge of the petition, that they duly attended to the trust, that the members of the Executive, or their deputies, more intimately connected, officially, with the movement, were not absent, or if in their offices were

free to attend to the matter, that the whole prescribed formula, including reference to the Superintendent, has been observed, and that so far no hitch in the proceedings has taken place, what then? The sentencing Judge or Police Magistrate is placed in possession of the file of papers in the case and asked to report, and, should his report be unfavourable, then all the trouble, expense, and anxiety undergone has, so far as those from without are concerned, a very disappointing ending. But an ending more serious still has to be taken into account. It was not possible in the nature of things that the boy should be ignorant of the exertions put forth in his behalf, or that he merited that these exertions should be made, then comes the question, What of him? and what of his future in connection with this, to him, disastrous ending. In nine cases out of ten "the last state is worse than the first," for instead of being hopeful and progressive he is in a condition exactly the reverse. "*Facilis est descensus Averni.*"

Referring such matters to the sentencing Judge is difficult to reconcile with ordinary common sense, for in what way is it possible that he can form an estimate of the changes for the better which may have taken place in the habits and character of the delinquent since he saw him in the dock, years before. Even when sentencing him he could not, having regard to his social position as compared with that of the culprit, have much, if any, knowledge of the boy's antecedents except such as he may have obtained from the constables the essence of whose training is to view mankind in general from that point only where the shadows are darkest. Of the earnest strivings after better things, or, of the transformation of character resulting therefrom, the sentencing Judge can have no adequate, in fact, no idea at all. Still the culprit that stood up before him for sentence, two or three years before, more or less, is again subjected to be tried by him, and this time without counsel to sift or jury to weigh the evidence, without being seen even, at this critical time by the dignitary in whose hands his release or detention entirely rests, and who, by the procedure which obtains, constitutes in himself a Court of Final Appeal. In determining the matter the only guide this Court can have would be the notes made when the delinquent was first tried and sentenced, but unfortunately these cannot tell the Judge of the changes which have taken place in the interim since he was before him in person, nor of the efforts made by the boy to shorten, by his good behaviour, his term of imprisonment. The pity of it is the lad himself feels that he has honestly earned the remission sought for, he is also aware that those best able to judge as to his merits, through seeing him day by day, struggling to improve, have already vouched for him and that his release has been recommended. As he patiently but hopefully waits for a favourable response to the appeal made in his behalf, a description of him might be attempted: but, when he learns that the movement has failed: that (to his mind) a miscarriage of justice has taken place; that all his strivings have been of no avail; and that his hopes of being reunited to his friends and his family, purged of the stain of crime, are blasted, then no pen can adequately describe the bitterness of his feelings, neither would it be possible to speculate with any degree of accuracy as to the evil results likely to accrue from this, to him, terrible disappointment.

The above criticism is intended to refer only to the law in itself; to attempt to criticize the dispensers thereof would not only be in bad taste, but would also be an act of unpardonable temerity, as they only apply the law in all good faith as part of the duty devolving in them. Many, if not all, of the Judges and Police Magistrates would, we have reason to believe, desire that after pronouncing and recording sentence, their functions in regard to those sentenced should cease to be further operative.

All these failures, disappointments, and heartburnings, etc., attempted to be described in the preceding paragraphs could, we are certain, be readily obviated. Were the Bench, as a whole, possessed of the fact that in accordance with Dominion and Provincial legislation, vide Dom. Stat. Vic. 43, cap. 39, sec. 1, and Ont. Stat. Vic. 43, cap. 34, secs. 27, 28, it had the power to sentence for *indefinite* periods all juvenile delinquents brought before it, and that by so sentencing, secs. 8, 10, Dom. Stat., and secs. 31, 32, 33, Ont. Stat. of said Acts, would be brought into operation whereby remissions would be obtainable without reference to it, its representatives would, we are certain, cease to pronounce *definite* sentences. Nearly six years have elapsed since this legislation has been made

operative, still only thirty-nine (39) boys are at present in the institution whose sentences are indefinite.

Until all or the great majority of the inmates are sentenced under sec. 1, it would be utter rashness and unwisdom to attempt making operative sec. 10, Dom. Stat., referred to. This latter section, in effect, provides, under certain regulations to be assented to by the Governor-General in Council, that the authorities immediately connected with the maintenance and management of the Reformatory may, after the expiration of the fixed term, grant discharges, absolute or upon probation. But as things are, with only 17 per cent. of our population sentenced indefinitely, no advantage can be taken of this section, else class legislation would be introduced, whereby the very few who were fortunate enough to receive indefinite sentences would benefit beyond their less fortunate comrades whose sentences are definite, although the offences for which latter were committed, are in many cases less serious than those of the former.

The logical sequence to the foregoing is the question—Why does not the Judiciary apply this later legislation when sentencing juvenile delinquents for whose special benefit it was enacted? An answer to this, perhaps not the proper one, will be found in my Annual Report of 1882, which I will here take the liberty of quoting.

“I can readily understand that those charged with the administration of justice have felt themselves justified hitherto in not taking advantage of the section referred to. Their impressions of this institution were, in a great measure, formed at a time when it systematically failed in its mission, when, from false notions and severe measures, it was a *prison*, not a *Reformatory*. I am satisfied that had they an opportunity of seeing for themselves the vast and radical changes brought about here, of late years, they would gladly avail themselves of their powers, and would place the boy in a position to make his own fortune, with no fear of its being marred, but by his own misconduct. By so sentencing them, they would enable the Superintendent to place a boy at once in *graded line*, and to make him feel that nothing stood between him and his freedom but his own conduct. The administrators of justice would then have the immense satisfaction of knowing that, in thus sentencing a boy to the Reformatory, they were taking the most direct and effective means towards his true and complete redemption.”

The portion of the report from which this quotation is taken was devoted to a review of the position as it was then, and although three years have since come and gone, the position remains unimproved. Further on, in this report a suggestion was made, which it may not be out of place to quote just here.

“For the purpose of removing any misconceptions, would it not be well that those, in whose hands the future of the boys, in some measure, lies, should have such an opportunity of seeing for themselves, the institution, in its improved state; that, by means of a visit, properly organized, they might be able to dispel any previously conceived ideas, and to obtain correct and clear notions on our work, and our ways and means of doing it. I would respectfully suggest, in accordance with the foregoing remarks, that steps be taken to secure, on that occasion, the largest possible representation of the dignitaries referred to, since I feel assured that, while such a visit cannot fail to be very interesting to these gentlemen, it will be, moreover, a means of putting the institution in its proper light before their minds, in such a way as would lead us to hope that subsequent committals would be made in greater consonance with the spirit of the statutes. I am quite certain they will rejoice that wise and thoughtful legislation has placed in their hands the power of sentencing for an indefinite period, since we have seen above that this alone can obviate the great difficulty which now stands in our way as a reformatory—our present slow and unwieldy pardoning system.”

There can be no reason for doubting had this visit been arranged and successfully carried out at the time (1882), or as soon after as was possible, that now, instead of 17 per cent. only of the inmates being sentenced indefinitely, the great majority, if not all, would be so sentenced, and, were this achieved, sec. 10 Dom. Stat. would be at once put into operation, and by its salutary aid, judiciously applied, the hopelessness complained of would be at once removed; for then the greatest incentives to earnest, healthy endeavour—recognition and reward—can be applied, grade books can be opened wherein each boy on his admission will be started in a definite grade line, and will know, month

by month, the state of his progress, with the encouraging conviction that in attaining a certain point in the grade book his remission will be *prompt and certain*. Still, "better late than never," and if the desired visit cannot be managed, let some other means be taken to bring this matter to the notice of the Bench when, without doubt, it will receive the thoughtful attention it deserves from the cool-headed, warm-hearted, kindly-disposed gentlemen who sit thereon.

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

THOMAS McCROSSON,
Superintendent.

STATISTICAL TABLES.

Shewing the operations of the Reformatory for the year ending 30th September, 1885.

In residence 1st Oct., 1884.....	242
Admitted during the year.....	51
Returned after attempting to escape.....	2
Total number during the year.....	—295
Discharged according to sentence.....	59
Reprieved.....	14
Escaped.....	2
	— 75
Remaining in residence 30th Sept., 1885.....	220

AGES WHEN COMMITTED.

1 at 7	5 at 11	11 at 15
1 at 8	7 at 12	1 at 17
2 at 9	9 at 13	1 at 18
3 at 10	10 at 14	
Total.....		51

PERIODS OF SENTENCE.

For 6 months and an indefinite period not to exceed 5 years.....	4
" 6 " " " 3½.....	1
" 9 " " 5.....	1
" 1 year " 4.....	1
" 3 years " 5.....	1
" 23 months.....	1
" 2 years.....	2
" 2½ ".....	1
" 3 ".....	18
" 4 ".....	8
" 5 ".....	13
	—
	51

NATIONALITIES of boys committed during the year, and of those committed since the establishment of the Reformatory.

	Commitments of the year.	Total commitments.
Canadian	43	1134
English	4	141
Irish	1	54
Scotch	1	27
United States	1	127
Other Countries	1	18
Total	51	1501

RELIGIOUS denominations of boys committed during the year, and of the boys remaining in the Institution on the 30th September, also of those committed since the establishment of the Reformatory.

	Commitments of the year.	In residence 30th September.	Total commitments.
English Church	13	62	495
Roman Catholic	18	93	512
Presbyterian	6	30	138
Methodist	13	27	269
Baptist	1	6	67
Other Denominations		2	20
Total	51	220	1501

CRIMES for which the 51 boys were convicted and sentenced to the Reformatory :

Larceny	35
Incorrigible conduct	2
Assault and larceny	1
Shopbreaking and larceny	1
Vagrancy	6
Attempt to commit rape	1
Burglary	1
Obtaining goods under false pretences	2
Housebreaking and theft	1
Unlawfully and maliciously wounding	1
Total	51

COUNTIES of Province from which the 51 commitments were made during the year :

Algoma	1	Middlesex	6
Brant	2	Oxford	3
Bruce	1	Ontario	1
Carleton	2	Peterborough	1
Elgin	1	Simcoe	4
Frontenac	7	Wellington	1
Grey	3	Welland	1
Hastings	1	Wentworth	3
Kent	4	York	5
Lambton	2		
Lincoln	1	Total	51
Leeds and Grenville	1		

COUNTIES of Province from which the 220 boys now in residence originally came:

Algoma	1	Norfolk	2
Brant	6	Northumberland and Durham	2
Bruce	2	Ontario	10
Carleton	7	Oxford	10
Elgin	6	Peterboro'	2
Essex	3	Prescott and Russell	1
Frontenac	15	Renfrew	3
Grey	3	Simcoe	6
Haldimand	2	Stormont, Dundas and Glengarry	5
Hastings	4	Victoria	1
Huron	3	Waterloo	1
Kent	11	Welland	2
Lambton	11	Wellington	3
Lanark	1	Wentworth	29
Leeds and Grenville	6	York	34
Lincoln	6		
Middlesex	22	Total	220

NUMBER of commitments since Confederation.

COMMITMENTS.	YEAR.	No.	No. at close of same year.
Committed in	1867	55	170
“	1868	59	173
“	1869	47	170
“	1870	41	163
“	1871	48	155
“	1872	48	158
“	1873	31	130
“	1874	58	139
“	1875	71	173
“	1876	47	183
“	1877	75	195
“	1878	69	196
“	1879	57	206
“	1880	80	216
“	1881	96	250
“	1882	84	263
“	1883	58	245
“	1884	81	242
“	1885	51	220

PRODUCE of the Farm and Garden attached to the Ontario Reformatory for Boys, from the 1st October, 1884, to 30th September, 1885.

FARM.

Timothy Hay.....	10 tons.....@	\$11 00....	\$110 00
Marsh ".....	1 ".....@	8 00....	8 00
Potatoes.....	1000 bush.....@	0 30....	300 00
Milk.....	25912 qts.....@	0 03....	777 36
Pork.....	10400 lbs.....@	7 50....	780 00
Pigs.....	40.....@	5 00....	200 00
Calves.....	5.....@	8 00....	40 00
			\$2215 36

GARDEN.

Vegetables.....	871 66
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REVENUE.

Farm and Garden.....	138 22
Total.....	\$3225 24

STATEMENT exhibiting the unproductive labour in the various shops for the year ending 30th September, 1885.

TAILOR SHOP.

To making	370 coats for inmates.....	@ \$1 00 ..	\$370 00
"	734 pants ".....	@ 50 ..	367 00
"	464 caps ".....	@ 20 ..	92 80
"	28 shirts ".....	@ 15 ..	4 20
"	83 under ".....	@ 15 ..	12 45
"	357 drawers ".....	@ 15 ..	53 55
"	44 prs. slippers.....	@ 10 ..	4 40
"	483 sheets ".....	@ 10 ..	48 30
"	206 mattress ".....	@ 25 ..	51 50
"	327 pillows ".....	@ 05 ..	16 35
"	231 " cases.....	@ 05 ..	11 55
"	15 night shirts.....	@ 25 ..	3 75
"	12 aprons ".....	@ 10 ..	1 20
"	187 towels ".....	@ 01 ..	1 87
"	74 suits for discharged boys.....	@ 4 00 ..	296 00
"	27 overcoats for " ".....	@ 2 50 ..	67 50
Repairing	547 shirts for inmates.....	@ 05 ..	27 35
"	369 drawers ".....	@ 05 ..	18 45
"	101 sheets ".....	@ 05 ..	5 05
"	16 pillow-cases.....	@ 01 ..	16
"	226 caps ".....	@ 05 ..	11 30
"	75 pants ".....	@ 10 ..	7 50
"	95 coats ".....	@ 10 ..	9 50
Making	11 cotton suits.....	@ 1 50 ..	16 50
"	6 duck pants for guards.....	@ 50 ..	3 00
"	1 " coat " ".....	@ 1 00 ..	1 00
"	20 linen " " ".....	@ 75 ..	15 00
"	22 uniform suits ".....	@ 5 00 ..	110 00

To making	56 pairs of pants for guards.....	@ \$1 00	..	\$56 00
"	22 caps " "	@ 25	..	5 50
"	1 coat and 2 pairs of pants (crash).....			2 00
To repairing	24 prs. of pants and 18 coats for guards @	10	..	4 20
To outside labour with boys,	234 days.....	@ 25	..	58 50
To cash as per workshop account.....				8 00
				\$1761 43

CARPENTER SHOP.

		DAYS		
To work at the	Superintendent's house	59	.....	23 60
"	Deputy do do	25	.....	10 00
"	Bursar's do	1	.....	40
"	R. C. Chaplain's do	23	.....	9 20
"	Guards' houses.....	10	.....	4 00
"	Institution	3598	.....	1439 20
Total number of days.....		3716	at 40c.	1486 40
To cash as per workshop account.....				11 10
				\$1497 50

SHOE SHOP.

To	659 pairs of Coburg boots @ 50c. making.....			329 50
"	12 " long " @ 75c. "			9 00
"	991 " boots repaired @ 40c. "			396 40
"	2016 days work outside @ 25c. "			504 00
"	65 prs. of boots for discharged boys @ 75c.			48 75
"	Cash as per workshop account			14 75
				\$1302 40

RECAPITULATION.

Tailor	shop.....			1761 43
Carpenter	"			1497 50
Shoe	"			1302 40
				\$4561 33

SURGEON'S REPORT.

PENETANGUISHENE, Sept. 30, 1885.

R. CHRISTIE, Esq.,

Inspector of Prisons, etc.

SIR—I have the honour to submit the Medical Report of the Ontario Reformatory for Boys for the year ending September, 30th, 1885.

It affords me much satisfaction to be able to state that the general health of the boys continues good, and that no death took place during the past year.

We have about the ordinary amount of sickness, but had no epidemic or any disease that has assumed a very dangerous form during its course.

During the changeable seasons of spring and fall a number suffered from coughs and colds, and we had a few cases of inflammation of the lungs, but all recovered favourably.

Two cases of synoritis required treatment for some time, but the patients have now regained the use of their joints and are apparently as well as ever.

The surgical cases consisted of simple wounds, some dislocations and a few fractures, (the forearm and clavicle) with favourable termination in each case.

Since the drains in and about the building have been repaired and the kitchen and wash room removed from the basement, all trace of typhoid fever has disappeared and the boys present as healthy an appearance as could be expected.

A few of our boys are scrofulous—some hereditary—others no doubt induced by want of proper and sufficient food in their young days, previous to their coming to this institution.

In all; their condition has improved, and with plenty of fresh air and good nourishing diet will no doubt continue to improve, and they will go back to their homes better boys both morally and physically.

As there has been considerable trouble during the past year in regard to the food supplied the inmates of one of the *Public Institutions* of this Province, the parents and guardians of our boys might be exercised about the *Bill of Fare* in this institution. It will no doubt be gratifying to them to know that the *dietary* of the Reformatory contains all that is requisite to keep the boys in a good healthy condition, which is so necessary to secure their proper growth and development.

The boys have bread, meat, fish, soup, vegetables, mush, milk and coffee in ample quantities and of good quality, all properly cooked and served.

They always appear to enjoy their meals, have sufficient appetite to do them full justice, and in no case has any complaint been made in reference to the quantity or quality of the food.

After the outbreak of small-pox in Montreal it was considered advisable to have the inmates vaccinated, and a suitable quantity of bovine virus was obtained for that purpose, and afterwards instructions were received to have the guards and their families vaccinated as well as the boys.

The buildings are in a fair sanitary condition, but there is one defect that requires attention, viz., the floor of the dining hall.

At present the floor is laid down in direct contact with the ground and filling underneath, with no means of ventilation, and as an necessary consequence it is in a very rotten condition.

A new floor will have to be laid, but before this is done the earth and filling should be removed and proper arrangements made for ventilation.

This will cause the floor to last much longer, and is absolutely necessary from a sanitary point of view.

I have the honour to be, Sir,

Your obedient servant,

P. H. SPOHN,

Surgeon.

ROMAN CATHOLIC CHAPLAIN'S REPORT.

PENETANGUISHENE, October 18, 1885.

R. CHRISTIE, Esq.,

Inspector of Prisons and Public Charities.

SIR,—I have the honour to transmit to you my report as Catholic Chaplain of the Ontario Reformatory for Boys, for the year ending 30th September, 1885.

The number of boys under my care on the 30th September, 1884, was 96; on the 30th September, 1885, it is 93, of whom 75 have made their first communion, and 74 have been confirmed. During the year 18 Catholic boys were received, of whom 11 had not made their first communion, and 16 had not been confirmed. During the year 21 names were removed from my roll, of whom 20 had been confirmed, and all had made their first communion.

His Lordship Bishop O'Mahoney visited the Reformatory on the 13th and 14th September, 1885, and confirmed 22 boys.

The conduct of my boys has been very good, and they attend to their religious duties with great regularity.

I will now venture a few remarks on a matter, the correct regulation of which has much to do with the moral progress of boys here. I am of opinion that the work of the Reformatory would be much more effectual, if means were provided, by which boys who come here hardened in crime or who show themselves recalcitrant under ordinary Reformatory treatment, could be temporarily separated from the rest of the institution. The only means now at hand for repressing insubordination, or for preventing a thoroughly bad boy doing injury to his comrades, is ordinary cell punishment. Apart from the manifest inconvenience of this in chronic cases, this treatment brings to such boys the idea of punishment only, and since a boy who professes sorrow for his offence, and promises amendment is (ordinarily) at once released, it is plain, and results prove it, that the effect produced is at best transitory, and from the nature of the restraint imposed, must be so. When frequent repetition of this punishment becomes necessary, it at length tends only to dull the boy's self-respect, and to make him regard good promises simply as methods of release from punishment. So far as regards the boy. Now for his comrades. We have here two distinct classes. I speak of a matter well known to the Reformatory officials. We have a few boys who come here positively hardened in crime, possibly after spending a few terms in jail with the worst characters in the country, depraved in mind and body. We have them here to reform them, certainly. But until they become amenable to ordinary Reformatory treatment, their baneful and blasting influence should not be allowed to reach the second class, those namely, who, through want of parental control are sent here for vagrancy or trivial offence, still free from habitual vice, with minds ready, often eager, for the salutary teaching of which their unfortunate circumstances had previously deprived them. It is manifestly building with one hand, and pulling down with the other, to allow the evil influence of such bad cases as I have mentioned to contaminate their comrades. Such boys themselves may be reformed, have, in the past, been reformed; but it takes time, and meanwhile sad damage is done. Under the existing system these boys during recreation must necessarily mingle freely with the younger and less depraved, and there is nothing so fatal to virtuous inclinations as the evil conversation of a depraved boy. No amount of discipline or care can prevent it. Discipline here is simply perfect; the guards vigilant, and kept so; yet the evil influence of this handful of bad boys is felt to a deplorable degree.

I believe, and I recommend it to your earnest attention, that there is but one way in which the evil can be prevented, and that is, by complete isolation from the rest of the institution. Let boys whose antecedents give evidence of habitual criminality, or whose disposition and temperament show that the kindly influences which now so happily rule in your Reformatory, would be, for the moment, thrown away upon them, be placed in a separate class, in a separate building if possible, where, under more severe discipline and greater restraint, they would learn self-control, lose little by little their vicious inclinations, and presently become fit for promotion to the Reformatory as it now exists. The Reformatory years ago adapted its treatment (possibly by necessity) to the hardened class, and became a prison pure and simple. The Reformatory now, with infinitely better results, adapts its treatment to the far more numerous class (quite 80 or 90 per cent. of the whole) who are amenable to kindly influences, but you cannot adequately legislate for the two classes together.

Again, magistrates send us boys of 18 and 19 for three and four years. But 75 per cent. of our boys are sent here at 14 or under. It is plain that the treatment which is suitable for young boys of 12 and 13, cannot satisfactorily be adapted to young men of 20 and 21. I am of opinion, therefore, that as a rule sentences to the Reformatory should not run beyond the 18th year of the boy's age, so long at least as you have only one house and one method of reform for all courses, young and old.

Another trouble, and a grievous one, comes from the unsatisfactory working of the pardoning machinery. It is very easy to exhort a boy to be patient, but quite another matter to expect him to *be so*, when he knows that a comrade who did not deserve remission a whit better than himself, has been fortunate enough to have his papers put through by the efforts of influential friends in Ottawa, whilst his own well-earned release hangs on the hook till his hopes are finally killed by an adverse memorandum from the magistrate who sentenced him, who saw him only for a moment as he passed before him from

the dock to the prison, and who knows absolutely nothing of the boy's present mental and moral condition.

I believe therefore that to bring out the maximum efficiency of the Reformatory you require,

1st. A suitable House of Correction or similar establishment under control of the Reformatory authorities, but so arranged that its inmates shall be absolutely isolated from the Reformatory proper, to which they can only gain admittance when their conduct gives assurance that they will not be a source of contamination for their better-disposed comrades. The details of such a House are not so difficult or so costly as at first glance would appear.

2nd. A satisfactory pardoning system which, to be perfect, would involve indefinite sentence, and prompt remission as soon as a boy should show himself thoroughly reformed.

The deep interest I feel in those here under my charge will plead my excuse for having entered into these details. Your own knowledge of Reformatory matters will show you that both the matters of which I have written bear very directly on the spiritual advancement of boys here.

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

J. F. McBRIDE,
Catholic Chaplain.

PROTESTANT SCHOOL MASTER'S REPORT.

PENETANGUISHENE, Oct. 7th, 1885.

ROBERT CHRISTIE, Esq.,
Inspector of Prisons, etc., Toronto, Ont.

SIR,—I have the honour to transmit the Report of the Protestant School, Ontario Reformatory for Boys, for the year ending September 30th, 1885.

I am happy to say that the number of boys in the school has greatly decreased during the past year, not because it lessens the labour of the teachers, but as being indicative of the diminution of juvenile crime throughout our Province.

As heretofore, the conduct of the boys under my control has been uniformly good, having made only two formal reports of misbehavior to the Superintendent during the whole year, and both these, I am sorry to say, were against the same boy.

The progress made by the boys in their various studies has been very fair, when it is taken into consideration that they have not the advantage of those stimulating influences which tend to produce a beneficial effect in our public schools, such as parental influence and parental oversight, public opinion, etc. Is it not possible to enact a law that for attention, industry, and progress in school, the conduct in other respects being equal, a portion of the term of incarceration shall be remitted? Or must the whole task of educating and fitting these boys to be respectable members of society be left to the personal influence of the officers over them? The only real personal incentive they have for industrious application in school is the benefit such application will be to them in after-life, too distant a period to have much effect.

The subjects taught during the past year have been reading, writing, arithmetic, grammar and composition, dictation, geography, bookkeeping, mensuration of superficies, and drawing simple geometrical figures.

During the past year I have dispensed with the services of a monitor, putting the first class under the charge of the assistant teacher.

I annex the usual statements of attendance, etc.

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

E. W. MURPHY,
Senior Protestant Teacher.

REPORT OF ATTENDANCE.

	Quarter ending Dec. 31st, 1884.	Quarter ending Mar. 31st, 1885.	Quarter ending June 30th, 1885.	Quarter ending Sept. 30th, 1885.	Total.
Senior Teacher's Room :—					
Aggregate attendance	4,827	4,805	4,457	3,209	17,298
Number of days taught.....	70	76	74	57	277
Average daily attendance, 62.44.					
Aggregate non-attendance.					
Causes. { At work	637	743	554	368	2,302
{ Sick	34	26	112	30	202
{ Under punishment		4	16	6	26
Average daily non-attendance, 9.13.					2,530
Assistant Teacher's Room :—					
Aggregate attendance	4,422	4,986	5,014	4,227	18,649
Average daily attendance, 64.99.					
Aggregate non-attendance,					
Causes. { At work	495	228	120	262	1,105
{ Sick	144	233	254	73	704
{ Under punishment		1	9	12	22
Average daily non-attendance, 6.37.					1,831
Number of days taught.	68	75	76	68	287

	Number in School October 1st, 1884.		
	Morning.	Afternoon.	Total.
Senior Teacher's Room	27	36	63
Assistant Teacher's Room	35	29	64
	62	65	127

STATEMENT shewing number in each class October 1st, 1884, and position of same, September 30th, 1885.

	No. in each Class Oct. 1st, 1884.	Position on September 30th, 1885.							Gone Out.
		1st Class.	2nd J. Class.	2nd S. Class.	3rd J. Class.	3rd S. Class.	4th J. Class.	4th S. Class.	
4th Senior Class.....	6							1	5
4th Junior “	20						1	10	9
3rd Senior “	11						7		4
3rd Junior “	15				1	3	5		6
2nd Senior “	38			2	10	10	2		14
2nd Junior “	40		6	20	3	1			10
First “	16	7	5	2					2
	146								

EDUCATIONAL status of boys received and boys discharged, etc., for year ending September 30th, 1885.

	1st Class.	2nd J. Class.	2nd S. Class.	3rd J. Class.	3rd S. Class.	4th J. Class.	4th S. Class.	Total.
Received	12	9	6	5	1	.....	.....	33
Discharged	2	6	11	13	4	8	8	52

REPORT OF ROMAN CATHOLIC SCHOOL MASTER.

PENETANGUISHENE, 10th Oct., 1885.

R. CHRISTIE, Esq.,

Inspector of Prisons and Public Charities.

SIR,—I have the honour to transmit this Report as Roman Catholic Schoolmaster of the Reformatory for Boys, for the year ending 30th September, 1885.

The number of boys on the roll is 93, being 3 less than in September of 1884, though it will be noticed that the average attendance has been much better than last year.

Particular attention has been given to reading, writing, commercial arithmetic, dictation, and composition. The most attractive features of history and geography have been taken up occasionally for the sake of variety, with the best results.

The boys in general evince marked interest in their studies, and in conduct, deportment and progress they will, I think, compare favourably with the schools of the Province.

The school-room is defective on sanitary principles, as the seating space is not large enough for the attendance. The number at a single session has sometimes reached 54, while there is seating accommodation for 48 only.

Enclosed find statement of attendance and progress. The classes are graded according to the standard of reading, writing, and arithmetic in use in the best schools of the Province.

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

J. M. MAHONY,

Roman Catholic Teacher.

	Year ending 30th Sept., 1884.	Year ending 30th Sept., 1885.
Total number of boys on roll	96	93
“ “ “ received	38	18
“ “ “ discharged	28	21

EDUCATIONAL status of boys received and discharged, showing also number in each class September 30th, 1885.

CLASSES.	No Class.	1st Class.	2nd Class.	3rd Class.	4th Class.	5th Class.	Total.
Received.....	5	8	4	1			18
Discharged.....			5	3	2	11	21
Present status		20	25	13	16	19	93

STATEMENT OF ATTENDANCE AND NON-ATTENDANCE.

	Quarter ending 31st Dec., 1884. 69 days.	Quarter ending 31st March, 1885. 70 days.	Quarter ending 30th June, 1885. 68 days.	Quarter ending 30th Sept., 1885. 59 days.	Year 256 days.
Morning session :					
Average attendance	38.9	45.2	39.3	37.1	40.1
“ non-attendance	6.1	4.8	6.7	7.9	6.4
Roll	45	50	46	45	46.5
Afternoon session :					
Average attendance	46.8	42.7	43.7	44.7	44.4
“ non-attendance	4.2	3.3	5.3	3.3	4
Roll	51	46	49	48	48.5
Whole school :					
Average attendance	55.7	57.9	53	51.8	54.6
“ non-attendance	10.3	8.1	12	11.2	10.4
Roll	96	96	95	93	95

RETURN

From the Records of the Elections to the Legislative Assembly since the last Return in 1885, shewing:—(1) The number of Votes polled for each Candidate in each Electoral District in which there was a contest. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each district. (4) The number of Votes remaining unpolled. (5) The number of names on the Voters' Lists in each District. (6) The population of each District as shewn by the last Census.

CHARLES T. GILLMOR,

Clerk of the Legislative Assembly.

LEGISLATIVE ASSEMBLY,
TORONTO, 1886.

RETURN from the Records of the Elections to the Legislative Assembly since the last Return in 1885, shewing—(1) The number of Votes polled for each Candidate in each Electoral District in which there was a contest. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The number of Votes remaining unpollled. (5) The number of names on the Voters' List in each District. (6) The population of each District as shown by the last Census.

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		VOTERS IN EACH SUB-DIVISION.				BALLOT PAPERS SENT OUT, AND HOW EMPLOYED IN EACH SUB-DIVISION.						Tendered Ballot Papers sent out and how disposed of in each Sub-Division.		Population in each Constituency, as shown by last Census.
		Abbott.	Lyon.	Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spotted Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.		Unused.
Algonia East.	1 Manitowaning	34	120	164			275	154	114	7				30		30
	2 Michaels Bay	4	44	48			150	48	102					20		20
	3 Blue Jay River	6	20	26			100	26	74					20		20
	4 Sandfield Mills		12	12			100	12	88					20	1	19
	5 Sandfield Township		15	15			75	15	58	2				10	2	8
	6 Big Lake	4	17	21			75	21	53	1				10	1	9
	7 Little Current	28	45	73			150	73	77					20		20
	8 Shegandah	5	34	39			100	39	61					20	2	18
	9 Green Bay	5	27	32			75	32	43					15		15
	10 Providence Bay	21	55	76			100	76	24					20		20
	11 Mindemoya Lake		25	25			148	25	122	1				20		20
	12 Mudge Bay	15	49	64			250	64	186					30		30
	13 Gore Bay	54	67	121			250	121	124	5				30		30
	14 Burpee	9	29	38			150	38	112					20		20
	15 Cockburn Island	39	19	58			174	58	116					20	20	15
	16 Hilton	5	35	40			100	40	58	2				15		15
	17 St. Joseph	37	73	110			150	110	40					20		20
	18 Sault Ste Marie	61	44	105			300	105	195					30		30
	19 Korah	14	28	42			125	42	83					20	1	19
	20 Barrie Island	24	26	50			125	50	75					20		20
	21 Robinson	9	28	37			75	37	38					10		10
	22 Meldrum Bay	5	9	14			50	14	36					10		10
	23 Campbell, Long Bay	8	33	41			75	41	34					10		10

24 West Bay	3	74	5	71	10	10	10
25 Tenby Bay	28	75	28	47	10	10	10
26 Mountain School	45	75	50	25	10	10	10
27 Collin's Inlet	9	50	9	39	10	10	10
28 Killarney	15	50	15	34	10	10	10
29 Spanish River	1	100	1	99	15	15	15
30 Serpent River	19	50	19	30	10	10	10
31 Algona Mills	16	99	16	83	15	15	15
32 Mississauga River	17	100	23	76	15	15	15
33 Thessalon River	95	175	136	89	20	20	20
34 Day's Mills	23	100	41	58	15	15	15
35 Forest Corners	26	75	43	30	10	10	10
36 Bruce Mines	76	200	133	62	20	20	20
37 Dunn's Valley	50	100	62	37	10	10	10
38 Tarbutt	50	100	52	47	10	10	10
39 Desert Lake	25	49	42	7	10	10	10
40 Coffin Additional	28	50	31	19	10	10	10
41 Orchards	13	100	26	72	10	10	10
42 Garden River	2	50	3	47	10	10	10
43 Goulais Bay	12	50	21	29	10	10	10
44 Munainse Mines	2	25	3	22	5	5	5
45 Michipicoton River	1	50	7	43	10	10	10
46 Michipicoton Isld.	3	23	4	19	5	5	5
Totals	1,390 619	4,992	2,009	2,948	700	28	672
Majority for Lyon	771						
Algona, West	Comtee.	Group.					
No. 1 McKay's Har- bour	1	9	10	90	10		10
" 2 Neepigon	19	2	21	79	10		10
" 3 Silver Islet	2	1	3	45	10		10
" 4 A Ward No. 3, (Town of Port Arthur)	26	18	44	253	30		39
" 4 B Ward No. 1, (Town of Port Arthur)	66	75	141	155	40	5	35
" 4 C Ward No. 2, (Town of Port Arthur)	34	33	67	231	30	4	26
" 5 Port William	32	15	47	252	30	1	29
" 6 A Murrillo	52	22	74	124	30		30
" 6 B Oliver School House	17	23	40	160	30	1	29

* This column cannot be filled as there are no Voters' Lists.

RETURNS FROM THE RECORDS OF THE ELECTIONS TO THE LEGISLATIVE ASSEMBLY SINCE THE LAST RETURN IN 1885.—Continued.

Electoral District.	Names and Numbers of Polling Sub-Divisions, of Candidates and No. of Votes polled for Each.		VOTERS IN EACH SUB-DIVISION.					BALLOT PAPERS SENT OUT, AND HOW DISPOSED OF IN EACH SUB-DIVISION.					Tendered Ballot Papers sent out and how disposed of in each Sub-Division.		Population in each Constituency, as shewn by last Census.		
	Comtee.	Gough.	Total No. of Votes Polled.	No. of Votes remaining Unpoll'd.	No. of names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.	Used.		Unused.	
Algonue, West.	No. 7 Ignace.....	27	100	32	78	20	20	3,961		
	" 8 Vermillion Bay.....	4	4	8	.....	100	92	8	.....	.....	.....	20	1	19
	" 9 Rat Portage.....	65	49	114	.....	400	114	283	3	.....	.....	50	.....	50
	" 10 Kee-wah-mills.....	40	23	63	.....	200	63	131	6	.....	.....	30	.....	30
	" 11 Rainy River.....	20	7	27	.....	200	27	172	1	.....	.....	30	.....	30
	" 12 Fort Francis.....	32	24	56	.....	200	56	143	1	.....	.....	30	3	27
	Not sent out.	950	950	
	Returned by	Returning Officer	
	Totals.....	410	327	737	613	4,000	737	3,238	23	5	400	15		385	
	Majority for Comtee	83	
	Lennox.....	Blackstock.	Hawley.	1,726
		No. 1 Ernestown.....	44	55	94	149	200	94	106	23	1		23	
do " 2.....		78	57	167	224	300	167	129	1	3	.....	33	.....	33	
do " 3.....		108	125	233	304	350	233	313	2	2	.....	33	.....	33	
do " 4.....		54	67	121	166	200	121	79	.....	.....	.....	33	.....	33
do " 5.....		80	106	186	233	300	186	113	.....	1	.....	33	.....	33
North Fredericksburg.			
No. 1.....		60	72	164	236	250	164	80	6	.....	.....	33	.....	33
do " 2.....		85	88	173	261	250	173	74	1	2	.....	21	.....	21	
South Fredericksburg.			
No. 1.....		84	49	133	150	200	133	67	.....	.....	.....	33	.....	33

do " 2	53	62	115	39	154	200	115	84	1										23	3,241 546 1,089 737 3,680	
do " 1	88	93	181	73	254	300	181	116	2	1									23		
do " 2	76	86	162	43	205	250	162	88											23		
do " 3	58	55	113	37	150	200	113	87											23		
do " 4	81	49	130	45	175	200	130	70											23		
Amherst Island " 1	66	70	136	50	186	200	136	62	2										23		
Bath " 1	33	37	70	31	101	150	70	80											23		
Adolphustown No. 1	61	65	126	37	163	200	126	73	1										23		
Napanee:																					
No. 1 Centre Ward	80	41	121	81	202	250	121	129											22		
do " 2	49	44	93	75	168	200	93	107											22		
do " 1 West Ward	35	36	71	31	102	200	71	129											23		
do " 2	48	47	95	85	180	250	95	151	1										22		
do " 1 East Ward	55	60	115	59	174	200	115	85											23		
Totals	1,333	1,406	2,799	1,138	3,937	4,850 150	2,799 not	2,025 sent	17	9	not sent out			476					2		16,314
						5,000															
						5,000															

Simcoe, East.																						
Oro		Thompson.																				
do No. 1	79	25	104	50	154	176	109	67	4	1										19	4,666 3,997 2,993 3,736 3,632	
do " 2	74	30	104	28	132	150	104	46														19
do " 3	115	48	163	76	239	248	164	84	1													18
do " 4	118	52	170	66	236	250	172	78	2													19
do " 5	96	43	139	86	225	251	145	106	5	1												19
Orillia and Match-																						
dash No. 1	69	56	125	97	222	248	127	121	2													19
do " 2	45	45	90	100	197	200	91	109	1													18
do " 3	41	45	80	84	160	171	90	84	3	1												19
do " 4	29	33	62	27	89	100	62	38														19
do " 5	20	33	53	24	77	100	53	47														19
Tay " 1	20	23	43	45	76	100	43	57														1
do " 2	27	31	58	46	88	124	58	66														19
do " 3	32	38	85	105	131	149	93	56	8													19
do " 4	40	38	78	46	147	150	80	69	1	1												19
do " 1	51	64	115	34	183	218	118	100														8
do " 2	25	72	97	26	131	147	97	50														3
do " 3	30	85	115	45	130	137	117	20	1	1												2
do " 4	43	19	62	13	107	106	62	44														19
do " 5	16	17	33	53	46	50	33	17													19	
Medonte " 1	71	41	112	73	165	174	112	62													19	
do " 2	56	50	106	69	179	200	107	93	1												22	

RETURN from the Records of the Elections to the Legislative Assembly since the last Return in 1885.—Continued.

Electoral District.	Names and Numbers of Polling Sub-Divisions.	Names of Candidates and No. of Votes Polled for Each.		VOTERS IN EACH SUB-DIVISION.			BALLOT PAPERS SENT OUT, AND HOW DISPOSED OF IN EACH SUB-DIVISION.						Tendered Ballot Papers sent out and how disposed of in each Sub-Division.		Population in each Constituency, as shown by last Census.	
		Drury.	Thompson.	Total No. of Votes Polled.	No. of Votes remaining Unpolled.	No. of Names on the Voters' Lists.	No. of Ballot Papers sent out to each Sub-Division.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Spoiled Ballot Papers.	Ballot Papers given to Voters who afterwards declined to Vote.	Ballot Papers taken from Polling Places.	No. of Tendered Ballots sent out to each Sub-Division.		Used.	Unused.
Simcoe, East. —Continued.	Medonte.....	No. 3	79	42	121	74	195	200	123	79	1	1	19	19	19	19
	do.....	" 4	41	63	104	88	192	200	104	96	6	19	19	19	13	19
	Midland.....	" 1	25	66	91	99	180	198	93	105	2	19	19	19	19	1,085
	do.....	" 2	43	62	105	84	189	197	107	90	2	25	18	18	18	18
	Orillia.....	" 1	61	63	124	124	126	250	124	126	18	18	18	18	18	18
	do.....	" 2	76	77	153	106	261	274	154	120	1	19	19	19	19	19
	do.....	" 3	60	53	113	111	174	180	113	67	19	19	19	19	19	2,910
	Penetanguishene.....	" 1	13	56	69	61	105	124	69	55	19	19	19	19	19	19
	do.....	" 2	37	40	77	36	109	136	78	48	1	19	19	19	19	1,089
	do.....	" 3	21	11	32	45	47	49	31	15	2	18	18	18	18	18
Totals.....	31	1,533	1,436	2,989	1,810	4,799	5,250	3,027	2,225	35	9	593	15	578	24,099	
Majority for.....		117														
Kent, E. R.....		Ferguson.....		By Acclamation.												

REPORT

OF

THE HON. THE PROVINCIAL SECRETARY

ON THE WORKING OF THE

TAVERN AND SHOP LICENSES ACTS

FOR THE YEAR

1885.

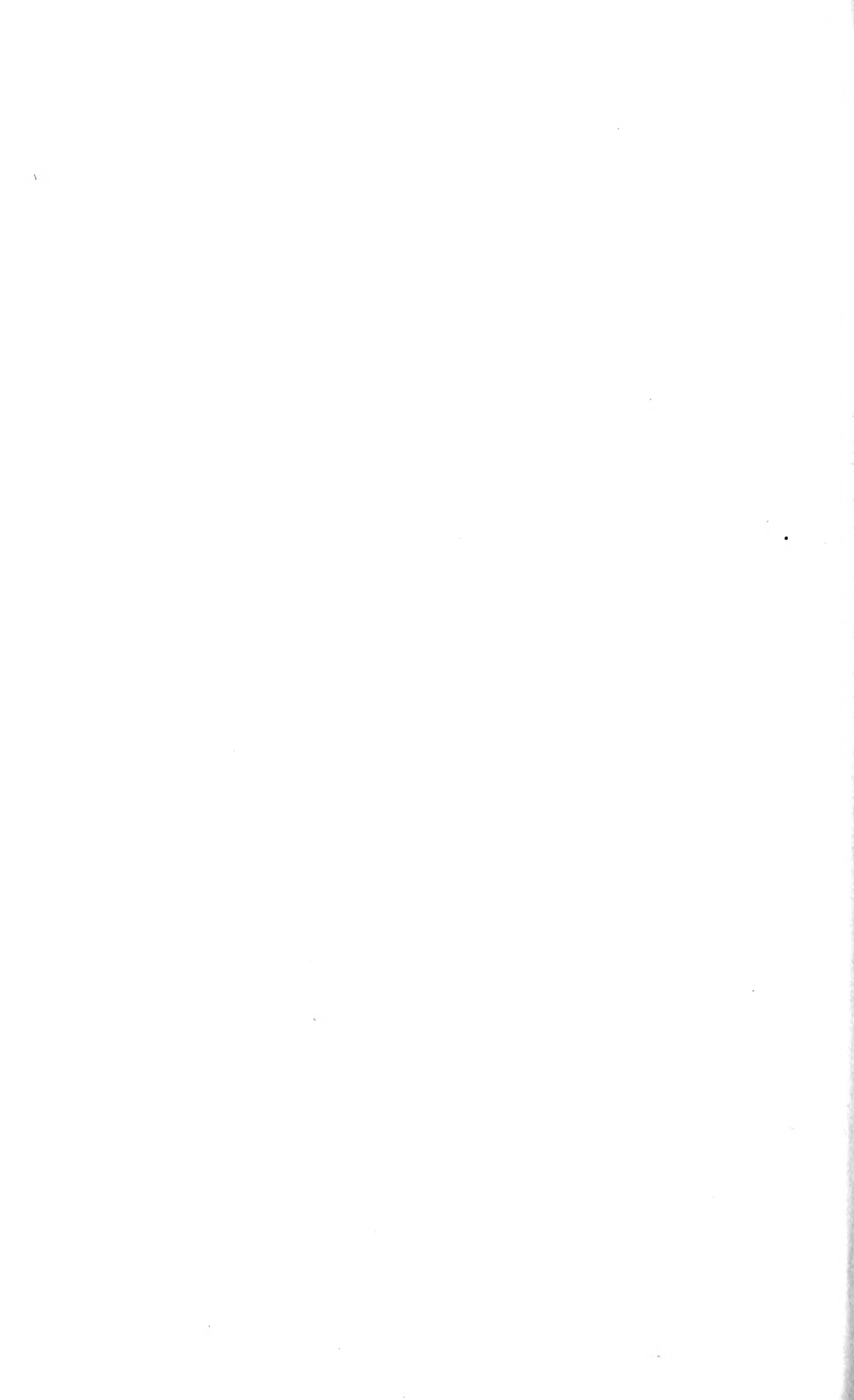
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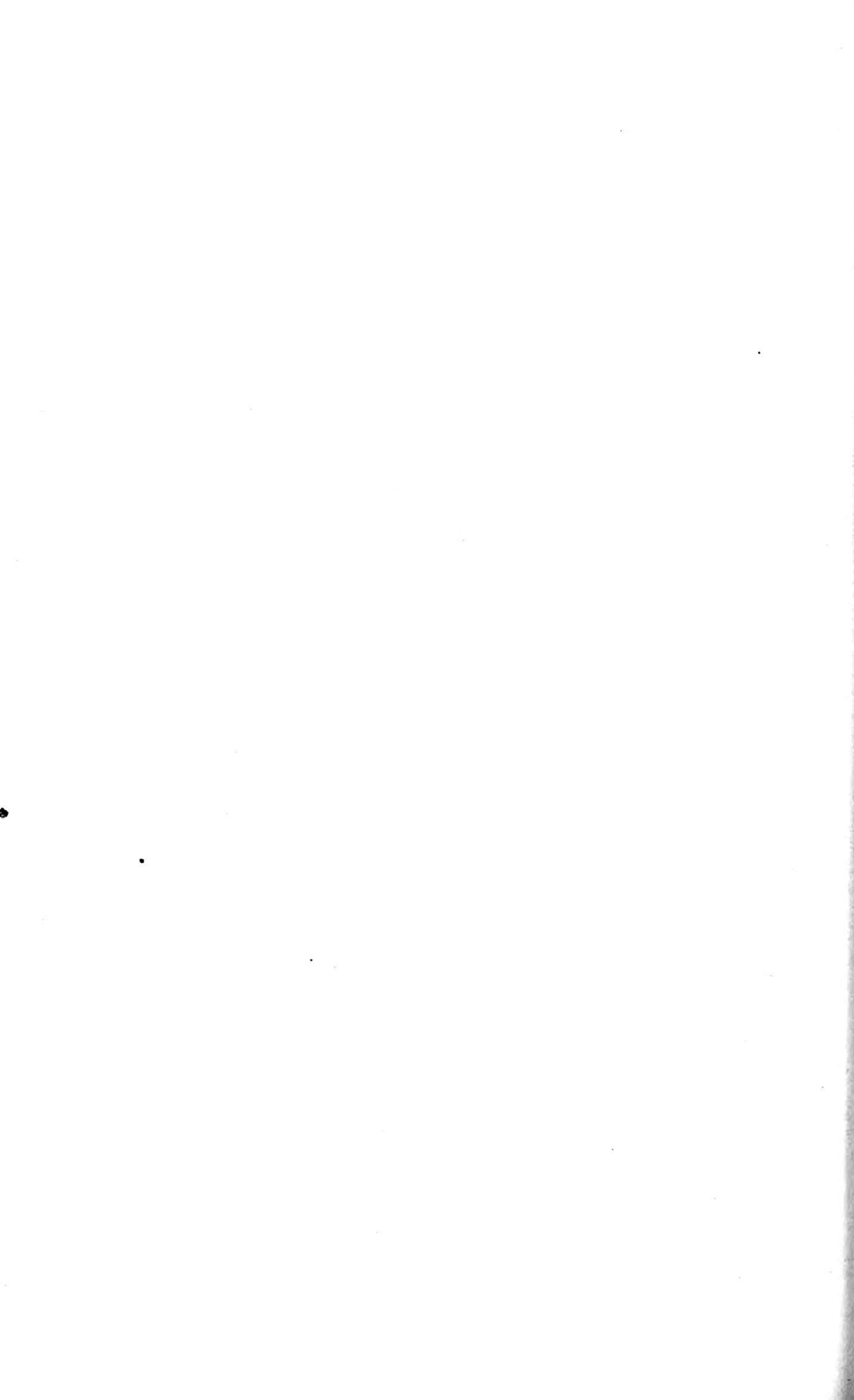
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1886.



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LICENSE REPORT.

PROVINCIAL SECRETARY'S OFFICE,

LICENSE BRANCH,

TORONTO, January, 1886.

To the Honourable JOHN BEVERLEY ROBINSON,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR :

I have the honour to submit the Tenth Annual Report, and accompanying Schedules, respecting the operation of the Liquor License Laws.

NUMBER OF LICENSES.

Schedule A is a comparative statement of the number of Licenses of the various denominations issued, and of the number extended, transferred or removed, in each of the License Districts of the Province, during the three past license years, and may be thus summarized :

YEARS.	LICENSES.									EXTENSIONS, TRANSFERS, AND REMOVALS OF LICENSES.			
	TAVERN.				Shop.	Wholesale.	VESSEL.		Total.	Extensions.	Transfers.	Removals.	Total.
	YEARLY.		SIX MONTHS.				Ordinary.	Beer and Wine.					
	Ordinary.	Beer and Wine.	Ordinary.	Beer and Wine.									
1882-3	3292	25	31	2	787	35	20	4	4196	50	572	41	663
1883-4	3340	23	27	5	781	36	18	3	4233	72	589	46	707
1884-5	3230	23	26	1	675	28	12	2	3997	48	427	44	519

There was a decrease in the number of Licenses issued last year, as compared with the preceding year, of 115 Tavern, 106 Shop, 8 Wholesale, and 7 Vessel, or 236 in all.

PROVINCIAL REVENUE.

The same Schedule shews the revenue derived by the Province from Licenses and Fines, to have been, for

1882-3.....	\$93,523 28
1883-4.....	93,225 70
1884-5.....	192,867 02

The falling off in the ordinary revenue from this source consequent on the decreased number of licenses, was more than compensated for by the amount received as additional duties for exclusively Provincial purposes, under the provisions in that behalf of the Liquor License Act, 1884; the result being that the revenue was more than doubled and that the increase was nearly \$100,000.

There was also collected during the past year, as the proportion of the Province of the duties payable by holders of exclusively Dominion licenses, the sum of \$11,187.90.

LICENSES IN COUNTIES AND CITIES.

Schedule B is a statement of the number of Licenses issued in the several Counties and Cities during the past eleven years, the aggregates of the last three years agreeing with those of Schedule A, except as to Six Months' Licenses, which are not included in the present Schedule.

LICENSES IN THE MINOR MUNICIPALITIES.

Schedule C gives, in detail, as regards each City, Town, Incorporated Village and Township, and the Unorganized Territory, of the Province, the number of licenses (other than vessel licenses) and of extensions, transfers and removals, granted during the past three years.

TOTAL COLLECTIONS.

This Schedule also gives the amounts collected from Provincial licenses and fines (including the sums imposed by municipal by-laws), the totals of which (with the duties derived from Vessel Licenses) were as follows:

1882-3.....	\$435,152 87
1883-4.....	444,745 40
1884-5.....	540,299 24

In the latter year there was also collected, as duties from the holders of exclusively Dominion Licenses, a total sum of \$27,915.05.

MUNICIPAL REVENUE.

The payments to the Municipalities are shewn by the same Schedule to have been, in—

1882-3.....	\$284,379 79
1883-4.....	287,246 31
1884-5.....	283,589 80

the decrease being attributable to the reduction, already referred to, in the number of licenses

In 1884-5, the Municipalities also received, as their proportion of the sum collected in respect of Dominion licenses, \$16,728.15.

FINES.

The Fines collected during the past year, as shewn in Schedule D, amounted to \$18,826.30, as compared with \$18,652.95 in 1882-3 and \$21,406.32 in 1883-4.

SALARIES OF INSPECTORS—EXPENSES OF COMMISSIONERS.

The payments during the past year under these heads are set out in the same Schedule and shew no considerable change from the like payments for the year preceding.

COMMITMENTS FOR DRUNKENNESS.

Schedule E shews the number of prisoners committed for drunkenness during the years from 1876 to 1885 inclusively. The number for the past year is markedly less than that of the year before, the most considerable decrease being in the District of Thunder Bay.

THE TEMPERANCE ACT, 1878.

In Schedule F is set out the result of the voting on the Scott Act, in the several Counties and Cities in which it has been submitted since the issue of my Report of 1884, in which was given the particulars of the voting where the Act had been submitted up to that time.

In the Counties of Elgin, Frontenac, Lambton, Lincoln, Middlesex, Northumberland and Durham, Ontario, Peterborough, Victoria and Wellington, and in the City of St. Thomas, the result was favourable to the introduction of the Act, which will accordingly go into force on the 1st May, 1886, except as to Frontenac, not yet gazetted; and in the Counties of Haldimand, Hastings, Perth, and Prescott and Russell, and in the Cities of St. Catharines and Stratford, the result was unfavourable.

The License Districts and parts of Districts which will be under the operation of the Act on and after the said first day of May, 1886 (including those in which it is already in force) and in which therefore no liquor licenses, other than those provided for by the Temperance Act, can be issued, are :

Addington, (except the portion comprised in the County of Frontenac.)

Brant, North.

Brant, South, (except the City of Brantford.)

Brockville and South Leeds.

Bruce, North.

Bruce, South.

Cardwell, (the two Townships of Adjala and Tecumseth only.)

Carleton, (except the portion comprised in the County of Russell.)

Cornwall.
Dufferin.
Dundas.
Durham, East.
Durham, West.
Elgin, East, (including the City of St. Thomas.)
Elgin, West.
Glengarry.
Halton.
Huron, East.
Huron, South.
Huron, West.
Kent, East.
Kent, West.
Lambton, East.
Lambton, West.
Lanark, North.
Lanark, South.
Leeds and Grenville, North, and South Grenville.
Lennox.
Lincoln, (except the City of St. Catharines.)
Middlesex, East.
Middlesex, North.
Middlesex, West.
Monck, (the Townships of Caistor and Gainsborough only.)
Muskoka and Parry Sound, (those portions comprised in the Counties of Simcoe and
Victoria respectively.)
Norfolk, North.
Norfolk, South.
Northumberland, East.
Northumberland, West.
Ontario, North.
Ontario, South.
Oxford, North.
Oxford, South.
Peterborough, East.
Peterborough, West.
Renfrew, North.
Renfrew, South.
Simcoe, East.
Simcoe, South.
Simcoe, West.
Stormont.

Victoria, North, and Haliburton.

Victoria, South.

Wellington, Centre.

Wellington, South, (including the City of Guelph.)

Wellington, West.

In view of the fact that the passage of the Act in the County of Frontenac has not been gazetted, the Act cannot come into operation therein before 1st May, 1887.

THE INSPECTORS OF LICENSES.

The names and post-office addresses of the Inspectors of Licenses are set out in Schedule G.

SPECIAL INSPECTIONS OF LICENSE DISTRICTS.

The special inspections of the License Districts, and the examination of the work of the license officials therein, from time to time, have been continued during the past year.

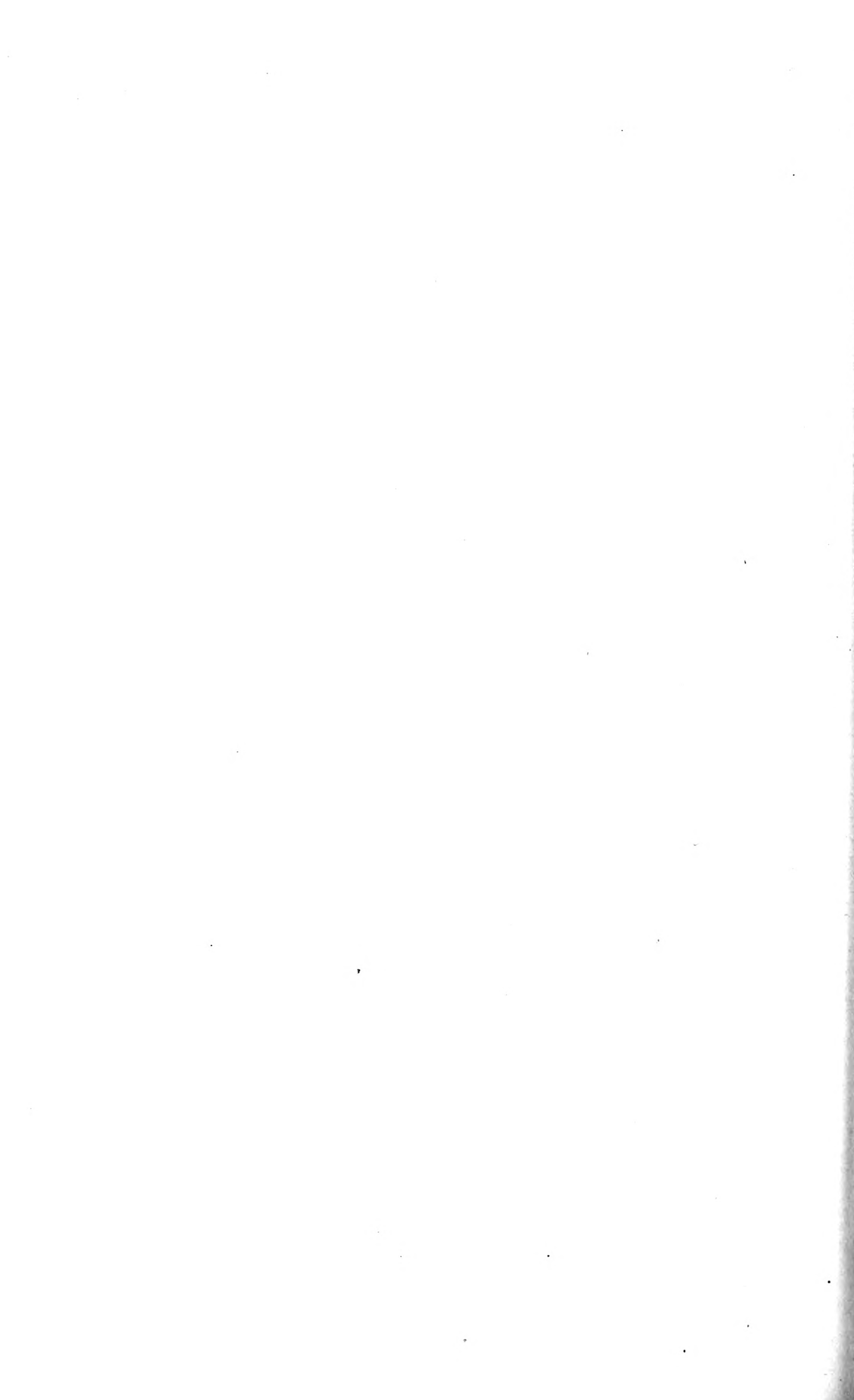
DECISION OF THE PRIVY COUNCIL.

The recent decision of the Imperial Privy Council upon the respective appeals of the Dominion and Provincial Governments touching the validity of the Liquor License Acts heretofore passed by the Parliament of Canada, has placed the whole question of the law upon the subject of Liquor Licenses upon a permanent footing, and has tended to relieve the license officers and the public from much confusion and uncertainty. Since the passage of the Dominion License Act of 1883 the conflict as to jurisdiction has weakened the efforts of the executive officers to enforce the law, and has encouraged illicit sellers to pursue their practices more openly and in greater numbers, and has partially paralyzed the efforts of those charged with the enforcement of the Provincial laws. Since the decision, directions have been given to Inspectors to enforce vigorously the laws against illicit and Sunday selling, and requesting them to call to their aid the assistance of the police and constabulary.

Heretofore these officers of the law (with rare exceptions) have given but little aid to the Inspectors in the performance of their arduous and delicate duties. Efforts will, however, hereafter be made to enlist the active co-operation of the police and constabulary, and it is hoped that through their aid much may be done that it has been found impossible for a single Inspector in a District to accomplish.

Respectfully submitted,

ARTHUR S. HARDY,
Provincial Secretary.



SCHEDULES.

SCHEDULE A.

COMPARATIVE STATEMENT, BY LICENSE DISTRICTS, shewing the number of (Provincial) such Licenses extended, transferred or removed, and the amount of Revenue received 1883-4 and 1884-5 respectively.

LICENSE DISTRICT.	Tavern Licences Issued.									Tavern Licenses Extended.			Shop Licenses Issued.			
	Yearly Licenses.						Six Months' Licenses.									
	Ordinary.			Beer and Wine.			Ordinary.	Beer and Wine.		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		1882-3.	1883-4.							1884-5.
Addington	42	43	44							1	1	...	4	4	3	
Algoma	20	23	23										5	2	3	
Brant, North	20	20	19										2	2	2	
Brant, South	38	38	30	1						2	2	1	11	9	5	
Brockville and South Leeds	56	58	52			2		2		2	3	2	15	16	13	
Bruce, North	43	42	38			2	1	1					8	7	5	
Bruce, South	65	66	61	1		1				1			10	9	10	
Cardwell	43	42	39			2							4	5	3	
Carleton	37	40	40							1			1	...	1	
Cornwall	23	22	24										5	6	5	
Dufferin	32	34	34	1									5	5	4	
Dundas	24	23	23										4	1	2	
Durham, East	30	31	30							1	2		8	8	6	
Durham, West	19	19	19										3	3	3	
Elgin	73			1		1				1			13			
Elgin, East		52	51											12	10	
Elgin, West		22	23				1	1			1			4	2	
Essex, North	47	50	47				1	1		1			15	14	11	
Essex, South	24	24	23				1	1					5	5	4	
Frontenac	16	19	16													
Glengarry	34	29	31										7	8	7	
Grey, East	32	34	36										3	3	2	
Grey, North	30	33	30										8	10	10	
Grey, South	26	28	25										7	7	7	
Haldimand	42	42	37										3	3	3	
Halton†																
Hamilton	96	103	96	2	2	1			2	2	3	1	1	58	54	47
Hastings, East	30	30	32										1	3	2	
Hastings, North	25	26	27										6	6	6	
Hastings, West	39	41	40	1			1	1	1		2	3	6	6	7	
Huron, East	36	34	29									1	1	1	1	1
Huron, South	45	45	42										7	6	6	
Huron, West	43	45	44				1	1	1		2	1	7	8	7	
Kent, East	40	42	45										6	7	4	
Kent, West	29	28	30							1			8	7	7	
Kingston	52	52	38	1	1	1	1				1		22	23	20	
Lambton, East	30	29	28				1						8	7	6	
Lambton, West	44	43	46	1	1		1						14	12	10	
Lanark, North	18	16	18										2	2	2	
Lanark, South	18	19	18										5	5	5	
Leeds and Grenville, North, and South Grenville	36	36	36										6	5	4	
Lennox	18	19	18						1		1		4	4	4	
Lincoln	66	65	65				3	4	3			1	15	13	11	
London	47	47	48										26	24	22	
Middlesex, East	69	67	65								1		6	7	6	
Middlesex, North	29	30	27								1		6	6	5	

* One wholesale license extended.

† Halton—Scott Act in force, and licenses issued thereunder as follows: in 1882-3, five; in 1883-4, five; in 1884-5, three.

‡ And one wholesale license extended in each case.

SCHEDULE A.

Tavern, Shop, Wholesale, Six Months' and Vessel Licenses issued, and the number of by the Province therefrom, including the proportion of Fines, in the license years 1882-3,

Shop Licenses Extended.			Wholesale Licenses Issued.			Vessel Licenses Issued.			Licenses Transferred and Removed.			Totals.			Proportion of Duties for Provincial Licenses, Fees for Transfers and Removals, and Fines, received by the Province.						
1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	Ordinary.	Beer and Wine.	1882-3.	1883-4.	1884-5.	Transfers.	Removals.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
																\$	c.	\$	c.	\$	c.
5	1												52	57	55	825	75	759	32	1414	39
1													26	26	27	709	20	642	83	1001	07
4													26	25	24	412	00	383	07	759	32
1				1	*								54	53	39	1287	47	1223	91	2476	26
10		2											85	83	76	1427	14	1612	17	2830	07
4		1											57	52	47	976	36	810	03	1518	58
14													94	96	78	1458	23	1524	31	2650	89
13													62	57	47	799	08	777	39	1194	63
9													48	46	46	598	80	737	83	1201	52
													28	33	33	562	59	586	89	1236	42
4													42	51	41	718	15	746	16	1373	90
2													31	27	25	457	28	331	91	731	45
4						1	1						44	48	42	880	13	867	18	1510	71
2													24	28	26	371	80	330	12	773	86
15													105			2078	48				
			2										73	65				1729	86	3703	26
													35	30				387	08	705	25
													67	75	63	1373	92	1468	74	2607	62
													36	33	31	549	97	564	38	1081	24
													19	21	16	200	21	217	57	401	12
													46	42	46	668	81	609	89	1151	39
													48	43	41	626	70	601	00	1099	34
						1	3	1					50	49	43	906	89	1201	34	1901	81
													39	40	34	571	99	631	78	1054	67
													48	51	45	779	01	751	54	1176	37
2	3	1	8	8	4+								202	206	162	5330	10	5710	54	13655	53
													37	40	35	485	31	510	33	920	41
													37	39	40	466	09	507	72	980	78
1	1		3	3	3								65	65	59	1358	28	1356	32	3754	17
													47	50	38	613	69	545	74	877	59
													61	60	54	971	68	957	15	1702	90
1													55	65	57	1082	95	1203	97	2183	20
		1											53	57	61	946	82	942	82	2007	00
													47	44	42	811	96	724	99	1650	98
		1	2	3	2+	9	5	5					100	92	74	3512	21	3154	76	6307	52
													47	50	41	647	75	670	00	1145	18
													75	62	65	1336	59	1243	13	2530	61
													22	21	22	256	02	466	32	660	77
													26	28	26	403	44	462	39	1033	69
													49	44	42	760	31	764	04	1479	55
													27	31	26	369	64	416	81	860	10
1		1											96	97	93	1949	40	1892	14	4981	93
	1		3	2	2								87	81	78	2495	18	2304	82	6551	86
													87	89	71	1478	36	1559	99	2390	67
1													44	39	37	531	30	536	31	1001	26

SCHEDULE A.—Comparative Statement shewing the number of (Provincial)

LICENSE DISTRICT.	Tavern Licenses Issued.									Tavern Licenses Extended.			Shop Licenses Issued.				
	Yearly Licenses.						Six Months' Licenses.										
	Ordinary.			Beer and Wine.			Ordinary.			Beer and Wine.							
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
	Middlesex, West	35	33	34							2		4	5	6		
Monck	18	19	18	2	1		1	1				2	3	2			
Muskoka and Parry Sound	48	47	43	2	5	2	2	2			1	5	6	4			
Nipissing	8	8	5	1	1							5	5	5			
Norfolk, North	30	29	26	1	1							5	5	4			
Norfolk, South	25	22	20	2	4					3		1	1				
Northumberland, East	25	27	28			1	1			1		7	9	7			
Northumberland, West	28	27	24			1				1	3	5	3	3			
Ontario, North	42	42	39	1	2							10	9	8			
Ontario, South	28	28	27	1	1							3	3	3			
Ottawa	75	75	75			1	1	1				76	84	78			
Oxford, North	37	37	31									5	4	4			
Oxford, South	37	35	31							3	3	6	5	4			
Peel	35	36	36			1	1	1				5	4	3			
Perth, North	67	67	61									13	12	9			
Perth, South	43	42	41									6	5	5			
Peterborough, East	23	22	21									5	4	4			
Peterborough, West	27	28	25				1					10	10	9			
Prescott	37	43	43									6	7	4			
Prince Edward	22	23	21			1	1	1			1	3	4	1			
Renfrew, North	23	27	24	1								11	13	11			
Renfrew, South	22	32	18	2	4	2					2	12	17	9			
Russell	33	37	38														
Simcoe, East	37	38	38	2	1					2	4	3	5	5			
Simcoe, South	35	35	30							1		5	5	5			
Simcoe, West	51	53	49					1				12	13	12			
Stormont	14	15	14									2	2	1			
Thunder Bay	14	32		1	1							4	4				
Thunder Bay, East			45		1							3		9			
Thunder Bay, West			4		1												
Toronto	213	197	217	3		1				3	11	100	98	88			
Victoria, North, and Haliburton	33	34	32	1	1	1	1				1						
Victoria, South	28	27	26				1	1			1	3	3	3			
Waterloo, North	46	47	47							1	1	9	7	8			
Waterloo, South	43	43	43	1	1	2						8	8	6			
Welland	75	74	78	2	1	6	8	7		3	4	20	18	14			
Wellington, Centre	35	35	35							1		6	4	4			
Wellington, South	38	36	36		1							8	8	8			
Wellington, West	54	53	45	1	1					3		12	10	7			
Wentworth, North	28	30	30							3		4	4	4			
Wentworth, South	23	22	24							1	1	2	2	2			
York, East	44	43	37									7	7	2			
York, North	46	45	43								1	7	7	5			
York, West	41	44	41									10	9	6			
Totals	3292	3340	3230	25	23	23	31	27	26	2	5	41†	50†	28†	787	781	675

‡ And one wholesale license extended.

† These do not include extensions which were afterwards converted into yearly licenses.

‡ And four extended.

§ Of this number forty-four issued in 1881-2, but were accounted for in 1882-3.

Tavern, Shop, Wholesale, Six Months' and Vessel Licenses, etc.—Continued.

Shop Licenses Extended.			Wholesale Licenses Issued.			Vessel Licenses Issued.						Licenses Transferred and Removed.						Totals.			Proportion of Duties for Provincial Licenses, Fees for Transfers and Removals, and Fines, received by the Province.								
						Ordinary.		Beer and Wine.				Transfers.			Removals.														
1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
						Ordinary.	Beer and Wine.				Transfers.			Removals.						\$	c.	\$	c.	\$	c.				
									6	12	6				45	52	46	733	12	746	87	1507	09						
									7	3					29	26	22	283	54	304	16	577	65						
	1								9	5	9				64	63	65	1306	09	1290	97	1900	48						
										3	2				13	17	12	1216	75	914	95	350	61						
									4	9	1				40	44	32	619	38	657	25	1077	21						
									3	5	4				29	30	28	359	77	350	45	585	20						
	1	1							8	5	6	2	1	43	43	44	520	48	594	44	1194	59							
	1								3	2				37	34	30	669	26	608	85	1076	50							
									11	14	11		7	3	63	73	63	862	75	826	50	1425	32						
									3	10	7				35	42	37	646	86	645	78	1264	75						
						1	1	1	9	19	10	9	6	5	171	186	170	4902	32	5120	41	14209	52						
									8	4	1				50	45	36	850	02	845	56	1377	52						
	1								4	4	4	1			48	48	42	887	47	722	28	1585	56						
									7	6	5	1		2	50	47	47	689	10	694	21	1324	83						
									26	12	16	1	3	1	106	94	87	1775	90	1709	21	3047	60						
									8	2	6				58	49	52	1036	06	911	08	1835	30						
									1	3	4	1		1	30	29	30	415	59	366	66	716	86						
						1	1	1	2	6	2				40	46	37	888	28	940	16	1734	37						
									5	5	5				48	55	52	707	48	887	91	1426	10						
						2	2	2	4	5	3		1		32	36	29	625	81	641	70	1073	56						
															35	40	35	676	64	888	25	1352	20						
		1								3					36	56	32	590	23	902	89	917	27						
									5	5	2				38	42	40	598	77	623	53	1082	10						
				1					5	10	1			1	50	57	46	791	83	784	42	1585	26						
									6	4	1				47	44	36	689	67	629	28	1049	30						
									9	7	8				72	73	70	1236	78	1255	07	2541	50						
									5	4	1	1			22	21	16	287	36	172	37	278	03						
				1	1				3	13		1	4		24	55		420	67	939	75								
		1			2						25			3									2194	71					
											4			1										175	42				
2	4	5	14	14	13*	4	4	2	3	1	1	66§	23	40	4	2	2	414	355	370	10990	09	10004	74	29921	51			
									4	1	4			1	39	36	38	478	70	356	50	642	22						
									4	7	3	1			37	39	53	594	18	762	53	1419	48						
				1					8	7	3				63	63	59	1094	39	1129	45	2122	22						
															52	52	51	1019	66	1000	45	1899	15						
1	2								11	10	17	1	4	3	117	123	121	2011	95	1969	99	3996	48						
	1								5	6	4				47	46	43	711	09	622	64	1231	90						
									2	7					48	52	44	1151	64	1128	50	2315	23						
	2	1							12	7	9			1	82	73	63	1420	42	1290	06	1873	99						
									8	4	4			1	43	38	39	583	33	591	03	1280	09						
									4	3	1	1			31	28	27	370	99	397	04	653	28						
									7	7	1				58	57	40	878	14	948	95	1559	90						
									8	6	6				61	58	55	987	75	936	67	1647	57						
									9	5	7	1	1	1	61	60	55	895	93	885	60	1497	32						
8†	22†	16†	35	36	28†	20	18	12	4	3	2	616§	589	427	41	46	44	4905	4940	4516	93523	28	93225	70	192867	02			

SCHEDULE B.

COMPARATIVE STATEMENT, by COUNTIES AND CITIES, shewing the number of (Provincial) Tavern, Shop, Wholesale and Vessel Licenses issued in the several Counties of the Province, and in the Cities separated from Counties, for the license years 1874-5-6-7-8-9-80-1-2-3-4.

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Algoma (including Thunder Bay).....	1874	30	14	.....	3	
	1875	36	15	.....	3	
	1876	18	6			
	1877	19	5			
	1878	19	5			
	1879	21	8	1		
	1880	22	6	1		
	1881	29	9	1		
	1882	35	9	1		
	1883	56	6	1		
	1884	74	12	2		
Brant.....	1874	95	29			
	1875	73	22	2		
	1876	56	14	4		
	1877	.....	.....	7		Dunkin Act in force.
	1878	53	11	5		
	1879	55	14	1		
	1880	57	14	1		
	1881	55	14	1		
	1882	59	13	1		
	1883	58	11	1		
	1884	49	7	.....	
Bruce.....	1874	180	25			
	1875	119	22			
	1876	88	13	3		
	1877	83	12	2		
	1878	83	9	2		Dunkin Act in force for 10 months.
	1879	93	12			
	1880	98	14			
	1881	105	15			
	1882	109	18			
	1883	108	16			
	1884	99	15			
Carleton (not including Ottawa).....	1874	89	5			
	1875	79	8			
	1876	44	1	2		
	1877	55	3			
	1878	43	3			
	1879	43	1			
	1880	42	3			
	1881	50	3			
	1882	54	1			
	1883	58	0			
	1884	58	1			
Dufferin	1881	33	7	.....		New County erected 24th January, 1881.
	1882	33	5			
	1883	34	5			
	1884	34	4			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Elgin	1874	113	25			
	1875	110	24			
	1876	66	16	2		
	1877	66	10			
	1878	69	12			
	1879	72	16			
	1880	74	12			
	1881	74	13			
	1882	74	13			
	1883	74	16			
1884	74	12				
Essex.....	1874	120	28	6		
	1875	101	25	6		
	1876	62	14	5	1	
	1877	69	18	1	1	
	1878	69	18	2	1	
	1879	71	18	3	1	
	1880	70	19	2	1	
	1881	74	21	2		
	1882	71	20	2		
	1883	74	19	2		
1884	70	15	1			
Frontenac (not including Kingston).....	1874	71	2			
	1875	57	29			
	1876	29	.....	1		
	1877	17	.....	.....
	1878	34	.....	.....		Dunkin Act assumed to be in force until quashed, December 28.
	1879	36	.....	.....
	1880	33	1			
	1881	33	1			
	1882	33	2			
	1883	36	2			
1884	34	2				
Grey.....	1874	115	20	.....	3	
	1875	114	16	.....	2	
	1876	77	11	5	2	
	1877	.....	.....	6	2	
	1878	72	7	4	1	Dunkin Act in force.
	1879	91	12	1	1	do until Sept.
	1880	88	17	1	2	
	1881	84	16	.....	1	
	1882	88	18	.....	1	Melancthon and Shelburne attached to new County of Dufferin.
	1883	95	20	.....	3	
1884	91	19	.....	1		
Haldimand	1874	96	16			
	1875	83	13			
	1876	45	5			
	1877	49	4			
	1878	49	4			
	1879	50	5			
	1880	47	5			
	1881	51	5			
	1882	52	5			
	1883	51	5			
1884	47	5				
Haliburton.....						See Victoria, <i>post.</i>

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.	
Halton	1874	61	4				
	1875	58	5				
	1876	39	2	1			
	1877	38	1				
	1878	38	1				
	1879	42	1				
	1880	41	1				
	1881	41	1				
	1882	Scott Act in force.
	1883	do
	1884	do
Hastings	1874	117	23	1			
	1875	100	21	2			
	1876	76	11	3	1		
	1877	82	14	3	1		
	1878	89	15	3	2		
	1879	94	15	3	1		
	1880	91	16	3			
	1881	90	15	3			
	1882	95	13	3			
	1883	97	15	3			
	1884	99	15	3			
Huron	1874	150	38				
	1875	164	37	2			
	1876	113	16	3			
	1877	124	16				
	1878	127	20				
	1879	134	21				
	1880	131	16				
	1881	128	15				
	1882	124	15				
	1883	124	15				
	1884	115	14				
Kent.....	1874	128	41	.....	1	
	1875	118	34	.....	1	
	1876	66	13	4	1		
	1877	67	15	.....	1	
	1878	65	13	.....		
	1879	67	14	.....		
	1880	67	13	.....		
	1881	69	13	.....	1	
	1882	69	14	.....	1	
	1883	70	14	.....		
	1884	75	11	.....		
Lambton.....	1874	89	44	1			
	1875	85	33				
	1876	65	28	1			
	1877	65	25				
	1878	70	27				
	1879	72	26				
	1880	71	25				
	1881	72	22				
	1882	75	22				
	1883	73	19	1			
	1884	74	16	1			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Lanark.....	1874	62	20	2		Dunkin Act in force, except in Perth.
	1875	62	14	1		
	1876	32	9	2		
	1877	32	9			
	1878	7	4			
	1879	33	6			
	1880	34	8			
	1881	36	6			
	1882	36	7			
	1883	35	7			
	1884	36	7			
Leeds and Grenville.....	1874	145	32	1		
	1875	136	23	1		
	1876	79	23	3		
	1877	101	25			
	1878	97	19			
	1879	97	18			
	1880	97	20	1		
	1881	89	18			
	1882	92	21			
	1883	94	21			
	1884	88	17			
Lennox and Addington ..	1874	52	7			Dunkin Act in force.
	1875	46	8		1	
	1876	28	6	1		
	1877			1		
	1878	36	6			
	1879	37	5			
	1880	37	5			
	1881	41	5			
	1882	43	6			
	1883	45	6			
	1884	44	5			
Lincoln	1874	94	23			
	1875	103	37			
	1876	70	31			
	1877	70	25			
	1878	69	21			
	1879	72	16			
	1880	73	12			
	1881	69	14			
	1882	73	15			
	1883	72	13			
	1884	71	11			
Middlesex (not including London).....	1874	188	17	1		
	1875	174	33			
	1876	122	26	3		
	1877	139	23			
	1878	143	21			
	1879	141	19			
	1880	134	18			
	1881	138	18			
	1882	133	16			
	1883	130	18			
	1884	126	17			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Muskoka & Parry Sound.	1874	9				
	1875	23				
	1876	19				
	1877	22				
	1878	29				
	1879	38	1			
	1880	44	4			
	1881	45	4			
	1882	48	5			
	1883	49	6			
1884	48	4				
Nipissing.....	1878	2	1			
	1879	3	1			
	1880	3	1			
	1881	11	8			
	1882	8	5			
	1883	9	5			
	1884	5	5			
Norfolk.....	1874	73	6			
	1875	74	6			
	1876	51	4	2		
	1877	51	5	1		
	1878	55	5			
	1879	51	7			
	1880	51	6			
	1881	55	6			
	1882	56	6			
	1883	54	6			
1884	51	4				
Northumberland and Durham.....	1874	135	35	2	1	
	1875	121	32	2	1	
	1876	102	27	4	1	
	1877	103	25	2	1	
	1878	89	21	2	2	
	1879	98	21	.....	1	Dunkin Act in force for 10 months, except in Port Hope and Cobourg.
	1880	100	22	.....	1	
	1881	100	23	.....	1	
	1882	102	23	.....	1	
	1883	104	23	.....	1	
1884	101	19				
1884	101	19				
Ontario.....	1874	86	35			
	1875	87	23			
	1876	60	10			
	1877	58	9			
	1878	55	8	2	.....	Dunkin Act in force for 10 months.
	1879	61	9			
	1880	65	11			
	1881	66	12			
	1882	71	13			
	1883	72	12			
1884	68	11				

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.	
Oxford	1874	104	29				
	1875	102	25				
	1876	73	9	4			
	1877	70	10	1			
	1878	71	10				
	1879	74	12				
	1880	74	14				
	1881	73	13				
	1882	74	11				
	1883	72	9				
1884	62	8					
Peel	1874	91	15				
	1875	86	15				
	1876	49	10				
	1877	57	9				
	1878	60	8				
	1879	57	7				
	1880	62	7				
	1881	56	7				
	1882	57	6				
	1883	57	5				
1884	55	4					
Perth	1874	145	33				
	1875	135	25				
	1876	101	13	3			
	1877	105	17				
	1878	105	17				
	1879	110	18				
	1880	110	19				
	1881	106	19				
	1882	110	19				
	1883	109	17				
1884	102	14					
Peterborough	1874	98	16				
	1875	72	16				
	1876	40	11	2	1		
	1877	43	11	.....	1	
	1878	35	11	.....	1	Dunkin Act in force, in part of West Riding, for 10 months.
	1879	42	13	.....	1	
	1880	46	12	.....	1	
	1881	46	14	.....	1	
	1882	50	15	.....	1	
	1883	50	14	.....	1	
1884	46	13	.....	1		
Prescott and Russell	1874	63	10				
	1875	58	11	1			
	1876	52					
	1877	46	5				
	1878	49	5				
	1879	41	5				
	1880	42	4				
	1881	50	5				
	1882	53	6				
	1883	62	7				
1884	65	4					

SCHEDULE B.—Comparative Statement, etc.—Continued.

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Prince Edward	1874	22	3	3	Dunkin Act in force. " " " "
	1875	23	3	.....	1
	1876	.....	.....	1	1
	1877	.....	.....	.....	.....
	1878	.....	.....	.....	.....
	1879	23	2	.....	1
	1880	24	2	.....	3
	1881	24	3	.....	1
	1882	22	3	.....	2
	1883	23	4	.....	2
	1884	21	1	.....	2
Renfrew	1874	100	35	1	
	1875	102	30	1	1	
	1876	51	20	.....	1
	1877	42	17	.....	.....
	1878	31	15	.....	.....
	1879	36	16	.....	.....
	1880	42	21	.....	.....
	1881	47	17	.....	.....
	1882	48	23	.....	.....
	1883	63	30	.....	.....
	1884	44	20	.....	.....
Simcoe	1874	223	42	Mono and Mulmur at- tached to new County of Dufferin.
	1875	196	35	2	2	
	1876	135	24	2	2	
	1877	137	24	1	2	
	1878	149	21	1	1	
	1879	142	20	1	1	
	1880	155	23	1	1	
	1881	144	23	1	1	
	1882	146	23	1	.....
	1883	147	26	.....	.....
	1884	138	24	.....	.....
Stormont, Dundas and Glengarry	1874	122	31	
	1875	80	28	.....	.....
	1876	82	22	.....	.....
	1877	87	17	.....	.....
	1878	94	17	.....	.....
	1879	91	16	.....	.....
	1880	91	18	.....	.....
	1881	96	18	.....	.....
	1882	95	18	.....	.....
	1883	89	17	.....	.....
1884	92	15	.....	.....
Victoria	1874	78	13	1	Including Haliburton.
	1875	70	9	.....	1
	1876	55	5	1	.....
	1877	56	5	.....	.....
	1878	56	6	.....	.....
	1879	60	6	.....	.....
	1880	59	5	.....	.....
	1881	62	4	.....	.....
	1882	62	3	.....	1
	1883	62	3	.....	2
	1884	58	3	.....	.....

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

COUNTY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Waterloo	1874	135	21	3		
	1875	136	20	13		
	1876	86	19	10		
	1877	84	17			
	1878	87	17			
	1879	89	15			
	1880	87	15			
	1881	88	16			
	1882	90	17			
	1883	91	15		1	
	1884	92	14			
Welland	1874	145	28	3		
	1875	151	23			
	1876	73	19			
	1877	80	19			
	1878	89	21			
	1879	92	25			
	1880	87	29			
	1881	81	19			
	1882	78	20			
	1883	79	18			
	1884	82	14			
Wellington	1874	183	52			
	1875	182	41	3		
	1876	138	29	3		
	1877	130	28	3		
	1878	134	29			
	1879	138	29			
	1880	145	30			
	1881	134	24			
	1882	128	26			
	1883	126	22			
	1884	116	19			Orangeville, Amaranth and East Garafraxa attached to new C'ty of Dufferin.
Wentworth (not including Hamilton)	1874	110	32	4		
	1875	107	19	2		
	1876	61	11	2		
	1877	56	10			
	1878	47	6			
	1879	63	6			
	1880	56	6			
	1881	55	6			
	1882	51	6			
	1883	52	6			
	1884	54	6			
York (not including Toronto)	1874	148	39			
	1875	164	35			
	1876	108	16	1		
	1877	97	15			
	1878					
	1879	114	15			Dunkin Act in force.
	1880	117	16			“
	1881	128	21			month (May). one
	1882	131	24			
	1883	132	23			
	1884	121	13			

SCHEDULE B.—Comparative Statement, etc.—*Continued.*

CITY.	YEAR.	Tavern Licenses.	Shop Licenses.	Wholesale Licenses.	Vessel Licenses.	Remarks.
Toronto.....	1874	309	184	21	16	
	1875	299	128	28	9	
	1876	215	100	39	9	
	1877	182	100	26	6	
	1878	181	92	20	10	
	1879	195	98	19	6	
	1880	204	94	18	4	
	1881	210	95	15	6	
	1882	216	100	14	7	
	1883	197	98	14	5	
	1884	217	88	13	3	
Hamilton.....	1874	127	93	.....	3	
	1875	110	72	.....	
	1876	68	61	11	1	
	1877	68	55	7	2	
	1878	68	64	7	2	
	1879	68	61	8		
	1880	74	57	7		
	1881	89	55	7		
	1882	98	58	8		
	1883	105	54	8		
	1884	97	47	4		
Ottawa	1874	120	77	6		
	1875	114	148	7		
	1876	75	77	7	1	
	1877	75	80	2	1	
	1878	73	77	.....	1	
	1879	73	71	.....	1	
	1880	75	72	.....	1	
	1881	75	77	.....	1	
	1882	75	76	.....	1	
	1883	75	84	.....	1	
	1884	75	78		1	
London.....	1874	75	40	3		
	1875	75	74	2		
	1876	57	34	5		
	1877	58	35	1		
	1878	58	37	1		
	1879	57	36	2		
	1880	45	27	2		
	1881	45	24	2		
	1882	47	26	3		
	1883	47	24	2		
	1884	48	22	2		
Kingston.....	1874	97	25	.....	1	
	1875	75	20	3	1	
	1876	53	23	6	5	
	1877	61	21	3	8	
	1878	61	21	3	8	
	1879	62	20	3	8	
	1880	62	20	3	8	
	1881	64	20	2	11	
	1882	53	22	2	9	
	1883	53	23	3	6	
	1884	59	20	2	6	

SCHEDULE B.—*Concluded.*

RECAPITULATION, shewing the total number of Provincial Licenses issued in the several Counties in the Province, including the Cities, during the license years 1874-5-6-7-8-9-80-1-2-3-4.

Years.	Tavern.	Shop.	Wholesale.	Vessel.	Total.
1874	4793	1307	52	33	6185
1875	4459	1257	78	24	5818
1876	2977	787	147	27	3938
1877	2845	739	65	27	3676
1878	2910	724	52	29	3715
1879	3199	757	42	22	4020
1880	3227	760	4	22	4049
1881	3311	764	34	24	4133
1882	3317	787	35	24	4163
1883	3363	781	36	21	4201
1884	3253	675	28	14	3970

The Six Months' Licenses and the Licenses *extended* do not appear in the above Schedule or recapitulation, and as a consequence the total number of Licenses issued, according to the Statement, does not correspond with the number as shown in Schedules A and C. Beer and Wine Licenses are included with the ordinary licenses under the heads of Tavern Licenses and Vessel Licenses respectively. An *extended* License is good for a period not exceeding three months. It is not in the nature of a new License, but simply a permission, granted by the Board of Commissioners, to the holder of a license expiring in April, to continue his business under the old license for the specified period, that he may be enabled to dispose of his stock on hand and quit the business without loss. Six Months' Licenses run from the first day of May to the thirty-first day of October, and are not valid after the latter date. They are granted in localities which are largely resorted to in summer by visitors, where the Board of Commissioners are of opinion that increased tavern accommodation for the summer months is necessary.

SCHEDULE C.

COMPARATIVE STATEMENT, BY MUNICIPALITIES, shewing the number of Provincial Licenses, whether Ordinary or Beer and Wine, issued, and the number extended, transferred or removed, the gross sums deposited to the credit of the License Fund Accounts therefor, and for Fines, and the revenue paid over to the Municipal Treasurers, during the license years 1882-3, 1883-4 and 1884-5 respectively.

MUNICIPALITY.	TAVERN.						Shop.	Wholesale.	Extended Tavern.			Extended Shop.			Six Months.		
	Ordinary.			Beer and Wine.					1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.											
ADDINGTON.	14	7	14	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
Caunden	14	7	14	1	1	1											
Sheffield	7	2	7														
Newburgh	2	2	2														
Loughborough	5	5	5														
Hinchinbrooke	3	3	3														
Portland	4	4	4	1	1	1											
Oso	2	2	2														
Barrie	1	1	1														
Kadadar and Anglesea	2	3	3														
Palmerston and North and South Canoto	1	1	2														
Bedford	1	1	1	1	1	1											
Denbigh, Abinger, etc.																	
Olden																	
Kennebec																	
ALGOMA.	2	3	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
Sault Ste. Marie	2	3	3	1	1	1											
Howland	3	2	2														
Assiginack	2	3	2														
Gordon	2	3	3														
Carnarvon	1	1	1														
Tekummah	2	1	1														
St. Joseph	1	2	2	1	1	1											
Hilton																	
Billings																	
Unorganized Territory	7	9	6	2	1	2											

Municipality.	Licenses Transferred and Removed.				Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.			Remarks.	
	1882-3.	1883-4.	1884-5.	Removals.		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
ADDINGTON.	Camden	4	4	3	19	980 00	960 00	1183 00	508 53	490 02	513 29	Dunkin Act in force.		
	Sheffield			3	8	480 00	500 00	631 00	212 41	261 90	270 54			
	Newburgh			2	2	120 00	150 00	170 00	62 26	76 56	65 75			
	Leighborough	1		2	6	305 00	305 00	380 00	158 27	155 71	161 81			
	Hinchinbrooke			1	3	180 00	185 00	216 00	93 39	94 42	91 03			
	Portland			1	6	335 00	305 00	480 00	173 85	155 68	212 39			
	Oso			1	3	220 00	225 00	211 00	162 26	163 80	160 69			
	Barrie			1	1	60 00	60 00	72 00	31 13	30 62	30 35			
	Katadar and Anglesa			2	3	120 00	180 00	256 00	62 26	91 93	111 25			
	Palmerston and North and South Canoto		1		1	100 00	105 00	211 00	71 13	73 22	150 79			
	Bedford			2	2	140 00	120 00	144 00	79 33	54 59	60 68			
	Denbigh, Abinger, etc.													
	Olden													
	Kennebec						260 00	20 00	40 00	146 66	10 22		20 23	
ALGOMA.	Sault Ste. Marie				3	400 00	400 00	673 00	312 00	305 55	500 65	Payable to Province, less proportion of expenses.		
	Howland		1		3	180 00	185 00	216 00	92 00	87 91	116 75			
	Assinmack				2	270 00	160 00	309 00	152 68	97 04	158 06			
	Gordon			1	3	150 00	195 00	236 00	91 33	100 55	101 16			
	Camaron			1	1	60 00	90 00	112 00	30 67	58 52	68 91			
	Tchikummah			2	1	150 00	75 00	72 00	91 33	43 52	28 91			
	St. Joseph			2	2	160 00	120 00	141 00	101 33	57 01	57 83			
	Hilton										28 91			
	Billings										28 91			
	Unorganized Territory			1	10	585 00	600 00	616 00						
	License District.													

SCHEDULE C.—Comparative Statement by Municipalities, shewing the Number of Provincial Licenses, etc.—Continued.

License Districts.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.																			
NORTH BRANT.	8	5	8	8	5	8	2	2	2																
Paris	8	5	8																						
South Dumfries	5	5	5																						
Brantford, Township, north- erly portion	4	4	3																						
Onondaga	3	3	3																						
SOUTH BRANT.	24	25	21	1			11	9	5	1	1 ext.	1	1	1											
Brantford, City	6	6	4																						
Brantford, Township, south- erly portion	3	2	2																						
Oakland	5	5	3																						
Burford																									
Brockville	19	20	20				5	5	5			1	2												
Gananoque	8	8	7				3	4	2																
Newboro'	3	2	1				2	2	1																
Bastard and Burgess	6	6	5				2	2	2																
Rear of Yonge & Escott	2	3	3				2	2	2																
North Crosby	4	3	3				1	1	1																
South Crosby	4	3	1																						
Rear of Leeds and Lans- downe	4	5	5				2	2	2																
Elizabethtown	6	6	5																						
Front of Yonge																									
Front of Leeds and Lans- downe																									
Front of Escott		2	2																						

SCHEDULE C—Continued.

License District.	Municipality.	Licenses Transferred and Removed.						Total.			Amount Received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.				
NORTH	Paris	1	1	1	1	1	1	10	10	11	1882-3.	1883-4.	1884-5.	\$ c.	\$ c.	\$ c.	1882-3.	1883-4.	1884-5.	
	South Dumfries							6	6	6				407 00	350 00	365 00				
	Brauford, Tinslip, north- erly portion	2	1	1	1	1	6	5	3	3	250 00	250 00	236 00	185 00	185 00	221 00	122 49	119 35	86 96	
	Onandaga	1	1	1	1	1	4	4	4	4	185 00	185 00	221 00	185 00	185 00	221 00	90 63	88 30	80 41	
SOUTH	Brauford, City							38	38	29	1412 50	4127 50	6691 25				2580 26	2586 43	3494 14	
	Brauford, Tinslip, south- erly portion	1	1	1	1	1	7	6	4	365 00	360 00	308 00				193 79	188 31	116 55		
	Oakland						3	3	2	180 00	155 00	141 00				95 56	81 07	54 96		
	Burford	1	1	1	1	1	6	6	4	335 00	305 00	234 00				177 86	159 53	87 40		
BROOKVILLE & SOUTH LEEDS.	Brookville	1	2	2	2	2	26	29	27	3905 00	4090 00	5510 00				3014 56	5190 89	3865 97		
	Gananoque	3	1	1	1	1	14	13	10	1525 00	1635 00	1930 00				2220 66	1272 69	1409 62		
	Newboro'						5	4	4	345 00	260 00	282 50				213 61	156 00	134 63		
	Bastard and Burgess	2	1	1	1	1	10	9	9	510 00	690 00	630 00				286 68	390 89	299 83		
	Rear of Yonge & Escott						2	3	3	120 00	200 00	256 00				67 45	113 32	122 14		
	North Crosby						5	5	5	300 00	245 00	313 00				168 64	138 78	146 98		
	South Crosby						4	4	1	240 00	205 00	162 00				134 92	116 16	83 27		
	Rear of Leeds and Lans- downe						6	7	7	360 00	420 00	544 00				202 37	237 99	255 43		
	Elizabethtown	4	1	1	1	1	13	7	8	535 00	490 00	587 00				300 73	277 57	285 85		
	Front of Yonge									20 00										
	Front of Leeds and Lans- downe									20 00	85 00									
	Front of Escott							2	3	3	60 00	180 00	210 00				29 61	101 96	99 94	

Dunkin Act in force.
Dunkin Act in force, '82-3.

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.					
		Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.																		
NORTH BRUCE.	Warton.....	4	4	4					1																
	Anabel.....	2	2	2																					
	Albermarle.....	6	9	5																					
	Arran.....	3	2	2																					
	Bruce.....	1	1	1																					
	Elderslie.....	4	4	4					1																
	Port Elgin.....	4	4	4					2																
	Paisley.....	4	4	4					1																
	Southampton.....	1	1	1					1																
	Saugeen.....	3	3	2																					
	Tiverton.....	3	3	3					2																
	Chesley.....	3	3	3					1																
	Tara.....	3	3	2					1																
Eastnor, Lindsay and St. Edmund.....	4	4	4					1																	
SOUTH BRUCE.	Kingcardine, Town.....	8	8	8					2	2	2														
	Carrick.....	10	11	11					1	2	2														
	Walkerton.....	8	8	6					2	2	2														
	Kimloss.....	4	4	3																					
	Greenock.....	9	9	7																					
	Culross.....	3	2	2																					
	Brant.....	8	8	8																					
	Kingcardine, Township.....	2	2	2																					
	Huron.....	5	5	5					1	1	1														
	Lacknow.....	4	5	5					2	2	1														
	Teeswater.....	4	4	4					1	1	1														
	CARD. WELL.	Adjala.....	10	11	10					1	1														
		Caledon.....	12	11	9					1	1														
Tecumseth.....		11	10	10					2	3															
Bolton.....		2	2	3																					
Albion.....		8	8	7																					

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	\$	\$	\$	\$	\$	\$	\$	\$	\$	
NORTH BRUCE.	Warton.....						5	5	5	540 00	506 00	660 00	394 13	362 20	389 10		
	Anabel.....		1				2	3	2	120 00	125 00	114 00	68 51	64 04	64 95		
	Albermarle.....						1	1	1	60 00	60 00	72 00	34 25	32 44	32 48		
	Arran.....						6	6	5	360 00	360 00	360 00	205 56	194 64	162 32		
	Bruce.....						3	2	2	180 00	120 00	164 00	102 77	64 88	73 53		
	Elderslie.....						1	1	1	60 00	60 00	.....	34 26	32 44	.....	
	Port Blyth.....	1					6	5	5	605 00	600 00	740 00	474 16	462 20	478 59		
	Paisley.....	3					9	6	5	795 00	680 00	515 00	574 07	488 16	312 98		
	Southampton.....		1				5	7	6	270 00	335 00	440 00	154 17	178 41	178 58		
	Saugeen.....						1	1	1	60 00	60 00	72 00	34 25	32 44	32 46		
	Tiverton.....						3	3	3	195 00	225 00	265 00	117 77	142 32	136 94		
	Chestley.....						5	4	4	660 00	470 00	530 00	505 56	345 30	339 88		
	Tara.....						4	4	4	400 00	360 00	406 25	288 46	249 76	251 77		
	Eastnor, Lindsay and St. Edmund.....						6	4	4	350 00	240 00	288 00	199 85	124 82	129 86		
	SOUTH BRUCE.	Kincardine, Town.....	3	4	4			13	13	14	1195 00	1230 00	1530 00	829 71	831 26	851 73	
Carriek.....			1	1			14	14	14	730 00	785 00	991 00	402 80	444 06	462 94		
Walkerton.....		4	2				14	12	8	1200 00	1190 00	1200 00	832 46	838 23	677 72		
Kinloss.....							4	4	3	240 00	240 00	256 00	132 45	135 75	120 25		
Greenock.....		1	3				10	12	7	545 00	555 00	504 00	300 73	314 01	234 76		
Culross.....							3	2	2	290 00	120 00	144 00	110 37	67 86	67 08		
Brant.....		1	1				10	9	8	515 00	485 00	576 00	284 33	274 37	268 32		
Kincardine, Township.....			3				2	5	2	120 00	175 00	144 00	66 22	99 22	67 08		
Huron.....		3	5	1			9	11	7	465 00	385 00	522 00	256 74	218 47	241 35		
Lucknow.....		1	1				9	8	7	860 00	945 00	1000 00	622 44	682 82	626 59		
Teeswater.....		1	1	1			6	6	6	405 00	405 00	525 00	268 31	272 54	279 96		
CARDWELL.		Adjala.....	2	3				13	15	10	670 00	795 00	800 00	364 84	406 46	336 42	
		Caledon.....	4	3				18	15	13	805 00	795 00	785 00	438 33	406 94	304 25	
		Tecumseh.....	3					17	13	13	840 00	780 00	919 00	457 38	598 79	383 39	
		Bolton.....	2		1			4	4	4	190 00	270 00	335 00	130 79	182 04	181 54	
	Albion.....	2	2				10	10	7	490 00	490 00	524 00	266 82	250 54	217 67		

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licences, etc.—Continued.

License District.	Municipality.	Tavern.			Shop.	Wholesale.	Extended Tavern.			Extended Shop.			Six Months.								
		Ordinary.	Beer and Wine.				1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.						
CARLETON.	Huntley	3																			
	North Gower	5																			
	Marlborough	1																			
	Goulburn	3																			
	Richmond	1		1																	
	March	2																			
	Napan	2			1																
	Tarbolton	2																			
	Fitzroy	2																			
			22		1																
	CORNWALL.	Cornwall, Township	13						2	3											
Cornwall, Town		10						2	4												
DUFFERIN.	Orangeville	9						4	4												
	Mulmur	5																			
	Mono	3		1																	
	Melancthon	5																			
	Garafaxa, East	3																			
	Shelburne	3						1	1												
	Amaranth	4																			

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.				
		Transfers.			Renovals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.					
CARLETON.	Huntley							3	3	3	200 00	240 00	236 00				100 62	124 37	105 27					
	North Gower							6	6	300 00	400 00	365 00						150 95	207 27	160 53				
	Marlborough							1	1	65 00	85 00	72 00						32 82	44 04	31 59				
	Goulburn							4	3	180 00	225 00	281 00						90 57	116 59	128 95				
	Richmond							3	2	100 00	160 00	240 00						50 61	82 91	94 74				
	March							2	3	120 00	125 00	141 00						60 39	64 77	63 15				
	Nepean							30	28	1415 00	1593 00	1763 00						711 94	825 41	776 33				
	Tarbolton																							
	Fitzroy																							
CORNWALL.	Cornwall, Township							15	15	1125 00	1220 00	1315 00						665 12	705 91	682 05				
	Cornwall, Town							13	18	2700 00	2810 00	3160 00						2165 01	2287 87	2415 78				
DUFFERIN.	Orangeville							15	18	1815 45	1800 00	1915 00						1261 24	1244 76	1110 52				
	Mulmur							6	8	305 00	335 00	365 00						160 73	173 28	158 07				
	Mono							4	4	230 00	260 00	365 00						121 21	131 52	158 08				
	Melancthon							5	8	320 00	410 00	432 00						168 64	212 08	186 59				
	Garafraxa, East							3	4	180 00	240 00	216 00						91 85	124 15	93 29				
	Shelburne							4	6	300 00	360 00	380 00						177 01	200 38	174 76				
	Amaranth							5	3	265 00	180 00	226 00						139 65	93 14	98 49				

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

MUNICIPALITY.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
DUNDAS. License District.	1882-3.	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1883-4.	4	5	6	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1884-5.	4	5	6	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1882-3.	6	5	6	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1883-4.	5	4	4	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EAST DURHAM.	1882-3.	4	4	4	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1883-4.	5	5	5	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1884-5.	4	5	5	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1882-3.	2	2	2	6	7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	1883-4.	15	15	15	6	7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
WEST DURHAM.	1882-3.	3	3	3	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1883-4.	3	3	3	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1884-5.	3	3	3	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1882-3.	5	5	5	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1883-4.	4	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

SCHEDULE C.—Continued.

Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Amounts paid to Municipalities.						Remarks.
	Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.				
DUNDAS.	1882-3.	1					5	6	4	620 00	505 00	600 00	402 70	326 13	370 87							
	1883-4.	1					10	6	7	1075 00	40 00	11 00	782 67	16 56	4 68							
	1884-5.	1					5	6	6	500 00	680 00	1165 00	341 78	471 83	781 09							
	1882-3.	1					5	5	4	345 00	365 00	368 00	197 55	186 15	170 87							
	1883-4.	1					6	4	4	325 00	240 00	288 00	156 85	99 28	102 33							
	1884-5.																					
EAST DURHAM.	1882-3.	2					23	26	21	3220 00	3315 00	3620 00	2419 71	2190 01	2249 05							
	1883-4.	3					8	6	5	617 50	465 00	560 00	416 31	323 24	317 22							
	1884-5.	1					6	7	5	305 00	356 66	293 00	165 52	190 91	128 40							
	1882-3.	1					1	5	5	240 00	300 00	360 00	130 24	160 64	157 23							
	1883-4.	2					2	4	2	220 00	160 00	179 00	155 98	99 59	95 52							
	1884-5.	3					1															
WEST DURHAM.	1882-3.	1					5	4	4	325 00	300 00	340 00	180 89	162 89	159 20							
	1883-4.	2					7	9	10	1105 00	1055 00	1150 00	756 96	717 93	599 71							
	1884-5.	1					4	5	4	205 00	210 00	241 00	93 52	90 07	91 38							
	1882-3.	1					3	6	5	420 00	423 75	460 00	245 99	240 95	194 01							
	1883-4.	3					5	6	5	325 00	300 00	340 00	180 89	162 89	159 20							
	1884-5.	1																				

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		1882-3.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
ELGIN.	Dunwich.....	6						1														
	Bayham.....	9						1														
	Aldborough.....	7																				
	Southwold.....	1																				
	South Dorchester.....	1																				
	Malahide.....	2																				
	Yarmouth.....	3																				
	Vienna.....	2																				
	Aylmer.....	4																				
	St. Thomas.....	21							1													
	Port Stanley.....	2																				
	Springfield.....	2																				
EAST ELGIN.	Bayham.....		8	7					1													
	South Dorchester.....																					
	Malahide.....		5	5																		
	Xarmouth.....		8	9																		
	Vienna.....		2	2					1													
	Aylmer.....		5	4					1													
	St. Thomas.....		22	22					7													
	Springfield.....		2	2																		
WEST ELGIN.	Dunwich.....		9	7					1													
	Aldborough.....		8	7					1													
	Southwold.....		9	7																		
	Port Stanley.....		2	2					1													
																						1

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
ELGIN.	Dunwich.....	1					8										For figures of 1883-4-5 see East Elgin and South Elgin, respectively, <i>infra</i> .
	Bayham.....	1					11										
	Aldborough.....	1			1		9										
	Southwold.....	1					8										
	South Dorchester.....	1					1										
	Malahide.....	1					6										
	Yarmouth.....	1					9										
	Vienna.....	1					4										
	Aylmer.....	2					7										
	St. Thomas.....	3					33										
	Port Stanley.....	1					6										
	Springfield.....	1					3										
	EAST ELGIN.	Bayham.....	1							10							
South Dorchester.....																	
Malahide.....																	
Yarmouth.....				1													
Vienna.....				1													
Aylmer.....				1													
WEST ELGIN.	Dunwich.....																For figures of 1882-3, see Elgin, <i>supra</i> .
	Aldborough.....																
	Southwold.....																
Port Stanley.....																	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.				
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.																				
NORTH ESSEX.	West Tilbury	6	2	2	8	17	16	17	17	9	7	6	2	2	1											
	Maidstone	2	2	2	8	17	16	17	17	9	7	6	2	2	1											
	Windsor	16	17	17	8	17	16	17	17	9	7	6	2	2	1											
	Rochester	3	3	3	8	17	16	17	17	9	7	6	2	2	1											
	East Sandwich	10	10	10	7	10	10	10	10	2	2	2	2	2	2											
	West Sandwich	3	3	3	4	3	3	3	3	2	2	2	2	2	2											
SOUTH ESSEX.	Sandwich, Town	5	5	5	4	5	5	5	3	3	3	3	3	3	1											
	Belle River	2	2	2	2	2	2	2	1	2	2	2	2	2	1											
	Mersea	2	2	2	2	2	2	2	2	1	1	1	1	1												
	Leamington	4	4	4	5	4	4	4	4	4	4	4	4	4												
	Amherstburgh	7	7	7	6	7	6	7	6	4	4	4	4	4												
	Anderton	3	3	3	2	3	2	3	2	4	4	4	4	4												
FRONT- GLEN- GARRY.	Malden	2	2	2	2	2	2	2	2	2	2	2	2	2												
	Gosneld	4	4	4	4	4	4	4	4	4	4	4	4	4												
	Kingsville	2	2	2	2	2	2	2	2	2	2	2	2	2												
	Essex Centre	2	2	2	1	2	1	2	1	1	1	1	1	1												
	Colchester, North																									
	Colchester, South																									
FRONT- GLEN- GARRY.	Kingston, Township	4	5	5	5	5	5	5																		
	Storrington	2	3	2	2	2	2	2																		
	Pittsburgh	4	5	4	4	5	4	4																		
	Wolfe Island	3	3	3	2	3	2	3																		
	Portsmouth	3	3	3	3	3	3	3																		
	Charlottenburgh	10	9	9	9	9	9	9																		
FRONT- GLEN- GARRY.	Lochiel	9	7	4	8	7	4	8																		
	Lancaster	9	7	8	7	8	7	8																		
	Kenyon	6	6	6	6	6	6	6																		
	Alexandria				4	6	6	4																		

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.					Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.		Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.		1884-5.
NORTH ESSEX.	West Tilbury		3				6	10	11	400 00	490 00	696 00	228 03	275 40	334 45	
	Maldstone		1			2	9	3	2	120 00	145 00	184 00	68 40	81 51	89 17	
	Windsor		4			27	33	30	24	4070 00	3960 00	4465 00	3072 61	2961 59	2774 96	
	Rochester		1			3	3	4	3	180 00	205 00	216 00	102 62	115 21	100 33	
	East Sandwich		1			12	12	12	10	720 00	720 00	713 00	410 46	405 31	337 23	
	West Sandwich					3	3	3	3	200 00	280 00	288 00	114 02	157 38	133 77	
	Sandwich, Town.	1				10	10	9	7	887 50	1002 50	970 00	593 01	632 17	503 31	
	Belle River					4	4	4	4	195 00	305 00	180 00	111 16	171 41	78 03	
						3	7	8	3	145 00	150 00	179 00	86 10	88 77	93 03	
						12	13	12	11	400 00	355 00	470 00	220 95	181 07	186 61	
SOUTH ESSEX.	Mersal	1	1			8	3	7	3	1105 00	1250 00	1360 00	688 00	724 37	633 80	
	Leamington	2	1	2		3	3	2	7	180 00	200 00	171 00	95 20	97 95	75 66	
	Amherstburgh	1	2			3	3	2	2	140 00	140 00	141 00	74 03	68 55	60 52	
	Anderdon					4	4	4	4	320 00	320 00	281 00	206 91	197 53	153 31	
	Malden					4	4	4	2	170 00	160 00	200 00	108 75	98 75	100 53	
	Gosfield					2	2	2	1	80 00	20 00	125 00	.....	9 78	52 96	
	Kingsville					.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Essex Centre					.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Colchester, North.					.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Colchester, South					.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
FRONTENAC.	Kingston, Township	2	2			6	7	5	5	330 00	390 00	400 00	119 58	135 76	112 41	
	Storrington					2	3	2	2	120 00	180 00	161 00	43 49	62 66	46 27	
	Pildsburgh	1				5	5	4	4	245 00	300 00	328 00	88 79	101 43	92 57	
	Wolfe Island					3	3	2	2	230 00	200 00	201 00	83 35	69 61	59 51	
	Portsmouth					3	3	3	3	180 00	180 00	240 00	65 23	62 65	59 51	
GLEN GARRY.	Charlottenburgh					11	11	12	12	660 00	685 00	730 00	346 88	344 56	318 93	
	Lochiel	3	1			15	14	4	4	720 00	680 00	368 00	397 39	371 86	205 17	
	Lancaster	1				13	10	13	13	745 00	600 00	815 00	391 55	301 82	363 35	
	Kenyon					7	7	6	6	460 00	520 00	560 00	241 77	261 57	248 85	
	Alexandria					1	1	1	8	.....	.....	645 00	.....	.....	302 18	

} Dunkin Act in force.

SCHEDULE C.—Comparative Statement, by Municipalities, showing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.	Tavern.						Shop.	Wholesale.	Extended Tavern.			Extended Shop.			Six Months.			
		Ordinary.			Beer and Wine.					1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
EAST GREY.	Artenesia	1882-3.	5	2	3	5			1884-5.										1884-5.
	Proton	1883-4.	7	6	7	7		1		1883-4.									1883-4.
	Holland	1882-3.	6	7	7	7		1		1882-3.									1882-3.
	Collingwood, Township	1883-4.	6	7	7	7		1		1884-5.									1884-5.
	Enphrasia	1884-5.	1	2	3	5				1883-4.									1883-4.
Osprey	1882-3.	5	2	3	5				1882-3.									1882-3.	
NORTH GREY.	Owen Sound	1882-3.	11	12	12	12		5		1882-3.									1882-3.
	Sullivan	1883-4.	3	3	3	3		1		1883-4.									1883-4.
	Meaford	1884-5.	6	7	6	6		2		1884-5.									1884-5.
	Derby	1882-3.	4	4	3	3		2		1883-4.									1883-4.
	Keppel	1883-4.	2	2	2	2				1882-3.									1882-3.
	Sydenham	1884-5.	3	4	2	2				1884-5.									1884-5.
	St. Vincent	1882-3.	1	1	1	1				1883-4.									1883-4.
SOUTH GREY.	Durham	1882-3.	4	4	4	4		2		1882-3.									1882-3.
	Beartinck	1883-4.	4	5	4	4		3		1883-4.									1883-4.
	Glencelg	1884-5.	4	4	4	4		2		1884-5.									1884-5.
	Normanby	1882-3.	11	12	10	1		3		1882-3.									1882-3.
	Egremont	1883-4.	3	3	3	3				1883-4.									1883-4.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.						Remarks.			
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.							
EAST GREY.	Artemesia	3	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Proton	3	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Holland	1	1
	Collingwood, Township ..	3	1	1
	Euphrasia
	Osprey	3	4

NORTH GREY.	Owen Sound	6	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sullivan	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Meaford	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Derby	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Keppel	1	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sydenham	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	St. Vincent .....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SOUTH GREY.	Durham .....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Bentick	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Glendeg	1	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Normanby	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Egremont	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.						
	Ordinary.	Beer and Wine.																										
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
HALDIMAND.	5	5	5	1			1	1	1																			
	4	4	3	1			1	1																				
	3	3	3																									
	4	4	3																									
	5	5	3																									
	4	4	4																									
	4	4	4																									
	12	12	11																									
	5	5	5																									
	96	103	96	58	54	47	8	8	8	4	3	3	3	3	3	1 B. & W.	2	3	1	2 B. & W.	2 B. & W.	1 B. & W.						
	HALTON.																											
HAMILTON.		96	103	96	58	54	47	8	8	4	3	3	3	3	3	1 B. & W.	2	3	1	2 B. & W.	2 B. & W.	1 B. & W.						

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses transferred and Removed.						Total.		Amounts received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality.						Remarks.
		Transfers.			Renovals.			1883-4	1884-5	1882-3		1883-4		1884-5		
		1882-3	1883-4	1884-5	1882-3	1883-4	1884-5			£	¢	£	¢	£	¢	
HALDIMAND.	Cayuga, Village.....						6	6	7	520 00	480 00	605 00	339 29	313 59	302 55	Scott Act in force, 1882-3-4-5, and Druggists' licenses issued thereunder, viz.: in 1882-3, 2 in Oakville, 1 in Milton, 1 in Acton and 1 in Georgetown; in 1883-4, 1 in Milton, 1 in Georgetown, 1 in Oakville, 1 in Acton and 1 in Burlington; and in 1884-5, 1 in Oakville, 1 in Acton and 1 in Esquesing.
	Caledonia.....	1					6	5	4	672 00	620 00	580 00	503 94	472 07	370 03	
	Ononda.....						3	3	3	180 00	200 00	236 00	98 68	107 55	100 03	
	Cayuga, North Township.....	2			1		4	7	3	240 00	255 00	216 00	131 58	137 13	90 00	
	Dunn.....						5	5	3	320 00	300 00	216 00	175 43	161 31	90 00	
	Rainham.....						4	4	4	240 00	240 00	288 00	131 58	129 07	120 00	
	Walpole.....	1	2	1			14	15	14	785 00	815 00	871 00	430 36	438 29	365 09	
	Seneca.....	1	1	2			6	9	7	405 00	405 00	470 00	267 20	261 07	255 04	
										1540 00	2435 00	611 10				
HALTON.	Nelson.....															
	Nassagaweya.....															
	Esquesing.....															
	Burlington.....															
	Georgetown.....															
	Oakville.....															
	Milton.....															
	Acton.....															
	Trafalgar.....															
HAMILTON.		25	28	10	6	1	202	206	162	25995 00	26284 65	32038 75	18372 69	18746 06	16495 92	
	Hamilton, City.....															

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.				Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.								
		Ordinary.	Beer and Wine.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.					
EAST HASTINGS.	Tyendinaga	10	9	10																						
	Hungerford	8	8	8																						
	Thurlow	8	9	10																						
	Deseronto (formerly Mill Point)	4	4	4																						
NORTH HASTINGS.	Marmora and Lake	3	4	4																						
	Huntingdon	2	2	2																						
	Stirling	3	3	3																						
	Madoc, Township	2	2	2																						
	Elzevir and Grimsthorpe	2	2	2																						
	Tudor and Limerick	4	3	4																						
	Wollaston	1	1	1																						
	Monteagle and Herschel	2	2	2																						
	Rawdon	2	2	2																						
	Madoc, Village	4	4	4																						
	Wicklow and Bangor	1	1	1																						
	Dungannon and Faraday																									
WEST HASTINGS.	Belleville	25	25	25																						
	Trenton	9	10	10																						
	Sidney	5	6	5																						

SCHEDULE C—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
EAST HASTINGS.	Tyendinaga	1						10			641 85	600 00	720 00	307 67	287 53	279 17				
	Hungerford	1					11			545 00	720 00	725 00	260 14	345 09	281 50					
	Thurlow	2	1				10			535 00	545 00	740 00	283 49	261 16	288 48					
	Deseronto (formerly Mill Point)	2	1				6	5	1	810 00	825 00	880 00	679 29	686 92	671 66					
NORTH HASTINGS.	Marmora and Lake	1	1				1	7	6	240 00	310 00	365 00	111 72	146 11	142 67					
	Huntingdon						3	2	2	125 00	120 00	141 00	59 74	56 52	57 10					
	Stirling		1				5	6	6	440 00	465 00	565 00	262 53	271 97	242 70					
	Madoc, Township.	2	1				1	2	4	150 00	120 00	241 00	71 71	56 52	89 21					
	Elzevir and Grimsthorpe.						2	2	2	120 00	120 00	141 00	57 36	56 52	57 10					
	Tuder and Limerick		1				4	3	5	240 00	180 00	293 00	114 72	84 81	106 63					
	Wollaston							1	1		60 00	60 00	92 00		28 28	34 83				
	Monteagle and Herschel		1				2	2	1	126 00	120 00	72 00	57 36	56 55	28 54					
	Raydon	3	2				2	3	2	120 00	165 00	141 00	57 36	77 77	57 08					
	Madoc, Village		3				10	10	10	715 00	815 00	855 00	487 95	532 08	479 80					
	Wicklow and Bangor						1	1	1	60 00	60 00	72 00	28 69	28 28	28 54					
	Dungannon and Faraday											20 00	20 00			8 70				
	WEST HASTINGS.	Belleville	6	7				42	41	38	5246 67	5155 00	7350 00	3670 61	3561 49	3711 61				
		Trenton	2	1				13	15	15	1505 00	1687 50	1895 00	1055 14	1171 12	1029 34				
Sidney		4	2				10	9	6	350 00	417 50	365 00	191 40	225 87	166 00					

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the Number of Provincial Licenses, etc. *Continued.*

License District.	Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.					
		Ordinary.			Beer and Wine.			1889-90	1888-89	1887-8	1886-7	1885-6	1884-5	1889-90	1888-89	1887-8	1886-7	1885-6	1884-5	1889-90	1888-89	1887-8			
		1889-90	1888-89	1887-8	1884-5	1883-4	1882-3																1881-2	1880-1	1889-90	1888-89	1887-8
EAST HURON.	Grey	2	2	2	1	1	1																		
	McKillop	4	4	3	3	3	3																		
	Hullett, East part	4	2	2	2	2	2																		
	Morris	2	2	2	2	2	2																		
	Howick	5	3	3	3	3	3																		
	Turnberry, East part	3	3	3	3	3	3																		
	Wroxeter	3	3	3	3	4	2																		
SOUTH HURON.	Exeter	5	5	5	5	5	5																		
	Scotforth	7	7	7	7	7	7																		
	Goderich, Township, S. part	1	1	1	1	1	1																		
	Bayfield	3	3	3	3	3	3																		
	Stephen	11	11	11	10	10	10																		
	Usborne	3	3	3	3	3	3																		
	Hay	7	7	7	6	6	6																		
	Tuckersmith	4	4	4	4	4	4																		
	Stanley	4	4	4	4	4	4																		
			10	10	9	9	9																		
WEST HURON.	Goderich, Town	1	1	1	1	1	1																		
	Wawanosh, East	1	1	1	1	1	1																		
	Hullett, West part	1	1	1	1	1	1																		
	Wawanosh, West	2	2	2	2	2	2																		
	Turnberry, West part	1	1	1	1	1	1																		
	Wingham	6	6	6	6	6	6																		
	Clinton	7	7	7	7	7	7																		
	Ashfield	5	5	5	5	5	5																		
	Colborne	6	6	6	6	6	6																		
Blythe	4	4	4	4	4	4																			

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.					Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.					Proportion thereof paid to Municipalities.			Remarks.	
		Transfers.		Removals.				1882-3	1883-4	1884-5	1885-6	1886-7	1887-8	1888-9	1889-90		1890-1
		1882-3	1883-4	1884-5	1885-6	1886-7												1887-8	1888-9	1889-90	1890-1
EAST HURON.	Grey.....	1		1			9	7	7	457 00	500 00	485 00	242 98	236 25	171 44		
	McKillop.....		2				1	3	260 00	270 00	260 00	130 25	127 57	80 44			
	Hullett, East part.....	2	1				4	3	130 00	130 00	130 00	65 13	61 43	55 68			
	Morris.....	2					2	2	140 00	120 00	184 00	70 14	56 69	71 25			
	Howick.....	2		2			11	9	570 00	470 00	554 00	285 55	222 07	209 31			
	Turnberry, East part.....	1	2	1			4	4	285 00	190 00	241 00	142 78	89 78	91 29			
	Brussels.....	4	4		1		10	12	690 00	735 00	730 00	490 38	500 26	419 21			
	Wroxeter.....		1	2			3	4	180 00	185 00	201 75	90 18	87 42	75 82			
	Exeter.....			2			7	7	790 00	770 00	900 00	586 51	573 13	565 33			
	Seaforth.....	4	4	1			14	13	1460 00	1265 00	1545 00	1079 56	924 95	925 07			
SOUTH HURON.	Godenrich, Township, S. part.....					1	1	60 00	60 00	72 00	33 46	32 41	32 82				
	Bayfield.....	1	1			1	5	4	265 00	285 00	285 00	147 76	157 43	122 63			
	Stephen.....	3	2		1		14	10	675 00	675 00	740 00	376 38	373 00	337 80			
	Usborne.....						3	3	180 00	180 00	216 00	100 36	97 22	98 52			
	Hay.....	1	1	1			8	7	445 00	505 00	492 00	248 14	278 83	228 63			
	Tuckersmith.....						5	5	300 00	300 00	360 00	167 28	162 04	164 15			
	Stanley.....						4	4	240 00	260 00	288 00	133 82	143 63	131 32			
	Godenrich, Town.....	1	1	3			14	14	1710 00	1740 00	1913 75	1205 78	1214 88	1069 57			
	Wawanosh, East.....						1	1	60 00	100 00	72 00	33 12	56 06	31 72			
	Hullett, West part.....		1				1	3	60 00	130 00	144 00	33 12	72 88	63 46			
WEST HURON.	Wawanosh, West.....					3	2	155 00	155 00	144 00	85 53	86 89	63 46				
	Turnberry, West part.....		1				1	2	80 00	65 00	72 00	41 15	36 44	31 74			
	Wingham.....		2				9	10	782 50	880 00	980 00	468 77	563 65	438 52			
	Clinton.....		5				8	15	870 00	1225 00	1240 00	574 21	818 60	593 41			
	Ashfield.....						5	6	300 00	315 00	380 00	165 54	176 63	158 68			
	Colborne.....			1			7	7	390 00	390 00	473 00	215 20	218 63	206 34			
	Blythe.....						6	5	473 75	375 00	475 00	296 72	243 19	233 68			

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.	Tavern.				Shop.	Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.	Beer and Wine.				1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
EAST KENT.	Howard	3	4	1	1	1												
	Blenheim	4	4	1	1	1												
	Dresden	5	5	1	1	1												
	Thamesville	2	3	1	1	1			1									
	Camden	2	2	1	1	1												
	Bothwell	1	4	1	1	1												
	Harwich	9	10	1	1	1												
	Orford	6	6	2	2	2												
	Ridgetown	4	4	2	2	2												
	WEST KENT.	Chatham, Town	15	17	6	6	6											
Chatham, Township		5	5	1	1	1			1									
Dover		5	2	1	1	1												
Wallacburgh		4	4	1	1	1												
Tilbury, East																		
Raleigh																		
Kingston, City		52	52	22	23	20	2	3	2	1	1	1	1	1	1	1	1	1
License District.																		

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.		Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.	
		Transfers.	Removals.		1882-3.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1888-9.	1889-0.		
EAST KENT.	Howard	1	1	2	210 00	300 00	385 00	131 53	165 40	175 21	1881-2			
	Blenheim	1	1	2	465 00	485 00	520 00	327 17	339 19	283 30	1881-2			
	Dresden	1	1	2	725 00	675 00	1035 00	510 34	481 33	626 41	1881-2			
	Thamesville	1	1	2	425 00	505 00	415 00	314 28	395 09	260 13	1881-2			
	Camden	1	1	2	120 00	120 00	241 00	65 77	66 14	110 51	1881-2			
	Bothwell	2	1	3	630 00	620 00	785 00	440 26	436 07	439 12	1881-2			
	Harwich	2	2	4	590 00	730 00	907 00	323 37	402 50	417 79	1881-2			
	Orford	2	1	3	550 00	380 00	432 00	301 45	209 53	191 07	1881-2			
	Ridgetown	2	1	3	780 00	755 00	1175 00	549 52	537 43	699 97	1881-2			
WEST KENT.	Chatham, Town	3	1	4	7305 00	8087 50	9035 00	6429 93	7109 44	7298 52	1881-2			
	Chatham, Township	1	1	2	325 00	300 00	365 00	162 91	151 43	151 11	1881-2			
	Dover	3	1	4	530 00	235 00	266 00	303 11	140 91	136 66	1881-2			
	Wallaceburg	1	3	4	635 00	645 00	730 00	482 92	489 01	438 67	1881-2			
	Tilbury, East				20 00		60 00				1881-2			
	Raleigh				20 00	93 75	40 00		46 73		1881-2			
KINGSTON.														
	Kingston, City	12	6	18	12057 50	12125 00	14211 50	8541 91	8514 53	7697 79	1881-2			

Prohibitory by-law, under C.S. U.C., cap. 54, in force. Dunkin Act in force.

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licences, etc.—Continued.

License District.	Municipality.	Tavern.					Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.				
		1885-86	1884-85	1883-84	1882-83	1881-82	1885-86	1884-85	1883-84	1882-83	1881-82	1885-86	1884-85	1883-84	1882-83	1881-82	1885-86	1884-85	1883-84	1882-83	1881-82	1880-81	
EAST LAMBTON.	Forest	5	5	5	5	5	2	2	2	2													
	Bosanquet																						
	Warwick	2	2	2	2	2																	
	Brooke	1	3	3	3	3																	
	Wyoming	3	3	3	3	3	1	2	2	2													
	Warford	1	3	3	3	3																	
	Euphemia	3	3	3	3	3																	
	Plympton	3	3	3	3	3																	
	Arkona	2	2	2	2	2																	
	Theford	3	3	3	3	3	2	1	1	1													
	Alvinston	4	4	4	4	4	1																
	WEST LAMBTON.	Petrolia	9	8	8	8	8																
Moore		9	1	1	1	1	3	3	3	3													
Sarnia, Township		1	1	1	1	1	1	1	1	1													
Sombra		6	7	7	7	7	3	2	2	2													
Oil Springs		2	2	2	2	2																	
Emiskillen		3	3	3	3	3	1																
Dawn		1	1	1	1	1																	
Sarnia, Town		9	9	10	10	10	6	6	6	6													
Point Edward		4	4	4	4	4	1																
NORTH LANARK.		Lanark, Village	2	2	2	2	2																
	Pakenham	3	3	3	3	3	1	1	1	1													
	Dalhousie	2	2	2	2	2																	
	Almonte	4	4	4	4	4	1	1	1	1													
	Carleton Place	4	4	4	4	4	1	1	1	1													
	Ramsay	4	4	4	4	4																	
	Lavant, Township	3	3	3	3	3																	
	Lanark, Township																						

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.					Total.	Amount received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality.					Proportion thereof paid to Municipalities.			Remarks.						
		Transfers.	Removals.	1882-3.	1883-4.	1884-5.		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.		1884-5.					
EAST LAMBTON.	Forest	1				1																
	Bosquet																					
	Warwick	1				1																
	Brooke		1			1																
	Wyoming		1			1																
	Wadford	1				1																
	Euphetaria		1			1																
	Plympton		1			1																
	Arkona		2			2																
	Thedford	1				1																
	Alvinston		1			1																
	WEST LAMBTON.	Petrofia	2				2															
Moore		1				1																
Sarnia, Township																						
Sombra		1				1																
Oil Springs			1			1																
Emuskillen		2				2																
Dawn		1				1																
Sarnia, Town		1				1																
Point Edward		4				4																
NORTH LANARK.		Lanark, Village		1			1															
		Pakenham		1			1															
		Dalhousie		1			1															
	Almoute	2				2																
	Carleton Place		1			1																
	Ramsay																					
	Lavant, Township																					
	Lanark, Township																					

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
SOUTH LANARK.	Perth	7	7	7				3	3	3												
	Smith's Falls	5	5	5				2	2	2												
	Beckwith	2	3	1																		
	Bathurst	1	1	1																		
	Drummond	2	2	2																		
	South Sherbrooke	1	1	1																		
NORTH LEEDS AND GREENVILLE AND SOUTH GREENVILLE.	North Elmsley			1																		
	Prescott	9	9	9				4	4	3												
	Edwardsburgh	2	3	3																		
	South Elmsley	2	2	2																		
	Kemptville	4	4	4				2	1	1												
	Kitley	5	5	5																		
	Oxford	3	2	2																		
	Angusta	4	4	4																		
	Merrickville	3	3	3																		
	Wolford	2	2	2																		
	Cardinal	2	2	2																		
	LENOX.	Napanee	7	8	8				2	2	2											
Bath		2	2	2																		
Adolphustown		1	2	1																		
Amherst Island		2	2	2																		
Ernestown		5	5	5																		
North Fredericksburgh		1																				
Richmond																						

SCHEDULE C. — Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Renewed.				Total.	Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.		
		1882-3.	1883-4.	1884-5.	1885-6.		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
SOUTH LANARK.	Perth	1	1	1	11	1600 00	1505 00	1925 00	1127 15	1088 73	1136 34	1884-5.	Dunkin Act in force.		
	Smith's Falls	2	1	1	9	1120 00	1110 00	1510 00	888 85	815 25	990 95	1883-4.			
	Beckwith	1	2	1	3	120 00	255 00	92 00	56 95	123 13	37 73	1882-3.			
	Bathurst	1	1	2	4	60 00	105 00	97 00	28 48	50 70	40 11	1881-2.			
	Drummond	1	1	2	4	130 00	130 00	151 00	66 95	67 97	66 60	1880-1.			
	South Sherbrooke	1	1	1	3	60 00	60 00	92 00	28 48	28 98	48 32	1879-80.			
NORTH LEEDS AND GRENVILLE AND SOUTH GRENVILLE.	Prescott	4	1	1	18	2060 00	2100 00	2430 00	1511 62	1516 62	1560 80	1884-5.	Dunkin Act in force.		
	Edwardsburgh	1	1	1	3	120 00	180 00	221 00	62 28	92 41	92 61	1883-4.			
	South Elnsley	1	2	2	5	120 00	120 00	141 00	62 29	61 63	60 09	1882-3.			
	Kemptville	1	1	5	7	735 00	685 00	800 00	549 81	497 71	550 22	1881-2.			
	Kitley	1	2	6	9	325 00	310 00	365 00	168 67	159 22	152 73	1880-1.			
	Oxford	1	1	2	4	180 00	120 00	141 00	93 42	61 63	60 09	1879-80.			
	Augusta	1	1	1	3	240 00	240 00	328 00	124 56	123 23	140 21	1878-9.			
	Merrickville	1	3	3	7	300 00	300 00	380 00	213 42	212 41	220 12	1877-8.			
	Wolford	1	2	2	5	120 00	120 00	181 00	62 29	61 63	80 14	1876-7.			
	Cardinal	1	2	2	5	150 00	150 00	190 00	92 29	91 64	90 09	1875-6.			
	ENNON.	Napanee	1	2	1	11	1875 00	2095 00	2055 00	1467 91	1619 14	1282 53		1884-5.	Dunkin Act in force.
		Bath	1	1	1	3	245 00	285 00	320 00	114 63	133 53	107 39		1883-4.	
Adolphustown		1	1	2	4	60 00	120 00	108 00	28 07	56 20	40 28	1882-3.			
Amherst Island		1	1	2	4	120 00	140 00	181 00	58 48	65 55	71 63	1881-2.			
Ernestown		1	4	5	10	305 00	320 00	405 00	142 71	149 84	154 37	1880-1.			
North Fredericksburgh		1	1	1	3	60 00	60 00	60 00	28 07	28 07	28 07	1879-80.			
Richmond		1	1	1	3	20 00	20 00	20 00	9 36	9 36	9 36	1878-9.			
Richmond		1	1	1	3	20 00	20 00	20 00	9 36	9 36	9 36	1877-8.			

SCHEDULE C.—Comparative Statement, by Municipalities, showing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.	TAVERN.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
		Ordinary.		Beer and Wine.		1872-3	1883-4	1884-5	1872-3	1883-4	1884-5	1872-3	1883-4	1884-5	1872-3	1883-4	1884-5	1872-3	1883-4	1884-5	1872-3	1883-4	1884-5
		1872-3	1883-4	1884-5	1872-3																			1883-4	1884-5
LINCOLN.	Niagara, Township	3	3																				
	St. Catharines	31	31			9															1		
	Grimsby, Township	3	3			1																	
	Grantham	6	6																				
	Merriton	4	4																				
	Louth	4	4			1																	
	Port Dalhousie	4	4																				
	Clinton	1	1																				
	Grimsby, Village	3	3																				
	Niagara, Town	5	5			2																	
	Beausville	3	2			1																	
LONDON.	London, City	47	47			26					2												
	London, Township	25	25																				
EAST MIDDLESEX.	North Dorchester	6	6			1																	
	Westminster	20	18			1																	
	London East, Town	12	11			2																	
	West Nisour	4	4																				
	London West, Village, formerly Petersville ..	2	3			2																	

License District.	MUNICIPALITY.	Licenses Transferred and Removed.		Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.		Proportion thereof paid to Municipalities.		Remarks.
		Transfers.	Removals.		1882-3.	1883-4.	1883-4.	1884-5.	
LINCOLN.	Niagara, Township	8	0	3	180 00	180 00	101 71	56 68	
	St. Catharines	6	0	47	4812 50	4786 25	2990 07	2907 55	
	Grimsby, Township	1	1	3	240 00	190 00	135 61	68 01	
	Grantham	2	1	9	635 00	635 00	463 20	454 67	
	Merriton	3	1	5	240 00	245 00	135 61	150 59	
	Leath	1	0	6	575 00	470 00	411 90	345 86	
	Port Dalhousie	0	1	1	60 00	60 00	33 91	32 89	
	Clinton	0	0	3	240 00	260 00	161 71	168 45	
	Grimsby, Village	2	0	10	600 00	650 00	339 03	309 14	
	Niagara, Town	1	0	4	240 00	285 00	135 61	188 53	
Beamsville	0	0	5	240 00	285 00	135 61	214 77		
LONDON.	London, City	10	2	87	9924 00	9673 33	6360 35	5643 71	
EAST MIDDLESEX.	London, Township	2	0	28	1645 00	1656 00	919 24	757 90	
	North Dorchester	1	0	7	460 00	365 00	257 06	197 72	
	Westminster	2	4	22	1390 00	1160 00	776 75	686 11	
	London East, Town	2	3	16	1560 00	1920 00	1017 35	970 10	
	West Nisour	2	0	7	256 00	240 00	143 06	131 80	
	London West, Village, formerly Petersville	2	0	6	510 00	610 00	373 23	404 74	

SCHEDULE C.—Comparative Statement by Municipalities, showing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
	Ordinary.	Beer and Wine.	1881-3.	1881-4.	1881-5.	1882-3.	1882-4.	1882-5.	1883-3.	1883-4.	1883-5.	1884-3.	1884-4.	1884-5.	1885-3.	1885-4.	1885-5.	1886-3.	1886-4.	1886-5.	1887-3.	1887-4.	1887-5.	
NORTH MIDDLESEX.	East Williams	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	McGillivray	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Adelaide	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Biddulph	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Ailsa Craig	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Lobo	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Parkhill	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Lucan	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	West Williams	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
WEST MIDDLESEX.	Elkrid	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Strathroy	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	Wardsville	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Metcalfe	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Delaware	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Caradoc	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	Glencoe	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Mosa	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Newbury	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
MONCK.	Wainfleet	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Canborough	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Caistor	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Sherbrooke	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Dunnville	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	Gainsborough	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	Pelham	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

License District.	MUNICIPALITY.	Licenses Transferred and Removed.				Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.			Remarks.
		1882-3	1883-4	1884-5	1884-5		1882-3	1883-4	1884-5	1884-5	1882-3	1883-4	1884-5	
NORTH MIDDLESEX.	East Williams.....				3	180 00	180 00	216 00	1884-5	86 15	81 71	83 49		
	McGillivray.....	1			3	145 00	180 00	161 00	1884-5	69 41	81 71	64 93		
	Adelaide.....				3	180 00	180 00	141 00	1884-5	86 15	81 71	55 66		
	Biddulph.....	1			6	305 00	300 00	308 00	1884-5	145 98	141 17	120 61		
	Ailsa Craig.....	1			6	110 00	425 00	535 00	1884-5	250 98	252 43	258 09		
	Lebo.....	2			6	250 00	240 00	293 00	1884-5	119 66	112 91	113 65		
	Parkhi I.....	1	1		8	805 00	800 00	950 00	1884-5	570 38	601 50	566 05		
	Lucan.....	1	1	1	6	530 00	450 00	605 00	1884-5	318 81	290 45	320 04		
	West Williams.....	2	1		8				1884-5					
					4				1884-5					
WEST MIDDLESEX.	Elkfrid.....	3	2		13	320 00	311 00	381 00	1884-5	168 18	161 81	166 63		
	Strathroy.....		3		11	1295 00	1435 00	1870 00	1884-5	870 36	996 03	1019 29		
	Wardsville.....	2			3	285 00	168 75	200 00	1884-5	171 11	103 99	102 28		
	Metcalfe.....		1		5	250 00	260 00	293 00	1884-5	131 39	135 27	127 15		
	Delaware.....				3	180 00	180 00	226 00	1884-5	94 60	93 64	98 61		
	Caradoc.....	4	1		10	360 00	500 00	518 00	1884-5	189 21	269 15	231 46		
	Glencoe.....	1			5	365 00	380 00	560 00	1884-5	248 76	255 27	315 68		
	Mosa.....		1		1	60 00	105 00	72 00	1884-5	31 53	51 63	31 06		
	Newbury.....		1		4	355 00	301 25	335 00	1884-5	241 14	202 90	186 02		
					6				1884-5					
MONCK.	Wainfleet.....	3			6	195 00	180 00	216 00	1884-5	81 62	76 55	72 47		
	Camborough.....	1			3	175 00	190 00	180 00	1884-5	73 23	80 82	60 38		
	Castor.....	1			4	155 00	180 00	216 00	1884-5	61 87	76 56	72 47		
	Sherbrooke.....				1	60 00	60 00	72 00	1884-5	25 12	25 53	24 15		
	Dumville.....	1	3		6	1065 00	1065 00	1070 00	1884-5	722 98	763 31	583 36		
	Gainsborough.....	1			12	285 00	260 00	216 00	1884-5	119 29	110 59	72 47		
	Pelham.....				4		40 00		1884-5		14 98			

Dunkin Act in force.

SCHEDULE C. Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.						Shop.	Wholesale.	Extended Tavern.			Extended Shop.			Six Months.		
	Tavern.			Beer and Wine.					1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
MUSKOKA AND PARRY SOUND.																	
Morrison.....	1	1	1														
Bracebridge.....	4	4	4				2										
McKellar.....	1	1	1														
Foley.....	2	2	2	1			1										
Stephenson.....	2	2	2														
Wood and Medina.....	1	1	1	*													
Macaulay.....	3	3	3														
Draper and Oakley.....	3	3	3	1													
Humphrey.....	3	3	3														
Gravenhurst.....	5	5	5				2										
Stated.....	1	1	1				1										
McDougall.....																	
McLean and Ridout.....	2	3	3														
Armour.....	3	3	3														
Chaffey.....	4	4	4				1										
Strong.....	1	1	1														
Chapman.....	2	2	2														
Monck.....	1	1	1														
Unorganized Territory.....	11	8	7														
				* six months													
NIPISSING.																	
Mattawa.....				5													
Widdfield.....																	
Unorganized Territory.....	8	8	1				5										

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.						Remarks.				
		Transfers.			Removals.				1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.								
MUSKOKA AND PARRY SOUND.	Morrison	1882-3	1					1	60 00	60 00	72 00	33 45	32 43	29 55	1884-5										
	Bracebridge							7	450 00	460 00	695 00	290 72	284 62	329 05											
	McKellar		2					2	60 00	65 00	112 00	33 45	34 14	49 29											
	Poley		1					4	140 00	369 50	216 00	78 06	195 32	88 72											
	Stephenson			1				2	120 00	120 00	149 00	66 91	64 87	61 61											
	Wood and Medora			1				2	90 00	90 00	131 00	50 18	48 65	54 21											
	Macaday			2				3	205 00	186 00	246 00	114 29	97 31	103 50											
	Draper and Oakley		1					2	120 00	120 00	128 00	66 91	64 87	54 21											
	Humphrey			4				4	210 00	210 00	180 00	117 97	110 37	73 94											
	Gravenhurst		1					8	425 00	523 24	665 00	236 96	274 36	339 69											
	Stisted							1	60 00	60 00	60 00	33 45	32 43	29 58											Dunkin Act in force.
	McDougall							2	160 00	185 00	261 00	106 91	97 31	110 89											
	McLean and Ridout		1					4	185 00	180 00	216 00	103 15	97 31	88 73											
	Arnour		1					7	310 00	300 00	288 00	172 83	162 18	118 29											
	Chaffey		2					1	60 00	90 00	108 00	33 45	47 21	44 37											
Strong			1				2	120 00	120 00	149 00	66 90	64 87	61 62												
Chapman							1			36 00															
Monck		4					15	680 00	665 00	762 00														Payable to Province, less proportion of expenses.	
Unorganized Territory																									
NIPISSING.	Mattawa										1730 00														
	Wildfield										180 00														
	Unorganized Territory		3				13		1300 00	1165 00	112 65														Payable to Province, less proportion of expenses.

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.	Tavern.						Shop.	Wholesale.	Extended Tavern.			Extended Shop.			Six Months.			
		Ordinary.			Beer and Wine.					1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.												
NORTH NORFOLK.	Middleton	9	9	8	1	3	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Simcoe	8	8	8	1	3	3	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Windsor	10	9	7	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Waterford	3	3	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Townsend	3	3	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
SOUTH NORFOLK.	Walsingham	6	5	6	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Woodhouse	2	1	1	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Charlotteville	9	9	6	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Houghton	4	3	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Port Dover	4	4	4	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
								1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
EAST NORFOLK. BERLAND.	Seymour	2	3	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Murray	2	2	2	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Cranshé	2	2	2	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Percy	3	4	4	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Colborne	4	4	4	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Campbellford	5	5	5	3	4	2	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Hastings	3	3	3	2	2	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Brighton, Village	4	4	4	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
WEST NORTHUM- BERLAND.	Alnwick	1	1	2	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	South Monaghan	2	1	1	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Haldimand	4	4	3	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Hamilton	7	7	6	1	1	1	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Cobourg, Town.	14	15	12	5	3	3	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
								1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.

*Beer and Wine License.

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.					Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
NORTH NORTHERLAND.	Middleton	2	2	1			12	12	10	630 00	630 00	653 00	320 92	313 71	247 55	
	Simcoe	1					12	11	11	1145 00	1190 00	1489 00	692 12	702 98	616 53	
	Windham	1	7				12	17	8	635 00	720 00	580 00	323 46	358 50	232 57	
	Waterford						4	4	3	340 00	505 00	360 00	222 25	356 88	201 75	
	Townsend									25 00				12 41		
SOUTH NORTHERLAND.	Walsingham	1	1	2			7	7	9	405 00	335 00	498 00	180 45	150 02	174 78	
	Woodhouse	2	1				4	4	2	130 00	125 00	108 00	57 92	56 00	57 45	
	Charlotteville			1			9	10	8	540 00	575 00	503 00	240 59	257 51	176 86	
	Houghton			1			4	4	5	240 00	230 00	257 00	106 92	103 01	89 48	
	Port Dover						5	5	4	425 00	425 00	420 00	258 66	259 38	199 85	
EAST NORTHERLAND.	Scymour						2	3	3	120 00	180 00	216 00	57 83	89 10	88 83	
	Murray			2			2	2	5	120 00	120 00	226 00	57 84	59 39	93 76	
	Cranshic	1					3	2	3	135 00	170 00	159 00	70 26	89 23	71 70	
	Percy	2					6	5	5	390 00	400 00	480 00	229 40	248 51	257 93	
	Collborne	3	1	3			8	6	8	315 00	305 00	435 00	151 81	150 97	165 33	
	Campbellford						8	10	8	640 00	773 75	718 75	370 60	453 04	338 25	
	Hastings	2	1				8	7	6	560 00	530 00	680 00	383 85	368 39	392 72	
	Brighton, Village		3	1	2		6	8	6	370 00	438 75	560 00	209 41	249 00	257 39	
WEST NORTHERLAND.	Albwick						2	1	2	90 00	15 00	144 00	48 09	7 88	55 76	
	South Monaghan						2	1	1	120 00	60 00	72 00	61 12	31 49	27 88	
	Haldimand						4	4	3	260 00	240 00	216 00	138 92	125 95	83 61	
	Hamilton	2					9	7	6	490 00	490 00	432 00	261 82	220 45	167 26	
	Cobourg, Town	1	2				20	21	18	2970 00	2878 75	3307 50	2250 53	2125 70	2160 46	

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

Municipality.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.						
	Ordinary.	Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
NORTH ONTARIO.	Reach.	7						1	1																
	Uxbridge, Village.	4						1	1																
	Brock.	4						1	1																
	Mara.	5						1	1																
	Thorah.	3						2	2																
	Port Perry.	5						1	1																
	Uxbridge, Township.	5						2	2																
	Scott.	3																							
	Kana.	3							1	1															
	Cannington.	3							2	2															
NORTH ONTARIO.	Ostawa, Town.	6						1	1																
	Whitby, Town.	7						2	2																
	Whitby, Township.	2																							
	Whitby, East, Township.	3																							
	Pickering.	10																							
Ottawa, City.	75	75	75				76	84	72																
NORTH ONTARIO.	East Nisourri.	2																							
	Blandford.	2																							
	East Zorra.	4						1	1																
	Embro.	2																							
	West Zorra.	3																							
	Woodstock.	13	13	12				4	3	3															
Blenheim.	11	11	8																						

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.				Total.	Amount received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.			Remarks.
		1882-3.	1883-4.	1884-5.	1884-5.		1882-3.	1883-4.	1884-5.	1884-5.	1883-4.	1882-3.		
NORTH ONTARIO.	Beach	2	1	2	1884-5.	9	\$ 590 00	\$ 485 00	\$ 514 00	1884-5.	\$ 305 47	\$ 297 13		
	Uxbridge, Village		1	1	1884-5.	6	\$ 530 00	\$ 520 00	\$ 615 00	1884-5.	\$ 372 91	\$ 370 79	\$ 356 93	
	Brock		1	1	1883-4.	6	\$ 260 00	\$ 295 00	\$ 293 00	1883-4.	\$ 132 63	\$ 132 28	\$ 118 04	
	Marl	1	1	1	1882-3.	7	\$ 365 00	\$ 365 00	\$ 462 00	1882-3.	\$ 184 57	\$ 192 94	\$ 187 87	
	Thorah	2	2	1	1882-3.	9	\$ 390 00	\$ 420 00	\$ 440 00	1882-3.	\$ 237 17	\$ 242 47	\$ 224 53	
	Port Perry	2	4	1	1884-5.	7	\$ 1100 00	\$ 1010 00	\$ 701 00	1884-5.	\$ 874 89	\$ 740 61	\$ 485 71	
	Uxbridge, Township	1	1	3	1884-5.	5	\$ 305 00	\$ 300 00	\$ 415 00	1884-5.	\$ 151 29	\$ 160 79	\$ 171 00	
	Scott		1	1	1883-4.	4	\$ 180 00	\$ 185 00	\$ 241 00	1883-4.	\$ 90 85	\$ 96 47	\$ 98 76	
	Rama		1	1	1882-3.	1	\$ 240 00	\$ 240 00	\$ 308 00	1882-3.	\$ 121 14	\$ 128 63	\$ 125 27	
	Cannington	3	3	2	1884-5.	8	\$ 415 00	\$ 425 00	\$ 570 00	1884-5.	\$ 281 52	\$ 270 79	\$ 309 35	
SOUTH ONTARIO.	Oshawa	2	1	1	1882-3.	9	\$ 1170 00	\$ 1105 00	\$ 1395 00	1882-3.	\$ 809 08	\$ 823 91	\$ 872 18	
	Whitby, Town	4	2	2	1883-4.	14	\$ 1200 00	\$ 1240 00	\$ 1410 00	1883-4.	\$ 808 35	\$ 812 22	\$ 786 88	
	Whitby, Township	1	3	2	1882-3.	6	\$ 175 00	\$ 365 00	\$ 376 00	1882-3.	\$ 116 11	\$ 228 19	\$ 218 76	
	Whitby, East, Township.	1	1	1	1884-5.	3	\$ 230 00	\$ 270 00	\$ 246 00	1884-5.	\$ 124 93	\$ 140 69	\$ 113 01	
	Pickering	1	1	2	1884-5.	10	\$ 880 00	\$ 790 00	\$ 766 00	1884-5.	\$ 555 82	\$ 486 57	\$ 422 67	
OTTAWA.	Ottawa, City	9	19	10	1882-3.	170	\$ 19384 00	\$ 20095 00	\$ 28915 00	1882-3.	\$ 13379 66	\$ 13815 82	\$ 14209 52	
NORTH ONTARIO.	East Nissouri				1884-5.	2	\$ 175 00	\$ 160 00	\$ 181 00	1884-5.	\$ 96 14	\$ 86 31	\$ 81 86	
	Blandford				1883-4.	2	\$ 120 00	\$ 120 00	\$ 111 00	1883-4.	\$ 65 92	\$ 64 73	\$ 61 39	
	East Zorra	1			1882-3.	5	\$ 305 00	\$ 305 00	\$ 380 00	1882-3.	\$ 167 54	\$ 164 54	\$ 163 72	
	Embro	2		1	1884-5.	3	\$ 240 00	\$ 200 00	\$ 265 00	1884-5.	\$ 151 42	\$ 144 73	\$ 151 19	
	West Zorra				1883-4.	1	\$ 189 00	\$ 180 00	\$ 92 00	1883-4.	\$ 98 81	\$ 97 10	\$ 40 93	
	Woodstock	4	1		1882-3.	17	\$ 1940 00	\$ 1920 00	\$ 2200 00	1882-3.	\$ 1309 01	\$ 1252 15	\$ 1115 11	
Blenheim	1	3		1884-5.	14	\$ 785 00	\$ 800 00	\$ 596 00	1884-5.	\$ 431 21	\$ 431 54	\$ 255 81		

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.					Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
		Ordinary.		Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.																1884-5.
SOUTH OXFORD.	Ingersoll.....	12	12	8	1	4	3															
	Tilsonburg.....	5	5	5	2	2	1															
	Norwich, Village.....	4	4	4																		
	North Oxford.....	1	3	3																		
	North Norwich.....	2	2	1																		
	South Norwich.....	4	4	4																		
	Dereham.....	4	3	4																		
	West Oxford.....	1	1	1																		
	East Oxford.....	1	1	1																		
PEEL.	Brampton.....	6	6	6	2	2	2															
	Chinguacousy.....	10	11	11																		
	Toronto.....	13	13	13	1	1	1															
	Toronto Gore.....	4	4	4	1	1	1															
	Streetsville.....	2	2	2	1	1	1															
NORTH PEERH.	Mornington.....	12	13	11	1	1	1															
	Ellice.....	6	7	7																		
	Wallace.....	4	3	2																		
	Elma.....	6	5	5																		
	Logan.....	2	2	2																		
	Listowel.....	8	8	6	3	1	1															
	Stratford.....	22	22	22	9	9	7															
	North Easthope.....	4	4	4																		
	Milverton.....	3	3	2																		

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.	
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.														
SOUTH OXFORD.	Ingersoll.....	2	2	1	1	19	18	14	2615 00	2610 00	2375 00	2065 09	1946 31	1524 42							
	Tilsonburg.....	2	1	1	1	9	8	7	835 00	763 75	950 00	592 87	499 03	520 97							
	Norwich, Village.....	1	2	1	1	4	4	6	240 00	240 00	450 00	138 08	116 53	194 49							
	North Oxford.....	1	1	1	1	4	6	3	260 00	235 00	216 00	149 59	114 09	94 62							
	North Norwich.....	1	1	1	1	4	2	1	120 00	120 00	72 00	69 04	58 25	31 54							
	South Norwich.....	1	1	1	1	4	5	4	240 15	277 00	338 00	138 16	134 49	162 95							
	Dereham.....	1	1	1	1	4	3	4	240 00	180 00	288 00	138 08	87 39	126 16							
	West Oxford.....	1	1	1	1	1	1	2	60 00	60 00	97 00	34 52	29 13	44 68							
	East Oxford.....	1	1	1	1	1	1	1	60 00	60 00	72 00	34 52	29 13	31 54							
PEEL.	Brampton.....	3	1	1	1	11	9	8	1015 00	1005 00	1000 00	698 74	691 69	445 53							
	Chinguacousy.....	2	1	1	1	13	12	11	727 50	815 00	812 00	425 71	472 55	345 87							
	Toronto.....	1	3	3	1	17	17	17	992 50	932 50	1134 50	557 94	512 25	527 81							
	Toronto Gore.....	1	1	1	1	6	5	4	305 00	300 00	308 00	157 73	154 26	132 23							
	Streetsville.....	1	1	2	2	3	4	7	240 00	245 00	320 00	153 08	155 15	161 72							
NORTH PERTH.	Mornington.....	3	2	3	3	16	16	15	820 00	875 00	959 00	485 82	513 05	453 60							
	Ellice.....	1	1	1	1	7	9	8	405 00	485 00	529 00	239 95	284 34	247 66							
	Wallace.....	1	1	1	1	5	3	2	265 00	180 00	144 00	157 00	105 51	66 78							
	Elma.....	1	1	2	1	10	7	7	380 00	310 00	370 00	225 13	181 73	172 53							
	Logan.....	1	1	1	1	2	2	2	120 00	120 00	144 00	71 11	70 35	66 78							
	Listowel.....	2	1	3	1	13	10	11	1340 00	1335 00	1290 00	977 29	981 34	734 10							
	Stratford.....	1	6	7	2	42	39	36	4845 00	4750 00	5437 00	3754 84	3682 96	3441 96							
	North Easthope.....	1	1	1	1	5	4	4	245 00	240 00	308 00	145 15	140 71	144 72							
	Milverton.....	3	1	1	1	6	4	2	195 00	185 00	200 00	115 53	108 45	89 06							

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

MUNICIPALITY.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.																
SOUTH PERTH.																						
South Easthope	6	6	6																			
Fullarton	3	3	3																			
Mitchell	7	7	7				2	2														
Hibbert	6	5	5				1	1														
Downie	7	6	7																			
St. Marys	10	10	10				2	2														
Blanchard	4	5	3																			
EAST PETERBOROUGH.																						
Ashburnham	3	3	3																			
Asphodel	1	1	2																			
Dummer	2	2	2																			
Otonabee	6	5	4																			
Burleigh, Anstruther and Chandos	4	4	2																			
Norwood	3	3	3				1	1														
Belmont and Methuen	2	2	3																			
Douro	2	2	2				1															
WEST PETERBOROUGH.																						
Smith	3	3	3																			
Lakefield	4	4	4																			
Peterborough	19	21	18				10	10														
North Monaghan	1																					
Ennismore																						

SCHEDULE C.—Continued.

License District.	Municipality.	Licenses Transferred and Removed.				Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.
		1882-3.	1883-4.	1884-5.	1885-6.		1882-3.	1883-4.	1884-5.	1885-6.	1882-3.	1883-4.	1884-5.	1885-6.	
SOUTH PERTH.	South Easthope	1		1	7	\$ 395 00	\$ 360 00	\$ 457 00	\$ 234 55	\$ 196 97	\$ 210 41				
	Fullarton	1		1	4	185 00	180 00	241 00	105 16	98 49	112 03				
	Mitchell	1		2	11	1005 00	900 00	1190 00	657 63	573 99	584 39				
	Hibbert				6	430 00	360 00	452 00	244 45	196 99	207 65				
	Downie	2		2	9	530 00	370 00	547 25	301 30	202 47	253 15				
	St. Marys	2			14	1670 00	1710 00	1830 00	1247 10	1248 14	1034 60				
	Blanchard	1			6	320 00	320 00	216 00	181 92	175 11	98 37				
EAST PETERBOROUGH.	Ashburnham			2	7	485 00	550 00	665 00	293 37	343 94	335 15				
	Asphodel				1	60 00	60 00	141 00	28 51	26 58	51 01				
	Dummer				2	140 00	140 00	144 00	66 50	62 07	51 01				
	Otonabee				4	360 00	300 00	308 00	170 99	132 92	110 53				
	Burleigh, Anstruther and Chandos	1		1	5	265 00	280 00	169 00	125 87	124 09	61 63				
	Norwood			1	4	300 00	325 00	390 00	173 99	177 43	166 26				
	Belmont and Methuen			1	2	140 00	120 00	221 00	66 50	53 17	78 64				
	Douro				3	180 00	120 00	164 00	85 50	53 17	59 51				
WEST PETERBORO.	Smith	1		1	4	205 00	255 00	276 00	116 70	143 07	130 02				
	Lakefield				4	300 00	380 00	385 00	196 62	239 40	192 73				
	Peterborough	1		1	30	4725 00	5165 00	6035 00	3689 08	4338 00	4244 00				
	North Monaghan				1	60 00			34 16						
	Emismore														

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.					Shop.	Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
		Ordinary.		Beer and Wine.				1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5
PRESCOTT.	South Plantagenet.	6	7	7	1882-3	1883-4	1884-5												
	East Hawkesbury	5	6	5	1882-3	1883-4	1884-5												
	Longueuil	2	2	2	1882-3	1883-4	1884-5												
	North Plantagenet.	6	9	10	1882-3	1883-4	1884-5												
	Caledonia	3	3	4	1882-3	1883-4	1884-5												
	Alfred	5	5	5	1882-3	1883-4	1884-5												
	West Hawkesbury	4	4	4	1882-3	1883-4	1884-5												
	Hawkesbury, Village	3	4	3	1882-3	1883-4	1884-5												
	L'Original	3	3	3	1882-3	1883-4	1884-5												
			7	7	7	1882-3	1883-4	1884-5											
PRINCE EDWARD.	Picton	7	7	7	1882-3	1883-4	1884-5												
	South Marysburgh.	2	3	2	1882-3	1883-4	1884-5												
	Wellington	2	2	2	1882-3	1883-4	1884-5												
	Sophiasburgh	2	2	2	1882-3	1883-4	1884-5												
	Hillier	3	3	3	1882-3	1883-4	1884-5												
	Ameliasburgh	3	3	3	1882-3	1883-4	1884-5												
	Hallowell	6	6	5	1882-3	1883-4	1884-5												
			7	7	7	1882-3	1883-4	1884-5											
			2	2	2	1882-3	1883-4	1884-5											
			2	2	2	1882-3	1883-4	1884-5											
NORTH RENFREW.	Bromley	2	2	2	1882-3	1883-4	1884-5												
	Pembroke	9	9	8	1882-3	1883-4	1884-5												
	Ross	1	2	1	1882-3	1883-4	1884-5												
	Westneath	6	6	6	1882-3	1883-4	1884-5												
	Wilberforce	3	3	1	1882-3	1883-4	1884-5												
	Head, Maria and Clara	3	3	4	1882-3	1883-4	1884-5												
	Petawawa	2	3	4	1882-3	1883-4	1884-5												
	Rolph, Buchanan & Wylie.	1	1	1	1882-3	1883-4	1884-5												
	Wilberforce and North Algona	1	1	1	1882-3	1883-4	1884-5												

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.		Total.			Amounts received for Provincial Licenses, Transfers, Renewals and Fines in each Municipality.		Proportion thereof paid to Municipalities.		Remarks.	
		Transfers.	Removals.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
PRESCOTT.	South Plantagenet.....	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
	East Hawkesbury.....	2		9	360 00	460 00	534 00	197 44	253 30	248 81		
	Longueuil.....			6	360 00	420 00	472 00	197 44	231 26	221 15		
	North Plantagenet.....	1	2	2	120 00	140 00	144 00	65 81	77 10	66 37		
	Calcutmia.....	1		13	540 00	805 00	914 00	296 14	443 29	425 71		
	Alfred.....	4		3	180 00	200 00	288 00	98 72	110 13	132 69		
	West Hawkesbury.....	1	1	6	300 00	365 00	365 00	164 53	200 98	168 64		
	Hawkesbury, Village.....	2	2	5	490 00	520 00	490 00	351 54	371 71	295 83		
	L'Orignal.....	1		4	300 00	405 00	300 00	218 72	294 89	159 51		
				4	300 00	300 00	240 00	191 62	183 17	99 51		
PRINCE EDWARD.	Pictou.....	3		13	1450 00	1765 00	1896 25	984 49	1317 33	1177 33		
	South Marysburgh.....			2	160 00	240 00	244 00	91 88	141 13	112 61		
	Wellington.....	1	1	3	315 00	290 00	315 00	198 62	191 12	176 57		
	Sophiasburgh.....	1		2	185 00	120 00	144 00	79 97	54 07	48 40		
	Hillier.....			3	180 00	180 00	216 00	77 81	81 15	72 54		
	Ameliasburgh.....	2	2	10	450 00	485 00	444 600	198 86	218 59	153 31		
	Hallowell.....		1									
				9								
				5	320 00	320 00	216 00	176 39	171 93	91 72		
				14	1375 00	1765 00	1790 00	832 25	1066 75	801 06		
NORTH RENFREW.	Bromley.....			5								
	Pembroke.....			14								
	Ross.....			2	120 00	200 00	174 00	66 15	109 28	76 44		
	Westmeath.....			6	360 00	405 00	462 00	198 43	221 41	198 69		
	Wilberforce.....			4	240 00	240 00	97 00	132 29	131 21	43 31		
	Head, Maria and Clara.....			4	230 00	360 00	547 00	126 74	196 81	241 89		
	Petaawawa.....	2		1	20 00	125 00	72 00	11 03	68 32	30 57		
	Rolph, Buchanan & Wylie.....			1		60 00	50 00		32 83	25 47		
	Wilberforce and North Algona.....			2			144 00			61 16		

SCHEDULE C.—Comparative Statement by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.																							
	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.					
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.			
LANSING	1882-3.	3	4	3	2	5	1	1884-5.	4	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1884-5.			
	1883-4.	5	6	5	3	5	5	1883-4.	2	1883-4.	5	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	1883-4.			
	1884-5.	3	4	3	2	5	1	1884-5.	2	1884-5.	4	1884-5.	2	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1884-5.			
	SOUTH RENFREW.	1882-3.	1	1	1	1	1	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1884-5.		
		1883-4.	1	1	1	1	1	1	1883-4.	1	1883-4.	1	1883-4.	1	1883-4.	1	1883-4.	1	1883-4.	1	1883-4.	1883-4.		
		1884-5.	1	1	1	1	1	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1	1884-5.	1884-5.		
		RUSSELL.	1882-3.	2	4	5	5	5	5	1884-5.	5	1884-5.	5	1884-5.	5	1884-5.	5	1884-5.	5	1884-5.	5	1884-5.	1884-5.	
			1883-4.	6	6	6	6	6	6	1883-4.	6	1883-4.	6	1883-4.	6	1883-4.	6	1883-4.	6	1883-4.	6	1883-4.	1883-4.	
			1884-5.	12	11	11	11	11	11	1884-5.	11	1884-5.	11	1884-5.	11	1884-5.	11	1884-5.	11	1884-5.	11	1884-5.	1884-5.	
			EAST SIMCOE.	1882-3.	3	4	4	4	4	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	1884-5.
				1883-4.	4	4	4	4	4	4	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	4	1883-4.	1883-4.
				1884-5.	8	10	9	9	9	9	1884-5.	9	1884-5.	9	1884-5.	9	1884-5.	9	1884-5.	9	1884-5.	9	1884-5.	1884-5.
MIDLAND.				1882-3.	7	7	7	7	7	7	1884-5.	7	1884-5.	7	1884-5.	7	1884-5.	7	1884-5.	7	1884-5.	7	1884-5.	1884-5.
				1883-4.	7	7	7	7	7	7	1883-4.	7	1883-4.	7	1883-4.	7	1883-4.	7	1883-4.	7	1883-4.	7	1883-4.	1883-4.
				1884-5.	4	4	4	4	4	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	4	1884-5.	1884-5.

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.				Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.				
		Transfers.		Removals.			1882-3.		1883-4.		1884-5.		1882-3.			1883-4.		1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.		1883-4.	1884-5.	\$	c.	\$	c.	\$	c.		\$	c.	\$	c.
SOUTH RENFREW.	McNab	1				6	240 00	415 00	306 00	132 40	237 52	117 71							
	Renfrew	1				9	750 00	830 00	875 00	480 99	545 62	393 51							
	Grattan					8	300 00	480 00	324 00	165 50	274 73	124 64							
	Brougham					1	180 00	60 00	117 00	99 29	34 35	48 45							
	Bredenell					4	60 00	240 00	117 00	33 10	139 85								
	Arnprior	1				8	480 00	545 00	840 00	264 79	311 91	421 60							
	Radcliffe and Raglan					10	60 00	60 00	60 00	33 10	31 86								
	Hagarty, Sherwood and Jones					3		200 00			114 48								
	Griffith and Matawatchan					1	80 00	80 00	20 00	44 12	45 78	9 23							
	Bago and Blithfield					5	140 00	320 00	112 00	77 23	183 17	46 17							
	Admaston					1		60 00	72 00		34 35	26 62							
	Horton					1		30 00			17 17								
Jones																			
Hagarty																			
RUSSELL.	Cambridge	1				5	205 00	290 00	400 00	105 23	147 88	175 93							
	Russell	1				5	305 00	320 00	370 00	156 56	163 08	160 40							
	Clarence	2				7	390 00	385 00	385 00	200 18	196 22	168 19							
	Gloucester					12	828 00	732 00	837 00	424 98	372 99	364 80							
	Cumberland	1				5	240 00	265 00	360 00	123 18	135 04	135 25							
	Osgoode	1				5	305 69	395 00	452 00	156 56	201 29	196 63							
	New Edinburgh					1	60 00	60 00	72 00	30 80	30 57	31 03							
	Thry	1				4	180 00	245 00	328 00	96 15	125 58	132 77							
	Orillia and Matchedash	2				5	190 00	190 00	216 00	101 49	96 30	92 82							
	Oro	1				5	305 00	340 00	360 00	162 90	172 31	154 70							
	Tay	1				4	185 00	142 00	144 00	98 82	72 78	61 88							
	Medonte	1				11	615 00	675 00	826 00	328 47	342 12	331 86							
Penetanguishene	2				7	470 00	480 00	625 00	283 64	277 81	276 28								
Orillia, Town	1				9	1090 00	1335 00	1570 00	728 92	977 45	951 33								
Midland					6	418 75	545 00	690 00	272 00	369 52	370 64								

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.				
	Ordinary.			Beer and Wine.			1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5		
	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5																				
SOUTH SIMCOE	Essa	9	9	7																						
	Innisfil	9	9	8																						
	West Gwillimbury	4	4	3			1	1																		
	Toronto	5	5	5			2	2																		
	Alliston	4	4	4			2	2																		
	Bradford	4	4	3			2	2																		
WEST SIMCOE	Barrie	12	12	12			5	5																		
	Nottawasaga	15	15	13			2	2																		
	Stayner	4	4	4			2	2																		
	Collingwood, Town	8	9	9			2	2																		
	Vespra	3	3	3			2	2																		
	Sunnisdale	3	3	2			1	1																		
	Flos	6	6	6			1	1																		
	Osnabruck	10	11	10			2	2																		
STOR-MONT	Finch	4	4	4			2	2																		
	Roxborough																									
THUNDER BAY	Shuniah	12	23				1	4																		
	Neebing	2	5				2																			
	Unorganized Territory		4				1																			
THUNDER BAY, EST.	Shuniah			35																						
	Neebing			10																						
	Unorganized Territory																									

SCHEDULE O.—Continued.

License District.	MUNICIPALITY.	Licenses transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.				
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	\$	c.	\$	c.	\$	c.	\$	c.		
License District.	SOUTH SIMCOE.	1	1	1	1	1	10	9	8	605 00	540 00	509 00	316 70	276 29	210 55					
		1	3				10	12	8	565 00	575 00	616 00	294 18	295 76	257 62					
		4					5	5	4	310 00	300 00	328 00	162 33	153 47	138 77					
							7	5	5	340 00	300 00	360 00	177 98	153 49	148 63					
							9	6	6	600 00	520 00	620 00	383 18	334 41	318 36					
							6	7	5	450 00	455 00	445 00	278 45	276 75	193 63					
WEST SIMCOE.	Barrie	3	2	5			20	19	22	2140 00	2135 00	2080 00	1536 26	1524 87	1555 80					
		4	4	2			21	21	16	1040 00	1040 00	1018 00	583 32	571 36	478 41					
		1					7	7	7	525 00	620 00	720 00	364 72	429 74	410 77					
							10	12	12	1200 00	1440 00	1800 00	850 40	998 61	1020 26					
							3	3	4	180 00	180 00	230 00	101 34	100 00	113 06					
							3	3	2	180 00	180 00	144 00	101 34	95 89	67 30					
							1	1	7	465 00	425 00	524 00	261 15	234 69	247 65					
STOR. MONT.	Osnabruck	3	4	1	1		14	15	11	720 00	740 00	2050 00	309 30	223 79	1414 23					
		2					8	6	5	370 00	360 00	408 00	158 95	108 88	109 93					
													106 47	12 10						
THUNDR. BAY.	Shumiah	3	9		1		19	40	65	1705 00	4895 00		1218 10	3989 91						
			4		2		4	11	21	500 00	907 60		393 28	734 80						
							1	4	3		340 00									
THUNDR. BAY, EST.	Shumiah																			

Dunkin Act in force. Part of amount received 1882-3 was in respect of expenses.

Payable to Province, less portion of expenses.

Payable to Province, less portion of expenses.

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

Municipality.	Tavern.						Shop.	Wholesale.	Extended Tavern.	Extended Shop.	Six Months.					
	Ordinary.		Beer and Wine.		1882-3.	1883-4.					1884-5.	1882-3.	1883-4.	1884-5.		
THUNDER BAY, WEST	1882-3.	1883-4.	1884-5.	1882-3.			1883-4.	1884-5.	1882-3.	1883-4.					1884-5.	1882-3.
Rat Portage.			1													
Unorganized Territory.			3													
Toronto, City.	213	197	217	3	1	1	100	98	88	14 & 1 Ext'd.	14	13 & 1 Ext'd.	3	13	1 Wholesale	
ELDON	10	10	8													1
Fenelon	4	5	4													1
Fenelon Falls.	4	4	3													
Bexley.	2	2	2													
Laxton and Digby	1	2	1													
Somerville.	2	3	3													
Anson.	1	1	1													
Minden.	2	2	2													
Snowdon.	1	1	1													
Dysart.	2	2	2													
Glamorgan.	1	1	1													
Sherborne.	2	1	1													
Dalton.	1	1	1													
Carden and Dalton																
Woodville, Village.			3													

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.		Total.	Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.	Removals.		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
THUNDER BAY, WEST.	Rat Portage		1	6	155 00			65 90		Payable to Province, less proportion of expenses.	
	Unorganized Territory	3	1	4	466 50						
TORONTO.	Toronto, City	66	2	367	51485 00	48582 50	70150 75	36759 36	34271 95	(Of the Transfers, 44 issued 1881-2, but accounted for 1882-3. See also St. Paul's Ward, of this City, included, 1883-4-5, in License District of East York.	
NORTH VICTORIA AND HALIBURTON.	Elden	2		8	610 00	650 00	596 00	265 73	284 71	203 04	
	Fenelon		1	6	340 00	335 00	329 00	167 61	163 32	129 77	
	Fenelon Falls			5	410 00	460 00	370 00	283 25	306 27	209 65	
	Bexley			2	120 00	120 00	144 00	52 28	52 56	48 73	
	Laxton and Digby			2	60 00	120 00	90 00	26 14	52 55	30 46	
	Somerville			3	140 00	180 00	216 00	61 00	78 84	73 09	
	Anson	2		3	60 00	75 00	82 00	26 14	32 85	26 74	
	Minden			2	120 00	160 00	144 00	52 28	70 08	48 73	
	Snowdon			1	60 00	60 00	72 00	26 14	26 27	24 37	
	Dysart			2	120 00	120 00	164 00	52 28	52 56	53 48	
	Glamorgan			1	60 00	60 00	72 00	26 14	26 27	24 37	
	Sherborne			2	120 00	60 00	60 00	52 28	28 04		
	Dalton			1	60 00	19 00	72 00	26 14	8 31		
Carden and Dalton			1	60 00		240 00			24 37		
Woodville, Village			3						73 00		

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.						Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.				
		Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.		
SOUTH VICTORIA.	Lindsay	14	14	14					2															
	Mariposa	6	6	5					2															
	Emily																							
	Verulam	1	1	3					1															
	Bobcaygeon	3	3	3					1															
	Omemece	4		3																				
NORTH WATERLOO.	Waterloo, T'nshp, N. pt.	7	7	7																				
	Woolwich	11	11	11					1															
	Wellesley	14	14	14					1															
	Berlin	8	9	9					6															
	Waterloo, Town	6	6	6					1															
SOUTH WATERLOO.	Galt	9	9	9																				
	Preston	5	5	5					1															
	Wilnot	13	13	13					1															
	Waterloo, T'nshp, S. pt.	5	5	5																				
	Hesper	3	3	3																				
	North Dumfries	4	4	4																				
	New Hamburg	4	4	4					2															
	Ayr, Village			2																				

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.						
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	\$	c.	\$	c.	\$	c.		\$	c.				
License District.	SOUTH VICTORIA.	1882-3.	3	4	3	1	1	19	20	19	2615 00	2630 00	3115 00	1938 15	1952 79	1919 45	1884-5.	1883-4.	1882-3.				
		1883-4.	1	2				7	8	5	365 00	370 00	360 00	180 86	180 39	141 58							
		1884-5.										70 00											
									1	1	1	60 00	60 00	72 00	29 57	29 26	28 31						
									4	4	3	305 00	370 00	360 00	212 13	252 13	204 93						
					1				5	6	4	700 00	567 50	610 00	527 61	434 25	403 24						
NORTH WATERLOO.	Waterloo, Tnship, N. part Woolwich Wellesley Berlin Waterloo, Town	1882-3.	2	4			7	8	7	420 00	425 00	504 00	237 85	240 02	235 02								
		1883-4.	3	1			14	16	12	775 00	840 00	924 00	438 85	474 37	435 77								
		1884-5.	3	1			18	17	17	935 00	940 00	1143 00	529 51	530 82	536 31								
			2	1			16	15	15	1330 00	1395 00	1725 00	822 60	866 17	808 53								
			1						7	8	685 00	700 00	915 00	439 96	447 55	446 81							
SOUTH WATERLOO.	Galt Preston Wilmot Waterloo, Tnship, S. part Hespeler North Dumfries New Hamburg Ayr, Village	1882-3.					14	14	14	1670 00	1750 00	2095 00	1198 23	1224 16	1188 57								
		1883-4.					6	6	6	601 00	480 00	600 00	390 89	316 83	315 89								
		1884-5.					14	14	13	810 00	900 00	936 00	473 07	492 01	424 43								
							5	5	5	300 00	340 00	380 00	168 95	185 87	174 12								
							3	3	3	180 00	200 00	260 00	101 37	109 35	108 83								
							4	4	4	320 00	320 00	184 00	215 16	211 21	105 32	331 67	275 89						

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	MUNICIPALITY.	Tavern.				Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
		Ordinary.		Beer and Wine.		1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	1882-3	1883-4	1884-5	
		1882-3	1883-4	1884-5	1882-3																1883-4	1884-5
WELLAND.	Niagara Falls, Town, (formerly Clifton)	10	14	1	7	4	5											1	1	1	
	Crowland	3	2		2	2	1												1	1	1
	Chippewa	3	3		2	1	1												1	1	1
	Fort Erie	3	3		2	3	2												1	1	1
	Port Colborne	5	5		2														1	1	1
	Humberstone	10	7	11	1														1	1	1
	Stamford	3	3	4															1	1	1
	Thorold, Township	6	4	4	1														1	1	1
	Thorold, Town	7	7	7	1	1	1												1	1	1
	Welland	7	7	7	3	4	3												1	1	1
	Willoughby	3	3	3	2	2	2												1	1	1
	Bertie	13	13	13	1	1	1												1	1	1
	Niagara Falls, South, Vil.	3	3	3															1	1	1
CENTRE WELLINGTON.	Pilkington	2	2		4	2	2												1	1	1
	Elora	5	5																		
	Nichol	7	7																		
	Fergus	6	6		2	2	2														
	West Garafraxa	3	3																		
	Erin, Township	5	5																		
	East Lather	2	2																		
	West Lather	2	2																		
	Erin, Village	3	3																		
	Erin, Village	3	3																		
SOUTH WELLINGTON.	Eramosa	10	9	9																	
	Guelph, Township	4	4																		
	Puslinch	6	5	5																	
	Guelph, City	18	18	18	8	8	8														

SCHEDULE C.—Continued.

License District.	MUNICIPALITY.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.			Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
		1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.				\$	\$	\$	\$	\$	\$	
WELLAND.	Niagara Falls, Town, (formerly Clifton).....	2	1	5	26	1410 00	1565 00	2285 00	829 45	895 59	976 71			
	Crowland.....	1	.....	1	.....	.....	3	185 00	180 00	149 00	108 83	103 01	72 48	
	Chippewa.....	.....	.....	.....	.....	.....	6	335 00	290 00	280 00	197 08	165 95	121 78
	Fort Erie.....	.....	.....	.....	.....	2	7	195 00	297 50	392 50	129 89	179 88	184 86
	Port Colborne.....	1	.....	2	.....	.....	10	668 50	726 25	825 00	475 06	505 95	475 33	
	Humberstone.....	1	.....	1	.....	1	13	700 00	535 00	853 00	411 80	306 17	414 64		
	Stamford.....	.....	.....	1	.....	.....	8	180 00	220 00	293 00	105 89	125 91	142 10
	Thorold, Township.....	.....	.....	.....	.....	.....	9	420 00	270 00	288 00	247 08	137 34	139 20
	Thorold, Town.....	1	3	1	.....	1	10	895 00	930 00	1187 00	612 98	622 03	628 66			
	Welland.....	1	2	5	.....	.....	12	1000 00	1112 50	1354 00	615 87	701 87	636 92		
	Willoughby.....	3	1	1	.....	.....	3	180 00	180 00	221 00	105 89	103 01	107 28		
	Bertie.....	1	.....	.....	.....	.....	19	1247 50	1237 50	1156 00	858 43	837 57	661 82
Niagara Falls, South, Vil.	1	.....	.....	.....	2	5	285 00	270 00	320 00	167 65	154 50	139 18		
CENTRE WELLINGTON.	Pilkington.....	.....	.....	.....	.....	.....	2	120 00	165 00	141 00	64 65	83 87	60 23
	Elora.....	2	.....	.....	.....	.....	11	800 00	580 00	700 00	513 98	366 10	350 81
	Nichol.....	.....	.....	3	.....	.....	7	420 00	430 00	519 00	226 25	218 56	218 35
	Fergus.....	.....	.....	.....	.....	.....	8	600 00	600 00	810 00	378 57	363 97	386 05
	West Garafraxa.....	1	.....	.....	.....	.....	4	185 00	180 00	216 00	99 66	91 49	90 35
	Erin, Township.....	.....	.....	1	.....	.....	6	385 00	310 00	365 00	297 40	157 58	153 11
	East Luther.....	1	.....	.....	.....	.....	3	125 00	145 00	181 00	67 31	73 71	80 33
	West Luther.....	1	.....	.....	.....	.....	3	125 00	125 00	141 00	67 35	63 55	60 24
	Erin, Village.....	.....	.....	.....	.....	.....	3	180 00	180 00	260 00	96 38	91 48	100 40
	SOUTH WELLINGTON.	Eramosa.....	10	600 00	545 00	648 00	353 14	316 32	305 30			
Guelph Township.....		.....	1	.....	.....	.....	4	320 00	285 00	333 00	188 50	165 41	133 56
Pushinch.....		.....	.....	.....	.....	.....	6	360 00	330 00	360 00	212 07	191 52	169 60
Guelph, City.....		2	5	.....	.....	.....	28	4580 00	4680 00	6210 00	3499 25	3533 75	3420 01	
.....					

SCHEDULE C.—Comparative Statement by Municipalities, shewing the Number of Provincial Licenses, etc.—Continued.

License Districts.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.			
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.																			
WEST WELLINGTON.	Mount Forest.....	7	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Clifford.....	4	4	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Arthur, Village.....	6	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Harriston.....	5	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Drayton.....	4	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Palmerston.....	7	8	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Arthur, Township.....	4	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Maryborough.....	7	8	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minto.....	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Peel.....	8	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
NORTH WENT-WORTH.	Dundas.....	9	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Beverley.....	6	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	West Flamborough.....	7	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	East Flamborough.....	3	3	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Waterdown.....	2	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	E. or W. Flamborough.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SOUTH WENT-WORTH.	Binbrook.....	3	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Ancaster.....	4	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Saltfleet.....	7	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Barton.....	6	6	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Glanford.....	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

EAST YORK.	Scarborough.....	7	7	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Markham, Township.....	11	10	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	York, East of Yonge St.....	16	16	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Markham, Village.....	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Yorkville, Village.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
City of Toronto (St. Paul's Ward, formerly Yorkville).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SCHEDULE C.—Continued.

License District	Municipality.	Licenses Transferred and Removed.						Total.			Amounts received for Provincial Licenses, Transfers, Removals, and Fines in each Municipality.						Proportion thereof paid to Municipalities.			Remarks.
		Transfers.			Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.				
WEST WELLINGTON.	Mount Forest	1						13	11	10	\$ 1611 25.	\$ 1405 00.	\$ 1400 00.	\$ 1170 86.	\$ 1051 23.	\$ 1044 45.	The question of right to these amounts, which depended on the determination of a disputed boundary between the municipalities concerned, has since been decided in favour of East Flamborough.			
	Clifford	1					6	6	6	335 00.	335 00.	350 00.	208 28.	200 97.	150 01.					
	Arthur, Village	1					12	10	8	945 00.	975 00.	945 00.	726 88.	713 53.	616 13.					
	Harriston	2					8	9	7	610 00.	600 00.	845 00.	406 44.	389 04.	449 46.					
	Drayton	1					6	5	6	565 00.	520 00.	480 00.	425 82.	370 57.	297 21.					
	Palmerston	2					13	10	7	1095 00.	955 00.	965 00.	758 48.	636 39.	569 47.					
	Arthur, Township	1					4	3	3	240 00.	180 00.	149 00.	140 29.	100 89.	69 45.					
	Maryborough	2					9	11	7	450 00.	515 00.	451 00.	263 06.	288 69.	240 56.					
	Minto	1					3	2	1	125 00.	120 00.	72 00.	73 07.	67 25.	33 33.					
	Peel	1					8	6	8	520 00.	530 00.	523 00.	303 96.	297 08.	243 89.					
	NORTH WEST WORTH.	Dundas	5				18	15	13	1585 00.	1590 00.	1950 00.	1055 56.	1060 50.	1049 22.					
		Beverley	1				7	7	8	365 00.	365 00.	482 00.	183 55.	181 37.	208 64.					
		West Flamborough	2				11	10	12	465 00.	515 00.	663 00.	233 83.	275 31.	282 44.					
		East Flamborough	1				3	3	4	230 00.	180 00.	528 00.	115 66.	90 92.	322 84.					
Waterdown		1				3	2	2	225 00.	200 00.	310 00.	157 88.	140 62.	241 05.						
E. or W. Flamborough		1				1	1	1	60 00.	60 00.	60 00.	30 17.	30 34.	.....					
SOUTH WEST WORTH.	Bimbrook	1				4	4	3	185 00.	140 00.	216 00.	81 46.	62 14.	77 50.						
	Ancaster	1				8	7	6	400 00.	435 00.	472 00.	187 34.	201 07.	183 65.						
	Saltfleet	1				8	8	7	465 00.	615 00.	501 00.	201 77.	272 82.	180 87.						
	Barton	1				7	6	8	405 00.	390 00.	509 00.	178 34.	173 01.	183 03.						
EAST YORK.	Glanford	1				4	3	3	250 00.	230 00.	216 00.	110 09.	102 07.	77 52.						
	Scarborough	2				9	8	7	900 00.	815 00.	797 00.	681 73.	657 59.	563 94.						
	Markham, Township.	2				13	14	11	1110 00.	1005 00.	1237 00.	809 46.	738 22.	793 35.						
	York, East of Yonge St.	1				22	24	12	1705 00.	1695 00.	1129 00.	1128 57.	1132 75.	635 81.						
	Markham, Village.	1				3	3	3	320 00.	300 00.	535 00.	230 29.	220 63.	343 75.						
City of Toronto (St. Paul's Ward, formerly Yorkville)	2				11	11	7	1290 00.	1360 00.	1470 00.	958 69.	721 93.	.....						

SCHEDULE C.—Comparative Statement, by Municipalities, shewing the number of Provincial Licenses, etc.—Continued.

License District.	Municipality.						Tavern.			Shop.			Wholesale.			Extended Tavern.			Extended Shop.			Six Months.		
	Ordinary.			Beer and Wine.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
NORTH YORK.	Aurora	4	4	4	4	4	2	1	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1
	Holland Landing	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	North Gwillimbury	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	King	12	11	9	9	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	East Gwillimbury	5	5	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Whitchurch	5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Newmarket	6	6	6	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Georgina	5	5	6	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Stouffville	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	WEST YORK.	York, West of Yonge St.	12	14	14	14	14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Vaughan		10	9	10	10	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Etobicoke		5	5	5	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Richmond Hill		3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Parkdale		2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Brockton		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Woodbridge, Village		3	3	4	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Weston, Village		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

SCHEDULE C.—Continued.

MUNICIPALITY.	Licenses Transferred and Removed.					Total.			Amounts received for Provincial Licenses, Transfers, Removals and Fines in each Municipality.				Proportion thereof paid to Municipalities.				Remarks.	
	Transfers.		Removals.			1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.		1884-5.
NORTH YORK. License District.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	Aurora		1				572 00	320 00	320 00	5 5	5	5	125 00	382 10	382 60	226 77		
	Holland Landing						180 00	200 00	200 00	3 3	3	3	240 00	99 00	101 96	93 10		
	North Gwillimbury.	1	3				245 00	255 00	255 00	5 7	4		288 00	131 75	131 00	121 19		
	King						1240 00	1160 00	1160 00	12 10	10		1076 00	898 00	818 37	677 88		
	East Gwillimbury	2	1	2			335 00	330 00	330 00	7 6	7		370 00	195 25	173 12	160 39		
	Whitechurch			1			300 00	240 00	240 00	5 4	5		233 00	161 99	126 12	126 78		
	Newmarket	2	1	2			910 00	1165 00	1395 00	11 10	11		501 00	561 24	775 93	748 60		
	Georgina	3	1				375 00	425 00	501 00	3 8	7		206 25	223 35	216 76			
	Stouffville						210 00	210 00	300 00	3 3	3		159 00	151 58	153 12			
WEST YORK.	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.	1170 00	1316 67	1332 00	19 20	20		1130 00	776 80	839 26	869 39		
	York, W. of Yonge Street	6	1	3			1005 00	965 00	1130 00	11 10	12		405 00	737 72	655 43	728 56		
	Vaughan	1	1	2			450 00	360 00	360 00	7 6	6		610 00	226 69	191 83	201 68		
	Etobicoke	1					555 00	610 00	630 00	3 3	3		480 00	370 48	388 91	420 82		
	Richmond Hill						480 00	410 00	410 00	5 5	4		605 00	320 95	268 21	439 27		
	Parkdale				1		545 00	605 00	605 00	6 7	7		240 00	392 59	437 06	361 28		
	Brockton						210 00	330 00	425 00	3 3	4		125 00	160 49	277 42	279 64		
	Woodbridge, Village.	1	1	1														
	Weston, Village																	
	Totals						*\$133,052 87	*\$443,095 10	*\$538,714 21				\$284,379 79	\$287,246 31	\$283,539 80			

SCHEDULE D.

COMPARATIVE STATEMENT of the amount of Fines collected, and of the amounts paid in respect of Expenses of Commissioners and Salaries of Inspectors, in each License District, for the license years 1882-3, 1883-84, and 1884-85 respectively.

LICENSE DISTRICT.	Fines Collected.			Paid in respect of Expenses of Commissioners and Salaries of Inspectors.		
	1882-3.	1883-84.	1884-5.	1882-3.	1883-4	1884-5.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Addington.....	360 00	110 00	440 00	557 00	539 75	521 75
Algoma.....	100 00	.....	195 00	366 66	417 50	442 33
Brant, North.....	142 00	70 00	30 00	428 88	430 96	427 00
Brant, South.....	265 00	295 00	305 00	700 99	690 96	680 00
Brockville and South Leeds	240 00	560 00	750 00	779 00	670 50	681 05
Bruce, North.....	280 00	60 00	160 00	462 00	480 00	458 60
Bruce, South.....	230 00	400 00	325 00	759 30	674 00	718 00
Cardwell.....	40 00	120 00	150 00	512 65	567 29	506 68
Carleton.....	40 00	408 00	120 00	557 00	522 56	523 00
Cornwall.....	180 00	255 00	310 00	424 50	438 96	430 00
Dufferin.....	195 45	225 00	50 00	492 50	517 00	513 40
Dundas.....	200 00	150 00	111 00	507 80	607 30	516 40
Durham, East.....	140 00	35 00	5 00	473 40	696 40	481 30
Durham, West.....	160 00	40 00	60 00	491 00	499 00	476 00
Elgin.....	400 00	.....	.....	608 89	.....	.....
Elgin, East.....	.....	650 00	280 00	.....	538 28	522 35
Elgin, West.....	.....	122 00	60 00	.....	482 83	413 15
Essex, North.....	80 00	365 00	345 00	581 00	565 46	562 00
Essex, South.....	160 00	300 00	298 00	424 75	426 21	473 83
Frontenac.....	130 00	100 00	160 00	480 00	504 00	495 00
Glengarry.....	60 00	180 00	126 00	522 50	529 80	507 50
Grey, East.....	180 00	80 00	105 00	450 00	484 75	450 00
Grey, North.....	180 00	160 00	200 00	515 00	500 00	510 00
Grey, South.....	40 00	160 00	130 00	450 00	450 00	450 00
Haldimand.....	127 00	65 00	40 00	477 50	480 60	531 75
Halton.....	1450 00	1821 72	.....	548 06	791 75	.....
Hamilton.....	1052 50	915 00	750 00	1000 00	1000 00	1000 00
Hastings, East.....	144 85	60 00	20 00	553 50	520 00	536 50
Hastings, North.....	60 00	200 00	60 00	505 30	524 20	563 45
Hastings, West.....	170 00	180 00	20 00	563 00	813 41	676 34
Huron, East.....	180 00	140 00	200 00	580 00	620 00	608 00
Huron, South.....	120 00	180 00	155 00	545 00	540 50	540 50
Huron West.....	260 00	360 00	40 00	603 60	602 18	596 67
Kent, East.....	340 00	120 00	510 00	512 25	507 70	507 50
Kent, West.....	195 00	228 75	180 00	576 00	558 67	553 50
Kingston.....	935 00	820 00	370 00	800 00	804 89	800 00
Lambton, East.....	160 00	65 00	20 00	458 50	467 80	456 00
Lambton, West.....	445 00	320 00	320 00	456 00	456 00	456 00
Lanark, North.....	100 00	70 00	205 00	450 00	452 85	458 45
Lanark, South.....	120 00	115 00	180 00	454 50	457 30	463 20
Leeds and Grenville, North, and South Grenville....	100 00	240 00	160 00	586 00	567 96	562 00
Lennox.....	50 00	160 00	125 00	450 00	450 00	450 00
Lincoln.....	80 00	260 00	80 00	812 60	820 55	814 30
London.....	746 00	910 00	600 00	800 00	800 00	800 00
Middlesex, East.....	440 00	440 00	.....	666 07	550 00	612 00
Middlesex, North.....	65 00	130 00	130 00	566 25	561 47	571 50
Middlesex, West.....	220 00	281 00	237 00	573 00	556 92	557 75
Monck.....	60 00	100 00	20 00	482 00	482 00	480 00
Muskoka and Parry Sound.	40 00	339 50	460 00	517 75	612 50	821 00
Nipissing.....	520 00	355 00	292 05	75 00	175 00	300 00
Norfolk, North.....	60 00	305 00	99 00	501 50	572 95	604 25
Norfolk, South.....	40 00	40 00	50 00	507 66	399 96	485 33
Northumberland, East.....	160 00	183 75	185 00	552 15	568 25	494 30
Northumberland, West.....	100 00	40 00	.....	460 00	458 50	450 00
Ontario, North.....	200 00	110 00	111 00	681 00	722 75	697 50
Ontario, South.....	240 00	300 00	240 00	526 00	518 50	510 00
Ottawa.....	369 00	245 00	380 00	1000 00	1060 00	1080 00

SCHEDULE D.

COMPARATIVE STATEMENT of amount of Fines, etc., in each License District for the license years 1882-3, 1883-4, and 1884-5 respectively.—*Continued.*

LICENSE DISTRICT.	Fines Collected.			Paid in respect of Expenses of Commissioners and Salaries of Inspectors.		
	1882-3.	1883-4.	1884-5.	1882-3.	1883-4.	1884-5.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Oxford, North	195 00	335 00	220 00	504 80	511 57	543 17
Oxford, South.....	20 15	92 00	360 00	500 02	597 94	564 42
Peel	20 00	80 00	120 00	554 00	552 00	554 00
Perth, North.....	225 00	215 00	542 00	568 10	549 96	758 29
Perth, South.....	215 00	80 00	103 25	525 25	542 14	529 50
Peterborough, East.....	60 00	80 00	60 00	485 00	500 00	500 00
Peterborough, West.....	100 00	180 00	80 00	400 00	416 35	420 50
Prescott		200 00	100 00	450 00	450 00	462 35
Prince Edward.....	240 00	80 00	140 00	552 50	553 43	560 00
Renfrew, North.....	105 00	80 00	290 00	400 00	400 00	547 67
Renfrew, South.....	40 00	550 00	165 00	352 83	472 28	513 49
Russell	328 00	202 00	130 00	483 00	480 70	493 10
Simcoe, East.....	60 00	192 00	210 00	542 25	599 20	692 71
Simcoe, South.....	190 00	40 00	80 00	497 00	499 00	486 00
Simcoe, West	40 00		60 00	552 49	560 89	543 29
Stormont	335 00	100 00	110 00	480 00	525 96	561 66
Thunder Bay.....	115 00	357 60		186 00	255 33	
Thunder Bay, East.....			773 50			298 00
Thunder Bay, West.....			352 50			358 33
Toronto.....	1510 00	1520 00	2647 00	2450 00	2450 00	2516 67
Victoria, North, and Hali- burton	20 00	128 00	40 00	517 64	499 88	500 08
Victoria, South.....	120 00	230 00	60 00	605 60	605 60	655 60
Waterloo, North.....	105 00	160 00	120 00	509 00	502 00	511 50
Waterloo, South	261 00	300 00	60 00	535 70	553 38	582 50
Welland.....	155 00	215 00	166 00	684 55	736 55	673 60
Wellington Centre.....	140 00	65 00	110 00	494 32	511 78	505 03
Wellington, South.....	100 00	145 00	145 00	450 00	450 00	641 79
Wellington, West.....	205 00	200 00	108 00	569 07	624 29	555 84
Wentworth, North.....	70 00	20 00	120 00	510 00	486 00	481 50
Wentworth, South	145 00	320 00	20 00	525 05	508 00	496 00
York, East	90 00		130 00	527 56	495 76	485 10
York, North.....	192 00	235 00	90 00	500 00	507 00	517 00
York, West.....	100 00	60 00	160 00	499 00	498 00	487 00
Totals	18,652 95	21,406 32	18,826 30	47,795 74	49,610 66	49,792 82

SCHEDULE E.

COMPARATIVE STATEMENT, shewing the number of Prisoners committed to the County Gaols for Drunkenness, during the years 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, and 1885.

COUNTY OR DISTRICT.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Algoma	8	4	4	24	19	17	24	21	15	12
Brant	97	84	75	63	81	64	80	75	58	28
Bruce	1	2	17	8	2	14	4	10	3	.....
Carleton	387	319	283	272	222	269	265	261	314	205
Dufferin						1			1	1
Elgin	31	41	47	54	53	45	61	92	82	57
Essex	87	55	60	59	71	51	91	121	103	47
Frontenac	143	137	139	126	102	53	25	46	75	74
Grey	15	13	14	35	40	23	23	19	28	36
Haldimand	7	2	6	10	15	6	4	7	7	18
Halton	21	15	6	1	6	5	4	7	6	9
Hastings	20	13	43	34	16	35	67	57	50	45
Huron	24	29	22	15	22	18	8	5	4	3
Kent	24	20	20	33	24	13	28	23	26	18
Lambton	123	84	142	115	120	77	77	75	105	130
Lanark	7	6	10	8	7	10	4	9	7	6
Leeds and Grenville	84	69	84	71	72	56	67	19	135	80
Lennox and Addington	6	4	5	9	11	14	11	18	20	6
Lincoln	56	98	68	51	44	55	41	65	39	29
Middlesex	155	106	211	193	235	210	242	269	445	277
Muskoka and Parry Sound	2	9	8	6	8	3	13	8	16	84
Nipissing				1	1		2	10	17	6
Norfolk	11	35	21	15	26	14	18	18	17	4
Northumberland and Durham	56	67	38	24	25	20	10	21	26	26
Ontario	10	10	12	11	6	2	5	10	1	4
Oxford	57	30	46	55	54	47	32	28	51	21
Peel	32	45	22	27	14	9	14	4	10	24
Perth	54	75	56	35	39	26	20	37	14	17
Peterborough	5	11	5	5	27	27	38	71	30	27
Prescott and Russell	2	6			1	1	2	2		3
Prince Edward	31	29	22	46	75	60	76	70	46	41
Renfrew	2	3	2	5	10	10	24	17	27	11
Simcoe	66	91	133	82	107	62	56	87	99	31
Stormont, Dundas and Glengarry	7	33	18	17	3	4	7	8	9	3
Thunder Bay	78	105	95	81	83	126	88	296	705	153
Victoria and Haliburton	22	32	25	10	7	8	14	7	20	13
Waterloo	13	10	4	28	11	11	10	14	11	7
Welland	69	101	321	188	186	145	50	34	23	33
Wellington	41	36	26	23	40	36	51	93	49	32
Wentworth	259	396	382	382	447	339	396	376	295	368
York	1755	1807	1293	1359	1463	1342	1445	1485	1661	1707
Total	3868	4032	3785	3581	3795	3328	3497	3895	4650	3696

SCHEDULE F.
Report of 1884.

Shewing the result of the voting on the Canada Temperance Act, 1878 (the Scott Act), in the following Counties and Cities since my

COUNTY OR CITY.	Date of Polling.	MUNICIPALITIES.	No. of Voters' Lists.	Total Votes Polled.		Votes Polled.		Majorities in Municipalities.		Majority in County or City.		
				Polled.	Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.	
Elgin	March 19, 1885.	Aldborough	1156	614	.....	409	205	204	.....	.....	.....
		Dunwich	1120	607	.....	417	190	227	.....	.....	.....
		Southwold	1123	713	.....	515	198	317	.....	.....	.....
		Yarmouth	1571	814	.....	590	224	356	.....	.....	.....
		Madabide	1120	680	.....	508	152	356	.....	.....	.....
		Springfield	147	96	.....	80	16	64	.....	.....	.....
		Bayham	1066	581	.....	341	210	101	.....	.....	.....
		South Porchester	538	275	.....	224	51	173	.....	.....	.....
		Aylmer	423	281	.....	183	98	85	.....	.....	.....
		Vienna	118	79	.....	30	49	.....	.....	.....	.....
		Port Stanley	147	94	.....	38	56	.....	.....	.....	.....
					8529	4814	3335	1479	1895	1856
		Frontenac	May 21, 1885	Barrie	121	15	12	3	9
				Bedford	352	44	33	11	22
Clarendon and Miller	180			33	.....	29	4	25	.....	.....	.....
Garden Island	86			56	.....	51	5	46	.....	.....	.....
Hinchinbrooke	298			76	.....	40	36	4	.....	.....	.....
Howe Island	76			21	.....	5	19	.....	.....	.....	14
Kennebec	243			53	.....	44	9	35	.....	.....	.....
Kingston, Township	958			417	.....	334	83	251	.....	.....	.....
Loughborough	511			252	.....	138	114	24	.....	.....	.....
Olden	210			46	.....	33	13	20	.....	.....	.....
Oso	219			30	.....	21	9	12	.....	.....	.....
Palmerston, and North and South	189			15	.....	10	5	5	.....	.....	.....
Pittsburgh	691			229	.....	152	77	75	.....	.....	.....
Portland	683			281	.....	155	126	29	.....	.....	.....
Portsmouth	210	122	.....	67	55	12	.....	.....	.....
Storrington	552	193	.....	163	30	133	.....	.....	.....
Wolfe Island	479	131	.....	47	81	.....	.....	.....	.....
			6088	2017	.....	1334	683	702	.....	651	

SCHEDULE F.—Continued.

COUNTY OR CITY.	Date of Polling.	MUNICIPALITIES.	No. of Votes on Voters' List.	Total Votes Polled.	Votes Polled.		Against the Act.	Majorities in Municipalities.		Majority in County or City.	
					Votes Rejected.	For the Act.		For.	Against.	For.	Against.
Haldimand	July 16, 1885	Cayuga, Village	160	111	31	21	90	69			
		Caledonia	255	170		54	96	42			
		Canborough	350	202		137	65	72			
		North Cayuga	586	353		190	163	27			
		South Cayuga	200	163		62	101		39		
		Dunn	230	176		73	103		30		
		Dunnville	450	270		114	156		42		
		Moulton	548	299		196	103	98			
		Oneida	548	371		138	233			95	
		Rainham	460	318		120	198			78	
		Seneca	574	366		185	181	4			
		Walpole	1299	967		419	548			129	
		Sherbrooke	200	72		46	26	20			
					5860	3818	31	1755	2063	216	524	308
Hastings	July 2, 1885	Wollaston	161	29		4	25		21		
		Tyendinaga	1108	639		175	464			289	
		Sidney	1202	525		320	205	115			
		Marmora and Lake	215	159		55	104		49		
		Deseronto	184	260		87	173		86		
		Rawdon	883	361		205	156	49			
		Mayo and Carlow	107	32		12	12	8			
		Madoc, Village	259	170		125	45	80			
		Madoc, Township	575	374		228	146	82			
		Elzevir and Grimsthorpe	249	78		44	34	10			
		Bangor, Wicklow and McClure	63	34		14	20		6		
		Dungannon and Faraday	150	51		44	7	37			
		Monteagle and Herschell	236	26		11	15		4		
		Huntingdon	591	300		198	102	96			
Hungerford	966	586		236	350		114				
Thurlow	1365	582		260	322		62				

Lambton	March 19, 1885	Trenton	745	338		134	204		70			
		Stirling	242	123		73	50					
		Tudor, Limerick and Cashel	271	73		56	17					
		Belleville, City (no vote taken)								162		
			9572	4740		2289	2451	539	701			
		Sarnia, Town		616		322	294	28				
		Point Edward		182		97	85	12				
		Theedford		87		69	18	51				
		Alvinston		126		59	67		8			
		Oil Springs		89		74	15	59				
		Petrolia		312		212	70	172				
		Watford		161		117	44	73				
		Wyoming		135		107	28	79				
		Arkona		87		73	14	59				
		Sarnia, Township		228		188	40	148				
		Moore		700		538	162	376				
		Sombra		482		392	90	302				
		Dawn		188		148	40	108				
		Euphemia		248		197	51	146				
		Brooke		377		281	96	185				
		Emiskillen		317		292	55	237				
		Plympton		569		417	92	325				
		Warwick		486		395	91	304				
		Bosauquet		399		315	81	231				
		Forest		252		142	110	32				
				6011		4465	1546	2927	8	2919		
Lincoln	June 18, 1885	Grantham		381		175	296		31			
		Merriton		267		105	162		57			
		Port Dalhousie		131		55	76		21			
		Niagara, Township		309		156	153					
		Niagara, Town		194		60	134			74		
		Louth		299		158	141					
		Clinton		380		281	99					
		Beamsville		132		92	40					
		Grimsly, Village		130		65	65					
		South Grimsly		273		191	82					
		North Grimsly		169		108	61					
		Gainsborough		544		373	171					
		Caistor		341		241	100					
					5514	3550	38	2060	1490	753	183	570

SCHEDULE F.—Continued.

COUNTY OR CITY.	Date of Polling.	MUNICIPALITIES.	No. of Voters on Voters' Lists.	Votes Polled.			Majorities in Municipalities.		Majorities in Counties or Cities.	
				Total Votes Polled.	Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.
Middlesex	June 18, 1885	Adelaide	300		238	62	176			
		Biddulph	377	1	171	206		35		
		Caradoc	472	5	327	145		182		
		North Dorchester	492	3	324	168		156		
		Delaware	251	1	153	98		55		
		Elfrid	325	1	239	86		133		
		Lobo	424	4	350	74		276		
		London, Township	1071	16	718	353		365		
		Mosa	234	2	205	29		176		
		Metcalfe	238	0	167	71		96		
		McGillivray	529	2	333	136		257		
		West Nissouri	449	3	348	101		247		
		Westminster	970	8	736	234		502		
		East Williams	225	0	204	21		183		
		West Williams	179	0	150	29		121		
		Strathroy	341	2	232	109		123		
		London East	439	0	264	175		89		
		London West	197	4	124	73		51		
		Ailsa Craig	108	1	84	24		60		
		Parkhill	173	4	117	56		61		
Wardsville	58		42	16		26				
Newbury	51		43	8		35				
Glencoe	109		64	45		19				
Lucan	103		52	51		1				
			8115	57	5745	2370	3410	35	3375	
Northumberland and Durham	February 26, '85.	Cobourg	656		308	348		40		
		Hamilton	754		443	311		132		
		Haldimand	753		421	332		89		
		Brighton, Village	265		164	101		63		
		Brighton, Township	561		318	243		75		
		Campbellford	220		117	103		14		

Cramahé	502	336	166	170	
Colborne	185	137	48	89	
Murray	530	272	258	11	
Percy	565	276	279	3	
Hastings	101	31	67	33	
Seymour	172	228	211	16	
South Monaghan	133	118	15	163	
Almwick	633	82	81	1	
Port Hope	639	297	312	45	
Hope	462	325	137	188	
Millbrook	117	98	49	49	
Cavan	380	273	107	166	
Manvers	383	296	87	209	
Bowmanville	446	321	125	196	
Darlington	565	152	113	339	
Clarke	631	479	152	327	
Newcastle	153	72	81	9	
Cartwright	257	183	71	109	
	9913	6050	3863	2333	146
					2187
Pickering	1633	505	215	288	
Whitby, Township	780	215	119	96	
East Whitby, Township	822	255	130	125	
Whitby, Town	696	115	203	88	
Oshawa	1131	324	297	117	
Uxbridge, Township	999	267	174	93	
Uxbridge, Village	133	182	59	123	
Scott	859	210	77	133	
Reach	1102	371	213	158	
Port Perry	470	152	102	50	
Seugog	133	36	16	20	
Brock	1024	368	150	218	
Cannington	198	68	45	23	
Thorah	483	120	81	39	
Beaverton	206	58	11	11	
Mara	630	118	174	56	
Rana	291	51	52	1	
	11950	3413	2061	1497	115
					1352
Stratford	1021	380	641	79	261
Saint Marys	469	274	195	79	
Milverton	79	26	53		27
Listowel	317	206	141	65	
Mitchell	338	178	160	18	
Blanchard	440	342	98	211	
Ellice	460	86	371	288	
Fullarton	417	211	176	65	

Ontario.....July 16, 1885

Pertb.....June 18, 1885

SCHEDULE F.—Continued.

COUNTY OR CITY.	Date of Polling.	MUNICIPALITIES.	No of Voters on the Voters Lists.	Total Votes Polled.	Votes Polled.		Majorities in Municipalities.		Majorities in Counties or Cities.		
					Votes Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.
Perth.— <i>Contd.</i>	June 18, 1885.	Elma		535		338	197	141			
		Hibbert		393		165	228		63		
		Dowrie		187		277	210	67			
		Wallace		447		296	151	145			
		Mornington		489		226	263		37		
		North Easthope		312		153	159		6		
		South Easthope		223		57	166		109		
		Logan		447		123	324		201		
					12986	60	3368	3536	824	992	168
		Peterborough.	Sep. 24, 1885.	Peterborough	1998	926		451	475		24
Ashburnham	290			151		71	80			9	
Lakefield	297			149		101	48		53		
Norwood	205			130		93	37		56		
Douro	504			229		56	173			117	
Dummer	551			250		162	88		74		
Harvey	299			95		60	35				
Asphodel	487			212		140	112		28		
Penningsmore	238			109		71	38		33		
Belmont and Methuen	483			140		102	38		64		
Barleigh, Anstruther, and Chandos	340			105		67	37		30		
Smith	692			333		259	74		185		
Galway and Cavendish	208			64		7	57			50	
North Monaghan	273			101		59	42		17		
Otonabee	771			451		299	152		147		
					7636	3485	1998	1486	712	200	512
Prescott and Russell ...	Nov. 26, 1885 ...			West Hawkesbury	393	280	3	200	80	120	
		East Hawkesbury	847	586	6	202	384		182		

Hawkesbury, Village	264	206	1	62	144			82	
L'Original	128	87	2	42	45			3	
Longueuil	198	148		32	116			84	
Calédonia	108	269	3	102	167			65	
Alfred	607	446	2	35	411			376	
South Plantagenet	302	418	2	132	286			154	
North Plantagenet	657	522	3	137	385			248	
Clarence	649	497	4	99	398			299	
Cumberland	579	309	2	150	159			9	
Russell	533	389	3	97	292			195	
Cambridge	445	309		45	264			219	
	6270	4466	31	1335	3131		120	1916	1796
St. Catharines Nov. 19, 1885	2569	1544	3	478	1066			588	588
St. Thomas March 19, 1885	2576	1497	11	754	743				11
Victoria July 23, 1885	1134	556	5	249	307			58	
Mariposa	1288	625	5	510	115		395		
Ops	827	331	6	108	223			115	
Emily	641	289	2	111	178			67	
Verulam	556	268	6	190	78		112		
Bobcaygeon	220	114		75	39		36		
Omemee	172	87		47	40		7		
Eldon	651	344	2	261	83		178		
Fenelon	638	312	4	178	131		44		
Fenelon Falls	287	156	1	101	52		52		
Brunel	152	46	1	44	2		42		
Woodville	95	52		36	16		20		
Bracebridge	268	129	1	80	49		31		
Macanlay	184	92		57	35		22		
Somersville	345	105	1	78	27		51		
Bexley	115	58		46	12		34		
Carden	125	43		26	17		9		
Dalton	96	5		3	2		1		
Higby and Longford	56	54		17	1		40		
McLean and Ridout	166	71		55	16		39		
Stephenson	184	69		38	31		7		
Ryde	104	39		29	10		19		
Draper and Oakley	229	87		67	20		47		
	8561	3932	37	2439	1493		1185	240	946

SCHEDULE F.—Continued.

COUNTY OR CITY.	Date of Polling.	MUNICIPALITIES.	No. of Voters on the Voters' Lists.	Total Votes Polled.	Votes Polled.		Majorities in Municipalities.		Majorities in Counties or Cities.	
					Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.
Wellington	April 2, 1885	Arthur, Township	597	242	355	179	113			
		Erin, Township	615	412	233	139				
		Erasmou	486	347	139	268				
		Garafraza	544	377	167	210				
		Guelph, Township	408	231	177	51				
		Luther	297	160	137	23				
		Minto	490	340	150	190				
		Maryborough	585	385	200	185				
		Nichol	344	195	149	46				
		Peel	744	492	342	60				
		Puslinch	475	297	178	119				
		Pilkington	313	159	154	5				
		Mount Forest	278	154	124	30				
		Palmerston	234	129	105	24				
		Harriston	231	156	75	81				
		Arthur, Village	183	87	96	9				
		Clifford	22	22		22				
Drayton	133	100	33	67						
Elora	204	96	108	12						
Erin, Village	71	46	25	24						
Fergus	256	139	117	22						
		4476	3064	1546	134	1412				

SCHEDULE F.—Continued.

Shewing the result of the Voting on the Canada Temperance Act, 1878, (the Scott Act), in the following Counties and Cities, since my Report of 1884.

RECAPITULATION.

COUNTY OR CITY.	Date of Polling.	No. of Voters on Voters' Lists.	Votes Polled.			Majorities in Municipalities.		Majorities in County or City.		
			Total Votes Polled.	Votes Rejected.	For the Act.	Against the Act.	For.	Against.	For.	Against.
Elgin	March 19, 1885	8329	4811 .....	.....	3335	1179	1893	57	1836 .....	.....
Frontenac	May 21, 1885	6088	2017 .....	.....	1331	683	702	51	651 .....	.....
Haldimand	July 16, 1885	5860	3818	31	1755	2063	216	524	308 .....	.....
Hastings	July 2, 1885	9572	4740 .....	.....	2289	2451	539	701	162 .....	.....
Leamington	March 19, 1885	no return	6011 .....	.....	4465	1546	2927	8	2919 .....	.....
Lincoln	June 18, 1885	5544	3550	38	2060	1490	733	183	570 .....	.....
Middlesex	June 18, 1885	21000	8115	57	5745	2370	3110	35	3575 .....	.....
Northumberland and Durham	Feb'y 26, 1885	no return	9913 .....	.....	6050	3863	2333	146	2187 .....	.....
Ontario	July 16, 1885	11950	5505	31	3413	2061	1937	145	1352 .....	.....
Perth	June 18, 1885	12986	6964	60	3368	3536	821	992	168 .....	.....
Peterborough	Sept. 24, 1885	7636	3485	1	1998	1486	712	200	512 .....	.....
Prescott and Russell	Nov'r 26, 1885	6270	4466	31	1335	3131	1120	1916	1796 .....	.....
St. Catharines	Nov'r 19, 1885	2569	1544	3	178	1066	478	1066	588 .....	.....
St. Thomas	March 19, 1885	2376	1497	11	754	743	754	11 .....	.....	.....
Victoria	July 23, 1885	8561	3932	37	2439	1493	1186	240	916 .....	.....
Wellington	April 2, 1885	no return	7540 .....	.....	4476	3064	1546	131	1412 .....	.....
Rejected votes, included in total votes polled .....	.....	.....	77911 .....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	92 .....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	77819	300	15291	32525	19890	744	15791	3029

SCHEDULE G.

NAMES AND POST OFFICE ADDRESSES OF THE INSPECTORS OF LICENSES of the several License Districts throughout the Province at date of issue of this Report, other than those in which the Scott Act is in force.

LICENSE DISTRICT.	INSPECTOR.	P. O. ADDRESS.
Addington.....	James Aylsworth.....	Tamworth.
Algoma.....	William L. Smith.....	Manitowaning..
Brant, North.....	George Inksater.....	Paris.
Brant, South.....	Southworth Cole.....	Brantford.
	Isaac B. Merritt.....	Scotland.
Brockville and South Leeds.....	Robert R. Phillips.....	Caintown.
Cardwell.....	Thomas Hanton.....	Caledon East.
Carleton.....	John O'Callaghan.....	Kars.
Durham, East.....	James H. Ford.....	Port Hope.
Durham, West.....	W. R. Clinie.....	Bowmanville.
Elgin, East.....	Archibald McIntyre.....	St. Thomas.
Elgin, West.....	Alexander Beaton.....	West Lorne.
Essex, North.....	Thomas J. Elliott.....	Windsor.
Essex, South.....	Alanson Elliott.....	Oxley.
Frontenac.....	John Dawson.....	Wolfe Island.
Grey, East.....	James Campbell.....	Clarksburg.
Grey, North.....	C. C. Pearce.....	Owen Sound.
Grey, South.....	Thomas A. Harris.....	Durham.
Haldimand.....	John Doyle.....	Caledonia.
Hamilton.....	J. I. Mackenzie.....	Hamilton.
Hastings, East.....	Michael Lally.....	Read.
Hastings, North.....	Edward Mouncey.....	Madoc.
Hastings, West.....	Michael J. Grainger.....	Belleville.
Kent, East.....	Thomas Boon.....	Bothwell.
Kent, West.....	Israel Evans.....	Chatham.
Kingston.....	William Glidden.....	Kingston.
Lambton, East.....	H. G. Taylor.....	Wyoming.
Lambton, West.....	Reuben C. Palmer.....	Sarnia.

SCHEDULE G.—*Continued.*

LICENSE DISTRICT.	INSPECTOR.	P. O. ADDRESS.
Lanark, North.....	J. W. Manning.....	Almonte.
Lanark, South.....	Henry Stafford.....	Almonte.
Leeds and Grenville, North, and South Grenville.....	Charles Chapman.....	Prescott.
Lennox.....	G. B. Sills.....	Napanee.
Lincoln.....	Robert Fowle.....	St. Catharines.
London.....	Robert Henderson.....	London.
Middlesex, East.....	William Craig.....	London, South.
Middlesex, North.....	Daniel Schoff.....	Clandeboye.
Middlesex, West.....	James M. Banghart.....	Strathroy.
Monck.....	J. W. McCallum.....	Dunnville.
Muskoka and Parry Sound.....	Elijah F. Stevenson.....	Bracebridge.
Nipissing.....	Napoleon Fink.....	Mattawa.
Northumberland, East.....	Robert Cook.....	Campbellford.
Northumberland, West.....	John Thomson.....	Cobourg.
Ontario, North.....	Thompson B. Frankish.....	Sunderland.
Ontario, South.....	John Ferguson.....	Whitby.
Ottawa.....	John O'Reilly.....	Ottawa.
Peel.....	George Blain.....	Brampton.
Perth, North.....	Alexander M. Fisher.....	Amulree.
Perth, South.....	John S. Coppin.....	Mitchell.
Peterborough, East.....	Hugh Drain.....	Norwood.
Peterborough, West.....	Christopher Leary.....	Peterborough.
Prescott.....	James H. Molloy.....	Fournier.
Prince Edward.....	D. L. Bongard.....	Picton.
Russell.....	Daniel McLaurin.....	Metcalfe.
Thunder Bay, East.....	Robert Maitland.....	Port Arthur.
Thunder Bay, West.....	Frank Garduer.....	Rat Portage.
Toronto.....	{ Thomas Dexter.....	Toronto.
	{ John Wilson.....	Toronto.
Victoria, North, and Haliburton.....	A. A. McLauchlin.....	Cobocouk.
Victoria, South.....	John Matthei.....	Lindsay.

SCHEDULE G.—*Continued.*

LICENSE DISTRICT.	INSPECTOR.	P. O. ADDRESS.
Waterloo, North.....	Thomas Tilt.....	Waterloo.
Waterloo, South.....	Samuel D. Martin.....	Preston.
Welland.....	Archibald Thompson, jr.....	Welland.
Wellington, Centre.....	John MacDonald.....	Elora.
Wellington, South.....	Alexander E. Goodfellow.....	Guelph.
Wellington, West.....	George Moore.....	Arthur.
Wentworth, North.....	Ebenezer B. Parker.....	Dundas.
Wentworth, South.....	Jonathan Davis.....	Hamilton.
York, East.....	James Eckardt.....	Unionville.
York, North.....	William Malloy.....	Newmarket.
York, West.....	Robert Willcock.....	Richview.

ELEVENTH ANNUAL REPORT

OF THE

ONTARIO AGRICULTURAL COLLEGE

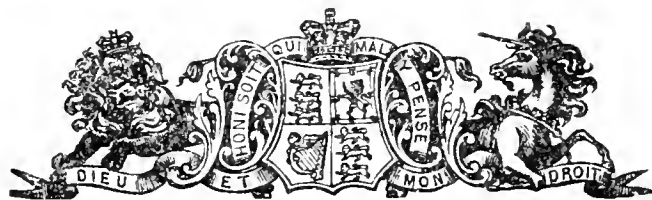
AND

EXPERIMENTAL FARM,

FOR THE YEAR ENDING 31ST DECEMBER,

1885.

Printed by Order of the Legislative Assembly.



Toronto:

PRINTED BY WARWICK & SONS, 26 & 28 FRONT STREET WEST.

1886



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PART III.—REPORT OF PROFESSOR OF VETERINARY SCIENCE

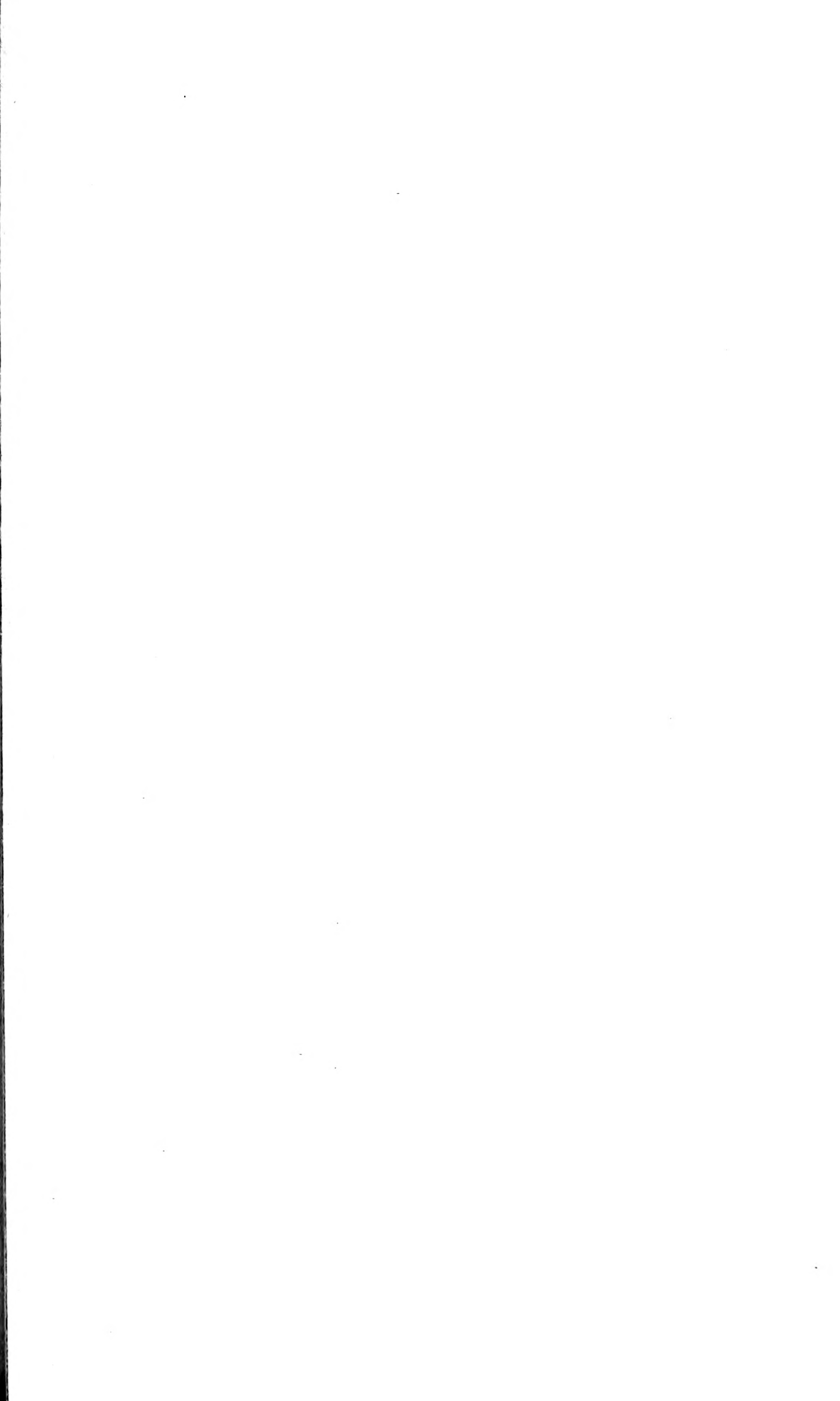
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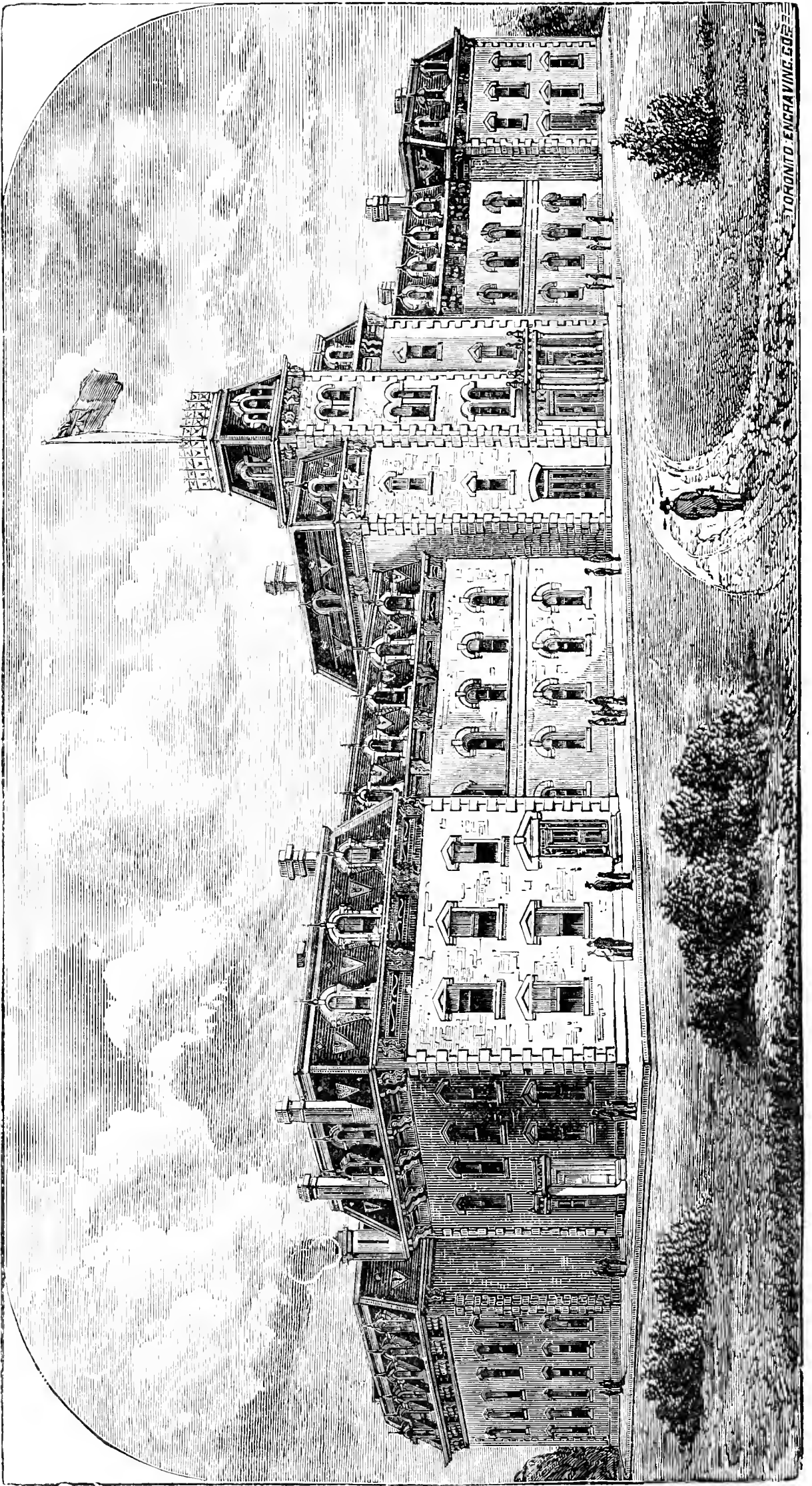
PART IV.—REPORT OF PROFESSOR OF AGRICULTURE, FARM MANAGER AND SUPERINTENDENT OF
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 REPORT OF THE ONTARIO AGRICULTURAL AND EXPERIMENTAL UNION.....





ONTARIO AGRICULTURAL COLLEGE, GUELPH.

R E P O R T
 OF THE
ONTARIO AGRICULTURAL COLLEGE
 AND
EXPERIMENTAL FARM,
G U E L P H,
 FOR THE
 YEAR COMMENCING THE 1ST JANUARY AND ENDING 31ST DECEMBER,
1885.

GUELPH, January 2, 1886.

To the Honourable A. M. Ross,
Commissioner of Agriculture:

DEAR SIR,—I have the honour to submit herewith for your perusal a brief statement of the work and statistics of the Ontario Agricultural College and Experimental Farm for the year 1885.

Our account of the year's operations is presented in six parts:—

- PART I.—THE REPORT OF THE PRESIDENT.
 PART II.—THE REPORT OF THE PROFESSOR OF GEOLOGY AND NATURAL HISTORY.
 PART III.—THE REPORT OF THE PROFESSOR OF VETERINARY SCIENCE.
 PART IV.—THE REPORT OF THE PROFESSOR OF AGRICULTURE AND FARM SUPERINTENDENT.
 PART V.—THE REPORT OF THE FOREMAN OF THE HORTICULTURAL DEPARTMENT.
 PART VI.—THE REPORT OF THE PROFESSOR OF DAIRYING.

I have the honour to be, sir,

Your obedient servant,

JAMES MILLS,

President.

PART I.

REPORT OF THE PRESIDENT.

INTRODUCTION.

Before proceeding to report on our work and attendance for the past year, I wish to say a word regarding agricultural education in the Dominion of Canada.

For many years the Province of Ontario—not to speak of the other parts of the Dominion—has had a good school system. We are proud of this system and congratulate ourselves on its excellence.

PUBLIC SCHOOLS.

Our public schools are among the best in the world. We do not say that they are faultless ; but in many respects I think they are as nearly perfect as we can make them. We may differ somewhat about the programme of studies, but as regards the division of the country into sections, uniformity of text-books, the training and licensing of teachers, the system of inspection, and the means of support, I do not think there is much room for improvement ; and, as regards the course of study, we must admit that it embraces all the essentials of an elementary education, and that the boy or girl who masters it will be fairly well equipped for the duties and responsibilities of Canadian life. The instruction also is, generally speaking, thorough, and it is always within the reach of the poorest in the land.

HIGH SCHOOLS.

Our high schools also, distributed all over the Province, will compare favourably with schools of the same grade in other countries. They have done good work since 1860, but especially within the last ten years, they have furnished an excellent type of intermediate education. The course of study in these schools is broad, the teachers are generally well equipped, and the teaching is good, so that, within a few miles of home, the young women of every county in Ontario can get an education which will fit them for the varied duties and responsibilities of their sphere in life ; and the young men can readily qualify themselves for mercantile life, for any of the learned professions, or for the university—all without charge, or for a very small fee.

So in regard to these two classes of schools, the Province of Ontario has more or less ground for claiming to be in advance of most other places on this continent ; but in the matter of

TECHNICAL SCHOOLS

we must admit that we have very little to boast of. In almost every State in the American Union there is, at least, one school or college maintained “to teach such

branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." In the Province of Ontario, and I may add in the whole Dominion of Canada, we have no schools of any kind for instruction in the mechanic arts, and very few for instruction in agriculture.

The people of this country seem never to have seriously thought of doing anything to develop the inventive faculties or improve the mechanical skill of young Canadians; and they have been slow to admit that instruction in the principles of agriculture would be of advantage to us. Hence, we have not as yet made much progress in this department of education.

AGRICULTURAL EDUCATION.

Speaking more particularly of agricultural education, I beg to say that, in my opinion, there are two or three circumstances which have hitherto prevented us from advancing so rapidly as we might have done in this direction: first, the unfortunate fact that those among us who have talked and written most on agriculture have not always been the most successful farmers; in too many instances their practice has very greatly discredited their teaching. Secondly, men without any practical knowledge of farm work, have occasionally undertaken to manage farms according to the instruction given in books, and have nearly always failed. Hence, the cry against "book-farming," and the wide-spread conviction that the more a man reads and studies, the less likely he is to succeed as a farmer.

Certainly, it is much to be regretted that men do not always practise what they preach, even in agriculture; and it is a misfortune that persons sometimes invest money in land, and undertake to farm with no other preparation than mere book knowledge; but all this has very little to do with the question of educating young men for the farm; and those who sneer at agricultural education, as if it were synonymous with "book-farming," make a mistake. They fail to distinguish between things which differ, and their vigorous thrusts are altogether wide of the mark; for no advocate of agricultural education has ever maintained that mere study, even of books on agriculture, will fit a young man for farming. Far from it. We are well aware that nothing can take the place of a thorough apprenticeship in every department of farm work, and that no amount of theoretical, or even practical knowledge of the minutest details can attain success, without good management, and the constant exercise of industry, prudence and economy. What we do maintain is, that neither theory nor practice should stand alone; but that they should go hand in hand, and the farm apprentice receive instruction in both. In fact, we are unable to see how any one can doubt the statement, that the young man who has chosen agriculture as his occupation, will be benefited by acquainting himself with the experience of the most successful farmers, by studying their practice, and discussing the principles and maxims which guided them on the way to success.

Further, the first settlers in this country, the men who cleared the farms which we now occupy, were nearly all from the middle and lower classes of society in Great Britain and Ireland. They represented a variety of occupations, but very few of them had either a theoretical or practical knowledge of agriculture. Most of them could truthfully say that they had started in the woods with little or no money, and a very meagre education; but they had gone to work with a will, and were successful. Having virgin soils to cultivate, they raised large crops from year to year, till they made themselves comfortable homes, and acquired considerable wealth. All this without any preparatory training, and when such a thing as a school to teach agriculture had not found a place in their most visionary speculations. They had got on well without such help, and, naturally enough, they concluded that nothing of the kind was necessary. In fact, they set it down as a self-evident truth that the only requisites for success in farming were physical strength, industry, prudence and economy.

In view of these facts, it is not at all surprising that the Public and High Schools of our Dominion were long in successful operation, before anything was done to provide for instruction in the principles of agriculture and the branches of learning relating thereto.

DR. RYERSON'S WORK.

In the Province of Ontario the first step in this direction was taken by the Rev. Dr. Ryerson, Chief Superintendent of Education, in the year 1870, when he published an elementary work on agriculture and recommended it for use in the High and Public Schools. But then, as now, the fixed programme of studies was sufficiently heavy for both masters and pupils. Hence no place was found for this or any other optional subject, and the Chief Superintendent's recommendation never resulted in any practical benefit to the class whose interests it was intended to promote.

AGRICULTURAL COLLEGE ESTABLISHED AND PRIMER ON AGRICULTURE, AUTHORIZED FOR USE IN SCHOOLS.

In 1874 the Ontario Agricultural College was established, and in 1882 the Hon. Adam Crooks, late Minister of Education, authorized Professor Tanner's "First Principles of Agriculture" for use in the Public Schools of Ontario, and "Elementary Lessons in Agricultural Science," by the same author, for use in the High Schools: and since that time the Council of the Agricultural and Arts Association has prescribed a course of reading for farmers' sons, and has held two examinations for second and third class certificates in agriculture.

This is the sum total of what we in Ontario have done in the line of agricultural education; and what has it amounted to?

The authorization of Professor Tanner's books has not led to any practical results, because the teachers are not qualified to give instruction in agriculture, and the programme of studies is already crowded.

The laudable efforts of the Board of Agriculture to induce farmers' sons to spend a portion of the long winter evenings in reading something which will make them more intelligent and efficient workers have been fairly successful. The course of reading is comprehensive, but strictly confined to the principles and practice of agriculture in its various branches. The examinations are held annually, in the month of July, at the same time and places, and subject to the same rules and regulations as the High School examinations for teachers' certificates; and the papers are examined by a special committee which is appointed by the board. The number of candidates has not been so large as could be desired; but eighteen third and three second class certificates have already been granted, and there is reason to hope that the number will gradually increase.

Then, as to the Ontario Agricultural College, what shall we say? The institution was founded to give instruction in the theory and practice of agriculture, horticulture, and arboriculture, and to conduct experiments relating thereto. It has been in operation for a little over eleven years, and I think has fairly well fulfilled the purpose for which it was established. It may not have done all that the farmers expected; but I believe that the work which it has accomplished will compare favourably with that of any similar institution in the same time on this continent or elsewhere. There have been 858 students in attendance since the college opened in 1874—some for a short time, and others for the period of two years or over. We have made no effort to swell the list of graduates, but have rather insisted on a somewhat rigid adherence to the standard laid down in our public announcements. Hence, many who have studied inside and laboured outside the full time necessary for graduation, have gone away without diplomas. We grant no degrees, but a diploma admitting to the status of associate of the college; and the number of those who have succeeded in taking this diploma is 101.

Even those whose confidence we have not hitherto enjoyed, generally admit that the Ontario Agricultural College is an institution at which a farmer's son can get a fairly liberal education in the line of his own occupation, without any risk of acquiring a distaste to farm work; and no one will deny that the instruction given and the experiments made here for the last few years have contributed in a large degree to the development of an interest in agriculture throughout the country. But, after all is said and done, we must admit that there is need of some more extended effort in the line of agricultural education in this Province.

 AGRICULTURAL SCHOOLS IN QUEBEC.

The Province of Quebec has three agricultural schools which are maintained in part by public funds, and three private establishments, which give instruction in agriculture, without any assistance from the State. The Provincial schools are at St. Anne Lapocatière, L'Assomption and Richmond; and the private ones are at Oka, Wentworth and Sorel.

For a description of these schools and the work they are doing, I cannot do better than quote from a report which Mr. E. A. Barnard made on the subject in February, 1885, to the Hon. J. J. Ross, Commissioner of Agriculture for Quebec.

ST. ANNE AND L'ASSOMPTION.

"In 1873," says Mr. Barnard, "I examined minutely the schools of agriculture at St. Anne's and at L'Assomption. This year (1885), I found that a sensible improvement had taken place in the cultivation of the farm at L'Assomption, though there is much still to be desired. When this school was opened, the land attached to it—a too frequent case in the Province—was covered with weeds, and as poor as possible. To-day, the crops are clean and fairly satisfactory. The live stock, too, is greatly improved since 1873. On the whole, I cannot praise too highly the persevering efforts of Mr. Marsan, the professor of agriculture and director of the farm, in spite of the numerous difficulties which he has had to contend with from the foundation of the school to the present time.

"The school at St. Anne had, in 1873, been established for several years, and in that year I called attention to an evident improvement in the crops grown on the school farm when compared with the crops in the neighbourhood.

"The present manager, Mr. Roy, is a skilful and practical man, who is evidently devoted to agriculture. He seems to be determined to place the farm in the best possible condition. The wheat crop appeared to me excellent, the root crops extensive and well grown; the pastures were good, and the yield of oats, barley, etc., promising. The garden is large and full of produce: the cattle were in good breeding condition, the calves, especially, were wonderfully good, though reared with the strictest economy.

"To say the truth, the practice in both these schools is on the road to excellence. With a little more encouragement the cultivation may become really a model, and the present managers seem to be capable of attaining this point, if means are granted to them, together with guarantees for the future.

"Unfortunately, during the last eleven years, these schools have made no progress in the number and style of their pupils—they are still fed and taught gratuitously by the state. The present pupils are almost children, and a large proportion seem to have mistaken their vocation, for they do not appear at all suited to a farmer's life. This fact is abnormal, and deserves your attention.

"No one can pretend that our people refuse all agricultural instruction, since, only last year, hundreds of applications were received for admittance into the school farm at Rougemont. The rarity of pupils in the schools at St. Anne's and L'Assomption, then, must be attributed to the little encouragement given to the pupils by the agricultural authorities, and to the fact that these schools have been constantly threatened with abolition from the time of their foundation. It is easy to see that the farming population are not likely to view with favour institutions which are always on the point of being suppressed, to be replaced by others.

RICHMOND.

"The school at Richmond I saw for the first time last winter; I returned there recently, and visited every part of the establishment: the older fields, the newly cleared fields, and the bush. In spite of all the troubles through which this school has passed, it is the most promising of the three, and for this reason: the farmers of the district now recognize its utility, and send their youths there as pupils in fair numbers. Not only are all the scholarships offered by Government taken up by competent students, but, in addi-

tion to these, a good number of temporary students frequent the school during the winter, and attend assiduously the course of agriculture.

“Still, the cultivation at Richmond is not more advanced than in our other two colleges, and the whole system followed is to-day in a transition state. In spite of this, the neighbouring farmers, many of whom I saw at the dairy meeting held at Richmond last winter, seem unanimous in saying that the system followed at the school is deserving of public support. Indeed the progress already made is striking, and the utility of the school will be placed beyond doubt as soon as its promoters shall be convinced that their pains will not be thrown away in the future. The manager informed me that the capital for the permanent improvements necessary to make Richmond an establishment of the first class, will not be wanting, as soon as there is no longer a possibility of our present schools being abolished to make room for others, and as soon as a guarantee to that effect is given by Government. Mr. Ewing is waiting for this guarantee to begin some important alterations.

ONE SCHOOL, OR THREE?

“For my part, while pointing out certain important reforms, I do not hesitate to say that our three schools of agriculture ought to be maintained, and I believe it to be very advisable that Government should at once give a guarantee of their maintenance for the future, with conditions acceptable to all parties.

“Few things, comparatively, are wanting to enable the Province to obtain from these schools the best results: they are all three situated at the centres of the three principal districts of the country: they differ, the one from the other, in the nature of their soil, in their climate, in their markets, and even in the customs of their people. All, or almost all, the farmers of the Province are interested in the success of these institutions, and they ought to be able to find, in one or other of these schools of agriculture, information and instruction fitted to their peculiar wants. With this view, the public has a right to expect from each of them: 1. That their system of farming should be veritably a model system; that is, that it should show itself to be really profitable in money-returns, while the soil is kept in a gradually improving state, instead of being harassed to death—the common condition of our farms; 2. That all desirable permanent improvements shall be made gradually, but year by year, bearing always in mind the profitable expenditure of the funds employed therein, as well as the precious lessons to be derived from the proper execution of such works of improvement; 3. That the instruction of the pupils shall be well suited to the circumstances of our farmers, and in agreement with the funds at their disposal; 4. That necessary means be employed to show our farmers how much they are interested in the work carried on in these schools.

“On their side, the schools have a right to demand: 1. A grant of funds in proportion to the expenses they are obliged to defray in order to furnish to the pupils and the farmers of the country the instruction the schools are expected to afford; 2. A guarantee of the permanency of the grants, to recoup, later, the outlay necessitated by the improvements of the farm—expensive work always—which is always an indispensable condition of sound instruction, even if elementary; 3. An understanding and a control, as direct as possible, between the government and these schools and their managers.

“In justice, it must be admitted that none of the above conditions have been fully demanded or granted on either side up to the present time. No surprise then need be felt at the schools not being perfect.

“Some persons, with, doubtless, good intentions, have, from time to time, strongly recommended the abolition of our present schools, for the purpose of replacing them by one single school, conducted on the same principle as the College at Guelph, Ont., and Lansing, Michigan. After much thought, and after having carefully examined these institutions and studied the course of lectures given there, I have come to the conclusion that the project is both unjust and impossible of realization. Unjust, because our present schools have vested interests, and do not deserve to be abolished. Impossible of realization; 1. Because one single school, however good, cannot give to our whole agricultural population, the practices of which are so varied, the instruction which three district

schools can give, schools situated in totally different circumstances, following plans based on the respective wants of their particular districts, and offering by their system of cultivation those precious teachings which well managed model-farms are able to present. This latter point is the less to be despised, since our agricultural population does not possess the advantages common in Ontario and in the United States, where the farms of skilled European agriculturists offer models of cultivation to every passer by. For this reason, Ontario especially may well content itself with one institution, based rather on the study of the sciences attaching to agriculture and on new experiments in cultivation, than on sound practice only, such practice as all good farmers are supposed to follow on their respective farms : 2. Still more difficult of realization, because Lansing and Guelph cost at first a sum of money almost inconceivable to us (about \$500,000 and \$350,000 respectively), and still cost for their annual expenses a sum equal to four times as much as our three schools together cost this Province : 3. Not to be realized, since our people do not yet feel the need of, and consequently do not desire an agricultural education, rather scientific than practical, such as is given to the sons of English and Scotch farmers, who are, for the most part, accustomed from their childhood to view daily the best practical cultivation in Europe : and lastly, because of the two distinct peoples of which the population of this Province is composed—different in religion, in language and in habits—differences which would render impossible, or nearly so, the proper direction of such an establishment.

PRIVATE SCHOOLS AT OKA, WENTWORTH AND SOREL.

“ I cannot finish this report without expressing the pleasure I felt during my visit to Oka, Wentworth, and Sorel. I do not hesitate to say that our Province has just been enriched with three institutions where agriculture of the most advanced and most profitable, and therefore of the most model kind, is put in practice, to the benefit of the neighbouring people and even of the whole Province.

“ The Trappist Fathers, at Oka, and the Marianite Fathers at the Agricultural Orphanage at Notre-Dame de Montfort, have not yet been two years in the Province. Nevertheless, any one passing near these establishments must see at once that the good *fathers* are thorough masters of agriculture, and that they hold this art in high esteem ; for the *fathers* themselves work for a great part of the day in the fields, while the *brothers* labour still longer than our most earnest farmers, in addition to the time spent in their religious duties. The progress they have made since their arrival in the country is quite astonishing, and promises much for the future.

“ I can say the same of the farm attached to Lincoln College, Sorel. Mr. Jenner Fust, our very able editor of the *English Journal of Agriculture*, took the management, only last spring, of a farm of sandy soil, excessively foul and completely worn out by frequent cropping. He has already transformed it to such a point that one sees there a great and successful variety of hoed crops: there are plants quite new to the country, such as *rape* for fattening sheep, and new varieties of cereals, the success of which shows how well our editor understands the wants and the circumstances of this Province. Already a considerable number of pupils attend, of their own accord, the very interesting course of lectures which Mr. Jenner Fust continues to give at the College.

“ Later on, I will return to the instruction which these three last institutions afford us. In the meantime, the whole country may well be glad to see the precious gift it has received in the establishment of such places, devoted to the teaching of the best agricultural processes without the expenditure of a single dollar of the public funds.”

This is the substance of what Mr. Barnard says regarding the Quebec schools of agriculture. He understands their working thoroughly, makes several suggestions for their improvement, and closes his report with a strong appeal for the immediate establishment of a good dairy school.

Everywhere the need of such schools is felt by the most progressive farmers, and so great is the demand for instruction that Mr. Barnard himself is now starting a private experimental farm at his own expense near Three Rivers.

MARITIME PROVINCES.

These Provinces are all very much interested in the question of agricultural education, and with limited resources are doing what they can to provide for it in their public schools, and otherwise. There has been some agitation for a union of New Brunswick, Nova Scotia, and Prince Edward Island, in the matter of an agricultural school with attached farm and experimental station; but as yet it has not amounted to anything practically.

New Brunswick has a live stock farm under provincial control, about fifteen miles from St. John, on the line of the Intercolonial Railway; but it has not been managed in such a way as to command public confidence. One of their own people says "it is a poor affair, which has had its recognized place in the domain of politics, and is about to be removed or got rid of."

The Nova Scotians have no provincial farm, stock or experimental: but at the last session of their Legislature, they passed an Act which displays a good deal of sound common sense, and is likely to be very helpful to the farmers of that Province. It is entitled "An Act to encourage agricultural education." It was passed in April, 1885, and reads as follows:—

Be it enacted by the Governor, Council, and Assembly:

1. The Council of Public Instruction shall have power to appoint a Lecturer on agriculture in connection with the Provincial Normal School.
2. It shall be the duty of the Council of Public Instruction to define particularly the duties of the aforesaid Lecturer, with reference to the following general objects:
 - a. Instructing the pupil teachers in Agricultural Chemistry and the sciences bearing on Agriculture, according to the provincial standards of examination, as announced from time to time.
 - b. Conducting a regular course of lectures on Agricultural Science, with experiments and laboratory practice, for the benefit of young men generally who may wish to fit themselves for the successful prosecution of agriculture, and with a view of training teachers for the special schools provided for in this Act.
 - c. Inspecting and reporting upon any schools receiving special grants under authority of this Act, so far as the teaching of Agriculture is concerned.
 - d. Delivering public lectures on Agriculture throughout the Province, so far as his other duties will permit.
3. Any male teacher of the first class (grade A or grade B), who shall have attended the course of lectures above provided for, and shall have passed a satisfactory examination on the subjects thereof, shall be entitled, subject to the conditions hereinafter named, to receive, when teaching school, in addition to the ordinary grant of his grade, a special grant of one hundred dollars for the school year, or ratably, according to the time he may have taught.
4. It shall be the duty of the Council of Public Instruction to frame regulations as to the outfit and management of schools in charge of teachers holding an agricultural diploma, and claiming the special grant aforesaid; and without the due observance of such regulations by both trustees and teacher the special grant shall in no case be paid.
5. To encourage teachers to qualify themselves as agricultural instructors, the Council of Public Instruction is authorized to distribute annually a sum not exceeding two hundred and fifty dollars, as prizes among the five teachers who shall pass the best examination on the subjects of the course.
6. The grants authorized by this Act shall be paid out of the moneys appropriated annually by the Legislature for Education,

Since the passing of this Act a lecturer on agriculture has been appointed, and is now actively engaged in carrying out the provisions of the Bill.

Prince Edward Island, like New Brunswick, has a stock farm, which is situated near Charlottetown, and is noted more for the breeding of horses than anything else. This

farm is not generally reckoned among the educational appliances, but it has a tendency to develop a taste for a better class stock, and is indirectly helpful to the cause of education.

Some of the leading men of Prince Edward Island, such as the Hon. Donald Ferguson, are amongst the best informed and the ablest advocates of agricultural education that can be found anywhere. They are fully abreast of the times, and I have no doubt it is largely due to their influence that a place has been found for a primer on the first principles of agriculture in the schools of that Province.

British Columbia has done little or nothing in the matter of agricultural education; but Manitoba has already voted a sum of money to assist in establishing an agricultural school or college within its bounds; and our Federal Government at Ottawa is at the present time collecting information with the view of founding somewhere an agricultural college or experimental station for the whole Dominion, or it may be one in each of the Provinces.

In view of all this it is evident that the interest in agricultural education is growing; and I think the day is not far distant when this branch of study will receive something like the attention which its importance demands.

SUGGESTIONS FOR ONTARIO.

After careful consideration of the subject, with some experience in teaching, I am of opinion that the first principles of agriculture could and should be taught in the rural schools of this Province. Underlying, as it does, the prosperity of every class in the community, agriculture claims consideration and a place on the programme of studies before anything and everything else, except those elements of a general education which we all insist on as the first and most important work of every public school.

If we could by any means give such information to the rising generation of farmers in Ontario as would induce them to raise a better class of animals than their fathers have raised; or enable them to grow five or six bushels per acre more than their fathers are growing; or make good butter everywhere, instead of the wretched stuff which has almost ruined our reputation as butter-makers at home and abroad—if, I say, we could only effect all or any one of these changes, the beneficial effects on every profession, trade, and department of business would be marvellous. No one, I think, can gainsay this conclusion; and hence, I maintain that whatever is done to make labour on the farm more productive is not for one, but for all classes of the people.

Now, there is no doubt that a young man on a farm will work to better advantage in any of the lines mentioned above, and will produce more wealth in a given time, if he is at the outset made acquainted with some of the principles that underlie the best agricultural practice in this and other countries. Consequently, I claim, on behalf of the whole population, that steps should, as soon as possible, be taken to introduce and make compulsory the teaching of the first principles of agriculture in all our rural Public Schools. A good primer on the subject might be used. The one now authorized would serve the purpose. I am, of course, aware that some persons have a prejudice against primers, and I am quite willing to admit that they are not the best books to unfold the secrets of a subject; but when written in plain, simple language, stripped of technicalities as far as possible, they are pleasant reading for beginners, and often excite an interest which leads to the perusal of more extensive works.

The mere reading of a book on such subjects as the origin, nature and constituents of soil; the relation of plants to the soil, the atmosphere and the animal; tillage operations, the rotation of the crops, stock-raising, etc.,—I say the mere reading of a book on such subjects, without any teaching whatever, would be a benefit to our farmers' sons. It would excite their curiosity, and, as Hugh Miller says, teach them to make a right use of their eyes in noticing the common objects and scenes of every day life; would foster in them a love of nature, and lead to the formation of most valuable habits of observation; would cause them to think and enquire into the causes of things; and, above all, would develop in them a taste for reading books and papers that treat of the operations which they are called on to perform in the daily routine of farm life.

In this way, a desire for agricultural education would be created, and before long the Minister of Education would be justified in establishing in every agricultural district, and, after a time, in every county, an agricultural High School, with a good laboratory, where young men could get instruction in agriculture, forestry, live stock, veterinary science, chemistry, geology, botany, reading, writing, spelling, arithmetic, English grammar, English literature and composition. And why should not the farmers of Ontario have such High Schools? They greatly outnumber all the other professions put together; and the preparation for farming is no less difficult than for other occupations; but, in spite of all this, we are maintaining over a hundred High Schools to prepare boys for various other pursuits, and not one in which a young man can get the kind of training which he needs for life on the farm. This, I hold, is a mistake. It is impolitic. It is not for the best interests of the state; and something should be done to remove the anomaly as soon as possible. Even the High School masters admit that we have a greater number of the ordinary High Schools than are necessary. Hence, it would not be a grievance or injury to any one to convert some of these schools into agricultural High Schools, such as I have described. The arts universities and this college would furnish suitable teachers for these schools: so there would be very little difficulty in making the change, whenever it might be required.

But, in order to prepare the way for the introduction of the subject into the Public Schools, the Normal Schools at Toronto and Ottawa should do something towards preparing the teachers for the work which will, ere long, be required of them; and I venture to suggest, that to the teachers in training at the Normal Schools, a course of lectures should be given every session on agriculture, live stock, dairying, forestry, the beautifying, etc.; and that lectures on the same subjects should be delivered at convenient centres throughout the Province, on Saturdays, for teachers who have already passed through the Normal Schools.

If such changes are ever made, I venture to predict that they will prove a great benefit to the community at large.

THE ONTARIO AGRICULTURAL COLLEGE.

Considering the importance of dairying, and the eager and widespread interest which all classes of the Canadian people seem to take in that branch of farming, we might almost speak of the past year as an era in the history of our college: for not until 1885 did we make any special provision for giving our students instruction in that subject. In April last it was added to our list of studies; and a professor was appointed to lecture to the students, to take charge of the creamery, and, when his other duties permit, to hold meetings among the farmers at convenient centres throughout the Province.

MANAGEMENT.

The management of the institution was slightly modified when the department of dairying was added. Since that time the authority has been vested in the President, the Farm Superintendent, the Gardener and the Professor of Dairying. Each of these officers is supreme in his own department, and is directly responsible to the Commissioner of Agriculture.

WORK OF THE COLLEGE.

The work of the College is generally spoken of under three heads:—

- I.—THE COURSE OF INSTRUCTION IN THE COLLEGE.
- II.—THE BOARDING HOUSE AND COLLEGE BUILDINGS.
- III.—THE BUSINESS DEPARTMENT.

The routine of each of these varies very little from year to year. The course of instruction remains nearly the same, there is not much change in the buildings, and the general business is subject to but slight variation.

I.—THE COURSE OF INSTRUCTION IN THE COLLEGE.

Before alluding to the work of 1885, I may give the terms into which the year is divided, a list of the subjects taught, and the names of the professors and lecturers, with the work allotted to each. Afterwards, I shall speak briefly of the year's operations, as a whole, and then of each term separately.

The scholastic year begins on the 1st of October, and ends on the 31st of August. It is divided into two sessions, and each session into two terms.

SESSIONS.

Winter Session, embracing the Fall and Winter Terms—1st October to 16th April, omitting the Christmas vacation.

Summer Session, embracing the Spring and Summer Terms—16th April to 31st August.

TERMS.

Fall Term—1st October to 22nd December.

Winter Term—22nd January to 16th April.

Spring Term—16th April to 30th June.

Summer Term—1st July to 31st August.

SUBJECTS TAUGHT.

The regular course of study extends over a period of two years, and includes the following subjects:—

First Year.—Agriculture, Live stock, Dairying, Inorganic Chemistry, Organic Chemistry, Geology and Physical Geography, Structural and Physiological Botany, Physiology, Zoology, Veterinary Anatomy, Veterinary Materia Medica, English Literature and Composition, Book-keeping, Arithmetic and Mensuration.

Second Year.—Agriculture, Live Stock, Arboriculture, Agricultural Chemistry, Meteorology, Systematic and Economic Botany, Entomology, Horticulture, Veterinary Pathology, Veterinary Obstetrics, Veterinary Surgery and Practice, English Literature, Political Economy, Book-keeping, Mechanics, Levelling and Draining.

METHOD OF INSTRUCTION.

The method of instruction is chiefly by lectures. Authors are read and studied in connection with the lectures on English Literature, Political Economy, and Systematic Botany; but in the other subjects, text-books are not used in the class-room, except for occasional reference.

THE STAFF.

1. JAMES MILLS, M.A., *President*.

English Literature and Political Economy.

1. WILLIAM BROWN, C.E., P.L.S.

Agriculture, Live Stock, and Arboriculture.

3. R. B. HARE, B.A., PH. D. (LATELY DECEASED).

Inorganic, Organic, Agricultural, and Analytical Chemistry.

4. J. HOYES PANTON, M.A., F.G.S.

Geology, Meteorology, Botany, Horticulture, Zoology, and Lectures on English.

5. F. C. GRENSIDE, V.S.

Veterinary Anatomy, Pathology, Materia Medica, and Obstetrics ; Practical Handling and Judging of Horses.

6. S. M. BARRÉ.

Dairying.

7. E. L. HUNT, THIRD YEAR UNDERGRADUATE, UNIVERSITY OF TORONTO.

Arithmetic, Mensuration, Mechanics, Levelling, Elementary Surveying, and Book-keeping ; Lectures on English.

 THE YEAR 1885.

An institution is generally prized in proportion as it fulfils the purpose for which it was founded ; and, whatever its true character may be, if it falls far short of its founders' expectations, men are disposed to question its usefulness.

The object of an agricultural college is, not to prepare young men for mercantile or professional life, nor to train them for any of the mechanic arts, but to educate them for the farm. If it accomplishes this object satisfactorily, its growth in public confidence may be slow, but the value of its work and its ultimate success are beyond doubt.

What, then, of the Ontario Agricultural College? Is it fulfilling the purpose for which it was founded, in educating young men for the farm and developing in them a taste for agricultural pursuits? We leave the public to answer, but venture to state one or two facts: First, at least ninety-five per cent. of those who have come to us from the farm, have returned home with increased interest in their work and are now engaged in active farming. This would seem to show that there is no influence here, nor anything in our system of teaching, which tends to develop a distaste to manual labour, or wean young men from the farm—nothing which suggests any other pursuit as preferable to agriculture. Secondly, a very considerable proportion of the young men who have come to us from towns and cities, have become real practical farmers, more or less efficient, and are now engaged in agricultural pursuits. This, we think, is not an unimportant testimony in favour of the College.

One difficulty, however, we have experienced in common with other agricultural colleges, and from it have suffered more or less in public estimation. It is this: A city lad who has an aversion to books and cares but little for the fashion and formality of city life, takes a run into the country to visit an uncle or a friend, sometime in the delightful month of May, when everything is fresh and beautiful; or later on, in June or July, when the air is fragrant with newly mown hay and the waving forests look so stately in their robes of varied green. He rides, drives and enjoys the utmost freedom; works a little, has splendid fun with the farmer's sons, and soon concludes that farming is a glorious occupation.

This young man decides to be a farmer and comes to the Agricultural College. He goes to work in October and appears to enjoy it very much; but after a while he is called on to pick potatoes, pull turnips, haul out manure, and a variety of equally pleasant jobs in all kinds of weather—cold and hot, wet and dry. He works away and says little; but he begins to realize that farming is not what he thought it was. He is sorry he came, and wishes he had not paid his tuition fee; but, having done so, he decides to put in one session as best he can. He spends his time in idleness or mischief; and, at the expiration of six months, he returns home to seek another occupation.

Such instances have not been rare; and the injurious effects on the College become so obvious that we made

A CHANGE IN THE TERMS OF ADMISSION

last spring, to discourage city boys in this Province and young men in England from coming here to make experiments, so discouraging to themselves and damaging to us. We

wish them, before coming to us, to go to work on a farm long enough to learn what farming really means ; and, with that object in view, we have fixed our charges for tuition as follows :—

1. Residents who are farmers' sons, or produce satisfactory certificates of having served at least one year's apprenticeship on a farm, \$20 a year.
2. Residents who have not served an apprenticeship of one year on a farm, \$30 a year.
3. Non-residents who produce satisfactory certificates of having served at least one year's apprenticeship on a Canadian farm, \$50 a year.
4. Non-residents who have not served an apprenticeship of one year on a Canadian farm, \$100 for the first year and \$50 for the second year.

CHANGE IN OUTSIDE WORK.

From the opening of the College in 1874, till the 1st October, 1885, all our students were required to spend from three and a half to five hours a day at manual labour, throughout the lecture season (1st October to 30th June) ; and nine and a half hours a day, during the Summer Term, *i. e.*, in the months of July and August. To the latter part of the arrangement no one objected. All were willing to work outside, when there were no studies demanding their attention inside. In the lecture season, however, it was different. City boys who did not care to study, were satisfied : but farmers' sons, who are generally more in need of education than practice in farm work, found the time for study too little. They could not keep up with the classes : and the result was that not a few of them, being unable to do the lecture-room work satisfactorily in the time allotted to study, became discouraged and left, without completing the short course of two years. Hence, at a meeting of the Experimental Union, held here last spring, a resolution was passed by the students and ex-students of the College, recommending, among other things, that the amount of manual labour required of students during the lecture season, be reduced by one-half. The Commissioner of Agriculture at once adopted the recommendation ; and the fact was announced in our new circular.

Coulter

ROUTINE FOR THE LAST THREE MONTHS.

This change in regard to labour took effect on the first of October last, and since that time the daily routine has been as follows : Twelve students go out in rotation every morning from seven to eight to feed cattle, etc. ; from eight to nine we have drill three times a week ; and from nine to twelve the whole school is at lectures in the class-room. For the afternoon, the students are divided into two equal divisions, which work and study alternately. One of these divisions goes out to work for three and a half to four hours, according to the season of the year, and the other studies in the class-room from 1.30 to 4 o'clock in charge of a master or professor, and *vice versa*.

After three months' trial of this arrangement, I must say that I consider it a great improvement on the former plan. It is better for all concerned, especially for farmers' sons. They now have time enough for study and work enough for exercise.

ATTENDANCE.

The attendance is not quite so large as it was in 1884, but we never before had so fine a class of students as we have at the present time—so industrious, law-abiding, and easy to manage.

The roll given below contains the names of those who have been here during the year, making a total of 175, and representing the following places : Ontario, 103 ; Quebec, 14 ; England, 30 ; Ireland, 5 ; Scotland, 5 ; Jamaica, Turkey, Wales, and the Island of Jersey, 1 each.

Of this number there have been 91 in attendance during the past term (1st October to 22nd December).

COLLEGE ROLL FOR 1885.

NAMES.	P. O. ADDRESS.	COUNTY, ETC.
Acres, A.	Ottawa	Carleton, Ont.
Baillie, W.	Shooter's Hill, Mt. Olivet	Jamaica, W. I.
Beament, H. J.	Ottawa	Carleton, Ont.
Bent, E. H.	Belleville	Hastings, Ont.
Birdsall, W. G.	Birdsall	Peterborough, Ont.
Bishop, W. R.	Brussels	Huron, Ont.
Black, C. C.	Amherst	Nova Scotia.
Bowie, T. M.	Mount Forest	Wellington, Ont.
Bradley, G. R.	Manotick	Carleton, Ont.
Brodie, C. J.	Bethesda	York, Ont.
Broome, A. H.	Henley-on-Thames	England.
Brown, C. R.	Norwood	Peterborough, O.
Browne, W. M.	Ottawa	Carleton, Ont.
Brownjohn, N. S.	East Lydford, Somerton	England.
Brush, G. H. R.	Clifton, Bristol	England.
Burwash, H. A.	Underwood	Bruce, Ont.
Butler, G. C.	London	England.
Byers, W. F.	Gananoque	Leeds, Ont.
Calvert, S.	Rochdale	England.
Carden, J.	Rowan Wood, Toronto	York, Ont.
Carman, H. D.	Sarnia	Lambton, Ont.
Carlaw, C. M.	Warkworth	Northumberland, Ont.
Carr, G. P.	Natherly, Cheltenham	England.
Carr, L. H.	Elmhurst, South Croyden	England.
Chadsey, W.	Wellington	Prince Edward, Ont.
Chipman, S. B.	Halifax	Nova Scotia.
Casswell, A. B.	Ingersoll	Oxford, Ont.
Cobb, C.	London	Middlesex, Ont.
Coutts, W. F.	Glamis	Bruce, Ont.
Craig, D. J.	Edinburgh	Scotland.
Craig, H.	Carsonby	Carleton, Ont.
Craig, J. A.	Russell	Russell, Ont.
Creelman, G. C.	Collingwood	Grey, Ont.
Davidson, F. L.	Southfields	England.
Davidson, J. F.	Peterborough	Peterborough, Ont.
Dennis, J. E.	Cheapside, London, E.C.	England.
Denton, E.	London	Middlesex, Ont.
Donald, J. C.	St. George	Brant, Ont.
Donaldson, F. N.	Mobarnane, Tipperary	Ireland.
Donaldson, H. W.	Mobarnane, Tipperary	Ireland.
Donnelly, P. E.	Montreal	Quebec.
Dunn, J. G.	St. John	New Brunswick.
Eby, J. R.	Sebringville	Perth, Ont.
Etherington, C. B.	Farquay, Devon	England.
Ewing, W.	Mulmur	Dufferin, Ont.
Farlinger, T.	Dundee	Quebec.
Fee, J. J.	Toronto	York, Ont.
Fortune, G. R.	Muir Cambus, Colinsborough	Scotland.
Fraser, G.	Stratford	Perth, Ont.
Furness, D.	Toronto	York, Ont.
Gibaut, E. D.	St. Heliers	Jersey.
Gilbert, W. J.	Shediac	New Brunswick.
Glass, J. M.	Montreal	Quebec.
Graham, G. M.	Penzance, Cornwall	England.
Green, C. W.	Ottawa	Carleton, Ont.
Guest, James	Ballycroy	Simcoe, Ont.
Haldimand, E. M.	Montreal	Quebec.
Hall, H. B.	St. John	New Brunswick.
Hannah, J.	Egmondville	Huron, Ont.
Harkness, A. D.	Irene	Dundas, Ont.
Hart, J. A.	Berwick	Nova Scotia.
Hart, J. W.	Bridgetown	Nova Scotia.
Haslam, G. T.	Dublin	Ireland.
Hay, W. H.	Stratford	Perth, Ont.
Hay, D. D.	Stratford	Perth, Ont.
Hayman, J. M.	Aldingham Rectory, Ulmerston	England.
Higinbotham, H. B.	Guelph	Wellington, Ont.
Hipwell, J. R.	Thompsonville	Simcoe, Ont.
Hirsch, J.	Manchester	England.

COLLEGE ROLL—*Continued.*

NAMES.	P. O. ADDRESS.	COUNTY, ETC.
Holtby, R. M.	Manchester.	Ontario, Ont.
Horsman, J. V.	Ingersoll	Oxford, Ont.
Howes, J. S.	Harriston	Wellington, Ont.
Idington, P. S.	Stratford	Perth, Ont.
Jeffrey, J. S.	Toronto	York, Ont.
Johnston, J. F.	Ottawa	Carleton, Ont.
Jones, T. L.	Aberystwith	South Wales.
Jones-Bateman, H.	Stratford	Perth, Ont.
Kemmis, J.	Waterloo Road, Dublin	Ireland.
Kennedy, J. R.	St. Mary's Vicarage, Leeds	England.
Kenyon, J. O.	Theford	Lambton, Ont.
Kernighan, J. N.	Benmilleo	Huron, Ont.
King, R. E.	Decewsville.	Haldimand, Ont.
Knowlton, S. M.	Newboro'	Leeds, Ont.
Lane, H.	Guelph	Wellington, Ont.
Lane, H. R.	Surbiton, Surrey	England.
Lea, H. F.	Toronto	York, Ont.
Leavens, D. H.	Belleville	Hastings, Ont.
Ledingham, A. M.	Turriff, Aberdeen	Scotland.
Leslie, J. P.	Georgetown	Halton, Ont.
Ledyard	Toronto	York, Ont.
Lick, E.	Oshawa	Ontario, Ont.
Livesey, E. M.	London	England.
Lloyd, O.	Gormley	York, Ont.
Lobb, E. W. F.	St. John's Wood, London	England.
Loblaw, W. F.	Elm Grove	Simcoe, Ont.
Lyster, G. R.	Cape Cove, Gaspé	Quebec
MacAlister, F. G.	Kingston	Frontenac, Ont.
MacFarlane, A. D.	Wallace	Nova Scotia.
MacDonald, F. J.	Montreal	Quebec.
MacDonald, P.	Caughnawaga	Quebec.
MacVicar, A. F.	Sarnia	Lambton, Ont.
Madge, R. W.	Brucefield	Huron, Ont.
Magee, F. P.	St. John	New Brunswick.
Malcolm, H.	Toronto	York, Ont.
March, H.	Rochdale	England.
Marcon, Y.	Windsor	Essex, Ont.
Marsh, G. F.	Thornbury	Grey, Ont.
Marsh, T. J.	Clarksburg	Grey, Ont.
Maude, F. S.	Bournemouth	England.
McCallum, E. G.	Martintown	Glengarry, Ont.
McIntosh, W. W.	Toronto	York, Ont.
McIntyre, D. N.	Paisley	Bruce, Ont.
McKay, J. B.	Stellarton	Nova Scotia.
McKay, J. G.	Underwood	Bruce, Ont.
McLean, R. M.	Ottawa	Carleton, Ont.
McNiven, W.	Mountsburg	Wentworth, Ont.
Meikle, W. F.	Morrisburg	Dundas, Ont.
Menzies, R. M.	Almonte	Lanark, Ont.
Mill, J. S.	Maria, Bonaventure	Quebec.
Miller, J. R.	Mabon	Cape Breton.
Moberly, G. E.	Erith, Kent	England.
Moodie, J. W.	Toronto	York, Ont.
Morgan, J. H.	Kerwood	Middlesex, Ont.
Muir, J. B.	North Bruce	Bruce, Ont.
Mytton, R. P.	Guelph	Wellington, Ont.
McPherson, A.	Montreal	Quebec.
Notman, C. R.	Toronto	York, Ont.
O'Doherty, E. J.	Ottawa	Carleton, Ont.
Orsman, C. P.	Bathurst	Lanark, Ont.
Owen, W. H.	Hull	England.
Pady, W. J.	Barnstaple, Devon	England.
Page, F. E.	Amherst	Nova Scotia.
Paget, H. A.	Loughborough	England.
Paterson, B. E.	Ottawa	Carleton.
Paterson, J. W.	Constantinople	Turkey.
Paton, N. F. W.	Edinburgh.	Scotland.
Pettingill, C.	Wellington	Prince Edward, Ont.
Poe, J. P.	Callan	Ireland.

COLLEGE ROLL—*Concluded.*

NAMES.	P. O. ADDRESS.	COUNTY, ETC.
Power, R. H.	Barrie	Simcoe, Ont.
Quinn, E. C.	Orillia	Simcoe, Ont.
Raynor, T.	Rose Hall	Prince Edward, Ont.
Reid, Peter.	Montreal	Quebec.
Renfrew, W. C.	Quebec	Quebec.
Ridings, H. L.	Grafton	Northumberland, Ont.
Ritchie, H.	Toronto	York, Ont.
Robertson, D.	Kircudbright	Scotland.
Robinson B.	Wheatley	Kent, Ont.
Roome, H.	London	England.
Ross, J.	Whitechurch	Bruce, Ont.
Routh, P. G.	Toronto	York, Ont.
Rowat, J. T.	Hillsdale	Simcoe, Ont.
Schofield, E. A.	St. John	New Brunswick.
Scott, J. A.	Stoke, Devonport	England.
Scrughan, J. G.	Toronto	York, Ont.
Sharp, W.	Killyleagh	Simcoe, Ont.
Skaife, F. W.	Montreal	Quebec.
Slater, H.	Taunton	England.
Sleightholm, F.	Humber	Peel, Ont.
Smith, A. H.	Simcoe	Norfolk, Ont.
Smith, E. P.	Port Hope	Durham, Ont.
Smith, J.	Guelph	Wellington, Ont.
Smithers, A. S.	Montreal	Quebec.
Sturge, E.	Penzance, Cornwall	England.
Thompson, W. D.	Guelph	Wellington, Ont.
Thompson, H.	Cheltenham	England.
Walter, J. R.	Wellington, Somerset	England.
Watts, W. G.	Dockenfield, Surrey	England.
White, S. A. K.	Ottawa	Carlton, Ont.
Whitehead, E. A.	Montreal	Quebec.
Wiggins, G. C.	Windsor	Nova Scotia.
Williams, J. B.	Perth	Lanark, Ont.
Williams, L.	Leakdale	Ontario, Ont.
Wilson, C. J.	Dunkeron	Simcoe, Ont.
Workman, J. R.	Guelph	Wellington.
Zavity, C. A.	Coldstream	Middlesex.

ANALYSIS OF ROLL.

Counties, etc.	Students.	Counties, etc.	Students.
Brant	1	Jersey	1
Bruce	6	Kent	1
Carleton (including Ottawa)	11	Lambton	3
Dufferin	1	Lanark	3
Dundas	2	Leeds	2
Durham	1	Middlesex (including London)	4
England	30	New Brunswick	5
Essex	1	Norfolk	1
Frontenac	1	Northumberland	2
Glengarry	1	Nova Scotia	9
Grey	3	Ontario	3
Haldimand	1	Oxford	2
Halton	1	Peel	1
Hastings	2	Perth	6
Huron	4	Peterborough	3
Ireland	5	Prince Edward	3
Jamaica	1	Quebec (Province)	14

ANALYSIS OF ROLL—*Concluded.*

Counties, etc.	Students.	Counties, etc.	Students.
Russell.....	1	Wellington (including Guelph).....	8
Scotland.....	5	Wentworth.....	1
Simcoe.....	8	York (including Toronto).....	15
Turkey.....	1		
Wales.....	1	Total.....	175
Ontario Students.....	103		
Non-residents.....	72		
Ontario Counties represented.....	32		

RELIGIOUS DENOMINATIONS.

Under this head, it may be observed that the College is patronized by members or adherents of nearly all the religious organizations in the Dominion. Last year there were ten denominations represented in our class-lists, as follows:—

Episcopalians.....	63	Christians.....	2
Presbyterians.....	48	Brethren.....	1
Methodists.....	34	Friends.....	1
Baptists.....	10	Reformed Episcopalians.....	1
Congregationalists.....	10		
Roman Catholics.....	5	Total.....	175

CLASS-ROOM WORK.

Lectures began, as usual, on the 1st October, 1884, and continued till the 30th June, 1885, which latter date is the end of the scholastic year, 1884-85.

The following syllabus of lectures will convey some idea of the field covered by the several professors in the nine months just mentioned:—

FIRST YEAR.

Fall Term—1st October to 22nd December.

DEPARTMENT 1.—AGRICULTURE.

Introductory.—Ancient and modern agriculture; agricultural literature: arts and sciences affecting agriculture: different kinds of farming.

Reclamation of Land.—Clearing, stumping, stoning, fallowing, etc.

Soils.—Origin and distribution of soil; natural conditions of soil and plant; examination and classification of soils: physical and chemical properties of each kind.

Rotation in Cropping.—Importance and necessity of rotation; principles underlying it; rotations suitable to different kinds of soil; examination and criticism of different systems of rotation.

Buildings.—Location of house, barn and stables; framing a building; stables for horses, sheep and cattle; arrangement of farm buildings.

Implements and Machinery.—Principles in construction of implements and machinery: points to be aimed at: classification, examination, and description of the same.

Miscellaneous.—Roads, lanes, fences, wells, etc.

DEPARTMENT 2.—NATURAL SCIENCE.

Chemical Physics.—Matter; accessory and essential properties of matter; attraction; various kinds of attraction—cohesion, adhesion, capillary, electrical, and chemical; specific gravity; weights and measures: heat, measurement of heat, thermometers, pyrometers, specific and latent heat; sources, nature and laws of light: spectrum analysis.

Inorganic Chemistry.—Scope of subject; elementary and compound substances; chemical affinity; symbols; nomenclature; combining proportions by weight and by volume; atomic theory; atomicity and basicity: oxygen and hydrogen; water—its nature, functions, decomposition and impurities; nitrogen; the atmosphere—its composition, uses and impurities; ammonia—its sources and uses; nitric acid and its connection with plants; carbon; combustion; carbonic acid and its relation to the animal and vegetable kingdom; sulphur and its compounds; manufacture and uses of sulphuric acid; phosphorus; phosphoric acid and its importance in agriculture; chlorine—its bleaching properties; bromine; iodine; silicon; potassium; calcium; magnesium; iron, etc.

Human Physiology and Hygiene.—Description of the different tissues in the body; alimentary system; circulatory system; nervous system; importance of ventilation and the influence of food on the body; remarks on the proper care of the body and attention to its surroundings in order to keep it in a continual state of health.

Zoology.—Distinctions between animate and inanimate objects; distinctions between plants and animals; basis of classification among animals; leading characters of each sub-kingdom, with special reference to classes of animals connected with agriculture.

DEPARTMENT 3.—VETERINARY SCIENCE.

Anatomy and Physiology of the horse, ox, sheep and pig; osseous system, muscular system, syndesmology, plantar system and odontology.

DEPARTMENT 4.—ENGLISH.

Composition.—The sentence, paragraph, and period; capitals and punctuation. Exercises in composition.

English Classics.—Critical study of Gray's "Elegy."

DEPARTMENT 5.—MATHEMATICS.

Arithmetic.—Review of subject, with special reference to farm accounts. Interest, discount, stocks, and partnership.

Mental Arithmetic.—Calculations in simple rules.

Book-keeping.—Subject commenced.

 FIRST YEAR—(Continued).

Winter Term—22nd January to 16th April.

DEPARTMENT 1.—AGRICULTURE.

Breeding, rearing and feeding of animals. Points to be considered in deciding what kind of animals to keep.

Horses.—Different breeds of horses, and leading characteristics of each; type of horse required for farm work; breeding, feeding and general management.

Cattle.—History and characteristics of Shorthorns, Herefords, Polled Angus, Ayrshires, Jerseys, Devons, Galloways, etc.; grade cattle; milch cows—points of a good milch cow; breeding generally, cross-breeding, in-and-in breeding; pedigree.

Sheep.—Breeds of sheep generally considered; long-woolled sheep; medium-woolled sheep; short-woolled sheep; crosses between different breeds compared: texture; quality, quantity, and uses of different kinds of wool.

Swine.—Characteristics of various breeds: management of sows; stores; bacon-curing, etc.

DEPARTMENT 2.—NATURAL SCIENCE.

Inorganic Chemistry.—Subject continued from fall term.

Organic Chemistry.—Constitution of organic compounds; alcohols, aldehydes, acids, and their derivatives; formic, acetic, oxalic, tartaric, citric, lactic, malic, uric and tannic acids. Constitution of oils and fats—saponification; sugars, starch, cellulose; albuminoids, or flesh formers and their allies. essential oils; alkaloids—morphine and quinine; classification of organic compounds.

Zoology (Continued).—Sub-kingdoms further described; detailed account of some injurious parasites, such as “liver fluke,” “taperworm,” “trichina,” etc.; insects; their influence on plant life; corals and mollusks as agents in the formation of soil; vertebrates with special reference to those of importance in the economy of the farm.

Lectures illustrated by specimens and diagrams.

DEPARTMENT 3.—VETERINARY SCIENCE.

Veterinary Anatomy.—Anatomy and physiology of the horse, ox, sheep, and pig—digestive system, circulatory system, respiratory system, urinary system, nervous system, sensitive system, generative system, tumental system.

DEPARTMENT 4.—ENGLISH.

Composition.—Exercises continued; abstracts of speeches and essays; letter writing.

English Classics.—Committing to memory and critical study of Goldsmith’s “Traveller.”

DEPARTMENT 5.—MATHEMATICS AND BOOK-KEEPING.

Arithmetic.—Equation of payments; percentage; profit and loss; stocks; partnership; exchange.

Book-keeping.—Business forms and correspondence; general farm accounts; dairy, field and garden accounts.

FIRST YEAR—(Continued).

Spring Term—17th April to 30th June,

DEPARTMENT 1.—AGRICULTURE.

Preparation of Soil.—Modes of preparation for different crops, as wheat, barley, oats, rye, pease, maize; modes suited to various kinds of soil.

Seeds and Sowing.—Testing the quality of seed; changing seed; quantity of seed per acre; methods of sowing.

Improvement of Lands.—Ordinary cultivation ; subsoiling in some cases ; fallowing ; draining ; manuring. Farm-yard manure and management of the same ; the properties, application and uses of artificial manures—lime, plaster, salt, bone-dust, superphosphates, etc.

Roots.—Cultivation of roots and tubers—turnips, mangolds, carrots, potatoes ; effects of each kind on soil.

Green Fodders.—Tares, lucerne, sanfoin, prickley comfrey, clovers, grasses ; the cultivation and management most appropriate for each.

Management of pastures ; harvesting and preparing crops for market, or one's own use ; crops for current year examined.

DEPARTMENT 2.—NATURAL SCIENCE.

Geology.—Connection between geology and agriculture ; classification of rocks—their origin and mode of formation, changes which they have undergone after deposition ; fossils—their origin and importance ; geological periods and characteristics of each.

Geology of Canada ; with special reference to the nature and economic value of the rock deposits ; glacial period and its influence on the formation of soil.

Lectures illustrated by numerous specimens and diagrams.

Botany.—Full description of the seed, roots, stem, leaves and flower. Plants are brought into the lecture-room and analyzed before the class so as to render students familiar with the different organs and their use in the plant economy.

Lectures also illustrated by excellent diagrams.

DEPARTMENT 3.—VETERINARY SCIENCE.

Materia Medica.—The preparation, doses, action, and use of about one hundred of the principal medicines used in veterinary practice.

DEPARTMENT 4.—ENGLISH.

English Classics.—Committing to memory and critical study of Wordsworth's "Excursion," Book I.

DEPARTMENT 5.—MATHEMATICS.

Mensuration.—Mensuration of surfaces—the square, rectangle, triangle, trapezoid, regular polygon, circle. Special application to the measurement of lumber. Mensuration of solids ; special application to the measurement of timber, earth, etc.

SECOND YEAR.

Fall Term—1st October to 22nd December.

DEPARTMENT 1.—AGRICULTURE.

Experimental Plots.—The results of last season's experiments with wheat, oats, barley, peas, grasses, clovers, roots, etc. ; liability to disease ; effects of various manures on different crops ; growth of plates, etc.

Farm Management.—Detailed account of the treatment of each field ; results from different kinds of seed and soil ; effects of manure ; harvesting, storing, and threshing of crops ; fall ploughing, subsoiling, etc.

Stock Feeding.—Value of feeding materials ; estimate for winter keep of live stock ; housing, feeding, and fattening ; points to be observed in selecting animals for fattening ; feeding experiments ; common diseases of animals ; management of animals on pasture ; value of green fodder. Dairy management and cheese-making.

DEPARTMENT 2.—NATURAL SCIENCE.

Agricultural Chemistry.—Connection between chemistry and agriculture : the various compounds which enter into the composition of the bodies of animals : the chemical changes which food undergoes during digestion ; chemical changes which occur during the decomposition of the bodies of animals at death : the functions of animals and plants contrasted ; food of plants, and whence derived ; origin and nature of soils : classification of soils : causes of unproductiveness in soil and how detected ; composition of different plants in relation to the soils upon which they grow : rotation of crops : preservation, development, and renovation of soils : manures classified, the chemical action of manures on different soils ; chemical theories in reference to the action of superphosphates ; the action of lime in the decomposition of double silicates ; feeding of animals : classification of foods ; chemical results in the use of different foods ; points necessary to be considered in order to obtain the full value of artificial and natural foods.

Horticulture.—Ontario as a fruit-growing country ; the natural divisions into which it may be divided for growing fruit ; detailed account of the operations, layering, grafting, budding, pruning, etc. ; laying out and cultivation of an orchard ; list of fruits best suited for general purposes, with best methods for their cultivation ; remarks on gardening as a source of profit : plants best adapted for the purpose of bedding and potting.

Lectures illustrated by practical work in the garden and specimens in the class-room.

DEPARTMENT 3.—VETERINARY SCIENCE.

Pathology.—Osseous System.—Nature, causes, symptoms, and treatment of diseases of bone, as splint, spavin, ringbone, etc.

Muscular System.—Nature, causes, and treatment of flesh wounds, etc.

Syndesmology.—Nature, causes, symptoms, and treatment of curb, bog-spavin, and other diseases of the joints.

Plantar System.—Nature, causes, symptoms, and treatment of corns, sand-crack, founder, and other diseases of the feet.

Odontology.—Diseases of the teeth and treatment of the same.

DEPARTMENT 4.—ENGLISH.

English Classics.—Critical study of Shakespeare's "Julius Cæsar."

DEPARTMENT 5.—MATHEMATICS.

Dynamics.—Motion, forces producing motion, momentum : work : the simple machines, etc.

Drainage.—General principles ; how to lay out a system of drains ; how, where, and when to commence draining : depth of drains and distances apart ; grades : cost of draining.

SECOND YEAR—(Continued).

Winter Term—22nd January to 16th April.

DEPARTMENT 1.—AGRICULTURE.

Laws affecting agriculture ; capital required in farming ; laying out of farm ; general management and economy ; measuring, levelling and draining ; permanent pastures ; inventory and valuation ; cost of production ; buying, selling and marketing ; field experiments.

Management of cattle, sheep, and other animals in winter ; breeding generally considered ; special management of ewes before, during, and after the season of lambing ; treatment of other animals in parturition ; rearing of lambs, calves and pigs ; washing and dipping of sheep, etc., etc.

Arboriculture.—Planting and attendance of forest trees, shade trees, etc.

DEPARTMENT 2.—NATURAL SCIENCE.

Agricultural Chemistry.—Subject continued from Fall term.

Entomology.—Importance of the subject to agriculturists ; beneficial and injurious insects—their habits, and the best means of checking the ravages of the latter.

Lectures illustrated by specimens.

Meteorology.—Relation of Meteorology to agriculture ; composition and movements of the atmosphere ; description of the barometer, different kinds of thermometers, pluviometer, anemometer, and how to read them ; temperature, its influence on agriculture ; the elements which are to be considered in the discussion of climate ; the principles considered in forecasting the weather.

Lectures illustrated by instruments referred to.

DEPARTMENT 3.—VETERINARY SCIENCE.

Digestive System.—Nature, causes, symptoms and treatments of spasmodic and flatulent colic, inflammation of the bowels, acute indigestion, tympanitis in cattle, impaction of the rumen, and many other common diseases.

Circulatory System.—Description of the diseases of the heart and blood.

Respiratory System.—Nature, causes, symptoms and treatment of catarrh, nasal-gleet, roaring, bronchitis ; pleurisy and inflammation of the lungs, etc.

Urinary System.—Nature, causes, symptoms, and treatment of inflammation of the kidneys, etc.

Nervous System.—Nature, causes, symptoms, and treatment of lock-jaw, string-halt, etc.

Sensitive System.—Nature, causes, symptoms, and treatment of the diseases of the eye and ear.

Generative System.—Nature, causes, symptoms, and treatment of abortion, milk-fever, etc.

Tegumental System.—Nature, causes, symptoms, and treatment of scratches, sallenders, mallenders, parasites, and other diseases of the skin.

DEPARTMENT 4.—ENGLISH LITERATURE AND POLITICAL ECONOMY.

English Classics.—The critical study of Shakespeare's "King Richard the Second."

Political Economy.—Utility ; production of wealth—land, labour, capital ; division of labour ; distribution of wealth ; wages ; trades-unions ; co-operation ; money ; credit, credit cycles ; functions of government ; taxation, etc.

DEPARTMENT 5.—MATHEMATICS.

Statics.—Theory of equilibrium ; composition and resolution of forces ; parallelogram of forces, moments ; centre of gravity, etc.

Hydrostatics.—Transmission of pressure ; the hydraulic press : specific gravity ; density ; pumps, siphons, etc.

Book-keeping.—Review of previous work.

Spring Term.—16th April to 30th June.

DEPARTMENT 1.—AGRICULTURE.

Review of all past lectures with special drill on outside work. Reasons for management, etc.

DEPARTMENT 2.—NATURAL SCIENCE.

Practical and Analytical Chemistry.—Chemical manipulation, preparation of common gases and reagents : operations in analysis—solution, filtration, precipitation, evaporation, distillation, sublimation, ignition, and the use of the blow-pipe ; testing of substances by reagents ; impurities in water ; adulteration in foods and artificial manures : injurious substances in soils.

Quantitative analysis of soils, manures and farm produce.

Systematic and Economic Botany.—Classification of plants and characters of the most important orders.

This course is illustrated by a large collection of plants in the college herbarium ; and also by analysis of several plants collected in the fields and woods of the farm,

Green-house Plants.—Special study of all the plants grown in our green-houses, and the shrubs, etc., on lawn.

DEPARTMENT 3.—VETERINARY SCIENCE.

Materia Medica.—The preparation, actions, uses, and doses of medicines—continued from the spring term of the first year. Lectures on special subjects, such as pleuro-pneumonia, the rinderpest, tuberculosis, etc.

Veterinary Obstetrics.—Description of foetal coverings. Phenomena in connection with puberty, oestrus, gestation, sterility, abortion, normal and abnormal parturition. Diseases incidental to pregnant and parturient animals.

DEPARTMENT 4.—ENGLISH.

English Classics.—The critical study of Milton's "L'Allegro" and "Il Penseroso."

DEPARTMENT 5.—MATHEMATICS.

Surveying and Levelling.—Fields surveyed with chain and cross-staff : measurements of heights.

Road Making.—Determination of proper slopes ; shape of road bed : drainage of roads ; friction on different roads ; various road coverings : the maintenance of roads : cost, etc.

FARMERS' INSTITUTES.

From time to time prior to the fall of 1883, I had suggested the propriety of making such a change in the College vacations as would enable the professors to assist in holding Farmers' Institutes at convenient centres throughout the Province, for the discussion of agriculture, live stock, dairying, forestry, the beautifying of country homes, and other matters of interest to the farming community. The proposal was approved of; but it was deemed inexpedient to make a change so soon after passing the Act of February, 1880.

Again, in the fall of 1883, just after the present Minister of Agriculture took office, I laid the matter before him; and he at once adopted the suggestion. He seemed in favour of the proposal, and forthwith agreed to introduce a bill striking out the Easter vacation of sixteen days and adding the same length of time to the Christmas vacation, in order to relieve the professors at that season of the year in which farmers have most leisure for attention to public business.

The plan on which we decided to proceed is as follows: The farmers themselves organize institutes according to instructions issued by the Commissioner of Agriculture, and hold at least two meetings in the year; and the professors of the College assist at these meetings as often as they can do so, during the Christmas vacation, *i.e.*, from the 22nd December to the 22nd January.

Each Institute occupies about a day and a half, commencing at half-past one o'clock the first day and continuing till some time in the afternoon of the second day. In the evening of the first day, there is a public meeting at which the entertainment consists of music and short addresses.

The Government pays the travelling expenses of the professors; and the locality in which the institute is held provides a place of meeting and pays for heat, light, and local advertising.

We assisted in holding twelve institutes last winter, and had to refuse applications for as many more. The farmers of the several localities read and discussed papers with great freedom, and entered so heartily into the work that the meetings everywhere were both interesting and profitable. The following is the list of the places: Smithville (Welland), Kingsville (Essex), Wyoming (Lambton), Cold Stream (Middlesex), Woodstock (Oxford), Clinton (Huron), Hamilton (Wentworth), New Lowell (Simcoe), Meaford (Grey), near Whitby (Ontario), Oshawa (Ontario), and Kingston (Frontenac).

DISTINGUISHED VISITORS.

Among the most pleasing incidents of the year were the visits paid us by His Honour Lieutenant-Governor Robinson, and His Excellency the Marquis of Lansdowne. The former, with about thirty members of the Ontario Legislature, spent a day with us in the month of February; and the latter came to Guelph in the early part of August, for the express purpose of inspecting our college and farm. Both of these visits were gratifying to the officers of the institution, and, we trust, not altogether without interest and profit to the distinguished men who made them.

CHANGES IN THE STAFF.

In reviewing the events of the year, it becomes our melancholy duty to chronicle the death of Dr. Hare, our late Professor of Chemistry. For three years and a half, Dr. Hare discharged the duties of the department of chemistry with marked ability, and in such a way as to win the esteem of his students and command the respect of all with whom he came in contact. Dr. Hare's kindly disposition, generous nature, and enthusiastic love of science, will long be remembered by all that came within the sphere of his influence. By his death we have lost a warm friend, an able chemist, and an enthusiastic worker, whose place it will be difficult to fill.

WINTER TERM. 1885.

22nd January to the 16th April.

The students in attendance were those who had entered at the beginning of the Fall Term in October, 1884, or previous to that date—108 in number : and the work was to a large extent a continuation of the subjects begun at that time.

CLASS-ROOM WORK.

The term was ten weeks and two days long, exclusive of the time spent on the Easter examinations : and the lectures delivered were as follows :—

<i>First Year.</i> —30 lectures, one hour each, on Agriculture and Live Stock.			
32	“	“	Chemistry.
20	“	“	Natural History.
21	“	“	Veterinary Anatomy.
20	“	“	English Literature.
10	“	“	English Composition.
29	“	“	Arithmetic and Book-keeping.
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<i>Second Year.</i> —15 lectures, one hour each, on Agriculture and Live Stock.			
5	“	“	Arboriculture.
31	“	“	Agricultural Chemistry.
11	“	“	Entomology.
21	“	“	Political Economy.
20	“	“	English Literature.
21	“	“	Veterinary Pathology.
21	“	“	Statics, Hydrostatics, and Book-keeping.
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Also one hour a week was spent by the second year students in the practical handling and judging of horses, under the supervision of Dr. Grenside, our Veterinary Surgeon.

DEPARTMENT 1.—AGRICULTURE AND LIVE STOCK.

In this department, the first year students devoted three hours a week to the study of the characteristic points and peculiarities of the leading breeds of sheep, pigs, and horses ; and the second year men spent six hours on general agriculture, five hours on arboriculture, and eleven hours in handling, judging, and comparing the different breeds and varieties of sheep and cattle. Under the last head, the method of instruction was the same as usual, and may be described as follows :—

A specimen of some kind, say a Shorthorn steer, is brought into the lecture-room, which is so arranged with galleried seats that every student while in his place taking notes has a full view of the lecturer and all his movements. The different parts of the animal are first pointed out and named, such for example, as the brisket, crops, loins, twist, etc. After this has been several times repeated, the students are called on to point out and name the several parts in presence of their class-mates. The lecturer then criticises the animal more closely, indicating the strong and the weak points, and giving his estimate of it as a whole. Afterwards several animals of different breeds are brought in together, and he proceeds to describe and illustrate what are considered the good points of the animals for beef and milk, comparing and contrasting Shorthorns, Herefords, Polled Angus, Devons, Galloways, Ayrshires, Holsteins, Guernseys, and Jerseys, breed with

breed in regard to shape of frame, quality of flesh, feeding, beefing, milking, hardiness, and other properties. Much the same course is pursued with the different breeds of sheep. Cotswolds, Leicesters, Southdowns, Oxford Downs, Shropshire Downs, Hampshire Downs, and Merinos are frequently examined in the class-room, and compared with one another as regards carcass, constitution, wool, mutton, feeding, hardiness, etc. Thus the instruction in this department is made in the strictest sense definite and practical.

DEPARTMENT 2.—NATURAL SCIENCE.

The work of the Winter Term in the department of Natural Science embraces Inorganic Chemistry, Organic Chemistry, Zoology, Agricultural Chemistry, and Entomology.

In the winter of 1885, our first year students spent a few weeks in completing the Inorganic Chemistry which they had studied throughout the Fall Term, and then took up the more difficult, but no less interesting subject of Organic Chemistry. They had a full course of lectures from Dr. Hare on the most important organic compounds, and gave special attention to the nature and sources of starch, sugar, oils, fats, the albuminoids, or flesh-formers, and other substances which have a more or less direct bearing on general agriculture and the feeding of animals. At the same time they attended Professor Pantton's lectures on Zoology, to get a general knowledge of the animal kingdom as a whole, and thereby fit themselves for becoming more intelligent and appreciative students of particular parts of that kingdom under the heads of Entomology and Veterinary Science.

The second year men were at the same time engaged in the study of Agricultural Chemistry and Entomology. During the previous term they had learned the relation of Chemistry to Agriculture and Stock-raising: and with this knowledge they now proceeded to study the nature and sources of plant food, the origin and properties of the different kinds of soil, their preservation and renovation, the causes of unproductiveness, the properties and uses of various manures, the chemical composition of a number of fodders, and the nutritive value of each. On subjects such as these they spent three hours a week: and at the same time took a course of lectures delivered by the Professor of Natural History, on the marks, habits, and depredations of the various insects that infest our crops and fruits, seeking especially to learn the best means of checking and preventing their ravages.

A detailed account of the work in the sub-department of Natural History will be found in Professor Pantton's report in part II of this volume.

DEPARTMENT 3.—VETERINARY SCIENCE.

As will be seen from the syllabus of lectures given on a previous page, the Winter Term in the Veterinary Department is devoted to the anatomy, physiology, and pathology of the horse, ox, sheep, and pig. The lectures to the first year students were on the anatomy and physiology of these animals, and were illustrated by the complete skeleton of a horse and portions of other skeletons. The second year lectures discussed various diseases and their treatment, especially the common ailments of the horse, as spavin, ringbone, curb, founder, inflammation, and such like; and, for the purpose of making the instruction thoroughly practical, horses were regularly brought into the class-room and examined, first by the professor in the presence of the class, and afterwards by the students themselves. In this way the veterinary surgeon was each day enabled to see whether his lectures were really understood or not by those to whom they were delivered.

The work of the year in this department embraced not merely the lectures in the College, but also the medical treatment of all the stock kept on the farm.

See Dr. Grenside's report in part III.

DEPARTMENT 4.—ENGLISH LITERATURE AND POLITICAL ECONOMY.

We spend no time on any foreign language; and not much on anything which has not a direct bearing on the duties of a Canadian farmer. We give all the subjects of the

programme a fair share of attention, but lay most stress on Agriculture, Live Stock, Chemistry, and Veterinary Science. Our primary aim is to make good practical farmers: but we are not forgetful of the fact that it is no less important to make good citizens—to add some of the graces of a broader culture, and thereby fit our students for filling positions of trust, influence, and responsibility in Church and State.

The kind of an education which enables a man to make the most of his abilities in the social circle, the municipality, or the political arena, is got, not by confining the attention to any single subject, but by reading, writing and conversation, with the sharpening and refining influence of many studies. At the same time, I think there is nothing else which contributes so much to that end, and tends so directly to create and foster a taste for reading, as frequent practice in composition and the critical reading of selections from classic authors: and for this reason we devote all the time we can spare to exercises of that kind.

During the Winter Term of 1885, the first year students spent one hour a week on exercises in composition, and two hours in the critical study of Goldsmith's "Traveller." The second year men read Shakespeare's "Julius Cæsar," and "King Richard the Second," and committed to memory the best passages in each. They also devoted two hours a week to the discussion of such questions as are usually considered under the head of Political Economy—land, labour, capital, the production and distribution of wealth, strikes, lock-outs, etc.

DEPARTMENT 5.—MATHEMATICS AND BOOK-KEEPING.

Under this head, we have not undertaken anything beyond Arithmetic, Mensuration, elementary Mechanics, and the less difficult operations in Levelling and Surveying. Even in these few branches, we lay most stress on what is likely to have frequent application in the ordinary business of a farming community. The Book-keeping also is of a special kind. It might be called Farm Book-keeping—farm, garden, field and dairy accounts.

The work of last winter differed very little from that of the winter before; hence I shall not spend time in describing it, but simply refer to the Examination papers on Arithmetic, Statics, and Book-keeping in Appendix 2, and to the Class-Lists in Appendix 3.

SPECIAL LIVE STOCK AND VETERINARY CLASS.

A special class was organized in October, 1884, as in the two previous years, for those who wished to devote their whole time during the winter months to the study of live stock and veterinary science.

There were eighteen applicants for this class—three new students and fifteen from the regular course; but, for some reason or other, they dropped off, one by one, till the number was reduced to thirteen by Christmas: and there were only eight who remained for the examinations at Easter.

This dropping out before examination day is not as it should be, and seems due to the fact that when students have but little to do and are left to themselves they are apt to spend their time in idleness, become demoralized, and accomplish so little that they soon give up in disgust.

Easter Examinations.

The Easter Examinations were, as usual, on the class-room work of the Winter Session (1st October to 16th April). They commenced on the 6th and ended on the 16th April. The questions set in the different subjects will be found in the first part of Appendix 2. Most of the papers were difficult enough to differentiate the best students, while they gave all honest workers a fair chance to pass.

Oral examinations on live stock were conducted as usual. Cattle, sheep, and horses were taken into the Veterinary Class-room on successive days: and the students, being admitted one at a time, were required to handle and judge the animals submitted, as if they were in a show-ring.

EXAMINERS.

The examinations were conducted by the Professors of the College and the following outside gentlemen, to whom we are specially indebted and beg to return our sincere thanks :

John Hobson, Esq., Mossboro', (Wellington)	Stock-Breeding.
James Phin, Hespeler, (Waterloo)	The Feeding of Animals.
S. C. Smoke, B.A., Toronto	English Literature.
Wm. Douglas, B.A., Toronto	Political Economy.

HONOURS.

A complete record of all the candidates, regular and special, will be found in the Class Lists (Appendix 3)—not only those who passed or won honours, but also those who failed. A fair proportion got first-class honours in individual subjects, and a few gained the rank of first-class men in one or more of the five departments, and received honour certificates, as follows :

Honour Certificates

GRANTED ON THE RESULTS OF THE EASTER EXAMINATIONS, 1885.

*First Year.**Agriculture and Live Stock—**Natural Science—*

1. Madge, R. W. County of Huron, Ont.
2. Sturge, E. Muskoka, Ont.
3. Owen, W. H. Hull, England.
4. Zavitz, C. A. Coldstream, Middlesex, Ont.
5. Fee, J. J. Toronto, Ont.
6. Calvert, S. Rochdale, England.

Veterinary Science

1. Owen, W. H. Hull, England.
2. Madge, R. W. County of Huron, Ont.
3. Sturge, E. Muskoka, Ont.
4. Fee, J. J. Toronto, Ont.
5. Eby, J. R. Sebringville, Perth, Ont.
6. Zavitz, C. A. Coldstream, Middlesex, Ont.

English Literature and Composition—

1. Sturge, E. Muskoka, Ont.
2. Owen, W. H. Hull, England.
3. Madge, R. W. County of Huron, Ont.
4. Calvert, S. Rochdale, England.
5. Zavitz, C. A. Coldstream, Middlesex, Ont.

Mathematics and Book-keeping—

1. Madge, R. W. County of Huron, Ont.
2. McKay, J. G. Underwood, Bruce, Ont.
3. Eby, J. R. Sebringville, Perth, Ont.
4. Jeffrey, J. S. Toronto, Ont.
5. Zavitz, C. A. Coldstream, Middlesex, Ont.

*Second Year.**Agriculture and Live Stock—*

1. Raynor, T. Rose Hall, Prince Edward, Ont.
2. Muir, J. B. North Bruce, Ont.

Natural Science—

1. Raynor, T. Rose Hall, Prince Edward, Ont.
2. Muir, J. B. North Bruce, Ont.
3. Butler, G. C. London, England.
4. McKay, J. B. Stellarton, N. S.
5. Macpherson, A. Montreal.
6. McIntyre, D. N. Paisley, Bruce, Ont.

Veterinary Science—

1. Muir, J. B. North Bruce, Ont.
2. McKay, J. B. Stellarton, N. S.
3. Raynor, T. Rose Hall, Prince Edward, Ont.
4. Butler, G. C. London, England.
5. Macpherson, A. Montreal.

English Literature and Political Economy—

1. Butler, G. C. London, England.

Mathematics and Book-keeping—

1. Raynor, T. Rose Hall, Prince Edward, Ont.

 SPRING TERM.

(16th April to 30th June.)

All specialists and generally some others leave at Easter. Hence we have been accustomed to hold two matriculation examinations in the year—one on the 1st of October and the other on the 17th of April. The number of applicants in April of last year was nineteen; seventeen were admitted, and two rejected.

WORK IN OUTSIDE DEPARTMENTS.

As the Spring Term affords special opportunities for practice in the outside departments, the class-room work did not receive quite so much attention as during the Winter Term. Every one had to attend lectures three hours a day, as usual; but a little less time was occupied in study than during the winter months. From four and a half to five hours a day were devoted to practical work outside.

CLASS-ROOM WORK.

While particular prominence was given to the work outside, the inside was by no means neglected. In the department of Agriculture the cultivation of the various crops was taken up; seeds were examined and judged; the different modes of sowing discussed and exemplified; the principles underlying rotation, and the rotations suitable to different soils, climates, and circumstances were explained; also the improvement of land by ordinary cultivation, subsoiling, fallowing, manuring, and laying down to grass. At the same time, under the head of Practical and Analytical Chemistry, the second year men were employed from three to four hours a week in the laboratory, examining and testing waters, soils, foods, manures, etc., so far as our limited appliances would allow. In that way they were led to see the practical value of what they had already learned in Inor-

ganic, Organic, and Agricultural Chemistry. They had opportunities for putting their knowledge to a practical test. Hence most of them entered cheerfully and heartily into the work. In systematic and Economic Botany they received lectures on the general classification of plants, and studied more particularly those orders which contain the most important agricultural and economic plants—cereals, grasses, roots, and plants used in the manufacture of fabrics, oils, medicines, and other articles of commerce. At the same time the first year students were attending lectures on Geology and Botany. In the former they learned something of the formation, composition, and character of the soils found in the country; in the latter they studied the plant in relation to the soil and the atmosphere—its form, food, functions, and diseases, giving special attention to hybridization, the different modes of propagation, and such diseases as smut, rust, mildew, etc. The lectures of the class-room were illustrated and applied to some extent by the gardener while the students were at work with him in the green-houses, gardens, and lawns. In the departments of Veterinary Science, English, and Mathematics, the work was carried on as during the Winter Term.

The first-year students had twenty-three lectures on the preparation, action, and doses of about fifty kinds of medicine commonly used in veterinary practice; read Wordsworth's "Excursion," Bk. I.; wrote compositions; and gave some time to the study of Mensuration. During the same period, the second-year men had lectures on veterinary science, including twenty-five or thirty important medicines and the therapeutics of the veterinary art; read critically and committed to memory Milton's "L'Allegro," and "Il Penseroso;" gave some attention to road-making; and went twice a week into the fields with a master to apply, as far as possible, what had previously been taught them under the heads of levelling, draining, and elementary surveying.

MIDSUMMER EXAMINATIONS.

The midsummer examinations on the work of the Spring Term (16th April to 30th June) began on the 20th and ended on the 23rd June: and immediately thereafter came the

CLOSING EXERCISES OF THE COLLEGE.

These exercises took place on the 30th June, and were attended by His Honour Lieutenant-Governor Robinson, James Laidlaw, M.P.P., and a number of ministers and other visitors from Guelph and elsewhere, who came to witness the presentation of the diplomas, medals, and prizes that had been awarded on the results of the year's work.

Nine young men, having completed the regular course of study and apprenticeship, were presented by the president of the college for diplomas, which were granted by His Honour the Lieutenant-Governor of the Province.

MEDALS AND MEDALLISTS.

Three medals are granted annually to the graduating students who stand respectively first, second, and third in general proficiency, provided they reach a fixed standard in both the theoretical and the practical work.

Last year the competition was keen, and the results may be stated as follows:—

(1) Christmas Examinations.	(2) Easter Examinations.	(3) Midsummer Examinations.
1. Raynor, T	1. Raynor	1. Raynor
2. Butler, G. C	2. Muir	2. Muir
3. Muir, J. B.	3. Butler	3. Butler

GENERAL PROFICIENCY.

1. Raynor, T. (Gold Medallist) Rose Hall, Prince Edward, Ont.
2. Muir, J. B. (First Silver Medallist) North Bruce, Ont.
3. Butler, G. C. (Second Silver Medallist) . . London, England.

All these medals were presented by His Honour Lieutenant-Governor Robinson, and the other prizes were distributed as follows :—

Honour Certificates.

MIDSUMMER EXAMINATIONS, 1884.

*First Year.**Agriculture and Live Stock—*

1. Zavitz, C. A. Coldstream, Middlesex, Ont.
2. Madge, R. W. County of Huron, Ont.
3. { Brown, C. R. Norwood Peterborough, Ont.
} Sturge, E. Muskoka, Ont.

Natural Science—

1. Madge, R. W. County of Huron, Ont.
2. Brown, C. R. Norwood, Peterborough, Ont.
3. { Sturge, E. Muskoka, Ont.
} Zavitz, C. A. Coldstream, Middlesex, Ont.
5. Holtby, R. M. Manchester, Ontario County, Ont.

Veterinary Science—

1. Sturge, E. Muskoka, Ont.
2. Madge, R. W. County of Huron, Ont.
3. Zavitz, C. A. Coldstream, Middlesex, Ont.

English Literature and Composition—

1. Madge, R. W. County of Huron, Ont.
2. Brown, C. R. Norwood, Peterborough, Ont.
3. { Sturge, E. Muskoka, Ont.
} Zavitz, C. A. Coldstream, Middlesex, Ont.

Mathematics—

1. { Madge, R. W. County of Huron, Ont.
} Zavitz, C. A. Coldstream, Middlesex, Ont.
3. Marsh, G. F. Thornbury, Grey, Ont.
4. Brown, C. R. Norwood, Peterborough, Ont.
5. Holtby, R. M. Manchester, Ontario County, Ont.

*Second Year.**Agriculture —*

1. Muir, J. B. North Bruce, Ont.
2. Raynor, T. Rose Hall, Prince Edward, Ont.
3. Butler, G. C. London, England.
4. Macpherson, A. Montreal.
5. McIntyre, D. N. Paisley, Bruce, Ont.

Natural Science—

1. Raynor, T. Rose Hall, Prince Edward, Ont.
2. Muir, J. B. North Bruce, Ont.
3. Macpherson, A. Montreal.
4. Butler, G. C. London, England.

Veterinary Science—

1. Raynor, T Rose Hall, Prince Edward, Ont.
2. Muir, J. B North Bruce, Ont.
3. Owen, W. H Hull, England.
4. McIntyre, D. N Paisley, Bruce, Ont.

English Literature—

1. Butler, G. C London, England.
2. Macpherson, A Montreal.
3. Raynor, T Rose Hall, Prince Edward, Ont.
4. Owen, W. H Hull, England.

Mathematics—

1. Raynor, T Rose Hall, Prince Edward, Ont.
2. Muir, J. B North Bruce, Ont.
3. Broome, A. H Henley-on-Thames, England.
4. Butler, G. C London, England.
5. Reid, P Montreal.
6. Macpherson, A Montreal.
7. McIntyre, D. N Paisley, Ont.
8. Poe, J. P Callan, Ireland.

Prizes Awarded on the Results of the Easter Examinations.

REGULAR COURSE.

*First Year.**Agriculture and Live Stock—**Natural Science—*

- 1st. R. W. Madge.
- 2nd. E. Sturge.

Veterinary Science—

- 1st. W. H. Owen.
- 2nd. R. W. Madge.

English Literature and Composition—

- 1st. E. Sturge.
- 2nd. W. H. Owen.

Mathematics and Book-keeping—

- 1st. R. W. Madge.
- 2nd. J. G. McKay.

General Proficiency—

- 1st. R. W. Madge.
- 2nd. E. Sturge.
- 3rd. W. H. Owen.

*Second Year.**Agriculture and Live Stock—*

- 1st. T. Raynor.
- 2nd. J. B. Muir.

Natural Science—

- 1st. T. Raynor.
- 2nd. J. B. Muir.

Veterinary Science—

- 1st. J. B. Muir.
- 2nd. J. B. McKay.

Eng. Lit. and Political Economy—

- 1st. G. C. Butler.

Mathematics and Book-keeping—

- 1st. T. Raynor.

General Proficiency—

- 1st. T. Raynor.
- 2nd. J. B. Muir.
- 3rd. J. B. McKay.

SPECIAL CLASS.

First Year Students—

- 1st. H. B. Hall.
- 2nd. J. R. Walter.

Second Year Students—

- 1st. H. L. Ridings.
- 2nd. A. B. Casswell.

*Silver Medal—*H. L. RIDINGS, Grafton, Ont.

Associates of the College.

1881.

Ballantyne, W. W	Stratford, Ont.
Dickinson, C. S	England.
Grindley, A. W	Montreal.
Motherwell, W. R	County of Lanark.
Phin, R. J. (Governor-General's Medallist)	Hespeler, County of Waterloo.
Phin, W. E	" "
Pope, Herbert	County of Grey, Ont.
Ross, James G	Montreal.
Robins, W. P	"

1882.

Blanchard, M. G	Windsor, Nova Scotia.
Charlton, G. H	St. George (Brant), Ont.
Chase, Oscar	Cornwallis, Nova Scotia.
Dawson, J. J	South Zorra (Oxford), Ont.
Dennis, James	Weston (York), Ont.
Elworthy, R. H	Jamaica.
Fotheringham, James	St. Mary's (Perth), Ont.
Hallesy, Frederick	Merthyr Tydvil, Wales.
Horne, W. H	North Keppel (Grey), Ont.
Howitt, Wm.	Guelph (Wellington), Ont.
Landsborough, John	Clinton (Huron), Ont.
Mahoney, E. C.	Hamilton (Wentworth), Ont.
Nicol, George	Cataraqui (Frontenac), Ont.
Ramsay, R. A. (Second Silver Medallist)	Eden Mills (Halton), Ont.
Shuttleworth, Arthur (First Silver Medallist)	Mt. Albert (York), Ont.
Silverthorne, Newman	Sommerville (Peel), Ont.
Stover, J. W	Norwich (Oxford), Ont.
Wettlaufer, Frederick (Gold Medallist)	Tavistock (Oxford), Ont.
White, C. D.	Hereford, England.

1883.

Fotheringham, W (Second Silver Medallist)	St. Mary's (Perth), Ont.
Garland, C. S	Montreal.
Jeffs, H. B	Bond Head (Simcoe) Ont.
McPherson, D	Glanworth (Middlesex), Ont.
Perry, D. E	Ottawa (Carleton), Ont.
Robertson, W. (Gold Medallist)	Wanstead (Lambton), Ont
Schwartz, J. A.	Quebec.
Torrance, W. J.	Ottawa (Carleton) Ont.
Willis, W. B. (First Silver Medallist)	Whitby (Ontario), Ont.

1884.

Black, P. C	Windsor, Nova Scotia.
Carpenter, P. A. (Gold Medallist)	Collingwood (Simcoe), Ont.
Lehmann, A. (Second Silver Medallist)	Orillia (Simcoe) Ont.
Major, C. H	Croydon, England.
Powys, P. C	Fredericton, N.B.
Saxton, E. A	Nantwich, England.

Slater, H. (First Silver Medallist)	Taunton, England.
Steers, O	Ottawa, Ont.
Tucker, H. V	Toronto, Ont.
Wark, A. E	Wanstead (Lambton) Ont.
Wroughton, T. A	Bangalore, India.

1885.

Butler, G. C. (Second Silver Medallist)	London, England.
Macpherson, A	Montreal.
McIntyre, D. N	Paisley, Bruce, Ont.
McKay, J. B	Stellarton, Nova Scotia.
Muir, J. B. (First Silver Medallist)	North Bruce, Ont.
Raynor, T. (Gold Medallist)	Rose Hall, Prince Edward, Ont.
Reid, P	Montreal.
Smith, E. P	Port Hope (Durham), Ont.
Thompson, W. D	Guelph, Ont.

LIVE STOCK CERTIFICATES.

The following members of the Special Live Stock and Veterinary Class, having passed the prescribed examinations, have received special certificates :—

1884.

Carlaw, C. M.	Warkworth, Northumberland, Ont.
Cowley, E. A.	Windsor, London, England.
Holcroft, H. S.	Orillia, Simcoe, Ont.
Hubbard, W. W.	Burton, N. B.
Keil, C. A.	Chatham, Kent, Ont.
McGregor, J	Colborne, Northumberland, Ont.
Sharman, H. B.	Stratford, Perth, Ont.
Sharman, G. C.	Stratford, Perth, Ont.
Skaife, F. W	Montreal.

1885.

Casswell, A. B.	Ingersoll, Oxford, Ont.
Hall, H. B.	St. John, New Brunswick.
Hannah, J	Egmondville, Huron, Ont.
Hayman, J. M.	Aldingham, Ulverston, England.
Ridings, H. L.	Grafton, Ont.
Rowat, J. T.	Hillsdale, Simcoe, Ont.
Walter, J. R.	Somerset, England.

SMOKERS AND NON-SMOKERS.

In my last report, I alluded to the effect of smoking upon young men at college. A very considerable number of our students smoke, and not a few of them are confirmed in the habit. At present I shall not discuss the question, but simply state one or two facts regarding the record of smokers and non-smokers in this institution.

In 1884 and 1885, fifty-eight of our students received departmental honours ; and forty-five of these were non-smokers. Within the last five years, sixty-seven have taken diplomas ; and forty-eight of them have been non-smokers ; fourteen have won medals ; and twelve of them have been non-smokers and non-drinkers.

SUMMER TERM.

(1st July to 31st August).

At the close of the Spring Term (30th June), when the year's lectures were ended, most of the farmers' sons went home for haying and harvest, and some of the other students hired out with farmers for the summer months; so that only thirty-two remained with us during the Summer Term (July and August). These worked nine and a half hours a day, giving more or less attention to all the departments, but spending the greater part of their time where it was most needed, *i. e.*, on the farm. I shall not attempt to give a detailed account of the routine in each department, but simply say that the young men received more or less instruction in the fields, the yards, the garden, and the shop; and assisted in doing all there was to do in the summer months, on a four hundred-acre grain and stock farm, and in the management of a large vegetable garden, flower garden, orchard, and lawn.

FALL TERM.

COMMENCEMENT OF A NEW SCHOLASTIC YEAR—1st. October, 1885.

Forty-two old students returned at the beginning of the Fall term, and fifty-nine new ones were admitted, making a total of 91. Their names, post-office address, and other information regarding them having been given in the college roll and analysis on a previous page, I need not trouble you with a repetition at this point. I shall simply refer to one or two particulars and pass on.

AGES OF STUDENTS.

The ages of our students during the Fall Term, which ended on the 22nd December ranged from 16 to 27 years, as follows:—

5 at the age of 16 years.			7 at the age of 22 years.		
24	"	17	3	"	23
17	"	18	2	"	24
18	"	19	1	"	25
6	"	20	2	"	26
4	"	21	2	"	27

The average age is $19\frac{1}{2}$ years.

CLASS-ROOM WORK.

The time table in Appendix I. indicates the subjects which are taken up in the Fall Term, and the number of hours allotted to each. Lectures began on the 5th October, and continued without interruption till the 17th December.

REGULAR STUDENTS.

The first-year students received three lectures a week on the characteristic points and peculiarities of the different breeds of cattle; had a full course of lectures with experiments on Chemical Physics and Inorganic Chemistry; and spent two hours a week in studying the Anatomy and Physiology of the horse. Under the head of English and Mathematics, they read Coleridge's "Ancient Mariner," gave some time to the practice of Composition, and reviewed certain portions of Arithmetic, with special reference to the requirements of farming in Canada.

The attention of the second-year men was directed to such subjects as stock-breeding, farm management, and the experimental plots; the selection of animals for beef; the housing, feeding, and fattening of the same; the comparative values of pastures and green fodder; results from the different kinds of seed, soil, and manures; and the previous season's experiments with wheat, oats, and grasses. They had one lecture a week on Horticulture, and a full course on Agricultural Chemistry—the composition of different plants in relation to the soils on which they grow; the preservation and renovation of soils, the chemical composition and value of different manures, the superphosphates, double silicates, and other substances which furnish plant food. They spent two hours a week at lectures on Veterinary Pathology, and one in handling and examining horses for spavin, ring-bone, splint, founder, and other diseases, all under the eye and direction of our veterinary surgeon, Dr. Grenside; they also read Shakespeare's "Julius Caesar," and devoted some time to the study of drainage and book-keeping.

SPECIAL STUDENTS.

There were only five applicants for the special Live Stock and Veterinary class last fall, which would seem to show that this class is not needed. These five are still in attendance, and are likely to remain till Easter.

FAT STOCK SHOW.

One of the benefits which young men get from attending our college, results from the opportunities which they have of inspecting the best beef cattle in the Province of Ontario; for in the neighbourhood of Guelph we have, not only some of the finest thoroughbred herds in the country, but the very best specimens of fat cattle.

On the 15th and 16th December last, the Guelph Fat Stock Club held its annual show in the City of Guelph; and the directors kindly arranged so as to give our students an opportunity of examining, comparing, and judging the animals on exhibition. Every student was required to write out a special report on the show for the Professor of Agriculture.

TERMINAL EXAMINATIONS.

The examinations on the work of the Fall Term took place on the 17th, 18th and 19th December. The subjects were as follows:—

First Year—

Live Stock,
Inorganic Chemistry,
Veterinary Anatomy,
English Literature,
English Composition,
Arithmetic,
Book-keeping,

Second Year—

Agriculture,
Live Stock,
Agricultural Chemistry,
Veterinary Pathology,
English Literature,
Draining,
Book-keeping.

The questions were not difficult, because they were intended only to show who were making a right use of their time, and to prepare the candidates for a severer test on the same and some additional work at Easter.

BOARDING HOUSE AND COLLEGE BUILDINGS.

For information of those who have not seen the College Buildings, I take the liberty of quoting, with slight alterations, a paragraph from my last report, as follows:—

COLLEGE BUILDINGS.

The College building, as shown on frontispiece, is a plain substantial structure, without much claim to architectural beauty. Like the institution itself, it was built little by little without any very definite idea of the shape it might ultimately assume. When the Government first bought land and determined to establish an Agricultural College, the Architect drew plans for a building which would have suited the purpose very well, but the cost seemed too great and the country was not prepared for it: consequently it was decided twelve years ago to commence work with a few students in Mr. Stone's farmhouse. Additions and alterations were made from time to time as the number of students increased, till the result is a large and peculiarly arranged building, altogether different from what was originally intended—not what we would like—but affording considerable accommodation and serving the purpose fairly well.

In the building, as it now stands, there are one hundred and twenty-two rooms—three class-rooms, a reading-room, a library, a laboratory, three offices, a public reception-room, sixty-two students' dormitories, a large dining-hall, a servants' dining-room, a store-room, pantry, kitchen, scullery, laundry, drying-room, eight bath-rooms, nine bedrooms for servants, the messenger's room, a parlour and bedroom for Matron, a sitting-room and bedroom for the Assistant Resident Master, nine rooms in the left wing occupied as a dwelling-house by the President and his family, two rooms in the centre occupied by the Matron, a spare room, an officers' dining-room, a sitting-room for students, a smoking-room, two wash-rooms, an engine-room, and a coal house.

REPAIRS AND ALTERATIONS.

During the past year, we have not done so much as usual under this head. A portion of one of the wash-rooms, on the first floor, has been partitioned off, fitted up, painted and furnished for a smoking-room: and one of the old wash-rooms, on the ground floor, has been re-floored, papered nicely, painted, and furnished for a students' sitting-room. That is all, except the papering of the spare room.

ADDITIONS.

The chief additions for the year are a stone walk in front of the college, and a small stone building for the earth closets in the rear. These closets have been in use for two months, and are doing fairly well: but it is too soon to pronounce an opinion on their merits as compared with water-closets.

BOARDING HOUSE.

In the boarding house nothing special has occurred during the past year. Things have moved along as usual. Our supplies are provided by contract: and, generally speaking, the quality of the articles furnished has been satisfactory. The Matron has superintended the work in the culinary department, and the Assistant Resident Master has taken charge of the students at meals and assisted me in looking after them in the halls and dormitories.

DAILY ROUTINE.

In regard to the surroundings of our students in the college, and the duties required of them, I may say that their bedrooms are furnished with beds, bedding, bureaus,

mirrors, washstands, study tables, and chairs. They sleep separately, two in a room, and in a few instances three. The daily routine during the Fall, Winter and Spring Terms, is as follows:—

All rise at six to get ready for breakfast and put their rooms in order. Breakfast is at half-past six; and at seven, or half-past seven, according to the season of the year, twelve or fourteen go out to feed and clean the cattle, horses, sheep, and pigs. This number is selected in rotation throughout the lecture session (1st October to 30th June). At 7.45, those who are not working outside go to drill for an hour; and all assemble in the class-room for roll-call and prayers at 8.45. From nine to twelve the whole school is at lectures in the college.

For the afternoon the entire number is divided into two equal divisions, which work and study alternately. One division goes out to work from 1.30 till tea time; and the other reads or studies under a professor in the class-room from 1.30 to 4, after which they are free till the call for tea at 5.30 or 6, according to the season of the year.

From seven to half-past nine in fall and winter, and from eight to half past nine in spring, they all study in their rooms under the supervision of the night watchman and one of the professors. Lights are put out at ten and the doors closed at half-past ten.

The half of every Saturday is a holiday; and every student, who is not under ban for some misdemeanor, is allowed to be out one evening in the week till half-past ten. When going out, each student leaves his name with the master or professor in charge, and is required to report himself when he returns.

On Sunday morning all students are required to attend their respective places of worship in Guelph, unless they are excused by the President. In the evening it is optional whether they go or stay in the college.

Such is the routine in the boarding house, and such are the duties which are required of students therein during nine months of the year. The Summer Term (July and August) is devoted entirely to work in the outside departments. Those who remain with us for that term, work nine and a half hours a day outside; and the duties inside differ but little from those in an ordinary boarding-house on a large scale.

DISCIPLINE.

I am pleased to be able to say that we have not had any serious case of discipline during the past year. Everything has gone on quietly and without the slightest friction anywhere. The change from some former years is very striking. All the students are respectful, obedient, and apparently anxious to make a right use of their time. This results from several causes, which I need not enumerate, but chiefly from the change in the hours of work, and from the fact that we have a better class of young men than we ever had before.

III.—THE BUSINESS DEPARTMENT.

Under this head there is a variety of work, for which the President and the Bursar are chiefly responsible—correspondence, books and accounts, general business, and the finances.

CORRESPONDENCE.

Most of the correspondence falls to the lot of the President, and consists chiefly in sending out circulars, distributing reports, and answering enquiries about terms of admission, course of study, duties of students, cost of board and tuition, books used, books recommended, etc.; and now there is added a new department, which occupies quite an amount of time and involves a good deal of letter-writing, that is, the Farmers' Institute work. During the last few months I have had to do the correspondence and arrange the programmes for twenty-four Institutes at different centres throughout the Province, as well as the writing to sixteen other places which we have had to refuse.

 BOOKS AND ACCOUNTS.

Our Bursar, Mr. A. McCallum, as financial agent of the institution, is chiefly responsible for the work under this head. It is his duty to examine all accounts against the College, the Farm, and the Creamery; to check them by invoices and requisitions; to charge each item under the proper head; to make out separate statements for these three departments every month, and submit them to the President, the Farm Superintendent, and the Manager of the Creamery, respectively, for their approval; after which he has to send them to the Treasury for payment,

The Bursar also receives and accounts for all moneys from the College, the Farm, and the Creamery, and pays all accounts that have been approved by the President, the Farm Superintendent, or the Manager of the Creamery, and passed by the Auditor. He also keeps five sets of books, as follows:—

No. 1, Shewing the monthly expenditure under each head of the appropriation for the college and boarding-house.

No. 2, Giving in detail the revenue and expenditure for the outside departments under the Farm Superintendent.

No. 3, Shewing the live stock and farm produce on hand, and the sales and purchases made under this head from time to time.

No. 4, Giving a statement of the purchases, sales, and other items of revenue and expenditure in connection with the Creamery.

No. 5, Shewing the account of each student from the day he enters the College till he leaves it—tuition fees, board and washing, amounts allowed for labour, and cash balances paid the College for board and washing.

Printed sheets containing the names of all the students are furnished each foreman daily, who fills in the blanks with the description of the work done that day by the students in his department, the number of hours each has worked, and the estimated value of such work. These are filed daily in the office, and journalized weekly. At the end of the financial month these sums are posted to the credit side of each student's account in the ledger, whilst on the debit side is placed the cost of the board and washing for that month, as obtained from the books of the storeroom and the laundry.

GENERAL BUSINESS.

In addition to his duties as book-keeper, the Bursar has to provide supplies for the boarding-house, and see that the quality of all articles furnished by tender is up to the standard required by the terms of contract.

The President signs requisitions for all purchases in the college, takes charge of the college buildings generally, and is responsible, not only for the management, but for the discipline of the inside departments, as regards both officers and students.

FINANCES.

Revenue.

The college revenue in 1885 amounted to \$7,885.90, and was made up of the following items:

(1) Tuition fees	\$4,152 50
(2) Balances paid for board after deducting allowances for work done in the outside departments, including also a few fines imposed for violation of rules	3,672 90
(3) Amount paid for supplemental examinations	60 50
Total revenue in 1884	<u>\$7,885 90</u>

*Expenditure.**No. 1.—College Maintenance.*

The total sum voted for college maintenance last year was \$25,520 ; and from this was deducted the sum of \$9,000, which the Legislature estimated as the probable college revenue for the year. So the net amount voted under this head was \$16,520. (See Estimates for 1885, page 30.)

The total expenditure for college maintenance during the twelve months has been \$23,536.48, and from this we have deducted the sum of \$7,885.90, which is the actual college revenue for the year. So the net expenditure under this head for 1885 has been \$15,650.58. Stated briefly as follows :—

Net sum voted for college maintenance in 1885.....	\$16,520 00
Net expenditure for college maintenance in 1885.....	15,650 58
	\$869 42
Balance unexpended under this head.....	\$869 42

No. 2.—Maintenance and Repairs of Governmental Buildings—furniture, repairs and alterations, fuel, light, and water—

The sum voted under this head was \$6,100 (see estimates for 1885, page 33); and the expenditure was \$5,735.09, as follows :—

Sum voted for maintenance and repairs of buildings in 1885..	\$6,100 00
Expenditure for “ “ “ “ 1885..	5,735 09
	\$364 91
Balance unexpended under this head.....	\$364 91

Summary.

Total sum voted, less the estimated revenue, under both the above heads for 1885.....	\$22,620 00
Total sum expended, less actual revenue, under both the above heads for 1885.....	21,385 67
	\$1,234 33
Balance unexpended in 1885.....	\$1,234 33

DETAILED STATEMENT OF COLLEGE EXPENDITURE IN 1885.

No. 1.—College Maintenance.

(1) Salaries and wages.....	\$11,492 93
(2) Food—	
Meat, fish and fowl.....	3,759 36
Bread and biscuits.....	968 19
Groceries, butter and fruit.....	3,591 41
(3) Household Expenses—	
Laundry, soap and cleaning.....	158 50
Women servants' wages.....	1,793 52
(4) Business Department—	
Advertising, printing, postage and stationery.....	741 05
(5) Miscellaneous—	
Chemicals and apparatus for laboratory.....	55 03
Library and reading-room (books, papers and periodicals)....	366 37
Unenumerated.....	610 12
	\$23,536 48
Less revenue.....	7,885 90
	\$15,650 58
Net expenditure for college maintenance.....	\$15,650 58

No. 2.—Maintenance and Repairs of Government Buildings.

(1) Furniture and furnishings.....	§ 696 51	
(2) Repairs and alterations.....	434 47	
(3) Fuel	2,959 62	
(4) Light	1,094 49	
(5) Water for college and farm (rent paid to Guelph water-works).	550 00	
		\$5,735 09
Total net cash expenditure in 1885.....		\$21,385 67

Taking into account the produce, etc., received by the college from the farm and garden, and the amount paid by the college for labour of students on the farm and garden, we have the entire expenditure of the college for the year, as follows :—

Cash expenditure of college, as above.....	\$21,385 67
Produce, etc., from farm and garden (see appendix 4).....	1,412 25
	\$22,797 92
Amount paid by college for labour of students on farm and garden.	3,696 29
	\$19,101 63

CONCLUSION.

Hitherto I have reported on the library, reading-room, and museum, and have given a list of the papers and periodicals that have been furnished by the college, or sent free by the publishers; but by the new by-laws, issued a few months ago, Professor Panton is recognized as librarian, and as curator of the museum, and is made responsible for everything pertaining to the library, reading-room, and museum. Hence, I beg to refer the reader to Professor Panton's report in Part II. of this volume, for information regarding that part of our educational appliances.

LITERARY SOCIETY.

The literary society in connection with the college never was more active and useful than it has been during the past year. The members of the society met every Friday evening in the Winter Session, in one of the class-rooms, to practise reading, debating, and declamation. The majority of the students became members of the society; and the work done was a valuable addition to the educational appliances of the institution.

In the performance of such work, young men have an opportunity of testing their powers before they engage in the duties and assume the responsibilities of real life in church or state. They learn to speak in public, and gradually become acquainted with the rules of order according to which public meetings are conducted. Their wits are sharpened, their reasoning powers developed, and their manners improved.

RECOMMENDATIONS.

Being much pressed with examinations and institute work, I shall close my report of 1885 with a mere repetition of the most urgent wants of the institution at the present time :—

(1) The removal of the old barns, sheds, and stables, or what is left of them after the fire of last September, and the erection of suitable farm buildings at a greater distance from the college, on the site selected by Mr. Miller, of Philadelphia.

-
- (2) A good laboratory for practical work in the department of chemistry.
 - (3) A botanical laboratory, with suitable green and propagating houses.
 - (4) A building for gymnasium and drill-room.
 - (5) A cottage on the college grounds for the Professor of Geology and Natural History.
 - (6) An addition to our coal house.

I have often urged the need of some of these items, especially the first three. The circumstances would justify another appeal; but I forbear. In view of the fact that the institution has been in existence for nearly twelve years, I think the mere mention of most of these wants is sufficient to commend them to your most favourable consideration.

I have the honour to be, sir,

Your obedient servant,

JAMES MILLS,

President.

APPENDIX I

TIME TABLE FOR FALL TERM.

The following Time Table indicates our class-room work from the 1st October to the 22nd December.

TIME TABLE.

2ND YEAR.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
9-10	English Literature.	Dairying.	Agriculture.	Agriculture.	Draining.
10-11	Agricultural Chemistry.	Agricultural Chemistry.	English Literature.	Book-keeping.	Horticulture.
11-12	Veterinary Pathology.	English Literature.	Agricultural Chemistry.	Veterinary Pathology.	Practical Horse.

1ST YEAR.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
9-10	Agriculture.	9. Arithmetic. 9.40. Book-keeping.	Arithmetic.	Composition.	Agriculture.
10-11	Agriculture.	10.20. Dairying.	Inorganic Chemistry.	Veterinary Anatomy.	Veterinary Anatomy.
11-12	Inorganic Chemistry.	Natural History.	English Literature.	Inorganic Chemistry.	English Literature.

 APPENDIX 2.

 ONTARIO AGRICULTURAL COLLEGE.

 EXAMINATION PAPERS.

 I. PAPERS SET AT THE MATRICULATION EXAMINATIONS, EASTER, 1885.

ARITHMETIC.

Examiner: E. L. HUNT.

1. The fore wheel of a carriage is 11 feet in circumference, and the hind one 13 feet. How many more revolutions will the one make than the other in one mile?
2. How far will the carriage go when the same spots which were on the ground at time of starting will be on the ground again at the same instant?
3. Simplify $\frac{5}{12}$ of $\frac{36}{49} - \frac{2}{7} + \frac{7}{15} \div \frac{14}{25}$
4. Divide .00169 by 1300, and subtract the quotient from .5.
5. A can do a piece of work in 24 days. B in 22 days, and C in 20 days. How long will it take all three working together?
6. A field is 30 rods, 4 yards, 2 feet long, and 20 rods, 3 yards, 1 foot, 8 inches wide. Find the cost of wire required to fence it, if the price of wire is 8 cents a rod and the fence is 7 wires high.
7. A farmer buys 10 steers for \$350, being $3\frac{1}{2}$ cents per lb.; he keeps them for 6 months, paying 15 cents a day each for feed, and then sells them for \$680, being 5 cents a lb.
 - (a) Find the average daily increase in weight of each steer (30 days in a year).
 - (b) Find the farmer's gain.

ENGLISH GRAMMAR.

Examiner: JAMES MILLS, M. A.

1. Give the principal divisions of Grammar, with a definition or explanation of each.
2. Define the terms *voice*, *mood*, *case* and *person*.
3. Name the moods of English verbs, and state briefly the uses of each.
4. Write out the plural number of *bandit*, *erratum*, *genus*, *medium*, *cherub*, *sheep*, *formula* and *species*; also the feminine gender of *lad*, *beast*, *stag*, *hart*, *earl*, *marquis*, *abbot*, *friar*, *czar* and *hero*.
5. Decline *I*, *who* and *she* in singular and plural.

EASTER EXAMINATIONS, 1885—Continued.

6. Give the principal parts, and write out the Future Indicative, interrogative form, in all the persons and numbers of the verbs *to be* and *to sing*.

7. Divide the following passage into simple sentences, stating the kind and connection of each, and parse the italicized words :

The sun *had scarcely begun to shed his* beams upon the summits of the snowy *mountains which* rise above Grenada, *when* the christian camp *was* in motion.

8. Correct the following sentences, giving reasons :

- (a) Who were you speaking to?
- (b) Can I go to my room?
- (c) I dislike those sort of questions.
- (d) It was us who did the work.

GEOGRAPHY.

Examiner : J. HOYES PANTON, M. A.

1. Define plateau, watershed, meridian, estuary and tide.
2. Name the Provinces of the Dominion and give their relative positions.
3. Where and what are:—Assiniboine, Elgin, Simcoe, Thames, Regina, Frontenac, and Collingwood.
4. Name the cities of Ontario, and the counties in which they are located.
5. Some parts of Ontario are said to be well adapted for fruit culture, others for the raising of cattle, and some for wheat growing. State where such districts are.
6. Draw a sketch map of Lake Erie, naming the counties around it and the rivers which flow into it.
7. Why is the snow so much longer in passing away from the vicinity of Stratford than it is around Toronto?

ENGLISH COMPOSITION.

Examiner : JAMES MILLS, M.A.

1. Write a composition on money, or a description of your home and its surroundings.

DICTATION AND READING.

Examiner : J. HOYES PANTON, M.A.

DICTATION.—Fourth Reader, p. 122—"To this casual turn to speak."

READING.—Fourth Reader, p. 133—"The voices of his hearthstone;" and p. 135—the last three stanzas.

 II.—PAPERS SET AT THE SESSIONAL EXAMINATIONS, EASTER, 1885.

FIRST YEAR.

AGRICULTURE.

Examiner : WM. BROWN.

1. What do you understand to be the principles and importance of a rotation in cropping?

EASTER EXAMINATIONS, 1885—Continued.

2. Define a manure, classify them, and indicate the principles that should guide us in the application to soils and crops.
3. Describe the best management of farm yard manure.
4. Judge the accompanying sample of wheat.

FIRST YEAR.

LIVE STOCK.

Examiner: Wm. Brown.

1. Give some of the principal facts connected with the establishment of the Short Horn breed of cattle, and the Leicester breed of sheep.
2. Draft pedigree of a bull with five removes—using the English, American, and the two Canadian Herd Book Signs.
3. Compare the Hereford and Aberdeen Poll breeds of cattle.
4. What are the essentials to secure in a fattening steer, irrespective of particular breed?
5. Describe a model milch cow, and place her among breeds known to you.
6. Report upon the sample of wool herewith.
7. Compare the Southdown and Shrops breeds of sheep.

FIRST YEAR.

JUDGING CATTLE (ORAL).

Examiner: Wm. Brown.

1. Give your opinion of the cow.
2. Compare the steers.
3. Which steer gives evidence of being the best breeder.

FIRST YEAR.

JUDGING SHEEP (ORAL).

Examiner: Wm. Brown.

1. Which is the best flecce? Give reasons.
2. Name the breeds of the rams, and say which is the best of its kind, giving reasons.

FIRST YEAR.

INORGANIC CHEMISTRY.

Examiner: R. B. Hare, Ph. D.

1. Explain the following terms chemists use:—Chemical combination, chemic force, acids and bases, salts, solution, combining proportions, atomic theory, molecular weight, and quantivalence.
2. Write down the formulæ of the chlorides, chlorates and hypochlorites, sulphates, phosphites and hypophosphites, nitrates, hyponitrites, arsenites, arsenates, silicates, silico-fluorides, and carbonates of some of the principal metals.

EASTER EXAMINATIONS, 1885—Continued.

3. Illustrate by formulæ the chemical action that occurs when goods are bleached -
 - (1) By chlorine.
 - (2) By sulphur dioxide.
4. The following elements and compounds are in labelled vessels placed before you, and you are required by characteristic experiments to illustrate the physical and chemical properties of each. How would you begin and end your experiments in each case: hydrogen, nitric acid, laughing gas, ammonia, carbon monoxide, carbon dioxide, ethene, chlorine, hydrochloric acid, sulphur, sulphuretted hydrogen, silicon tetrafluoride, phosphuretted hydrogen, arsenic trioxide and iron.
5. Describe the occurrence, preparation and properties of the element carbon.
6. How would you quickly distinguish the metal potassium from sodium, calcium from magnesium, and iron from manganese.
7. How many cubic centimeters of laughing-gas, measured at 20° C. and 790 *mm.* pressure, can be obtained by heating 20 grammes of ammonium nitrate.

FIRST YEAR.

ORGANIC CHEMISTRY.

Examiner: R. B. HARE, PH. D.

1. Illustrate by formulæ the difference that exists :
 - (i) Between the paraffins and the olefines.
 - (ii) The monatomic, diatomic and trivalent alcohols.
2. Formulate the relation that exists between an alcohol and the aldehyde acid, and ether obtainable from it. In illustration of your meaning take examples from the monatomic, diatomic and trivalent alcohols.
 - (3) Indicate by chemical formulæ the action that occurs in the manufacture
 - (i) Of oxalic acid from saw-dust.
 - (ii) Of soap from fat.
 - (iii) Of tartar emetic from antimony trioxide.
4. The organic compounds, methane, ethene, ethyl alcohol, ether, formic acid, acetic acid, glycerine, and turpentine, are placed before you in separate unlabelled bottles, how would you determine the composition of each bottle?
5. Illustrate by *structural* formulæ the relation the *lactic acid* series and the *oxalic*, bear to the diatomic alcohols.
6. Give composition and properties of the leading members of the albuminoid and carbohydrate groups.
7. Indicate by structural formulæ the composition of benzol, aniline, and succinic acid.

FIRST YEAR.

NATURAL HISTORY.

Examiner: J. HOYES PANTON, M. A.

1. Give the most characteristic distinctions between animals and plants.
2. Name the sub-kingdoms into which animals are divided, and give the characters of the third.
3. Name the different orders of birds, and state in which the most useful are found.
4. To what extent have worms been of use in the preparation of soil? Name animals from at least three sub-kingdoms which have been important factors in the formation of the earth's crust.

EASTER EXAMINATIONS, 1885—Continued.

5. Give the leading characters of Echinodermata.
6. Describe the life history of the so-called Liver fluke.
7. Name the classes into which Vertebrates have been divided, and describe the heart in each.
8. Give the principal stages in the development of a tape-worm.
9. Name the chief distinctions between reptiles and mammals.
10. Identify the specimens before you, stating the sub-kingdom, class and order to which each belongs, and describe the peculiar characters of Number 4.

FIRST YEAR.

VETERINARY ANATOMY.

Examiner: F. C. GRENSIDE, V. S.

1. Describe the stomach of the horse.
2. Mention the organs that take part in the process of chylicification.
3. Describe the ileo-cæcal valve, and mention its function.
4. Describe the rectum, and how defæcation is accomplished.
5. Describe the Trachea and Bronchi.
6. Describe the course of the Urine, from its point of secretion to that of excretion.
7. State how the circulation of erectile tissue differs from that of other tissues and the organs in which it is found in either sex.
8. Describe the œsophageal canal.
9. Describe the process of rumination.
10. Describe the course of the circulation of the blood.

FIRST YEAR.

ENGLISH LITERATURE.

Examiner: J. HOYES PANTON, M.A.

1. Write brief notes on the life of Goldsmith, and name some distinguished literary characters who lived about the same time.
2. Explain the terms—verse, epic, metre, didactic, and elegaic as applied to poetry.
3. “Some village Hampden, that with dauntless breast
 The little tyrant of his fields withstood ;
 Some mute, inglorious Milton here may rest,
 Some Cromwell, guiltless of his country's blood.”
 (a) Explain the allusions in this extract.
 (b) “Inglorious,” “guiltless,” “village.” Explain.
4. “Full many a gem * * * * * ”
Complete the stanza.
Write explanatory notes on urn, lyre, glebe, rustic, and heath.
5. What is the object of the *Traveller*, and what poet is Goldsmith said to have taken for his model ?
6. What countries are referred to throughout the poem ? Give brief description of each according to Goldsmith.

EASTER EXAMINATIONS, 1885—Continued.

7. "All evils here contaminate the mind,
That opulence departed leaves behind :
For wealth was theirs, not far removed from date.
When commerce proudly flourished through the state.
At her command the palace learned to rise,
Again the long-fall'n column sought the skies,
The canvas glowed beyond e'en nature warm,
The pregnant quarry teemed with human form,
Till, more unsteady than the southern gale,
Commerce on other shores displayed her sail."

- (a) To what place is reference made in the lines quoted?
(b) Explain : evils, palace, canvas, warm, quarry, southern.
(c) "Other shores." What shores? Why the decay in commerce?

8. "Thine, Freedom, thine * * * *"

Complete this apostrophe to Freedom. At what part of the *Traveller* is this introduced, and to what scenes does it likely refer?

9. Give the meaning and derivation of:—Ambition, plethoric, churlish, mansion, zephyr; and write brief notes on Idria, Loire, Apennine, Arcadia, Luke's iron crown.

10. Explain the figures:—Metaphor, alliteration, metonymy, hypallage, and apostrophe. "Dull as their lakes;" "yea lakes." Name them.

FIRST YEAR.

ENGLISH COMPOSITION.

Examiner: JAMES MILLS, M.A.

1. Define the terms *sentence* and *paragraph*.
2. Quote the rules for punctuating—
 - (1) Adverbial phrases.
 - (2) Complex sentences.
3. Give as many rules as you can to guide one in the arrangement of phrases in a sentence.
4. Enumerate the various methods of securing variety of expression in English composition.
5. Lord Chatham said: "I rejoice that the grave has not closed upon me—that I am still alive to lift up my voice against a great wrong." Change this quotation into the indirect form of speech.
6. Give two examples illustrating the difference between the grammatical and the rhetorical order.
7. Explain what is meant by *style*, *synonym*, *euphemism*, *redundancy*, and *tautology*.
8. "The excellence of a sentence depends on two things."
 - (1) State what these two things are.
 - (2) Enumerate and explain the requisites necessary to secure either of them.
9. Write a composition on *money*, or a short biography of some person whose history you know.

EASTER EXAMINATIONS, 1885—Continued.

FIRST YEAR.

ARITHMETIC.

Examiner: E. L. HUNT.

1. A wire fence is to be made 120 rods, 3 yds., 2 feet, 8 inches long and, 6 wires high.

(a) Find cost of wire at 8 cents a rod.

(b) How many posts are required if they are 9 feet apart.

2. Find the simple interest on \$8,450 for 3 years 6 months, at 7 per cent.

3. Why are taxes levied upon property?

(a) After paying an income tax of $2\frac{1}{4}$ cents on the \$ on all his salary over \$400, has \$1,182 left. Find his salary.

4. A merchant buys 7,500 lbs. sugar for 8 cts. a lb.; he pays a *specific* duty of $\frac{1}{2}$ cent per lb., and an *ad valorem* duty of 25 per cent., and \$15 freight. Find—

(a) The amount of duty.

(b) The selling price that he may make a profit of 5 per cent.

5. A has 900 bushels of wheat; B offers him 78 cents cash; C offers him 80 cents to be paid at the end of 6 months. Which is *now* the better offer and by how much, money being worth 5 per cent.

6. If A accepts the latter offer, and gets C's notes discounted at bank July 19th at 5 per cent., find the discount charged; also, the banker's gain.

7. \$2,000.

GUELPH, June 1st, 1884.

One year after date I promise to pay R. Bruce, or order, one thousand dollars, with interest at 10 per cent. per annum.

Endorsed as follows:—Sept. 1st, 1884, \$400.00.

Nov. 1st, 1884, \$15.00; Dec. 1st, 1884, \$500.00.

What amount remained due June 1st, 1885?

8. A merchant sends to his agent wheat, and cash, to the value of \$6,300 with instructions to sell the wheat and invest the whole proceeds and the cash in buying goods (after deducting his commissions). The agent charges 4 per cent. for selling wheat and 5 per cent. for buying goods; his whole commission amounts to \$500. Find amount of cash and value of wheat sent.

FIRST YEAR.

BOOK-KEEPING.

Examiner: E. L. HUNT.

1. Distinguish a non-negotiable note and one negotiable without endorsement; write a form of each.

2. Explain the purpose of general labour and farm produce accounts.

3. State fully how the ledger is classed.

4. You have 7 cows valued at \$320; make out and close an account with cows for the year 1884.

5. How would you enter the following in your books:—

(a) Bought a wagon, \$75.

(b) I sell H. Thomas one ton of hay, \$10, and 50 lbs. of butter at 25 cts. a lb.; he charges me \$8 for repairing reaper and gives me balance in cash.

EASTER EXAMINATIONS, 1885—Continued.

- (c) Paid \$16 taxes for 1884.
- (d) Sold a horse, \$175.
- (e) Paid \$11 for threshing wheat.
- (f) Sowed 25 bushels oats in field No. 4 kept from last year and now worth 45 cents a bushel.
- (g) Sowed timothy seed in same field, for which I paid \$10 cash.
- (h) Gave J. Bruce (hired man) \$15 on account, and at same time an order on R. Jones, general merchant, for goods to the value of \$20 to be charged in my account.

SECOND YEAR.

AGRICULTURE.

Examiner: WM. BROWN.

1. What principles should guide us in the arrangement and construction of farm buildings?
2. Name and explain some of the detail arrangements for such buildings.
3. The cultivation and manuring of land in the fall, in preparation for succeeding crops, is found to be beneficial; what are the facts that bring about such a result?
4. Give a concise yet full statement of the value of permanent pasture, showing how it should be associated with the present system of farming in Ontario.
5. Give names and quantities per acre, of grasses and clovers, for such pasture.

SECOND YEAR.

LIVE STOCK.

Examiner: WM. BROWN.

1. In preparing for the winter keep of all classes of Live Stock, what should guide you in estimating the kinds and quantities of food?
2. In view of the increasing importance of dairying—in what manner and to what extent is it advisable to change the present system of farming in Ontario? Refer briefly to the principal circumstances that influence this subject.
3. In what respects do the production of thoroughbred cattle and sheep for others, their production for immediate consumption, and their maintenance for dairy purposes, as separate branches for Ontario, influence the general system of the best of mixed farming?
4. Place the Holstein, Ayrshire, and Jersey breeds of cattle in connection with question 2 hereon.
5. Compare the Shropshire and Hampshire breeds of sheep as suitable for Canadian purposes.

SECOND YEAR.

ARBORICULTURE.

Examiner: WM. BROWN.

1. What are the main objects of the study of this subject in Canada?
2. Sketch briefly the management of trees in the Nursery.
3. Indicate the importance of enclosing, draining, and cultivation, in connection with forest trees.

EASTER EXAMINATIONS, 1885—Continued.

4. Report, very briefly, on the management of a plantation, from planting up to maturity. What is maturity here?

5. Show the financial position of a properly established and maintained ten acre plantation of mixed trees at the end of fifty years.

SECOND YEAR.

JUDGING CATTLE (ORAL EXAMINATION).

Examiner: WM. BROWN.

1. Judge the Short Horn Cows, giving 1st, 2nd, and 3rd places, with reasons.
2. Which is the most typical of the Cows? Give reasons.
3. Which of the Cows, irrespective of breed, gives the best milking indications as regards (1) skin, (2) veins, (3) escutcheon, (4) udder.

SECOND YEAR.

JUDGING SHEEP (ORAL).

Examiner: WM. BROWN.

1. Name and criticise the two down rams, according to their classes.
2. Judge the fleeces of the Hampshires.
3. Criticise the two shorn grade wethers from a Leicester standpoint.

SECOND YEAR.

AGRICULTURAL CHEMISTRY.

Examiner: R. B. HARE, PH.D.

1. Classify and chemically describe the combustible and incombustible constituents of the animal body.

2. In theory and practice state briefly

(1) The constituents which determine the character of the food.

(2) The conditions which enable the animal most fully to use these constituents.

(3) To what fodder will the addition of starch or sugar diminish digestibility.

(4) Give "Frankland's" heat-producing power of starch, fat and albumen.

3. Name the foods which when fed to animals make the manure of these animals richest in valuable constituents.

4. In making cream, skim-milk, butter, buttermilk, cheese and whey from the milk of a cow, briefly give the principles that would in each case influence you in foddering.

5. When and how would you drain your soil?

6. The following *digestible fodder* is given you, and you are required to fatten an ox of 1,000 pounds live weight. What ration of each fodder would you use?

	Albuminoids.	Carbohydrates.	Fat.
Red clover	7	38.1	1.2
Wheat straw	0.8	31.9	0.4
Turnips	1.1	5.3	0.1
Potatoes	2.1	20.6	0.3
Peas	20.2	49.9	0.7
Wheat bran	10.9	37.6	3.4
Linseed cake	28.7	29.4	4.0

EASTER EXAMINATIONS, 1885—Continued.

7. Briefly describe some of the latest improvements German experimenters have made in the subject of cattle feeding.

SECOND YEAR.

ENTOMOLOGY.

Examiner : J. HOYES PANTON, M.A.

1. Name some of the most common insecticides and the methods of application.
2. Describe the common bark louse, and give remedies.
3. To what orders do the following destructive pests belong:—Cut worms, white grubs, wire worms, and canker worms. Describe the larvæ of each, and give a method for their destruction.
4. Compare the pupa condition of the following:—*Pieris rapæ*, *sphinx drupiferarum*, *saperda candida*, *samia cecropia*.
5. Name at least four insects injurious to the grape, two to the potato, three to wheat, and six to the apple. Give the remedies for those affecting the wheat.
6. Name the most important orders of insects, and give the names applied to the different stages through which they pass during development.
7. Name the families to which some of the most beneficial insects belong.
8. Describe the following insects in their complete condition:—*Hyperchiria Io*, *Bruchus pisi*, *Haltica striolata*, *agriotes mancus*, and name the plants they affect.
9. Distinguish a butterfly from a moth, and give three examples of each, stating in each case the plants they affect.
10. Identify the insects before you: name the orders to which they belong, and the plants upon which they feed. Give a remedy in each case.

SECOND YEAR.

METEOROLOGY.

Examiner : J. HOYES PANTON, M.A.

1. What information is necessary in order to form an idea of the climate of a place?
2. Describe the instrument used for measuring rainfall. Is the rainfall of the North-west Territories more or less than that of the Winnipeg district? Give reasons for your answer.
3. Find the mean of the following readings;— 15° , $+6^{\circ}$, $+24.6^{\circ}$, -21.2° , $+14^{\circ}$, -13° ; and give the total precipitation from the following observations on rainfall:—Snow, 4. 2. $\frac{1}{2}$, 5 inches; rain, $\frac{1}{2}$, 4. 2, $1\frac{1}{4}$ inches.
4. Name the different kinds of clouds, and state which is a precursor of storms. Give brief notes regarding the method adopted in forecasting storms.
5. Name the different kinds of thermometers, and the purposes for which they are used. It is repeatedly remarked that low readings of the thermometer in Manitoba do not indicate so cold weather as the same readings here. How do you account for this?
6. Explain why it is that a body of water has an influence upon the climate of a locality. To what extent will its depth affect the results? Give Canadian examples in connection with your answer.
7. Classify winds, and name localities in which they occur. Describe the anemometer and state its use.

EASTER EXAMINATIONS, 1885—Continued.

8. How do you account for mists in a valley? State in what way this is of practical importance.

9. Why is the Northern Hemisphere warmer than the Southern, though surrounded with less water?

10. Read the instrument before you.

SECOND YEAR.

VETERINARY PATHOLOGY.

Examiner: F. C. GRENSIDE, V.S.

1. Mention the four kinds of wounds usually met with; state which is the most dangerous, and name the usual sequels.

2. Give the symptoms of choking in a cow, and the various methods of relief in such a case.

3. Describe the following conditions, pointing out the consequences of their presence, and the proper manner of dealing with them, viz., Lampas, Wolf Teeth, and Parrot Mouth.

4. Give the reasons why horses are more prone to intestinal troubles, while cattle suffer more frequently from gastric derangements. Explain the common causes of digestive disorders in horses.

5. What attitude does a horse assume in Pneumonia, and what class of medicines are contra-indicated in this affection.

6. Give the symptoms, causes, and treatment of "Weed."

7. Give the symptoms, causes, and treatment of White Scours in foals, calves, and lambs.

8. Give the symptoms of spasmodic colic, rupture of the stomach, and treatment of acute indigestion.

9. Give the symptoms and causes of Azoturia.

10. Give the symptoms of Strangles.

PRACTICAL HORSE (ORAL).

Examiner: F. C. GRENSIDE, V. S.

1. Show how twitch should be applied, and how to give a ball.

2. Take pulse in horse and cow, and drench.

3. Point out the situation of splints, ringbones, spavins and sidebones, curbs and thoroughpins.

4. Point out the conformation most desirable in the middle-piece.

5. Describe the most desirable formation of knee and parts below it in the horse.

SECOND YEAR.

POLITICAL ECONOMY.

Examiner: W. A. DOUGLAS, B. A.

NATURE OF WEALTH.

1. Name a common error as to what constitutes wealth.

2. Illustrate the following:—Whether a commodity is wealth or not depends on *where* it is, *how much* we have of it, and *when* we have it.

EASTER EXAMINATIONS, 1885—Continued.

3. In what way should we measure an increase in the wealth of the world, by quantity, by value, or by what? Give illustration.
4. Illustrate from Canadian farm life the "law of succession in wants."

PRODUCTION OF WEALTH.

5. When people resort to the best locations for their supplies, work in the best manner, adopt the best machinery, *et. cet.*, what are they seeking to secure, and what are they seeking to avoid? Answer in two short sentences.
6. Why is it we can buy a newspaper for a cent?
7. Name six methods adopted to render labour more productive.

DISTRIBUTION OF WEALTH.

8. Are strikes generally against a reduction of real or of nominal wages?
9. Against which should strikes be, if they are any use at all?
10. Against which one of the three claimants to the product are strikes generally directed?
11. What effect would a universal strike inevitably have on real wages?
12. Whose share of the product increases without effort?

FALLACIES.—Prove the fallacies in the following statements, and state the doctrines in which they are involved:—

13. Work is wealth.
14. High wages depend on high prices.
15. One country's wealth means another's impoverishment.
16. Wealth depends on *where* we get our supplies and not on *how much*.
17. Increase of debts means an increase of wealth.

SECOND YEAR.

ENGLISH LITERATURE.

RICHARD II. AND JULIUS CÆSAR.

Examiner: S. C. SMOKE, B. A.

I.

1. As in a theatre the eyes of men,
After a well-graced actor leaves the stage,
Are idly bent on him that enter next,
Thinking his prattle to be tedious;
Even so, or with much more contempt, men's eyes
Did scowl on gentle Richard; no man cried "God save him!"
No joyful tongue gave him his welcome home;
But dust was thrown upon his sacred head,
Which with such gentle sorrow he shook off,—
His face still combating with tears and smiles,
The badges of his grief and patience,—
That had not God for some strong purpose, steeled
The hearts of men, they must perforce have melted,
And barbarism itself have pitied him.
But heaven hath a hand in these events,
To whose high will be bound our calm contents.
To Bolingbroke are we sworn subjects now,
Whose state and honour I for aye allow.

EASTER EXAMINATIONS, 1885—Continued.

- (a) Write a prose paraphrase of this passage.
- (b) Scan verses 6, 10, 11, 13 and 14 of the extract.
- (c) *Honour*. State which spelling you prefer, *honour* or *honor*, and give the reasons for your preference. State your view as to the desirability of a general change in English spelling in the direction of making it phonetic, giving your reasons.
- (d) *Combating*. When should the final consonant of a verb be doubled before an affix? Write the present participle of *regret*, *benefit*, *profit*.
- (e) Select from the above passage what you think the most truly poetic verses, and give reasons for your selection.
2. Welcome, my son, who are the violets now
That strew the green lap of the new-come spring?
- (a) By whom and under what circumstances are these words spoken? Explain fully their meaning.
- (b) Name the figure employed and quote other examples of the same figure.
3. Continue the following quotations :
- (a) My life thou shalt command but not my shame.
- (b) The purest treasure mortal times afford.
- (c) A dearer merit, not so deep a main.
- (d) Each substance of a grief hath twenty shadows.
- (e) O loyal father of a treacherous son.
- (f) They love not poison that do poison need.
4. The apprehension of the good
Gives but the greater feeling to the worse.
- (a) By whom spoken.
- (b) Comment briefly upon the sentiment.
5. Give a short analysis of Richard's character, as represented by Shakespeare.

II.

1. "Not that I loved Cæsar less, but that I loved Rome more."
Explain the full meaning of this and show how it summarizes the whole of Brutus' speech in the Forum after the assassination.
2. Sketch briefly the argument of Antony's speech in the Forum.
3. Quote some of what you consider the most powerful passages in Antony's speech, and say wherein you think their power consists.
4. Compare the speeches of Antony and Brutus with respect to the classes of feelings to which they appeal.

SECOND YEAR.

MECHANICS.

Examiner: E. L. HUNT.

1. Define *acceleration*, *mass*, *momentum*. A body weighing 20 lbs. is projected vertically upwards, and reaches the ground again in $5\frac{1}{2}$ seconds. Find—
- (a) The velocity when it reaches the ground.
- (b) The distance through which it passed during the 3rd second.
- (c) Its momentum at the end of the 1st second.

EASTER EXAMINATIONS, 1885—Continued.

2. In the system of pulleys where the same string passes round each pulley, there are two pulleys in the lower block. what power is required to raise a weight of 400 lbs.?

3. what is ment by *mechanical advantage* being lost or gained by the intervention of the lever? If a pitchfork be 6 feet long, and prongs 10 inches, and the weight of hay on prongs 30 lbs., with centre of gravity over the centre of prongs, find the force exerted by the right and left hands, if the left be at the end of handle and the right 18 inches from end—the fork being horizontal.

4. State and prove the principle of the Parallelogram of Forces. Two forces of 50 lbs. and 75 lbs. act upon an article at an angle of 60° . Find their resultant.

5. Show that the *Screw* is a modification of the *Inclined Plane*. If the distance between the threads of the screw be $\frac{1}{2}$ inch. and a power of 100 lbs. be applied at the end of a lever $3\frac{1}{2}$ feet long, the arms on either side of the screw being of equal length, what pressure will be produced?

6. Find the resultant pressure of a fluid on a body wholly immersed in a fluid.

(a) Why will a body lighter than water rise in water?

(b) A piece of wood, whose specific gravity is 0.75, is in the form of a cube. Find to what depth it will sink in water, if the edge of the cube be 3 feet long.

7. Draw a diagram of the Hydrostatic Press, and state the property of fluids of which practical advantage is thus taken.

8. Name any useful instruments the action of which depends upon the atmospheric pressure. Draw a diagram of one, and fully explain its working.

SECOND YEAR.

DRAINING.

Examiner: E. L. HUNT.

1. "The process of underdraining is a process of absorption and filtration, as distinguished from surface-flow and evaporation." Explain—

Enumerate the benefits arising therefrom.

2. What is a sill-basin? Where are they used?

3. In cases where slopes occur, what should be the direction of the laterals? Give the arguments for your position.

4. Describe the different kinds of tile used for underdraining and which you would prefer.

5. "If I had to borrow money at 10 per cent. I think it would pay me to drain my wet lands":—*Agricultural Commission Report.*

Fully discuss this statement, taking an average field of 10 acres, giving the details of cost, the increase of the various crops, etc.

SECOND YEAR.

BOOK-KEEPING.

Examiner: M. MACCORMICK,

Principal Guelph Business College.

1. Give definition of Ledger.

2. What is balance sheet?

3. State the use of the Loss and Gain account, and what is shown by the Dr. and Cr. sides respectively?

EASTER EXAMINATIONS, 1885—Continued.

4. What amounts are shown on the Dr. and Cr. sides respectively of the balance sheet.

5. You own, in the County of Wellington, a farm of 200 acres, worth \$60 per acre, together with necessary stock and implements for working it; you have cash \$500, notes in your favour \$300, and no liabilities. Estimate the value of stock and implements, and give your opening debits and credits.

6. Make out and close an account with a turnip field of six acres.

7. What accounts would be affected and how by the following transactions:—

- (a) Bought 10 acres of bush land at the rear of my farm, at \$50 per acre, giving \$250 cash and my note at 12 months, with interest at 6 per cent. for balance.
- (b) Paid E. White's bill for blacksmithing with cash \$9 and contra account for one ton of hay, \$10, and teaming coal and iron, \$6.
- (c) Effected insurance on barn and stables to the amount of \$2,000, paying premium at $\frac{3}{4}$ per cent., and \$1.25 for policy, with cash.
- (d) Sowed a 10 acre field with fall wheat, for which I paid \$1.50 per bushel, cash.

SPECIAL CLASS.

LIVE STOCK.

Examiner: WM. BROWN.

1. The Shorthorn and Jersey breeds of cattle, as extremes, have yet points or characteristics in common. Name these, and place another breed between them that would tie most of the dissimilar points.

2. What facts would stand in favour, and against, the practice in Ontario of finishing yearling beef for the British market?

3. Compare the Cheviot and Leicester breeds of sheep.

4. Describe and compare fully the two accompanying samples of wool.

5. Note, in order of occurrence, with dates, ten of the principal events in the life of a fattened Shearling Wether.

6. Milk, as a farm product, varies in value according to its application. Specify these, and indicate in what other respects it varies in value.

7. What is the proper position of green fodder crops in Ontario?

8. Give a concise idea of the importance to Canada of better pasture, and name the principal grasses at present reliable for permanent use.

SPECIAL CLASS.

LIVE STOCK.

Examiner: P. J. WOODS.

1. Describe the best kind of a store steer for feeding purposes, and also one that would be unprofitable as a feeder. Give a full statement and reasons for your answer.

2. What is understood by the word finished when applied to fat cattle, and how would you judge the weight of dressed beef as to live weight of an animal fit for the shambles.

3. Give the general principles of breeding, and also the excellent points in a flock of sheep.

EASTER EXAMINATIONS, 1885—Continued.

4. Write fully on the following question:—Give the signs of lambing in the ewe. Should it be apparent that the lamb is presented wrong what is necessary to be done? Sometimes the ewe has not strength to expel the lamb, in such cases what would you do?

5. Name three breeds of pigs best adapted for our Canadian markets. Give reasons for your selection. What is meant by fertility in sows? Give treatment of a sow about to pig, and until the pigs are six weeks old.

6. Give the essential points in a good milch cow without reference to breed.

SPECIAL CLASS.

JUDGING CATTLE (ORAL).

Examiner: W. BROWN.

1. Judge the Short Horn cows, giving first, second, and third places, with reasons.
2. Which is the most typical of the cows? Give reasons.
3. Which of the cows, irrespective of breeds, gives the best milking indications as regards (1) skin, (2) veins, (3) escutcheon, (4) udder.

SPECIAL CLASS.

JUDGING CATTLE (ORAL).

Examiner: P. J. WOODS.

1. Judge the cows for the dairy and compare their build from a milking standpoint.
2. Judge the steers; give first, second and third places; giving reasons for your selections.
3. Would you consider the steers you have just judged good representatives of what beefing steers should be. Give reasons for your answers.
4. Which of the steers indicates the best handling quality.

SPECIAL CLASS.

JUDGING SHEEP (ORAL).

Examiner: W. BROWN.

1. Judge the fleece of the Oxford Down grade wether.
2. Criticise the two shorn grade wethers from a Leicester standpoint.
3. Which is the most typical of the long-wooled rams? Explain fully.

SPECIAL CLASS.

VETERINARY OBSTETRICS.

Examiner: F. C. GRENSIDE, V.S.

1. In which of our patients is difficult parturition most frequently seen, and what is the relative difficulty in affording relief, in mare and cow, and causes, of the same.
2. Give directions for attention to offspring immediately after birth.
3. Give the modes of restraint, state what assistance the obstetrician requires, and describe how traction should be applied.

EASTER EXAMINATIONS, 1885—Continued.

4. Describe how to perform cephalotomy, and mention the condition that calls for this operation.
5. What is the normal presentation, and in what other position is delivery sometimes effected.
6. Under what circumstances is it advisable to resort to Cæsarean section.
7. Give directions for delivering when the head is deviated downwards, between the fore-legs.
8. Give directions for delivering in reverse anterior presentation.
9. Give the symptoms of retention of Placenta.
10. Give the treatment of inversion of the Uterus.

SPECIAL CLASS.

LAW'S VETERINARY ADVISERS.

Examiner: F. C. GRENSIDE, V. S.

1. What is an Aneurism? and what are the symptoms of the condition?
2. What are the differences between the symptoms of hæmorrhage from arteries and veins?
3. Mention the causes of Phlebitis.
4. What are the causes of local Lymphangitis, and symptoms of the same?
5. Give the symptoms of the presence of Trichinæ Spirales in animals.
6. Give the symptoms of Gangrenous Ergotism, and means of prevention.
7. Give the causes of Acute Anasarca.
8. What is Anæmia, and what are its causes?

SPECIAL CLASS.

STOCK BREEDING (MILES).

Examiner: JOHN HOBSON.

1. What is the most important consideration in estimating the value of animals?
2. Give some illustrations of that form of heredity known as the heredity of acquired and abnormal characters.
3. In what way have many of the most valuable characteristics of the various improved breeds of animals been produced?
4. What course must be followed to make the improved characters in animals permanent?
5. Define the form of heredity termed "Atavism," and give some illustrations.
6. For what purpose has in-and-in breeding been practised by most of the great breeders; and what is the most obvious objection to close-breeding?
7. When cross-breeding has been successfully practised, what has been the object in view?
8. How may the constitutional tendencies and general characteristics of animals be ascertained with great certainty? And how must additional information in regard to the details of the organization which determine the qualities that are of value in the economy of the farm, be gained?

EASTER EXAMINATIONS, 1885—Continued.

9. How have all the best qualities of the improved breeds been obtained ?

10. In what way has the high development of special qualities in our improved breeds which have been obtained by artificial treatment, affected them in other respects ?

SPECIAL CLASS.

FEEDING OF ANIMALS (Stewart).

Examiner : JAMES P. PHIN.

1. Why should we study the nature of the animal we feed ?

2. Define the terms—Protein, Cellulose, and Respiratory Food.

3. Why should foods rich in Albuminoids not be fed alone ?

4. The digestible nutrients of wheat-bran are—say Albuminoids 12, Carbo-hydrates 42.2, Fat 2.5. What will be the nutritive ratio ?

5. Explain "The System of Ensilage," and state the benefits likely to result from that discovery.

6. Describe how to feed the young calf until it is six months old.

7. At what age should beef cattle be ready for market ? And how has the economy of young beef been demonstrated ?

8. Describe the principal characteristics to be considered in selecting a dairy cow, and give the composition of an average winter ration for such cow.

9. How many lbs. of milk should a good cow well fed yield in a season ? And what portion of the food goes to keep the animal alive ?

10. Give your opinion as to the best method of managing a flock of sheep so as to produce the best results in wool and mutton.

 III. PAPERS SET AT THE SESSIONAL EXAMINATIONS, MIDSUMMER, 1885.

FIRST YEAR.

AGRICULTURE.

Examiner : WM. BROWN.

1. What quantities of wheat, oats, and barley, would you sow per acre, and what circumstances would guide you in varying these quantities ?

2. Describe the preparation and management of a root crop, and explain what position it holds in the rotation.

3. What is the general character of the soil of this farm, the rotation of cropping in use, and the special conditions of No. 17 field ?

4. Give a list of our principal green fodders, their feeding value, quantity per season, and order of earliness.

5. Answer the following points in drainage :—

(1) what regulates depth and distance apart of drains ?

(2) The cost of cutting, laying, and filling drains, per rod.

(3) Sketch field 12, show how it is being drained, and give names to drains therein.

MIDSUMMER EXAMINATIONS, 1885—Continued.

FIRST YEAR.

GEOLOGY.

Examiner: J. HOYES PANTON, M.A., F.G.S.

1. From what rock formations have the principal ingredients in Ontario soil been derived, and by what means has their disintegration been chiefly effected.
2. What is the composition of dolomite, quartzite, selemite, apatite, feldspar, calcite, talc, and gneiss? In what rocks are they usually found?
3. Describe the occurrence of fossils in two forms, and state what inferences can be made from the presence of a coral in limestone.
4. Name the *Systems* found in the second and fourth Ages of the geological records.
5. Write notes on the "Age of Reptiles," "Age of Fishes," and the "Age of Flowerless Plants."
6. Contrast the coal of the North-West with that of Nova Scotia with reference to its age and its source.
7. In what geological deposits are the following economic products found:—Iron, copper, petroleum, salt, peat, gypsum, lead, coal, chalk, silver, and graphite?
8. Describe the Third Prairie Steppe of the North-West.
9. Identify the specimens before you.
10. Arrange the accompanying slips representing the layers of the earth's crust in their relative position, and name some of the most characteristic fossils found in No. 8.

FIRST YEAR.

• STRUCTURAL AND PHYSIOLOGICAL BOTANY.

Examiner: J. HOYES PANTON, M.A., F.G.S.

1. Describe the different methods by which plants climb, and give examples of each.
2. Name the form of inflorescence observed in the Clover, the Indian Turnip, the Lily of the valley, the Blue Weed, the Apple, the Timothy, and the Lilac.
3. Explain fully the process of fertilization. By what means is it effected, and to what extent can it be practically taken advantage of by horticulturists?
4. Describe a leaf fully, and draw diagrams illustrating ten of the most common forms.
5. Classify roots according to their shape, and give an example of each. How are biennial forms usually distinguished from annual?
6. Contrast the characters Endogens with those of Exogens, and give three examples of each?
7. Write notes on the circulation of sap in plants, with special reference to where and what changes it undergoes before assimilation.
8. What is meant by an irregular flower? Give the terms sometimes applied to such, and an example in each case.
9. What peculiarity exists in the essential organs of reproduction in the following plants, and what terms are applied to such forms:—Begonia, Willow, Maple, Geranium, Snowball, and Pine?
10. Analyze the plants before you according to the accompanying Schedule.

MIDSUMMER EXAMINATIONS, 1885—Continued.

FIRST YEAR.

MATERIA MEDICA.

Examiner: F. C. GRENSIDE, V. S.

1. Give the theories with regard to the Allopathic, Antipathic and Homœopathic modes of cure.
2. Define the following terms, viz:—Diuretic, Tonic, Anæsthetic, Disinfectant and Alterative.
3. Give the actions of Aconite, and the indications for its use.
4. Write all you know about Aloes.
5. Describe the process to pursue in purging a horse.
6. Give the actions and uses of Belladonna, and mention its active principle.
7. How is lime-water made, and what are its uses?
8. Describe how to prepare and apply a Cantharidine blister.
9. What is Carbolic Acid obtained from, and what are its uses?
10. Describe the medical treatment of foot-rot in sheep.

FIRST YEAR.

ENGLISH LITERATURE.

Examiner: E. L. HUNT.

1. (i) "Oh, Sir! the good die first,
And they whose hearts are dry as summer *dust*
Burn to the socket. Many a passenger
Hath blessed poor Margaret for her gentle looks,
When she upheld the cool refreshment drawn
From that forsaken spring: * * *
* * * * * She is dead,
The light *extinguished* of her lonely hut,
The hut itself abandoned to decay,
And she forgotten in the quiet grave."
 - (ii) "It were a wantonness, and would demand
Severe reproof, if we were men whose hearts
Could hold vain dalliance with the misery
Even of the dead; contented thence to draw
A momentary pleasure, never marked
By reason, *barren* of all future good.
But we have known that there is often found
In mournful thoughts, and always might be found
A power of virtue *friendly*."
- (a) Parse the words in italics.
 - (b) Point out the figures of speech in (i).
 - (c) "The good die first." Quote any proverb which expresses the same thought.
 - (d) "Burn to the socket." Quote a passage from any other poem where the same figure is used.
 - (e) Express clearly the meaning (ii.)

MIDSUMMER EXAMINATIONS, 1885—Continued.

2. What is pathetic Fallacy? Give two or three examples from the "Excursion."
 (a) Quote eight lines beginning:—
 "Ere long the sun declining shot
 A slant———.
- Or quote any other passage you remember not exceeding twelve lines.
3. (a) Narrate briefly the story of Margaret, introducing quotations from the poem.
 (b) Is Wordsworth justified in representing the leading character, from which the story derives its pathos, as being so neglectful of herself and her infant?
4. "The one obvious word of counsel in her (Margaret's) particular distress, which dotage could not have overlooked, he (the Wanderer) suppresses * * * To have overlooked a point of policy so broadly apparent as this, vitiates and nullifies the very basis of the story. * No such case of distress could have existed for one fortnight." Explain and criticise.
5. Locate the following passages and explain the meaning of each.
- (i) "And still that length of road,
 And this rude bench, one torturing hope endeared,
 Fast rooted at her heart."
- (ii) "Far and wide the clouds were touched,
 And in their silent faces could be read
 Unutterable love."
- (iii) "And with a brighter eye she looked around
 As if she had been shedding tears of joy."
- (iv) "From his intellect
 And from the stillness of abstracted thought
 He asked repose."
- (v) "He whistled many a snatch of merry tunes
 That had no mirth in them."
- (vi) "Whate'er, in docile childhood or in youth,
 He had imbibed of fear or darker thought
 Was melted all away."
- (vii) "Beside yon spring I stood,
 And eyed its waters till we seemed to feel
 One sadness, they and I."
- (viii) "Therefore with her hues,
 Her forms, and with the spirit of her forms,
 He clothed the nakedness of austere truth."
- (ix) "I rose; and, having left the breezy shade,
 Stood drinking comfort from the warmer sun."
-

FIRST YEAR.

COMPOSITION.

Examiner: JAMES MILLS, M. A.

1. Name and define the most important properties of a good style.
2. Distinguish the following words, and give an example of the correct use of each: *Truth* and *veracity*, *inaugurate* and *begin*, *balance* and *remainder*, *ambiguity* and *obscurity*, *redundancy* and *tautology*.

MIDSUMMER EXAMINATIONS, 1885—Continued.

3. Criticise the following sentences, and point out the properties of style which are violated in any of them: (1) "Sincerity is as valuable, and even more so than knowledge," (2) "May is *par excellence* the month of flowers," (3) "He not only owns a house, but also a farm," (4) "They were persons of moderate intellects, even before they were impaired by their passions," (5) "I have since learned to like nothing but what you do," (6) "He was a man of fine abilities, and who lost no opportunity of improving them by study," (7) "We came to our journey's end at last, with no small difficulty, after much fatigue, through deep roads and bad weather."

4. Explain the difference between a simile and a metaphor.

5. Point out and explain the figures in the following:—

- (1) At length Erasmus
Stemm'd the wild torrent of a barbarous age
And drove those holy vandals off the stage.
- (2) Up rose the sun, and up rose Emilie.
- (3) My heart is turned to stone.
- (4) The marble speaks; the canvas glows.
- (5) He was useful in his day.
- (6) Athens the eye of Greece,
mother of arts and eloquence.
- (7) There is too much red tape in the institution.
- (8) To take arms against a sea of troubles.
- (9) But yonder comes the powerful king of day
Rejoicing in the East.
- (10) From the cradle to the grave.

6. Write a short composition on "method in daily life,"; or "the advantages of a good education."

FIRST YEAR.

MENSURATION.

Examiner: E. L. HUNT.

1. (a) A rectangular plot is 550 feet long and 330 wide; a road 7 feet wide surrounds the plot. Find the area of the road.
(b) Find the area of the road which surrounds a circular plot of the same perimeter.
2. A sack of wheat, a pail, and a trough, are in the hall. Take the necessary measurements and find—
(a) The weight of the sack of wheat;
(b) The number of gallons the pail will contain;
(c) The number of gallons the trough will contain. (A gallon contains $277\frac{1}{4}$ inches).
3. A stick of timber 50 feet long tapers regularly, the diameters of the ends being 4 feet and 2 feet respectively. Find the volume of the largest squared stick which may be cut from it.

MIDSUMMER EXAMINATIONS, 1885—Continued.

4. If the amount of rainfall is 0.75 inches, find how many gallons fall on an acre.
 5. A ditch is 6 feet wide at the top and 2 feet wide at the bottom, and 4 feet deep.
 - (a) How many cubic yards are removed if the ditch is one mile long?
 - (b) If the surface of a road is horizontal, and the excavation from the ditch be applied to the road to the width of 20 feet, so as to make the surface two inclined planes meeting in the centre, how much is the centre of the road raised if the edges are raised 2 inches?
 6. In question 5, if the ditch be half filled with water, find the depth of the water.
-

SECOND YEAR.

AGRICULTURE.

Examiner: WM. BROWN.

1. The cropping of this Farm was arranged for certain objects. What were these? For what reasons are they not now altogether required, and what additional cropping or change of system should be adopted to meet the requirements of the times for Ontario?
 2. Describe the place and purpose of pasture in a rotation of cropping; indicate wherein it fails to meet our provincial wants, and show in what way it can be improved.
 3. Make critical notes on the kind, the method of feeding, increase to weight, and the financial results of our store cattle last winter.
 4. What are the causes leading to the extension of Dairying in Ontario? Describe briefly the factory systems of butter making, and advise, with reasons, as to the most suitable breed of cattle for such a change.
 5. Name the principal causes that are likely to regulate prices of cattle at our public sale this year, and apply them to a yearling Hereford bull, a yearling Guernsey heifer, and a yearling Shorthorn bull.
-

SECOND YEAR.

ANALYTICAL CHEMISTRY.

Examiner: R. B. HARE, B. A., PH. D.

1. Explain briefly how metals in a systematic course of analysis are separated into groups.
2. How would you separate—
 - (i) Fe from Al, in solutions of ferrous sulphate and aluminium sulphate.
 - (ii) Ca from Mg, in solutions of chlorides.
 - (iii) As from Cu, in solutions of chlorides.
3. Formulate the chemical action that occurs when—
 - (i) Ferrous sulphate and sulphuric acid are added to a solution of a nitrate.
 - (ii) Potassium ferrieyanide to solutions of a ferrous and ferric compound.
 - (iii) Acid of carbonate of ammonia is heated with potassium hydrate.
 - (iii) Potassium hydroxide is added to aluminium hydroxide.

MIDSUMMER EXAMINATIONS, 1885—Continued.

(iiii) Manganous hydroxide is heated with potassium nitrate and sodium carbonate.

4. Give the characteristic tests for the acids: Nitric, carbonic, oxalic, acetic and phosphoric.

5. Practical: Determine—

(i) The metals of solution, No. I.

(ii) The acids of solution, No. II.

SECOND YEAR.

HORTICULTURE.

Examiner: J. HOYES PANTON, M.A., F.G.S.

1. State some of the climatic conditions which influence fruit growing, and illustrate with reference to the Province of Ontario.

2. Write notes on the roots and leaves of a plant; describing the functions of each, and show the interdependence existing between them.

3. What soils are best fitted for the growing of pears, peaches, apples, plums and strawberries?

4. Describe the propagation of plants by budding, and state what precautions are necessary to be observed. Name the different ways in which plants may be obtained.

5. Name some of the hardiest shrubs best suited for ornamental purposes, and give a collection of plants especially adapted for pots and hanging baskets.

6. Give the directions for the construction of a hot bed. What is its use, and what precaution is to be observed in arranging plants in it?

7. What advantages are to be obtained by hybridization? Illustrate with reference to some Canadian fruits, and name some plants in which this is readily effected.

8. Name the different kinds of grafting and describe one of them. Upon what conditions does its success depend?

9. State the benefits derived from mulching, pruning, and the cultivation of the soil in orchards.

10. What are the principal points to be observed in planting an orchard?

SECOND YEAR.

SYSTEMATIC AND ECONOMIC BOTANY.

Examiner: J. HOYES PANTON, M.A., F.G.S.

1. Upon what characters does the classification of plants into sub-kingdoms, provinces, classes and cohorts depend? Arrange the following into these divisions:—Apple, Spring Beauty, Geranium, Honeysuckle, Mint, Heliotrope, Lilac, Maple, Oak and Liverleaf.

MIDSUMMER EXAMINATIONS, 1885—Continued.

2. The White Lily of the Woods, Lily of the Valley, Orange Lily and Calla Lily. Which of these are true lilies? Name the orders to which they belong and contrast the two last.

3. From what orders are the following economic products obtained:—Sugar, resin, nuts, forage, flour, lumber, fruit, cotton, hemp and vegetables.

4. Give the economic uses of the alga.

5. Describe the life history of the *rust* on wheat (*Puccinia graminis*) Name three other forms among the Fungi injurious to crops.

6. Give the characters of the orders *Labiata*, *Oleaceae*, and *Coniferae*, and give examples of plants in each.

7. Name ten of the most common weeds and the orders to which they belong.

8. Name some important genera in the pulse family.

9. Identify the specimens before you, and state what peculiarities characterize the flowers numbered 2, 4, 6, 8.

10. Fill out the accompanying schedule with the analysis of either of the plants before you marked A and B. To what order does C belong?

SECOND YEAR.

VETERINARY MATERIA MEDICA.

Examiner : F. C. GRENSIDE, V. S.

1. Define the following terms : Antiseptic, Disinfectant and Ecbohic, and give three words that express different degrees of purgation.

2. Mention the cases in which Croton Oil can be used with advantage, and those in which it is inadvisable; state why, and give the proper doses.

3. Compare Digitalis and Ergot of Rye as to their physiological actions.

4. What are the actions of Sulphuric Ether, and how can the quantity of water contained in any specimen be determined?

5. Explain the practical value of Gamboge, and how and when to use it.

6. Of the medicinal compounds of Lead, Mercury, and Magnesium, mention those that are of the most importance in veterinary medicine, and give their properties.

7. What are the indications for the use of Nux Vomica, and the dose for the horse? Name its principal Alkaloid, and give the properties of it.

8. Describe all you know about opium.

9. Write out prescriptions for purgatives for the horse, ox, sheep and dog.

10. Give a prescription for hoven.

SECOND YEAR.

VETERINARY OBSTETRICS.

Examiner : F. C. GRENSIDE, V. S.

1. Describe how an Ovum and Spermatozoon come in contact.

2. Describe the Uterus of the mare and its functions.

MIDSUMMER EXAMINATIONS, 1885—Continued.

3. Mention the four acts by which generation is accomplished.
 4. What are the causes of Parturition?
 5. Give an account of the causes of Abortion.
 6. What length of time does parturition occupy in the mare, cow, and ewe, and how are we to be guided in interfering.
 7. Define normal and abnormal parturition; and describe the natural presentation, also the usual cause of malpresentations.
 8. Describe the instruments required in parturition.
 9. Give a description of how to proceed in delivering a fœtus when one fore-leg is completely retained.
 10. Describe the indications for delivery when all four legs and the head are presented.
-

SECOND YEAR.

L'ALLEGRO AND IL PENSEROSO.

Examiner: S. C. SMOKE, B. A.

1. Explain carefully and fully the meaning of the following extracts, pointing out anything which you consider to be specially beautiful in thought or expression :
 - (a) The frolic wind that breathes the spring.
 - (b) While the cock with lively din
Scatters the rear of darkness thin.
 - (c) Where the great sun begins his state,
Robes in flames and amber light,
The clouds in thousand liveries dight.
 - (d) Untwisting all the chains that tie
The hidden soul of harmony.
 - (e) And every shepherd tells his tale
Under the hawthorn in the dale.
 - (f) Forget thyself to marble.
 - (g) While Cynthia checks her dragon yoke
Gently o'er the accustomed oak.
2. "And if I give the honour due,
Mirth admit me of thy crew,
To live with her and live with thee,
In unreprieved pleasures free."
 - (a) Analyze this passage syntactically.
 - (b) Her. Who is meant?
3. "Half-regained Eurydice." Relate the story to which the allusion is here made.
4. *Prince Memnon, that starr'd Ethiop queen, Musæus, Orpheus.* Write brief notes upon these.
5. "While yet there was no fear of Jove." Explain.
6. Quote any passage which indicates Milton's opinion of the superiority of the ancient over the modern drama.
7. What is alliteration? Quote examples of its use in these poems.
8. *Twilight.* What is the ordinary signification of this word? How is it used in *Il Penseroso*? Give its derivation.

MIDSUMMER EXAMINATIONS, 1885—Continued.

9. "Unsphere the spirit of Plato." Explain the meaning of the word "unsphere," and complete the quotation. State briefly what you know of Plato.

10. Quote the passages in which the following expressions occur:—*dappled dawn, nibbling flocks, busy hum, looks commercing with the skies, the noise of folly, dim religious light, prophetic strain.*

11. Explain the meaning of the names of these two poems.

12. Name any other poems of Milton.

13. Say what you consider to be the essential characteristics of poetry.

SECOND YEAR.

ROAD-MAKING, LEVELLING AND SURVEYING.

Examiner: E. L. HUNT.

I.—1. Write fully on earth roads; their improvement, repairs, &c.

2. What are the objects of covering the earth which forms the natural surface of the road with some other material, such as stone, &c.?

3. Ordinary pit gravel should be screened before being put on the road. What should be the size of the gravel? State the objections to large stones.

4. What *extra* force is required to draw a load of one ton up a hill which rises 1 in 20?

II.—1. Distinguish *true* and *apparent* level, and find the difference for a distance of (a) 220 yards, (b) 3 miles.

2. Complete the following field book, and determine the relative heights of A and G

Stations.	Distances.	Back-Sights.	Fore-Sights.	Ascents.	Descents.	Total Heights.
A						
B	60	6.00	3.70			
C	185	0.85	9.40			
D	30	1.60	6.40			
E	95	3.00	5.38			
F	70	6.24	2.50			
G	85	2.80	5.17			

(a) Between what two stations is the grade steepest?

(b) Which is the highest, and which the lowest point in the line?

III.—Draw a rough sketch of the field and find its area from the measurements given in the following field book:—

LEFT OFFSETS.	CHAIN-LINES.	RIGHT-OFFSETS.
	800 to O ³	
	620	150
	425	190
	160	120
	From O ₂	
	Turn to the left.	
	1320 to O ²	
to O ₃ 640	840	
425	180	
	Front O ₁	

APPENDIX 3.

CLASS LISTS :

- I.—EASTER EXAMINATIONS, 1885.
- II.—MIDSUMMER EXAMINATIONS, 1885.

I.—EASTER EXAMINATIONS, 1885.

FIRST YEAR.

CLASSES.	AGRICULTURE.	LIVE STOCK.	JUDGING CATTLE. (Oral Exam.)	JUDGING SHEEP. (Oral Exam.)	INORGANIC CHEMISTRY.
	I.	1 Zavitz, C. A. 2 Sharpe, W.			
II.	1 Sturge, E. 2 Owen, W. H. 3 Power, R. H. 4 Watts, W. G. 5 Hipwell, J. R. 6 Menzies, R. M. 7 Fee, J. J. 8 Madge, R. W. 9 Kennedy, J. R.	1 { Sharp Zavitz 3 Kernighan 4 { Madge Sturge 6 Hipwell Eby 8 Mill Brown 10 Power Calvert	1 Sharpe 2 { Magee Calvert Menzies 4 { Owen Idington Hipwell	1 Sharpe 2 Macfarlane 3 { Mill Menzies Chadsey Hipwell Kernighan	1 Jeffrey 2 Byers 3 McKay 4 Kernighan 5 Eby

²² Names unnumbered are those of students who failed to pass in the subject.

The minimum for first-class honours is 75 per cent : for second-class honours, 60 per cent : for pass, 33 per cent.

CLASS LISTS (EASTER EXAMINATIONS)—Continued.

FIRST YEAR.

CLASSES.	AGRICULTURE.	LIVE STOCK.	JUDGING CATTLE. (Oral Exam.)	JUDGING SHEEP. (Oral Exam.)	INORGANIC CHEMISTRY.
	PASS. III.	1 Eby, J. R.	1 Kennedy	{ Kernighan { Zavitz { Power { Chadsey { Brown { Kennedy { Sturge { Watts { Macfarlane { Mill { Madge { Burwash { Wiggins { Notman { Holtby { Beament { McDonald { Birdsall { Green { Horsman { Fee { Marsh { Routh { Baillie { McClean { Etherington { Jeffrey { McLean { McKay { Byers { Eby { Lobb { Brush { Cobb { Dennis { Donaldson { Ledyard { O'Doherty	{ Madge { Fee { Power { Calvert { Brown { Magee { Watts { Sturge { McDonald { Idington { Horsman { Holtby { Kennedy { McLean { Marsh { Burwash { Owen { Zavitz { Routh { Jeffrey { Lobb { McKay { Birdsall { Broome { Carr, L. H. { Eby { Green { Etherington { Brush { Beament { Baillie { Wiggins { O'Doherty { Notman { Dennis { Cobb { Byers { Ledyard { Donaldson

Names unnumbered are those of students who failed to pass in the subject.

The minimum for first-class honours is 75 per cent. ; for second-class honours, 60 per cent. ; for pass, 33 per cent.

CLASS LISTS (EASTER EXAMINATIONS)—Continued.

FIRST YEAR.

CLASSES.		ORGANIC CHEMISTRY.	NATURAL HISTORY.	VETERINARY ANATOMY.	ENGLISH LITERATURE.	ENGLISH COMPOSITION.
HONOURS.	I.	1 Madge. 2 Sturge. 3 Owen. 4 Zavitz. 5 Eby. 6 Fee. 7 Calvert.	1 Madge. 2 Sturge. 3 Eby. 4 Fee. 5 Owen. 6 Cobb. 7 Calvert. 8 Broome. 9 McKay.	1 Owen. 2 Madge. 3 Sturge. 4 Fee. 5 Eby. 6 Zavitz.	1 Owen. 2 Sturge. 3 Calvert. 4 Madge. 5 Zavitz. 6 Jeffrey.	1 Sturge 2 Madge. 3 Holtby. 4 Owen. 5 Kernighan. 6 Zavitz.
	II.	1 McKay. 2 Green. 3 Brown. 4 Jeffrey.	1 Zavitz. 2 Etherington. 3 Mill. 4 Kernighan. 5 Green.	1 Calvert. 2 Hall (Sp.) 3 Kernighan. 4 Chadsey. 5 Power.	1 Kennedy. 2 Eby. 3 McKay. 4 Kernighan. 5 Fee. 6 Brown. 7 Green. 8 Watts. 9 Holtby. 10 Dennis. 11 Broome. 12 Wiggins. 13 Cobb. 14 Donaldson.	1 Cobb. 2 Broome. 3 Kennedy. 4 Fee. 5 Calvert. 6 Mill. 7 Dennis. 8 Eby.

CLASS LISTS (EASTER EXAMINATIONS).—Continued.

FIRST YEAR.

CLASSES.	ORGANIC CHEMISTRY.	NATURAL HISTORY.	VETERINARY ANATOMY.	ENGLISH LITERATURE.	ENGLISH COMPOSITION.
PASS. III.	1 Cobb.	1 Watts.	1 Walter (Sp.)	1 Mill.	1 Green.
	2 Dennis.	2 Power.	2 Holtby.	2 Burwash.	2 Brown.
	3 Kernighan.	3 Idington.	4 McKay.	3 Marsh.	3 Watts.
	4 Chadsey.	4 Notman.	5 Green.	4 Etherington.	4 Sharpe.
	5 Holtby.	5 Chadsey.	6 Beament.	5 Menzies.	5 Menzies.
	Carr.	6 Baillie.	7 { Hayman (Sp.)	6 Idington.	6 Jeffrey.
	Sharpe.	7 Brown.	{ Sharpe.	7 Baillie.	7 McKay.
	Mill.	8 Beament.	9 { Magee.	8 Power.	8 Beament.
	Lobb.	9 Holtby.	{ Jeffrey.	9 Chadsey.	9 { Chadsey.
	Horsman.	10 Marsh.	11 Cobb.	10 Beament.	{ Bateman.
	Hipwell.	11 Jeffrey.	12 O'Doherty.	11 Notman.	11 Wiggins.
	Idington.	12 Kennedy.	13 Kennedy.	12 Sharpe.	12 Baillie.
	Baillie.	13 Dennis.	14 { Notman.	13 Magee.	13 Lobb.
	Birdsall.	14 Brush.	{ Idington.	14 Macdonald.	14 Etherington.
	Burwash.	15 Ledyard.	16 Watts.	15 O'Doherty.	15 O'Doherty.
	Wiggins.	16 Routh.	17 { Whitehead.	16 Routh.	16 { Idington.
	Etherington.	17 Donaldson.	{ Fortune (Sp.)	17 Brush.	{ Marsh.
	Watts.	18 Birdsall.	19 { Lobb.	18 Ledyard.	{ Burwash.
	Beament.	Burwash.	{ Byers.	19 Hipwell.	{ McFarlane.
	Routh.	{ Magee.	{ Mill.	20 Horsman.	20 Horsman.
	O'Doherty.	{ O'Doherty.	21 { Broome.	Birdsall.	21 Notman.
	Macfarlane.	Horsman.	{ Hipwell.	McLean.	22 Power.
	Jones-Bateman.	Wiggins.	23 { Burwash.	Macfarlane.	23 Hipwell.
	Power.	McLean.	25 Menzies.	Carr, L. H.	Donaldson.
	McDonald.	Carr, L. H.	26 { McLean.	Lobb.	Brush.
	McLean.	Hipwell.	{ Baillie.	Jones-Bateman.	Birdsall.
	Menzies.	McDonald.	28 Wiggins.	Byers.	McLean.
	Kennedy,	Jones-Bateman.	Birdsall.	.....	Carr, L. H.
	Ledyard.	Sharpe.	Dennis.	.....	Routh.
	Donaldson.	Lobb.	Macfarlane.	.....	Ledyard.
	Magee.	Macfarlane.	Ledyard.	.....	Magee.
	Brush.	.....	Routh.	.....	McDonald.
	Marsh.	.....	Etherington.	.....	Byers.
Notman.	.....	Horsman.	.....	.....
Byers.	.....	Chipman (Sp.)	.....	.....
Broome.	.....	Macdonald.	.....	.....
Whitehead.	.....	Bateman.	.....	.....
.....	.....	Brush.	.....	.....
.....	.....	Thompson.	.....	.....
.....	.....	Donaldson.	.....	.....
.....	.....	Marsh.	.....	.....
.....	.....	Carr, L. H.	.....	.....

Names unnumbered are those of Students who failed to pass in the subject.

The minimum for first-class honours is 75 per cent. : for second-class honours, 60 per cent. : for pass, 33 per cent.

CLASS LISTS (EASTER EXAMINATIONS).—Continued.

FIRST YEAR.

CLASSES.	ARITHMETIC.	BOOK-KEEPING.	GENERAL PROFICIENCY.	DEPARTMENTS.	FIRST-CLASS MEN IN THE DEPARTMENTS.	
HONOURS.	I.	1 Jeffrey. 2 Eby. 3 McKay. 4 Madge. 5 Zavitz.	1 Madge. 2 Sturge. 3 McKay. 4 Owen. 5 Burwash.	1 Madge. 2 Sturge. 3 Owen. 4 Zavitz.	I.	AGRICULTURE AND LIVE STOCK.
	II.	1 Brown. 2 Sharpe 3 Burwash. 4 Holtby. 5 Marsh.	1 Menzies. 2 Eby. 3 Kernighan. 4 Broome. 5 Zavitz. 6 Calvert. 7 Jeffrey. 8 Fee.	1 Fee. 2 Calvert. 3 Eby. 4 McKay. 5 Kernighan. 6 Brown.	II.	NATURAL SCIENCE.
PASS.	III.	1 Cobb. 2 Idington. 3 Owen. 4 Ledyard. 5 Fee. 6 Sturge. 7 Green. 8 Kernighan. 9 Chadsey. 10 Dennis. 11 Broome. 12 Calvert. 13 Beament. 14 Hor-man. 15 McFarlane. 16 Byers. 17 Menzies. 18 Mill. 19 Notman. 20 Baillie. 21 Watts. 21 Wiggins. Whitehead. Carr. McDonald. Magee. Birdsall. Hipwell. Etherington. Jones-Bsteman. Lobb. Power. O'Doherty. Routh. McLean. Donaldson. Brush. Kennedy.	1 Holtby. 2 Sharpe. 3 Brown. 4 Magee. 5 McFarlane. 6 Watts. 7 Cobb. 8 Birdsall. 9 Mill. 10 Baillie. 11 Ledyard. 12 Notman. 13 Power. 14 Green. 15 Kennedy. 16 Marsh. 17 Etherington. 18 Chadsey. 19 Beament. 20 Idington. 21 Hipwell. 21 Horsman. Dennis. Routh. Jones-Bateman. O'Doherty. Wiggins. Lobb. Byers. McLean. Donaldson. Carr, L. H. McDonald. Brush.	1 Jeffrey. 2 Holtby. 3 Green. 4 Chadsey.	III.	VETERINARY SCIENCE.
	IV.	1 Sturge. 2 Owen. 3 Madge. 4 Calvert. 5 Zavitz.	IV.	ENGLISH LITERATURE AND COMPOSITION.		
	V.	1 Madge. 2 McKay. 3 Eby. 4 Jeffrey. 5 Zavitz.	V.	MATHEMATICS AND BOOK-KEEPING.		

Names unnumbered are those of Students who failed to pass in the subject.

Only those who passed in every subject are ranked in general proficiency.

First-class men in general proficiency must obtained at least 75 per cent. of the total number of marks ; second-class men, at least 60 per cent. of the total number of marks. First-class men in any department must obtain at least 75 per cent. of the marks allotted to the subjects in that department.

CLASS LISTS (EASTER EXAMINATIONS)—*Continued.*

SECOND YEAR.

CLASSES.	AGRICULTURE.	ARBORICULTURE.	LIVE STOCK.	JUDGING CATTLE. (Oral Exam.)	JUDGING SHEEP. (Oral Exam.)
HONOURS.	I.	1 Muir, J. B. 2 Raynor, T. 3 { McKay, J. B. Butler, G.C. 5 McIntyre, D. N.	1 Muir. 2 Raynor. 3 { McKay. McPherson. 5 Butler.	1 Raynor. 2 McKay. 3 { Muir. McIntyre.	1 Raynor. 2 McIntyre.
	II.	1 McPherson, A. 2 Reid, A. 3 { Thompson, W.D. Smith, E. P.	1 McIntyre. 2 Reid.	1 { Butler. McPherson. 3 Reid.	1 { Butler. Muir. 3 { Thompson. McKay. McIntyre. 6 McPherson. 7 Reid. 8 Smith.	1 Muir. 2 McKay. 3 Butler. 4 Thompson.
PASS.	III.	1 Smith.	1 Smith. 2 Thompson.		1 McPherson. 2 Smith.

CLASS LISTS (EASTER EXAMINATIONS)—Continued.

SECOND YEAR.

CLASSES.	AGRICULTURAL CHEMISTRY.	ENTOMOLOGY.	METEOROLOGY.	VETERINARY PATHOLOGY.	JUDGING HORSES.
HONOURS.	I. 1 Muir. 2 Raynor. 3 Butler. 4 McKay. 5 McPherson.	1 Raynor. 2 McKay. 3 Muir. 4 McPherson. 5 Butler. 6 Reid. 7 McIntyre.	1 Raynor. 2 Butler. 3 Muir. 4 McPherson.	1 Muir. 2 McKay. 3 Raynor. 4 Butler.	1 Muir. 2 McKay. 3 Raynor. 4 McPherson. 5 McIntyre.
	II. 1 McIntyre. 2 Reid.	1 Thompson.	1 McIntyre. 2 McKay.	1 McPherson.	1 Butler.
PASS.	III. 1 Thompson. 2 Smith.	1 Smith.	1 Reid. 2 Thompson. 3 Smith.	1 McIntyre. 2 Reid. 3 Thompson. 4 Smith.	1 Reid. 2 Thompson. 3 Smith.

CLASS LISTS (EASTER EXAMINATIONS)—*Continued.*

SECOND YEAR.

CLASSES.	ENGLISH LITERATURE.	POLITICAL ECONOMY.	MECHANICS.	DRAINING.	BOOK-KEEPING.
HONOURS.	I. 1 Raynor. 2 Butler. 3 McKay. ..... .....	..... ..... ..... ..... .....	1 Raynor.	1 Muir. 2 McKay. 3 { McIntyre. Raynor. 5 McPherson.	1 Raynor.
	II. 1 Muir.	1 Muir. 2 Butler. 3 McPherson. 4 McKay. 5 Reid. 6 Raynor.	1 Butler. 2 McKay. 3 McIntyre. 4 Muir.	1 Butler.	1 { Butler. Muir. 3 McKay.
PASS.	III. 1 Reid. 2 McPherson. 3 Smith. 4 McIntyre. 5 Thompson.	1 McIntyre. 2 Smith. 3 Thompson.	1 McPherson. 2 Reid. 3 Thompson. 4 Smith.	1 Reid. 2 Smith. 3 Thompson.	1 { Thompson. Smith. 3 Reid. 4 McPherson. 5 McIntyre.

Names unnumbered are those of students who failed to pass in the subject.

The minimum for first-class honours is 75 per cent. ; for second-class honours, 60 per cent. ; for pass 33 per cent.

CLASS LISTS (EASTER EXAMINATIONS).—*Continued.*

SECOND YEAR.

GENERAL PROFICIENCY.	DEPARTMENTS.		FIRST-CLASS MEN IN THE DEPARTMENTS.
1 Raynor. 2 Muir. 3 McKay. 4 Butler. 5 McPherson. 6 McIntyre. 7 Reid. 8 Thompson. 9 Smith.	I.	AGRICULTURE AND LIVE STOCK.	1 Raynor. 2 Muir.
	II.	NATURAL SCIENCE.	1 Raynor. 2 Muir. 3 Butler. 4 McKay. 5 McPherson. 6 McIntyre.
	III.	VETERINARY SCIENCE.	1 Muir. 2 McKay. 3 Raynor. 4 Butler. 5 McPherson. 1 Rowat (Sp.)
	IV.	ENGLISH LITERATURE AND POLITICAL ECONOMY.	1 Butler.
	V.	MATHEMATICS AND BOOK-KEEPING.	1 Raynor.

Only those who passed in every subject are ranked in general proficiency.

First-class men in general proficiency must obtain at least 75 per cent. of the total number of marks; second-class men at least 60 per cent. of the total number or marks.

First-class men in any department must obtain at least 75 per cent. of the marks allotted to the subjects in that department.

CLASS LISTS (EASTER EXAMINATIONS).—Continued.

SPECIAL CLASS.

CLASS.	LIVE STOCK.	JUDGING SHEEP.	JUDGING CATTLE. PAPER I.	JUDGING CATTLE. PAPER II.	VETERINARY ANATOMY.	VETERINARY PATH- OLOGY.
I.	1 Caswell, A. B. 2 Hall, H. B.			1 Caswell. 2 Ridings. 3 Hannah.		
	1 Ridings, H. L. 2 Hannah, J.	1 Caswell.	1 { Ridings. Hannah. 3 Caswell.	1 Hall.	1 Hall.	1 Rowat. 2 Richings.
III.	1 Walter, J. R. 2 Rowat, J. P. 3 Fortune, G. R. 4 Hayman, J. M. 5 Thompson, H. S.	1 { Ridings. Hayman. 2 { Hannah. Hall. 4 Rowat. 5 Walter. 6 Fortune. Chipman. Thompson.	1 { Fortune. Rowat. 3 { Hall. Hayman. 5 Walter. Thompson. Chipman.	1 { Walter. Hayman. 3 Rowat. 4 Fortune. 5 Thompson.	1 Walter. 2 Hayman. 3 Fortune. Chipman. Thompson.	1 Hannah. 2 Caswell.

08 HONOURS.

PASS.

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CLASS LISTS (EASTER EXAMINATIONS)—Continued.

SPECIAL CLASS.

Classes.	JUDGING HORSES. (ORAL EXAMINATION).	VETERINARY OBSTETRICS.	LAW'S VETERINARY ADVISER.	STOCK BREEDING, (MILES).	FEEDING OF ANIMALS. (STEWART).	GENERAL PROFICIENCY.
I.	1. Rowat, J. P.	1 Hayman. 2 Ridings. 3 Caswell. 4 Hannah.	1 Hayman. 2 Rowat. 3 Ridings.	1 Hall. 2 Walter.	1 Ridings. 2 Walter.	<i>First Year.</i> 1 Hall 2 Walter. 3 Hayman.
	1 Hannah, J.	1 Rowat. 2 Hall. 3 Walter.	1 Hannah. 2 Caswell.	1 Rowat. 2 Hayman. 3 Caswell. 4 Ridings.	1 Caswell. 2 Hall. .....	..... ..... .....
II.	1 Caswell, A. B. 2 Ridings, H. L.	1 Fortune. 2 Thompson.	1 Walter. 2 Thompson. 3 Hall. 4 Chipman. 5 Fortune.	1 Hannah. 2 Fortune. 3 Thompson.	1 Hannah. 2 Fortune. 3 Thompson. 4 Rowat. 5 Hayman.	<i>Second Year.</i> 1 Ridings. 2 Rowat. 3 Caswell. 4 Hannah.
III.

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CLASS LISTS.

II.—MIDSUMMER EXAMINATIONS, 1885.

FIRST YEAR.

CLASSES.		AGRICULTURE.	GEOLOGY.	BOTANY.	MATERIA MEDICA.	ENGLISH LITERATURE.
HONOURS.	I.	1 Zavitz, C. A. 2 Madge, R. W. 3 { Brown, C. R. { Sturge, E.	1 Madge. 2 Sturge. 3 Brown. 4 Zavitz. 5 Holtby.	1 Madge. 2 Brown. 3 Zavitz. 4 Sturge. 5 Holtby. 6 Kernighan. 7 Fee.	1 Sturge. 2 Madge. 3 Zavitz.	1 { Brown. { Madge. 3 Zavitz. 4 Sturge.
	II.	1 Kernighan, J. N. 2 Calvert, S. 3 { Denton, E. { Fee, J. J. 5 { Holtby, R. M. { Chadsey, W. E.	1 Power. 2 Fee. 3 Calvert. 4 Mill. 5 Cobb. 6 Kernighan. 7 Chadsey. 8 Ross. 9 Notman. 10 Denton.	1 Cobb. 2 { Mill. { Power. 4 Chadsey. 5 Marsh. 6 Hirsh. 9 Beament. 10 Dennis. 11 Ross.	1 Holtby. 2 Hirsh. 3 Jeffrey.	1 Calvert. 2 Johnston. 3 Idington.

CLASS LISTS (MIDSUMMER EXAMINATIONS)—Continued.

FIRST YEAR.

CLASSES.	AGRICULTURE.	GEOLOGY.	BOTANY.	MATERIA MEDICA.	ENGLISH LITERATURE.
	PASS. III.	1 Kennedy, J. R. 2 Bowie, T. M. 3 Menzies, R. M. 4 Notman, C. R. 5 Ledyard, E. D. 6 Cobb, C. 7 Mill, J. S. 8 Acres, A. G. 9 Ross, J. H. 10 Jeffrey, J. S. 11 Carr, G. P. 12 Power, R. H. 13 Robertson, D. 14 Beament, H. J. 15 Etherington, C. B. 16 Horsman, J. V. 17 Brush, G. H. B. 18 Johnston, J. F. 19 Birdsall, W. G. 20 Iddington, P. S. 21 Marsh, G. T. 22 Carman, H. D. 23 McFarlane, A. D. 24 Wiggins, G. C. 25 Baillie, W. 26 White, S. A. Ritchie, H. Hirsch, J. March, H. Marcon, F. McLean, R. M. Dennis, J. E. Davidson. Carr, L. H. O'Doherty E. J. Magee, F. P. Macvicar, A. F. Brown, W.	1 Johnston. 2 Ledyard. 3 Dennis. 4 Bowie. 5 Beament. 6 Baillie. 7 Acres. 8 Birdsall. 9 Robertson. 10 Brush. 11 Jeffrey. 12 Marsh. 13 Etherington. 14 Iddington. 15 McFarlane. 16 Ritchie. 17 March. 18 Hirsch. 19 Menzies. 20 Carr G. P. White. O'Doherty. Davidson. Wiggins. Horsman. McLean. Carr, L. H. Carman. Marcon. Macvicar. Brown, W. Magee. Kennedy. McNiven.	1 Calvert. 2 Bowie. 3 Baillie. 4 March. 5 Menzies. 6 Acres. 7 Denton. 8 Birdsall. 9 Carman. 10 Jeffrey. 11 Notman. 12 Johnston. 13 Etherington. 14 Kennedy. 15 Ritchie. 16 Ledyard. 17 Brush. 18 Robertson. 19 Iddington. 20 Carr, G. P. 21 McFarlane.	1 Fee. 2 Cobb. 3 Calvert. 4 Davidson. 5 Kernighan. 6 Dennis. 7 Ross. 8 Carr, G. P. 9 Carr, L. H. 10 Brown, C. R. 11 Iddington. 12 Menzies. 13 Kennedy. 14 Power. 15 Carman. 16 Chadsey. 17 Wiggins. 18 Marsh, G. F. 19 Beament. 20 March, H. Ledyard. Ritchie. O'Doherty. McFarlane. Birdsall. Mill. Denton. Notman. Bowie. Etherington. Acres. Brown, W. White. Brush. Robertson. Johnston. Magee. Baillie. Macvicar. McLean. Horsman.	1 Holtby. 2 Kennedy. 3 Baillie. 4 Hirsch. 5 Kernighan. 6 March. 7 Etherington. 8 Davidson. 9 Chadsey. 10 McFarlane. 11 Cobb. 12 Fee. 13 Marsh, G. F. 14 Carman. 15 Power. 16 Jeffrey. 17 Dennis. 18 Mill. 19 Magee. 20 Notman. 21 Carr, G. P. Wiggins. Ritchie. Carr, L. H. Acres. Birdsall. Bowie. Beament. Menzies. Robertson. Ledyard. McLean. Brush. McNiven. White. Denton. O'Doherty. Macvicar. Brown, W. Marcon. Horsman. Ross.

Names unnumbered are those of Students who failed to pass in the subject.

The minimum for first-class honours is 75 per cent. ; for second-class honours, 60 per cent. ; for pass 33 per cent.

CLASS LISTS (MIDSUMMER EXAMINATIONS).—Continued.

FIRST YEAR.

CLASSES.	COMPOSITION.	MENSURATION.	GENERAL PROFICIENCY.	DEPARTMENTS.	FIRST-CLASS MEN IN THE DEPARTMENTS.						
HONOURS.	I. 1 Madge. 2 Calvert. 3 Sturge.	1 { Madge. Zavitz. 3 March, G. F. 4 Brown, C. R. 5 Holtby.	1 Madge. 2 Zavitz. 3 Sturge. 4 Brown.	I. AGRICULTURE AND LIVE STOCK.	1 Zavitz. 2 Madge. 3 { Brown. Sturge.						
	II. 1 Kennedy. 2 Kernighan. 3 Johnston. 4 { Brown. Zavitz. 6 Holtby. 7 Cobb.	1 Kernighan. 2 Ledyard. 3 Ross. 4 Beament. 5 Sturge.	1 Holtby. 2 Kernighan. 3 Calvert.			II. NATURAL SCIENCE.	1 Madge. 2 Brown. 3 { Sturge. Lavitiz. 5 Holtby.				
PASS.	III. 1 Dennis. 2 Mill. 3 Fee. 4 March. 5 { Hirsch. Menzies. 7 Marsh. 8 Robertson. 9 Jeffrey. 10 Davidson. 11 Beament. 12 Etherington. 13 Carman. 14 { Bowie. Chadsey. 16 O'Doherty. 17 Idington. 18 Magee. 19 Notman. 20 Carr, G. P. 21 Macvicar. (Birdsall. McFarlane. 22 { Ledvard. Wiggins. Ritchie. Brush. Carr, L. H. Baillie. Horsman. Acres. Power. Marcon. Denton. Ross. White. Brown, W. McLean.	1 Menzies. 2 Jeffrey. 3 Chadsey. 4 Fee. 5 Baillie. 6 Johnston. 7 Hirsch. 8 Mill. 9 March. 10 Power. 11 { Birdsall. Calvert. 13 Bowie. 14 { Carr. Magee. Cobb. 16 { Notman. Dennis. Idington. Ritchie. Kennedy. Horsman. McFarlane. Etherington. Robertson. Wiggins. Acres. O'Doherty. Brown, W. Davidson. Carr, L. H. White. McLean. Macvicar. Denton. Brush. Marcon.	1 Fee. 2 Cobb. 3 { Marsh, G. F. Chadsey. 5 Jeffrey. 6 Hirsch. 7 Beament. 8 Menzies. 9 Idington. 10 Carr, G. P.	III. VETERINARY SCIENCE.	1 Sturge. 2 Madge. 3 Zavitz.						
						IV. ENGLISH LITERATURE AND COMPOSITION.	1 Madge. 2 Brown. 3 { Sturge. Zavitz.				
								V. MATHEMATICS.	1 { Madge. Zavitz. 2 Marsh. 3 Brown. 4 Holtby.		
									
.....										

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CLASS LISTS (MIDSUMMER EXAMINATIONS)—*Continued.*

SECOND YEAR.

CLASS.	AGRICULTURE.	SYSTEMATIC AND ECONOMIC BOTANY.	HORTICULTURE.	ANALYTICAL CHEMISTRY.	MATERIA MEDICA.	
HONOURS.	I.	1 Muir, J. B. 2 Raynor, T. 3 Butler, G. C. 4 Macpherson, A. 5 McIntyre, D. N.	1 Raynor. 2 { Muir. { Macpherson. 4 Butler. 5 Reid. 6 Owen.	1 Muir. 2 Raynor. 3 Butler. 4 Reid. 5 { Broome. { Macpherson. 7 Thompson. 8 McIntyre.	1 Raynor. 2 Muir. 3 Macpherson. 4 { Watts. { Butler.	1 Raynor. 2 Muir. 3 Owen. 4 McIntyre.
	II.	1 { Watts, W. G. { Reid, T. 3 Smith, E. P. 4 { McKay, J. G. { Thompson, W. D. { Owen, W. H. 7 { Patterson, J. W. { Broome, A. H.	1 McIntyre. 2 Thompson. 3 Watts.	1 Owen. 2 Watts. 3 Smith. 4 Patterson.	1 Owen. 2 Reid. 3 Broome. 4 McIntyre.	1 Macpherson. 2 Butler. 3 Reid.
PASS.	III.	1 Poe, J. P.	1 Broome. 2 Patterson. 3 Watts. 4 McKay. 5 Poe.	1 Poe. 2 McKay.	1 Thompson. 2 McKay. 3 Smith.	1 Broome. 2 Smith. 3 Thompson. 4 Watts. 5 McKay.

CLASS LISTS (MIDSUMMER EXAMINATIONS)—*Continued.*

SECOND YEAR.

CLASS.		VETERINARY OBSTETRICS.	ENGLISH LITERATURE.	LEVELLING, ROAD-MAKING AND SURVEYING.	GENERAL PROFICIENCY.	DEPART- MENT.	FIRST-CLASS MEN IN THE DEPARTMENTS.	
HONOURS.	I.	1 Muir.	1 Butler.	1 Raynor.	1 Raynor.	I.	AGRICUL- TURE.	1 Muir.
		2 Raynor.	2 Macpherson.	2 Muir.	2 Muir.			2 Raynor.
		3 Owen.	3 Raynor.	3 Broome.	3 Macpherson.			3 Butler.
		4 McIntyre.	4 Owen.	4 Butler.	4 Butler.			4 Macpherson.
	.....	.....	5 Reid.	.....	5 McIntyre.			
	.....	.....	6 Macpherson.	.....	.....	
	.....	.....	7 McIntyre.	.....	.....	
	.....	.....	8 Poe.	.....	.....	
II.	1 Macpherson.	1 { Muir.	1 McKay.	1 Owen.	III.	VET'Y. SCIENCE.	1 Raynor.	
	.....	2 Reid.	2 Owen.	2 McIntyre.			2 Muir.	
	.....	2 Broome.	3 Watts.	3 Reid.			3 Owen.	
	.....	3 McIntyre.	4 Thompson.	4 Broome.			4 McIntyre.	
.....	.....	.....	5 Watts.	.....			
PASS.	III.	1 Broome.	1 Watts.	1 Patterson.	1 Thompson.	V.	MATHEMATICS.	1 Raynor.
		2 Reid.	2 Thompson.	.....	2 Smith.			2 Muir.
		3 Thompson.	3 Smith.	.....	.....			3 Broome.
		4 Butler.	4 Poe.	.....	.....			4 Butler.
		5 Smith.	5 McKay.	.....	.....			5 Reid.
		6 Watts.	.....	.....	.....			6 McPherson.
		7 Poe.	.....	.....	.....			7 McIntyre.
		8 McKay.	.....	.....	.....			8 Poe.

~~Names~~ Names unnumbered are those of Students who failed to pass in the subject.

Only those who passed in every subject are ranked in general proficiency.

First-class men in general proficiency must obtain at least 75 per cent. of the total number of marks second-class men, at least 60 per cent. of the total number of marks. First-class men in any department must obtain at least 75 per cent. of marks allotted to the subjects in that department.

 APPENDIX 4.

COLLEGE IN ACCOUNT WITH FARM AND GARDEN.

(a) WITH FARM.	<i>Dr.</i>
To 215 bags potatoes, at 45c.....	\$141 75
“ 3,870 gallons milk, at 12c.....	464 40
“ 34½ bags flour, at \$2.00.....	69 00
“ Cartage for College	25 00
“ Feed of College horse (without attendance)	75 00
“ Feed of Matron’s horse (without attendance)	75 00
“ Carpenter work for College	15 00
	<hr/>
	\$790 15
(b) WITH GARDEN.	
To fruit and vegetables (for items see Mr. Forsyth’s report in Part V.)	622 10
	<hr/>
	\$1,412 25
By amount paid for Students’ labour on farm and garden	3,696 29
	<hr/>
By balance	\$2,284 04

PART II.

REPORT

OF THE

PROFESSOR OF NATURAL HISTORY
AND GEOLOGY.ONTARIO AGRICULTURAL COLLEGE,
GUELPH, December 31st, 1885.*To the President of the Ontario Agricultural College:*

SIR,—In submitting to you a report of the Department which is allotted to my charge, it will be convenient to consider it under the following topics:—

1. Museum.
2. Library.
3. Reading-room.
4. Practical work.

COLLEGE MUSEUM.

A Museum for an Agricultural College should partake more largely of an instructive character than for the gratification of public curiosity; while it may, to a certain extent, possess features of popular interest; still these should be subservient to the objects of instruction. Our museum hitherto has been an attempt to satisfy the ordinary sight-seer who visits the College from time to time. Many of the specimens are foreign to the Province and serve in a very indirect way to instruct our students. During the past year an attempt has been made to render the collection more instructive, by altering the arrangement and adding specimens of more practical value in advancing the education of students in agriculture. Upwards of one thousand have been labelled and the collection so arranged that students may come from the Lecture-room and observe illustrations of the subjects discussed. By a proper use of these facilities, inquiring, thoughtful young men have impressed upon their minds much of the instruction received in the class-room. There is no doubt, that the more we can illustrate our lectures by specimens, easy of access, the more successful we will be in developing an interest in the different studies of our curriculum. To effect this, we should make our collection of specimens largely provincial and closely associated with the instruction imparted.

While it is gratifying to mark the progress in the number, character and arrangement of our specimens, I regret to have to direct your attention to the inferior condition of the room itself, which at the present time is in sad want of repair, and equipped with a style of case which takes up much space and displays but little.

I hope you will be able to impress those who have means at their disposal to do something to improve the accommodation and equipment of the room. The introduction of more modern cases, the raising of the roof and construction of a gallery around the sides would effect most satisfactory results in the appearance and utility of this valuable adjunct to college work. I am quite confident, if we could secure these necessary improvements we would soon possess a museum unique in its character as an important factor in the progress of agricultural education, instructive to students and interesting to the ordinary visitor.

During the year we have been indebted to the following for, in some cases, very valuable donations to this department:—

1. Sir J. W. Dawson. A collection of Carboniferous and Post-Pliocene fossils.
2. Geological Survey, Ottawa. A collection of Cambrian, Carboniferous and Post-Pliocene fossils, and upwards of 150 species of plants, illustrating the flora of the North-West.
3. Prof. J. Hoyes Panton. Collection of Silurian, Devonian and Cretaceous fossils.
4. George Murton, Esq., Guelph. Fossil plants from the coal measures of Nova Scotia.
5. C. Zavitz, student. Specimens of roots of several agricultural plants.
6. C. B. Etherington, student. Collection of Canadian bird's eggs.
7. Prof. W. Brown. An ammonite from the Cretaceous deposits of the North-West.
8. E. A. Shuttleworth, ex-student. Collection of grasses from the Experimental Field on the College Farm.
9. J. W. Brown, B.A. Indian relics of the North-West rebellion.
10. B. E. Paterson, student. An excellent fossil from the Guelph Formation.
11. J. Townsend, Esq. Fossils from the Guelph Formation near Elora.

Our geological specimens are now arranged in the crude cases we have, so as to give an idea of the different Systems in the series of rocks as well the minerals and fossils found in them, together with rocks that form the earth's crust and the minerals of which they are composed.

Each case represents a System. These are so arranged that by commencing at one side and passing to the left, the sixteen Systems in the geological series pass in review, each with its characteristic fossils.

By this means our students soon become familiar with the rocks which have been an important factor in the formation of soil. One case is devoted to popular geology. In this no scientific names are employed; every specimen is labelled by some common name by which it can readily be understood as regards its character and formation.

The collection of birds is also classified and labelled so as to be of practical use to students.

We intend to employ duplicates in making another form of classification, consisting of two groups, embracing the beneficial and injurious forms of bird life. As soon as time will permit, the same arrangement will be adopted with the collection of insects. Our entomological collection is capable of great improvement, to assist the students in economic entomology. At present it is made up of mature insects, while the larval condition, often the most important, is unrepresented. It will be our object to have in the collection, specimens showing the egg, larva, pupa and imago, together with illustrations of how they affect farm crops, etc.

During autumn, a collection of fruits was made; it was but the commencement of securing typical forms to exemplify the Canadian fruits found in Ontario. These will be preserved in a condition, which will enable the students to compare with little difficulty the fruits discussed in lectures on Horticulture.

At present there are upwards of three thousand specimens in the different departments represented in the museum. This number will rapidly increase as our students become interested in the work and send donations from year to year.

This very important department of instruction should be a credit to our College and to the wealthy Province in which it is located, but if the improvements already suggested cannot be carried out, we can scarcely expect to hold the position we should.

LIBRARY.

Here, too, the work of systematizing has received much attention during the year. The books are conveniently arranged, and every facility afforded to encourage reading. The following summary shows the number of books taken out during the respective terms and the departments to which they belong :—

	Winter Term.	Spring Term.	Summer Term.	Fall Term.	Total.
Agriculture	188	71	33	216	508
Chemistry	10	4	4	31	49
Natural History	64	62	7	64	197
Literature	80	32	11	108	231
Veterinary	31	24	7	68	130
Mathematics	5	3	..	22	30
History	25	7	10	58	110
Travel.....	25	12	4	40	81
Miscellaneous	48	20	20	60	148
Biography	35	11	7	40	93
	521	246	103	707	1,577

You will notice a marked improvement in the last term. This is, no doubt, the result of the improved arrangement for study in the afternoon of each day. There is also now a list of the best books in each department of study placed in a conspicuous place, so as to aid the students in selecting proper books to study, in connection with the lectures ; this list is prepared by the Professor of each department. During the year there has also been made a synopsis of all the reports in the Library, many of which contain very able essays on subjects connected with Agriculture. This enables a student to find with but little trouble papers on important topics in connection with agricultural science, which in almost every case were unknown to the students, and only in a few cases known to the Professors themselves.

The Library contains at present 5,000 volumes, of which four hundred and eight have been added this year. These latter may be grouped as follows :—

Reports, chiefly agricultural	290
Natural History, including Botany	15
Veterinary	3
Agriculture	25
Chemistry	7
Literature	9
Encyclopædias	7
Bound Journals	14
Directory	1
Atlas	1
Dairying	4
Geology	3
History	20
Pamphlets	8

Although the number of agricultural reports appears large in comparison with that of other books added during the year, it must be remembered that in many of these some most valuable papers are found, and these are now so indexed that our students can readily find them. On this account these reports may be considered valuable acquisitions to our library, and in many respects almost equivalent to text-books upon agricultural subjects. The library is, no doubt, a very important factor in our work, and, if properly used by the students, will from year to year influence their minds in the line of study and thought. As instructors of the young men under our charge, we cannot do too much in striving to impress upon their minds the benefits to be derived from reading, not only in connection with their lectures, but even beyond them. It is usually found that the best thinkers are those who read most.

READING-ROOM.

This is one of the most commodious and pleasant rooms in the College, and is becoming yearly more used for the purpose it was intended. It is well furnished for reading and study; excellent tables and chairs, and convenient reading desks, upon which are found the best agricultural journals published, a list of which is given in this portion of my report.

The students avail themselves of these excellent facilities afforded for reading, and can be seen at all times consulting the papers and journals on file. It is a pleasing feature to notice there is becoming a much less tendency to cut or destroy the papers than when this room was first opened.

Rules regarding the proper use of the reading-room are posted in conspicuous places.

It is a pleasure to report that the students take an interest in keeping this room in order, and not turning it into a place for general discussion.

The following is the list of papers, journals and magazines which come to the College and are for the use of the students in attendance :

PAPERS AND MAGAZINES.

(a) *Sent free by the Publishers.*

Name.	Where Published.
1. Journal of Commerce.....	Montreal.
2. Journal of Agriculture	"
3. Weekly Witness	"
4. Christian Guardian.....	Toronto.
5. Canada Presbyterian	"
6. Mechanical and Milling News	"
7. Monthly Weather Review.....	"
8. Dominion Churchman.....	"
9. Canadian Lumberman.....	Peterboro'
10. Manitoba Weekly Free Press	Winnipeg.
11. Canadian Horticulturist.....	St. Catharines.
12. Canadian Entomologist	London, Ont.
13. St. John Telegraph.....	St. John, N.B.
14. Weekly Herald	Stratford.
15. Bee Journal.....	Beeton.

(b) *Furnished by the College.*

1. The Daily Globe	Toronto.
2. " Mail	"
3. " Mercury.....	Guelph.
4. " Herald	"
5. Rural Canadian	Toronto.
6. Grip	"
7. The Week.....	"
8. Farmers' Advocate	London, Ont.
9. Canadian Dairyman	Montreal.
10. Canadian Stock-Raisers' Journal.....	Hamilton.
11. Nor'-West Farmer	Winnipeg.
12. Popular Science News	Boston.
13. Rural New Yorker	New York.
14. Gardeners' Monthly.....	Philadelphia.
15. Canadian Breeder	Toronto.
16. North British Agriculturist	Edinburgh, (Scotland).
17. Farmers' Gazette.....	Dublin (Ireland).
18. Mark Lane Express.....	London (England).
19. American Garden	Greenfield (Mass.)
20. American Naturalist	Philadelphia.
21. Veterinary Journal.....	London (England).
22. Veterinarian	"
23. Cultivator and Country Gentleman	Albany, N.Y.
24. Scientific American.....	New York.
25. " Supplement	"
26. Live Stock Journal and Fanciers' Gazette	England.
27. Live Stock Journal.....	Chicago.

PRACTICAL WORK.

So much of my time has been employed in connection with the Museum and Library and during the last term, in discharging the duties belonging to the department of Chemistry, owing to the death of the late Dr. Hare, that I have had little or no time to devote in the line of investigation. However, under the improved system of study, more time will be afforded for such work, and I hope at an early date to arrange a series of experiments for the purpose of elucidating some points connected with agricultural science. During the year I have observed a marked advance in outsiders seeking information, especially in regard to the identification of plants. This has entailed considerable correspondence ; but on all occasions it has been a pleasure to give the desired information.

Under this head may properly be given the result of meteorological observations taken at the College during the past year.

I have departed somewhat from the method of arrangement in the report of this work, but it will be found to contain a summary of all the observations taken, expressed in a way which will prove convenient at any time for reference.

METEOROLOGY.

REPORT OF OBSERVATIONS TAKEN AT THE ONTARIO AGRICULTURAL COLLEGE
DURING 1885.

Observations are regularly taken at the hours of 7 a.m., 2 p.m., and 9 p.m. daily, and recorded in a book printed for the purpose. The instruments in use are as follows:—

Anemometer—Recording the direction of the wind and indicating the number of miles travelled.

Barometer—Showing the atmospheric pressure at the time of observation.

Maximum thermometer—Indicating the highest temperature between times of observation.

Minimum thermometer—Indicating the lowest temperature between times of observation.

Hygrometer—With *dry* and *wet* bulb thermometers, for the purpose of showing the condition of the atmosphere with reference to moisture.

Pluviometer—Used in measuring the rainfall.

Thermometer—For observing ordinary temperature.

Besides taking observations from these instruments, the cloudiness of the sky is observed, and general remarks on the weather for the day are recorded in the daily register. At the close of each month a summary of the month's observations is given to the Guelph papers for publication. From these monthly summaries the condensed statement of the year's meteorology is made out.

In my course of lectures on Meteorology, the practical method of teaching is adopted. The instruments named above are fully described, and the students taught not only how to read them, but also to epitomize the observations taken in such a way as to make them interesting and instructive.

At examinations some of the instruments are brought into the class-room and the candidates asked to read them.

FORM OF MONTHLY SUMMARY.

Meteorology.

A summary of the meteorological observations taken at Ontario Agricultural College during the month of

Normal height of barometer at Guelph (1,100 feet above sea level and 740 above Lake Ontario), 28.86 inches.

Barometer—

Highest barometer.

Lowest “

Highest mean barometer.

Lowest “ “

Monthly “ “

Monthly range.

Thermometer—

Highest thermometer.

Lowest “

Highest mean thermometer.

Lowest “ “

Monthly “ “

Monthly range.

Pluviometer.

Days rain fell.
 Greatest rainfall.
 Days snow fell.
 Greatest snowfall.
 Total precipitation.

Anemometer—

Direction of wind.
 Greatest number of miles travelled in twenty-four hours.
 Greatest velocity per hour.
 Mean velocity per month.

Clouds—

Cloudy days.
 Clear days.
 Mean cloudiness for the month.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Barometer—	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
Highest barometer	29.384	29.262	29.190	29.236	29.032	29.088	29.600	29.068	29.058	29.140	29.216	29.564
Lowest “	28.054	29.050	28.324	28.340	28.400	28.500	28.378	28.358	28.359	28.252	28.332	28.020
Highest mean barom'er.	29.314	29.238	29.051	29.163	28.998	29.068	29.216	29.057	29.042	29.090	29.151	29.434
Lowest “ “	28.110	28.160	28.458	28.404	28.350	28.528	28.619	28.419	28.428	28.433	28.444	28.143
Monthly “ “	28.752	28.962	28.870	28.873	28.741	28.859	28.835	28.822	28.813	28.822	28.366	28.778
Monthly range.....	1.330	1.202	.886	.896	.632	.588	1.222	.710	.699	.888	.884	1.544
Thermometer—	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.	deg's.
Highest temperature ..	45	36	42.9	79.8	81.6	84.7	90.3	86.8	85.1	69	63.8	59.2
Lowest “ “	-13	-20	-16.5	12.5	26	41.3	45.7	38.9	36.5	17.3	23	-3
Highest mean “ “ ..	39	29.8	38.2	67.3	67.1	72.5	76.0	72	71.6	51.2	56.7	40
Lowest “ “	-5.6	-13	-6.3	23.1	26	44.9	57.1	50.4	49.5	26.6	25.8	4.6
Monthly “ “	31.1	-12	14	33.8	41.7	60.5	68.8	58.2	55.8	42.8	36.4	25.9
Monthly range	58	56	59.4	92.3	55.6	43.4	44.6	47.9	48.6	57.7	40.8	62.2
Pluviometer—												
Number days rain fell..	2	.....	.....	7	8	11	9	11	6	11	10	3
“ snow fell..	9	5	9	3	1	.....	.....	.....	.....	1	5	12
Greatest rainfall, inches	.08	.....	.....	.44	.48	1.04	.49	1.19	1.58	.89	.7	.2
Rainfall for month, in.	1.4	.....	.....	.97	1.44	3.20	2.24	2.03	3.40	2.17	1.07	.33
Greatest snowfall, in. .	2.5	2	2.2	.....	1	.....	.....	.....	.....	.2	3	3.0
Snowfall for month, in.	6.5	4	6.2	8.30	1	.....	.....	.....	.....	.2	4.8	13.1
Total precipitation	2.05	.4	.62	1.80	1.54	3.20	2.24	2.03	3.40	2.19	1.55	1.64
Anemometer—												
Predominating wind... S.W.	N.W.	N.W.	N.W.	E.	S.W.	N.W.	N.W.	N.W.	N.W.	S.W.	S.W.	S.W.
Greatest No. of miles in 24 hours.....	783	822	901	705	583	529	462	539	512	556	569	719
Mean velocity for the month	18.5	19.1	20.4	15.6	14.9	13.4	9.2	9.92	9.56	10.6	11.6	15.45
Clouds—												
Cloudy days	20	15	17	11	16	14	13	14	16	17	20	21
Clear days	4	9	11	14	14	12	10	10	9	6	4	5
Mean cloudiness for the month	7.6	5.4	5.6	4.7	5.6	5.1	5.2	5.8	5.3	6.3	8.1	7.8

























MEAN METEOROLOGICAL RESULTS FOR THE YEAR 1885.

	1885. GUELPH.	Average of 40 Years. TORONTO.
BAROMETER.		
Mean pressure for the year.....	28.791	29.616
Month of highest mean pressure.....	December.	September.
Highest mean monthly.....	29.434	29.664
Lowest " ".....	28.110	29.572
Month of the lowest mean.....	January.	June.
Highest pressure.....	29.600	30.358
Lowest pressure.....	28.020	28.692
Range of the year.....	1.580	1.668
THERMOMETER.		
Mean temperature of the year.....	38.3	44.17°
Warmest month.....	July.	July.
Mean temperature of the warmest month.....	76.0	67.64°
Coldest month.....	February.	February.
Mean temperature of the coldest month.....	- 12	22.73°
Mean temperature of the warmest day.....	72.8	77.85°
Mean temperature of the coldest day.....	- 13	- 1.50°
Date of the highest temperature.....	July 23rd.	.....
Highest temperature.....	90.3	91°
Date of the lowest temperature.....	February 11th.	.....
Lowest temperature.....	- 20	11.9°
Range of the year.....	110.3	102°
PLUVIAMETER.		
Total depth of <i>rain</i> in inches.....	18.27	28.30
Number of days on which <i>rain</i> fell.....	78	110
Month in which the greatest depth of <i>rain</i> fell.....	September.	September.
Greatest depth of <i>rain</i> in one month.....	3.40	3.55
Month with most <i>rainy</i> days.....	August.	October.
Greatest number of <i>rainy</i> days in one month.....	11	13
Total depth of <i>snow</i> in inches.....	44	.....
Number of days on which <i>snow</i> fell.....	45	.....
Month in which the greatest depth of <i>snow</i> fell.....	December.	.....
Greatest depth of <i>snow</i> in one month.....	13.1	.....
Month with most <i>snowy</i> days.....	December	.....
Greatest number of <i>snowy</i> days in one month.....	12	.....
Total precipitation in inches.....	22.65	.....

DIAGRAM ILLUSTRATING THE MEAN METEOROLOGICAL RESULTS FOR 1885.

<i>Temperature :</i>	<i>Below Zero.</i>	<i>Above Zero.</i>		
January		31.1°		
February	12			
March	14			
April		36.8		
May		41.7		
June		60.5		
July		68.8		
August		58.2		
September		55.8		
October		42.8		
November		36.4		
December		25.9		
 <i>Rain and Snow :</i>	<i>Total Precipitation.</i>		<i>Inches.</i>	<i>Total.</i>
January			2.06	
February .....			.4	
March .....			.62	
April			1.80	
May			1.54	
June			3.20	
July			2.24	
August			2.03	
September			3.40	
October			2.19	
November			1.55	
December			1.64	22.67

DIAGRAM ILLUSTRATING THE MEAN METEOROLOGICAL RESULTS.—*Continued.*

<i>Wind :</i>	<i>Miles Travelled.</i>	<i>Miles.</i>	<i>Direction predominating.</i>
January.....		783	E. one month.
February.....		822	N.W. six "
March.....		901	S.W. five "
April.....		705	
May.....		583	
June.....		529	
July.....		462	
August.....		512	
September.....		539	
October.....		556	
November.....		569	
December.....		719	
<i>Cloudiness :</i>			
January.....			
February.....			
March.....			
April.....			
May.....			
June.....			
July.....			
August.....			
September.....			
October.....			
November.....			
December.....			

I remain, Sir, yours respectfully,

J. HOYES PANTON,
 Professor Natural History and Geology.

PART III.

REPORT

OF THE

PROFESSOR OF VETERINARY SCIENCE.

GUELPH, December 31st, 1885.

To the President of Ontario Agricultural College:—

SIR,—Outside of the ordinary every day casualties to which a comparatively large stock is subject, the past year has been a pretty favourable one and few losses have occurred from death amongst the College stock. In my last report I gave an account of a somewhat serious outbreak of abortion amongst the cows on the farm; and at the time of writing that account expressed the hope that it was over, and that no more losses from this cause would be sustained, as some time had elapsed without a mishap; but unfortunately two more lost their calves during the winter. This winter, so far, we have had no loss from this cause, and the influence, whatever it is, seems to have worn itself out.

Last year I dilated at some length on the various theories regarding the causes of this trouble, which have been advanced by different authorities, and which seem to be based on reasonable evidence, and as no new light has since been thrown on the subject, we must allow it to remain as it is until something more than mere hypothesis can be given.

It is interesting to note that this scourge committed serious ravages in Great Britain, and particularly in Scotland last winter, and that a gentleman from whom one of our recently imported cows was purchased, lost every calf, some fifty cows in all having slipped their young. The cow spoken of was amongst the first to abort with us. Of course it is merely speculation to try and establish any connection between the outbreak amongst the recently imported cattle and the existence to a marked degree of the same trouble in the herds from whence they came, but it is a coincidence, which with many others that have been observed, tend towards confirming the impression that it is of contagious origin, and that it is a poison of an animate character, that is the essential element in bringing about the accident.

I am authoritatively informed that several breeders of some prominence in this Province have suffered somewhat severely from abortions during the last couple of years.

Two imported ewes died about the end of January, out of five that were seriously sick

The symptoms of illness presented were of a very acute character, and in those cases which terminated fatally, indisposition was only noticed for three days. The first signs of derangement were dulness, inappetence and hurried breathing, soon followed by straining, evident pain, and the voidance of a considerable quantity of semi-fluid dark coloured feces. The patients were placed in a dry room and some artificial heat provided, as it was very cold weather at the time. Opium was administered to relieve the pain and straining. In the three that recovered the pain soon subsided and the bowels became inactive, when Epsom salts in small and repeated doses, dissolved in linseed tea, was given, resulting in speedy and complete restoration to health.

A *post mortem* on the two that died revealed very evident, "Inflammation of the Liver," that organ presenting a yellow colour, and being much softened and infiltrated with puriform like fluid. It was also somewhat enlarged. In assigning a cause for this diseased condition, the continuous severity of the weather of last winter should not be overlooked, especially the influence it would be likely to have upon sheep unacclimatised. Cold is a very frequent exciting cause of inflammation in internal organs, although the liver is not often the seat of it. The subjects of the attack described were in very high condition, and had doubtless been fed on a stimulating diet throughout their lives, which had been short, as they were only shearlings and two shears. High feeding in taxing the liver to its utmost will, no doubt, predispose this organ to disease, and in the absence of more ostensible causes the above explanation seems reasonable, and founded on physiological facts.

A gentleman in this neighbourhood who imported a flock at the time the College sheep were brought out, lost several in exactly the same way and about the same time, which is evidence that climatic influence was a factor in bringing about the disease. About the end of November a Guernsey cow was reported to me as sick, and on examination she was found to be in a very serious condition. The cattleman gave her history as being an animal that had never been very thrifty since her arrival with the new importation; her appetite being capricious, and she showed a general want of life.

When my attention was drawn to her I found her very weak—so much so that a moderate push would almost knock her over, and there was a complete loss of appetite. The pulse was very weak and beating about one hundred times a minute. The respirations were increased to about forty to the minute, but were not laboured. The ears and legs were colder than natural, and the bowels somewhat confined. On listening to the sounds emitted by the chest, over the lower end of the windpipe and bronchial tubes, a harsh and weazing sound was audible. On the right side of the chest the respiratory murmur was unnaturally pronounced, while on the left there was an almost entire absence of sound either from the lungs or heart. These symptoms simulated so nearly what I had before observed in connection with "Tuberculosis," when the tubercular deposits have formed a thick lining on various parts of the chest, that I was inclined to the opinion, that it was a case of "Tuberculosis" we had to deal with, although it was seldom any coughing was heard. In discussing the case with the students at a clinical lecture, I mentioned the resemblance that the case bore to a condition not infrequently met with in cattle in connection with the pericardium or sac that envelopes the heart, and termed pericarditis or inflammation of the heart's covering. From the history of the case and its symptoms, however, I was inclined to the opinion that it was of a tubercular character; but a *post mortem* examination, which we soon had an opportunity of making, revealed that no tubercles were present, but that the sac containing the heart was extensively diseased, being much thickened and having a hardened coating of lung tissue adherent to it. It was much distended and contained more than a gallon of dirty-coloured fluid. Many such cases have been recorded by veterinary writers, but some foreign body, as a piece of wire, a darning needle or sharp pointed nail has generally been found to account for the condition. Such articles on being swallowed pierce their way through the coats of the stomach and through the diaphragm, finally reaching the heart or remaining in its covering. The channel by which such bodies travel from the stomach to the heart can generally be easily detected by the diseased traces they leave behind them. It seems that the contractions of the coats of the stomach impel such bodies outwards, and that the pumping action of the heart draws them towards it. In this instance, however, a

careful search failed to reveal any foreign body. This condition has been described by some writers as resulting from inflammation caused by damp, cold and variable temperature. When recovery is made from a mild attack of this character, more or less organic change usually remains, rendering such a subject liable to a return of the trouble from time to time. Thus the inflammatory products accumulate and finally bring about a fatal termination. If it is determined to build new stabling accommodation, it is to be hoped that some provision will be made for furnishing an apartment for use as a veterinary hospital. Hitherto we have had no facilities for affording isolation, quietude, or for regulating the temperature, all of which are important auxiliaries in the treatment of disease.

Respectfully submitted,

F. C. GRENSIDE, V.S.

REPORT OF THE PHYSICIAN.

DEC. 31, 1885.

*To the Hon. A. M. Ross,
Commissioner of Agriculture:*

SIR, --I have the honour to present to you my Annual Report.

We had a good deal of sickness, especially during the earlier months of the year, but I am glad to be able to state that nothing of a fatal character occurred.

Scarlet Fever and Diphtheria visited our city and neighbourhood during the past summer and autumn, but we did not have a single case at the college.

By instruction from the President early in the present session, I vaccinated all the young men who had not been successfully vaccinated within seven years.

The building is in a good sanitary condition. Dry earth closets have been in use for the past four months, and, I have no doubt, with proper care will be a great improvement on the former ones if the ventilating pipes are run up above the main buildings.

I have the honour to be, Sir,

Your most obedient Servant,

E. W. MCGUIRE,, M.D.

Physician Ontario School of Agriculture.

PART IV.

REPORT

OF THE

PROFESSOR OF AGRICULTURE,

FARM MANAGER AND EXPERIMENTAL SUPERINTENDENT.

The Honourable A. M. Ross,
Commissioner of Agriculture.

31st December, 1885.

SIR,—I beg to submit the eleventh Annual Report of the Outside Departments of this Institution, and as introductory, have pleasure in bringing under your notice what, during the year, has been the warmest part of our work.

The most interesting feature of the Agriculture of Ontario to day is unquestionably Dairying—the production of milk, butter and cheese. This is acknowledged in various ways. Your Government still contributes to the maintenance of two Dairymen's Associations, that annually hold conventions, publish reports, and give instruction in cheese manufacture, by travelling experts amongst factories, and it has been through their influence, and the special advice of Mr. Ballantyne, M.P.P., that Canada has during the last two years gained such renown in teaching Scotland how to improve her cheese. Then also, as a mark in your own management, our station has been supplied with two important additions to its appliances; the establishment of a Butter Factory, and a special Professor of Dairying. Professor Barré will no doubt tell us well and fully as to the practical outcome, and attendant bearings of this factory for the year just closed, and President Mills will submit the plan of lectures thereon, and the instruction being otherwise given on such an important division of our profession. Having had the honour of explaining the cream gathering system to patrons last spring, and opening the factory previous to Mr. Barré's appointment, I may be permitted to express the hope that the fullest details in every way affecting the question of butter-making be given to the Province. The question is not necessarily one of profits, but, under judicious management, to obtain light of every sort upon what is at present a sore point by the world's estimate of our average Provincial product. In doing this the position of the Centrifugal Separator should be argued, so that our people may have the best and latest,—the practical, the scientific, and the truth.

As if to endorse these Government efforts, the two largest Agricultural Exhibitions of Canada gave very special encouragement to Dairying this year. I have given elsewhere a short notice of the work undertaken by Professor Barré and myself at London and Toronto,—and certainly no small measure of thanks is due to the management of these Exhibitions for liberality and progressiveness. The universal commendatory Press notice in Europe and America of this specialty is encouragement for the future.

And I think it is clearly my duty to mention that the "Midsummer Advance Report," treating mainly of Experimental Dairy subjects, has been received in high favour in all civilized countries. Brief as the various subjects had to be treated, they have nevertheless rung a note of the times that has been taken up and responded to in a very gratifying manner,—indeed in such a manner as makes us think seriously of our future work. I could send you a large book of letters received from the United States and Britain complimenting the College on this branch of its labours.

On the farm we are adhering to rotation in cropping as strictly as is consistent with seasons, bare fallowing, and the particular circumstances of fields, especially in regard to good or poor condition—natural, or that has been made so by cultivation. I have told in previous reports very much of all the practical and scientific bearings of what we aim at in good farming—what each field has come through, and year by year their conduct in the production of each class of crops, but I have delayed until now to say anything in regard to what we have realized other than by the ordinary methods in getting rid of the Canada Thistle; and, as the subject is a very big one all over the country, I give it the important position of this introduction.

This weed can be thoroughly exterminated without the loss of a crop as in fallowing, or by the almost equally expensive cutting in most crops, or by the cultivation of roots, either of which is not permanent. The agent we have found for this purpose is—the best establishment and maintenance of permanent pasture. This may not be new to some, for many observers say nothing; at any rate it has never to my knowledge been brought under the particular notice of our farmers. Some farmers can tell us of natural meadows, orchards and lawns, without thistles, except it may be in odd spots, but what do our roadsides say, and nearly all the pasture that accompanies the rotation called hay in our system of cultivation? Many know of smothering out thistles by a very heavy crop of corn, or other green fodder, but this is temporary. When land is laid down to permanent pasture with the proper variety of grasses and clovers, under good average conditions, there is such a rush of growth during the first year, and such a close matting of everything in all subsequent years—such an *early* and *continuous* cropping of pasture, that nothing else has a chance of establishment. We have had this clearly demonstrated in all our experimental permanent pasture plots during the last ten years, where in other plots immediately adjoining, with any other crop—grain, roots and some fodder plants, singly—thistles were continually bothering, but, four feet distant on the pasture none existed. There is not only a smothering of the thistle, but a rotting of its stem deep down, and apparently the permanent extermination of the weed. It shall be my duty to tell in what way such pasture can be rotated with other crops so as to overtake what has long baffled the Province, and, at the same time, give greater returns than can possibly be got by any other method.

A feature of our Live Stock interest particularly gratifying this year is the patronage of the newly imported bulls. The service revenue for the year amounts to \$608, which, if taken as interest upon capital at six per cent., represents a capital of \$10,000. The eight bulls cost \$9,500. This alone, from such a source, outside of surplus stock revenue, is certainly very satisfactory. Had all the bulls been in request equal to the Short Horn, the revenue would have been \$2,070! But the surplus cattle realized the sum of \$2,865, after a loss of \$1,170 from abortions. So that altogether throughout several unfavourable circumstances, the cattle alone have returned a gross revenue of \$3,473 per annum. The ordinary keep of the bulls is about \$450, which in ordinary cases would be deducted from revenue, but to us their educational value is more than twice their keep. Were actual cash returns the only consideration I could not advise the possession of more than *three bulls*.

II.—THE FARM.

I.—FARM BUILDINGS.

Our farm buildings and other property were almost totally destroyed by fire on the 30th Sept., cause unknown. The following is an abstract of detailed list of loss therefrom :—

Buildings	\$22,215
Live Stock	905
Crops	2,567
Manures	1,380
Feed and Fodder	64
Medicine	30
Implements, Machinery and Tools	3,126
Total	\$30,287

We have provided temporary accommodation for the Live Stock by covering some of the old walls, and taking possession of the large implement shed that was saved, with bull shed and small experimental barn.

It will be your privilege to arrange for a new suite of buildings on another site ; it is my duty to make out a list of requirements that I consider necessary in correspondence with the size, the aims and the character of the farm, as regards Cropping, Live Stock, Experimental Work and Mechanics. On the 10th December last I sent you a plan showing these in detail, from which I trust you will be able to provide us with such accommodation as shall be creditable to the Province, and in keeping with our other appliances.

FARM FOREMAN'S REPORT.

To Prof. WM. BROWN :

SIR,—I have the honor to herewith submit my annual report of the Farm and Live Stock Department. These departments are, I am pleased to be able to say, in a satisfactory condition. I must confess that in the busy season, when an hour's delay probably meant damage to the crops and consequent loss to the institution, I could not possibly superintend the work done by all the students. To show them how, and start them at it in each field is about as much as one man can do, especially when the peculiar nature of the operations in one particular place may render his presence there continually necessary. When in connection with this it is considered that nearly all the students who have had any experience at farm work leave for home when harvest commences, it will be readily seen that the position of farm foreman is no sinecure. As to the present condition of the farm, I may say that there is much to commend and little or nothing to condemn. There has been a gradual diminution of thistles and noxious weeds during the past year, and very shortly it is hoped the farm will be entirely free of such pests. I might also state that last summer we drained the north-west half of field No. 12, and removed many of the stumps and second growth bush. If the means are forthcoming for drainage purposes it is hoped that next year this entire field will be made arable. It will then be one of the best plots on the farm.

FIELD CROPPING.

Owing to the fire destroying a large quantity of grain, etc., it is impossible to give the yield in a great many of the fields. Hence, in the following table there are several omissions of the quantity harvested, and on that account the statement is not as complete as usual :

FIELDS.

No. 1. Nineteen acres. Nine were sown with mensury barley yielding 40 bushels per acre, and ten with black barley.*

No. 2. Seventeen acres under hay, yielding 1 ton per acre.

No. 3. Seventeen acres. Four sown with spring wheat,* four with corn for green fodder yielding 40 tons per acre, six with Egyptian oats*, one-half racehorse oats,* one-half early blossom oats.*

No. 4. Twenty acres pasture.

No. 5. " " "

No. 6. " " "

No. 7. " " summer fallow.

No. 8. " " Twelve sown with Egyptian oats*, seven with New Zealand oats,* one with racehorse oats.*

No. 9. Twenty acres, sown with golden vine peas, giving a net yield of 446 bushels.

No. 10. Eight acres, Egyptian oats.*

No. 11. Twenty-three acres, under fall wheat, Bonnell and Rodger varieties, giving a net yield of 700 bushels.

No. 12. Fifteen acres, uncultivated, used as pasture.

No. 13. Nineteen and three-quarter acres, seven of which were under turnips, yielding 900 bushels per acre. Eight acres of this field were under mangold, yielding 1,020 bushels per acre; one acre was sown with carrots, white Belgian, yielding 750 bushels per acre; two and three-quarter acres of potatoes, yielding 174 bushels; remaining acre under vetches and oats used as green fodder.

No. 14. Twenty-five acres, experimental field.

No. 15. Twenty acres, pasture.

No. 16. Thirty acres, twenty-six acres hay,* yielding two tons per acre; four acres under white Russian wheat.*

No. 17. Thirteen acres hay, yielding 2 tons per acre.*

No. 18. Thirteen acres " " $1\frac{3}{4}$ " " "

No. 19. Thirty acres " " $1\frac{1}{2}$ " " "

No. 20. Twenty acres uncultivated.

No. 21. Twelve acres, five acres under potatoes, yielding 750 bushels, and seven acres of turnips. As this plot was sold, and as yet a portion of them remain in pits, I am unable to give the result per acre.

The above marked thus * were burned.

LIVE STOCK.

There have been two extensive sales during the past year. The first, the annual live stock sale, was well attended, buyers being present from all parts of the Dominion. The result was, on the whole, satisfactory, but in some cases the animals did not bring the expected figures. The Shorthorn, Hereford, and Polled Angus breeds were most in demand, and sold readily. The surplus grade stock, accommodation for which could not be found after the fire, was sold at the special sale at somewhat of a sacrifice.

THE FIRE.

Destroying as it did all the stabling accommodation, except the bull shed and the building for fattening cattle, the fire was a visitation greatly to be deplored, as it disarranged the departments very much. The implement shed has been fitted up as stabling for the cattle held over. It suits the purpose well, and the animals are now comfortably housed there.

THE WINDMILL.

If my memory serves me, in my last report I drew your attention to the satisfactory manner in which the windmill erected in the south-west portion of the farm for the purpose of supplying water to the stock, was performing its operations, and also laying before you the desirability of having another erected in the north-east part. What I said then I would, did space permit, repeat now. This suggestion I hope will be given your consideration, as I feel incalculable advantages would accrue from its being carried into effect.

P. I. WOODS,
Farm Foreman.

III. LIVE STOCK.

PUBLIC SALE OF LIVE STOCK.

We had two public sales of Live Stock this year—the first, the regular surplus sale on the 4th September,—and the second, on the 16th October, was necessitated by the fire that destroyed most of our farm buildings—a culling out of several animals that did not affect the standing of our herds and flocks, but considered desirable in view to ease expense in erecting temporary buildings for winter. Following is detail of these sales:—

PUBLIC SALE OF LIVE STOCK, SEPTEMBER 4TH, 1885.

LOT.	CLASS.	PURCHASER, ETC.	Amount.	Total.
CATTLE.				
<i>Short Horns:</i>				
			\$ c.	\$ c.
1	Bull	P. Bathgate, Eramosa	140 00	
2	Bull Calf	J. Lamont, Caledon	125 00	
3	Cow	Alex. Taylor, Dromore	190 00	
4	Heifer	Amos Cutler, Coldstream	280 00	
5	Heifer	J. McHugh	280 00	
			<hr/>	1015 00
<i>Herefords:</i>				
6	Bull Calf	C. J. Alloway, Montreal	250 00	
7	Bull Calf	F. W. Stone, Guelph	225 00	
8	Cow	H. Sorby, Guelph	350 00	
9	Heifer	H. Sorby, Guelph	230 00	
			<hr/>	1055 00
<i>Aberdeen Polls:</i>				
10	Bull Calf	C. Cumming, Troy	200 00	
11	Bull Calf	Geary Bros., London	100 00	
12	Bull Calf	H. Stairs, Nova Scotia	340 00	
13	Bull Calf	Thomas McRae, Guelph	180 00	
14	Bull Calf	Mossom, Boyd & Co., Bobcaygeon	60 00	
15	Heifer	Geary Bros., London	125 00	
16	Cow	Geary Bros., London	300 00	
17	Cow	Mossom, Boyd & Co., Bobcaygeon	325 00	
			<hr/>	1630 00
<i>Holsteins:</i>				
18	Bull Calf	J. Jackson, Malton	100 00	
19	Bull Calf	W. Leeds, Toronto	65 00	
20	Heifer	Withdrawn		
			<hr/>	165 00
<i>Ayrshires:</i>				
21	Bull Calf	H. G. Clarke, Brampton	30 00	
22	Bull Calf	F. Kean, Orillia	35 00	
23	Heifer	A. Cairns, Flesherton	80 00	
24	Cow	A. Cairns, Flesherton	90 00	
25	Cow	A. Kains, Byron	100 00	
			<hr/>	335 00
<i>Jerseys:</i>				
26	Bull Calf	J. Jackson, Malton	90 00	
27	Heifer	W. Leeds, Toronto	65 00	
28	Heifer	W. Leeds, Toronto	70 00	
			<hr/>	225 00
<i>Guernseys:</i>				
29	Heifer	F. W. Stone, Guelph	45 00	
30	Heifer	J. Langton, Stratford	63 00	
31	Heifer	Geary Bros., Bothwell	30 00	
			<hr/>	138 00
<i>Fat Cattle:</i>				
32	Hereford Grade Steer	C. J. Alloway, Montreal	150 00	
33	Aberdeen Grade Steer	C. J. Alloway, Montreal	230 00	
34	Short Horn Grade Steer	W. West, Guelph	220 00	
35	Short Horn Grade Steer	T. Simpson, Guelph	150 00	
36	Short Horn Grade Steer	L. O. Barber, Guelph	135 00	
			<hr/>	885 00

Public sale of Live Stock—Continued.

LOT.	CLASS.	PURCHASER, ETC.	Amount.	Total.
<i>CATTLE—Continued.</i>				
<i>Grades:</i>			\$ c.	\$
37	Cow	Thomas Kershaw, Holstein	70 00	
38	Cow	J. Lamont, Caledon	65 00	
39	Cow	A. Taylor, Dromore	90 00	
40	Cow	D. Reed, Glanford	50 00	
Total for Cattle				275 00
<i>SHEEP.</i>				
1	Cotswold Ram Lamb	J. Taylor, Rockwood	11 00	
2	Pair Cotswold Ewe Lambs	A. J. Brown, Jeddo	8 00	
3	Leicester Ram Lamb	Robert Coulter, Wingham	9 00	
4	Pair Leicester Ewe Lambs	A. Cairns, Flesherton	7 00	
5	Shropshire Ram Lambs	A. Taylor, Dromore	21 00	
6	Pair Shropshire Ewe Lambs	A. Taylor, Dromore	22 00	
7	Highland Ram Lamb	H. Y. Attrill, Goderich	3 00	
8	Cotswold Ram	J. Gilchrist, Puslinch	8 00	
9	Cotswold Ram	A. J. Brown, Jeddo, N.Y.	17 00	
10	Shropshire Ram	T. C. Patteson, Toronto	47 00	
11	Leicester Cheviot Cross	Walter West, Guelph	12 00	
12	Leicester Cheviot Cross	James Glennie, Guelph	21 00	
13	Hampshire Grade	James Glennie, Guelph	42 00	
14	Cotswold Grade	W. West, Guelph	7 00	
15	Cotswold Grade	W. West, Guelph	7 00	
16	Southdown Grade	W. West, Guelph	12 00	
17	Shropshire Grade	W. West, Guelph	30 00	
18	Shropshire Grade	J. Glennie, Guelph	20 00	
19	Leicester Grade	W. West, Guelph	15 00	
20	Leicester Grade	W. West, Guelph		
21	Oxford Grade	J. Millar, Guelph	16 00	
22	Oxford Grade	J. Millar, Guelph		
23	Merinc Grade			
Total for Sheep				335 00
<i>SWINE.</i>				
1	Berkshire Boar	J. Hewer, Guelph	21 00	
2	Berkshire Sow	J. Hewer, Guelph	28 00	
3	Berkshire Sow	J. H. Wilcox, Guelph	22 00	
4	Essex Boar	A. Kerr, Guelph	11 00	
5	Essex Sow	John Anderson, Guelph	9 00	
6	Essex Sow	A. McDougall, Guelph	10 00	
7	Essex Sow	E. Coghlin	10 00	
Total for Swine				111 00
<i>HORSES.</i>				
	Clyde Cross Mare	H. Sorby, Guelph	110 00	
	Clyde Cross Mare	A. J. Brown, Jeddo	155 00	
Total for Horses				265 00
<i>SCOTCH COOLIE DOGS.</i>				
1	Dog	G. Moore, Waterloo	4 00	
2	Dog	G. Moore, Waterloo	4 00	
3	Bitch	P. Burnet	1 00	
4	Bitch	A. Broome, O.A.C.	2 00	
5	Bitch	R. Menzies, O.A.C.	2 00	
6	Bitch	H. A. Paget, O.A.C.	2 00	
7	Bitch	A. Macdonald, O.A.C.	2 00	
8	Bitch	James Pinkely	2 00	
9	Bitch	J. R. Kennedy, O.A.C.	9 00	
Total for Dogs				28 00
Grand Total				6462 00

PUBLIC SALE OF LIVE STOCK, OCTOBER 16TH, 1885.

LOT.	CLASS.	PURCHASER, ETC.	Amount.	Total.
CATTLE.			\$ c.	\$ c.
1	Grade Cow.....	J. & R. Millar, Guelph	28 00	
2	Grade Cow.....	J. Sandilands, Guelph	28 00	
3	Grade Cow.....	J. & R. Millar, Guelph	45 00	
4	Grade Cow.....	J. & R. Millar, Guelph	35 00	
5	Grade Cow.....	R. White, Rockwood	29 00	
6	Grade Cow.....	— Macdonald, Guelph	45 00	
7	Hereford Grade Heifer	J. Thomson, Guelph	11 00	
8	Hereford Grade Heifer	F. McQuillan, Guelph	10 00	
9	Hereford Grade Steer.....	J. Thomson, Guelph	16 00	
10	Hereford Grade Steer.....	J. Thomson, Guelph	10 00	
10 ¹ / ₂	Hereford Heifer.....	J. Thomson, Guelph	18 00	
				275 00
HORSES.				
11	Clyde Cross Mare	Charles Austin	81 00	
12	Aged Horse	D. O'Connor	51 00	
13	Clyde Cross Horse	W. Dawson	150 00	
				282 00
SHEEP.				
<i>Grade Ewes (in pairs):</i>				
14	Nos. 639,853	J. & R. Millar	7 00	
15	“ 247,848	John Henderson	8 50	
16	“ 679,850	F. Simmons	7 50	
17	“ 248,288	J. Sanderson	9 00	
18	“ 295,867	J. Sanderson	8 50	
19	“ 268,831	J. Shirton	9 50	
20	“ 680,895	N. Moore	8 00	
21	“ 269,675	A. Heleher	10 50	
22	“ 270,638	Robert Shortreed	8 00	
23	“ 265,890	A. Heleher	7 50	
24	“ 686,825	W. Simmons	5 00	
25	“ 858,899	J. & R. Millar	7 00	
26	“ 206,859	R. Shortreed	9 00	
27	.....	A. White	9 00	
28	One Cotswold	J. Simmons	2 00	
				116 00
<i>Pure bred Ewe Lambs:</i>				
29	Hampshire (pair)	M. P. Doyle	5 00	
30	Cotswold (pair).....	W. Elliott	7 00	
31	Grade Lambs (pair)	J. Tyson	5 00	
32	Grade Lambs (pair)	J. Roberts	5 00	
33	Grade Lambs (pair)	J. & R. Millar	10 00	
34	Grade Lambs (pair)	W. Scott	7 00	
35	Grade Lambs (pair)	J. Tyson	6 50	
36	Grade Lambs (pair)	J. Tyson	6 00	
37	Grade Lambs (pair)	J. & R. Millar	5 00	
38	Grade Lambs (pair)	W. Elliott	4 59	
				61 00
<i>Grade Ewe Lambs:</i>				
39	Pair Ewes.....	J. Tyson	3 00	
40	Pair Ewes.....	J. & R. Millar	7 00	
41	Pair Ewes.....	J. & R. Millar	7 50	
42	Pair Ewes.....	J. Tyson	6 50	
43	Pair Ewes.....	J. Tyson	8 00	
44	Pair Ewes.....	J. Tyson	6 00	
				38 00
Grand Total				\$772 00

IV.—EXPERIMENTS.

It cannot be said that the Province is full of facts with reference to any branch of farming, and certainly not so as regards dairying. When such an authority as Professor Arnold says, "There are many things about cow's milk and its production, with which we are all in some respects so familiar, which the most careful students have not been able to explain or comprehend. There are so many things in regard to it which are still unknown, that I could not, if I would, make a complete account of it."—The use of cow's milk among civilized nations has been of more importance than even flesh, and no article of the farm has ever stood the vicissitudes of time, of markets, of climate, and of fashion so well as this has. It has never been superseded in food value by anything else in nature or art, and yet it is the most easily spoiled and destroyed among animal products,—not only so, but man himself is less certain about its physiological source, knows less about its variety of source, is less able to regulate its quality, and thinks less about its actual value, or even what it costs to produce it—all the while that most men use it daily. Do we yet know how skilfully and easily to detect adulterated milk, how to choose a cow *exactly* by any real or supposed indications, what is meant by *character* of a cow as regards dairy products?—do we know even what *heavy* milk implies, and why milk is not valued and paid for according to its kind; or why cheese and butter are not systematically manufactured in winter as well as summer? It stands as a remarkable fact in the agricultural history of nations that whatever be their position—in age or civilization—whatever their wealth and resources of any other kind—if troubles arise in the growing of crops from causes within or without themselves—climatic, disease, or competition causes—then recourse is had to the dairy. One of the oldest and one of the newest civilized countries are to-day examples of this striking fact. Britain and Canada are dipping deep into butter and cheese. It is possibly a phase in the agricultural battle that will culminate in some scientific and practical revolutions.

In view then of the increasing importance of this interest in our country, I have deemed it advisable to attempt the production of more light. The appliances of this station are now such as authorize our farmers in asking for this. It has not been difficult to arrange a plan, and it should not be difficult to carry it out systematically and accurately. The food, and the agents (cows) as well as the chemical, microscopic, centrifugal, and other helps, have been liberally supplied. The work involved may be gathered from the fact that on dairy subjects alone as many as 2,700 separate tests have been made during six months. Similar testing in other lands cannot be taken as guides for us because of the very marked difference of conditions.

I have also thought it well to submit some more information about mutton, wool, grasses and even the fattening of cattle, in these times of doubt to many. These advanced notes would be justified were it only to report the position of permanent pasture, to which I beg your particular attention.

The public will understand that it is not desirable to elaborate in the early stages of an inquiry, but when we are more full of experience, at the end of the season, a greater latitude will be given in commenting on the various subjects; and it should be distinctly understood that such experiments are but the beginning of a series, and results cannot necessarily meantime be taken as characteristic of particular sources.

NOTE.—This portion of the report is the Midsummer Advanced Report, referred to on page 5, and is to be understood as written under date of July 1.

2. THE ANIMALS USED IN THESE TESTS.

BREED.	Names of Cows.	Age in Years.	Weight in lbs. May 1.	Had last Calf on	In Calf Again.	Applicable to Chapters.
Aberdeen Poll.....	Advie.....	5	1300	September, '84*....	January, '85....	{ 7, 8, 9, 11, 12, 13, 16, 17, 21.
	Mavis.....	6	1390	April, '85.....	no.	
Ayrshire.....	Stately.....	6	1130	June, '84.....	September, '84	5, 7, 8, 12.
	Sensation.	4	1155	January, '85*.....	April, '85.....	13, 14, 16, 17, 20, 21.
Devon.....	Esmeralda ...	7	1450	October, '84*.....	no.	7, 8, 9, 11, 12, 14.
	Ruddie.....	5	1100	April, '85.....	no.	16, 17, 20, 21.
Galloway	Berta.....	3	1260	December, '84*....	March, '85....	7, 8, 9, 12.
	Gem.....	3	1410	October, '84.....	January, '85.	13, 17, 21.
Guernsey.....	Ruth.....	3	880	June, '84.....	August, '84....	7, 8, 12, 14, 17.
	Goldleaf.....	4	910	June, '84.....	November, '84	
Hereford.....	Sunflower....	3	1220	June, '84.....	November, '84	12.
Holstein.....	Verapina.....	3	895	January, '85.....	March, '85....	{ 5, 7, 8, 9, 11, 12, 13, 14, 16, 17, 20, 23.
Jersey.....	Beauty o' the Mill.	3	835	February, '85....	April, '85....	{ 5, 7, 8, 9, 11, 12, 13, 14, 16, 17, 23.
Ontario Grade.....	Grammie.....	old.	950	March, '86*.....	no.	12, 17, 21.
Quebec Grade.....	Mack.....	5	800	April, '85.....	no.	8, 9, 12, 20.
	Flower.....	5	880	May, '85.....	no.	
Short Horn.....	Madamoiselle.	7	1530	November, '84*....	April, '85....	{ 7, 8, 9, 12, 13, 14, 16, 17, 21.
Short Horn Grade.	Little Taylor.	9	1100	November, '84....	February, '85.	6, 7, 8, 9, 12, 13, 14, 17.

BRIEF DESCRIPTION OF THE COWS USED IN THE EXPERIMENTS.

“Advie” is a five year old, whole red Aberdeen Poll—true to her origin, a persistent milker in moderate quantity—a kindly cow, with a touch of the beefy disposition so characteristic of the breed.

“Mavis” is another Aberdeen Poll, six years old, of a more delicate looking type than some of her kind—a sweet cow, without any appearance of individual character.

“Stately.”—I had difficulty in securing this Ayrshire from the Duke of Buccleuch's agent, and no wonder. Every time we have to milk her daily two weeks before calving, and, even though nursing twins, have had to milk by hand twice a day for three weeks after calving. Her head and horns, staggy, are not liked by some, but the great quarters, the double udder, and the whole make up of the cow, speak of milk.

“Sensation” is another Ayrshire, four years old. This is the unsettled cow referred to in permanent pasture records—kindly, but nervous. For the class her colour is

* These cows aborted their calves—see Chapter 21.

unusually yellow all over ; is at present too fleshy ; a very neat animal, clean boned, with silky hair—a remarkably rich milker, but largely under average in quantity.

“ Esmeralda ” is a seven year old Devon, and heavy as an average Short Horn. This cow cannot be kept in moderate flesh, and at the same time save our reputation for kindness. Of the light Devon shade and Short Horn in form, she is a very moderate milker in quantity.

“ Ruddle,” another Devon, five years old, is a very different cast from the other—having neither the flesh nor form, but more leggy, more irregular, and without much appearance of milk.

“ Bertie ” and “ Jem ” are three year old Galloways, averaging 1,350 lbs. Good judges place them well up, and for milking appearance they compare favourably with the average of other kinds.

“ Ruth ” and “ Goldleaf ” are Guernseys, three and four years old : their stamp reminds one of a cross between Ayrshire and Jersey—both in size, colour and form. Goldleaf is actually yellow from hoof to horn, with all the surface mirroring and irregular outline that delights the dairyman.

“ Verapina.”—This is a medium sized Holstein, three years old, and, as with her kind at the age, is lanky and leggy. She possesses a beautiful skin, a well balanced udder and good barrel, nevertheless. Weight, 900 lbs.

“ Beauty o’ the Mill ” may be described as a Jersey that pokes her nose into everybody’s pocket—an uneducated pet. With such a disposition we have had much pleasure in handling this cow. Cream-coloured, even, roomy, a fine skin, but with little milk mirror and medium udder.

“ Grannie ” is an old 950 lb. grade that evidently has had nothing to do with any blood other than the roadside chance : and yet her handling quality is short of nothing in our experience.

“ Mack ” and “ Flower ” are five year old Quebec grades averaging 840 lbs. These cattle are not without character, in appearance as well as milk. The unusual dwarfing of the quarters of Mack, and the beautifully developed udder and veins of Flower, are well-known features in our herd.

“ Mademoiselle ” is the seven year Short Horn that we could hardly purchase in Scotland last year. A light roan, deep, round, broad, full, and almost faultless : she holds the delicate head, neck, and forequarters of a milker, and yet all over, the character and frame to make and hold beef.

“ Little Taylor ” is an undersized nine year old Short Horn grade, compact and neat.

3. WHAT REGULATES MILK.

I take the risk of placing in systematic order, and under valuation, those agencies that, to the intelligent farmer, seem to regulate or influence cows in producing milk. That our opinion will not agree with others is certain, but that it will help us to understand some of the experiments to be submitted in this report, is the principal object.

AGENCIES THAT GOVERN THE PRODUCTION OF MILK.

	Quantity. Per cent.	Quality. Per cent.	Quantity and Quality Combined.
1. Breed.....	20	45	32½
2. Food.....	30	20	25
3. Individual Merit.....	15	10	12½
4. Management.....	15	8	12
5. Time after calving.....	12½	12	12½
6. Age of Animal.....	7½	5	7½
	100	100	100

The sources of milk—what is called *particular breeds*—among cattle may be taken as the first general idea; it is unquestionably the prime regulator of quality, if not also of quantity, and together they give breed a valuation of thirty-two per cent. It cannot be said, however, that breed regulates quantity more than food, for though it does so in some individuals that are typically strong or weak, as the case may be, the fact of food influencing quantity more than breed is now acknowledged. We say, then, that breed demands fully one-third of all that goes to produce milk.

In the second place, I am of opinion that food claims fully one-fifth of this position—taking its greatest direction in quantity, and a somewhat less one in quality; of course appropriate food is implied in this valuation as against what is known to be poor for such a purpose.

What is called “Individual Merit,” or the average goodness of a cow in her class, takes third-class as a point in estimating milk value, amounting to one-eighth of the whole. The world has been so much treated, of late, to one cow records, that some people will object to the middle place I give this, but reflection as to the average individual of any breed cannot ask for more, and no doubt individual merit has more to do with the quantity than the quality of the product.

The fourth place is given to time after calving. This agent is naturally a strong one, and as yet, in our knowledge of variety of sources, it is uncertain whether quantity or quality has the stronger hold upon it: meantime quantity is given the higher value. It is possible that no influence is so unerring in its regularity as this, and yet, by reason of associations, cannot be allowed more value than individual merit.

Among the agencies are two, that, so to speak, are in our hands for better or for worse, namely, food and management; not overlooking the fact of breeding as partly ours also. Management, as the fifth in order of importance, may be safely placed at an average of ten per cent., and telling much more on quantity than quality; management means—system, favourable surroundings, along with kindness and half a dozen other things.

Then, in the sixth place, the valuation is closed by the very indefinite agent—age, which at seven and one-half per cent. is probably more proportionately than experience has indicated. It is one of the things of the future as to whether age affects quantity or quality most, but in waiting for light I have made it stronger on the former.

In checking, or hearing any criticisms on this subject, the public will remember to allow for:—Individual herd experience, partiality to a breed, physical influences, and high or low pressure management.

This chapter is written without reference to any facts exhibited by the following tests.

4. THE MAINTENANCE OF CHARACTER IN DAIRY PRODUCTS.

A feature in the manufacture of butter and cheese, either not known or undervalued, is the maintenance of its *character*. We prosecute the business with every respect to profits by securing the quantity and also the quality as generally understood; but quality is more usually looked upon as the result of manipulation, and though it is known that the particular condition of the cow is an element of some value, this value is neither properly appreciated nor systematically arranged for.

The *character* of butter and cheese is that full natural rich flavour, odour, colour, and texture always obtained from milk, whatever its source, when nature is prepared to support herself best. All the constituents of milk being thus at their maximum during early calf growth, we have the *character*.

The best butter and cheese must have this character, and hence must have new milk; no other arrangement can possibly secure it. Take the case of butter—remembering that good cream makes good butter at any season; whether home make or factory make, it ought to be part of the system to breed cows to calve every month, and as one gallon of new milk gives character to twelve gallons that do not possess it, the number of incoming cows at any time need not exceed that proportion.

Let dairymen understand that this question is no unimportant one, but one of the prime regulators of market value.

5. THE TESTING OF NEWLY-CALVED COWS OF THE FOUR PROMINENT DAIRY BREEDS.

It has often been said by some of our writers and dairymen that this farm should be put in possession of the best possible couple, or trio, of cows of the principal milking breeds, for the purpose of making a two or three year test of their respective merits—all so well balanced according to their kind, and so exactly managed alike as should command the confidence of the country. I consider the suggestion a good one—and am prepared to help at any time. Subject to some such systematic and thorough experiment, I have, at the same time, every confidence in placing, as the next best thing in our hands, the record of any breed against another, that, by age, and calving particularly, give us opportunity for reliable work. Among the animals imported last year are several young cows of all our breeds, and I am glad to say that the equality of conditions were, last fall, so favourable as to induce a systematic testing of their milk, cream, butter and cheese. The cows were set aside on 1st February, and every day since, each milking has been weighed, the percentage of cream ascertained by various methods, and butter and cheese made at intervals. It is proposed to continue this throughout the summer, and indeed part of the summer results form part of this report.

The age, weight, and time of last calving are given in the tables hereto, but their general type as milkers can be ascertained only by inspection. The public will understand that there has been no desire to choose, necessarily, an “extraordinary” cow of any of the breeds, nor would we have anything to do, in any case, with a poor specimen of them. The three cows of this chapter are good of their kind, and being all from their first calf, the contest may be taken as a very fair one indeed.

First, then, as to the winter competition:—

CONTEST IN WINTER MILKING OF THREE COWS OF PROMINENT DAIRY BREEDS.

BREED.	Name.	Age.	Calved.	Weight.	Feb. Milk.	March Milk.	April Milk.	Mean Daily.
				lbs.	lbs.	lbs.	lbs.	lbs.
Ayrshire	Sensation	4	January, 1885.	1150	21	22	17	20
Holstein	Verapina	3	January, 1885.	900	22	22½	21	22
Jersey	Beauty of the Mill..	3	February, 1885	830	15½	21	18	18

The first glance at this table tells of an uniform milk produce that would not be expected by even those not well up in characteristic of breeds. Twenty pounds, or a little over two gallons of milk per head per day, is certainly not poor for winter, and is over the average of Ontario factory records for summer, but the quantity is not unusual considering the sources—particularly if Ayrshire and Holstein records be all true. Indeed the reflection is decidedly in favour of the Jersey, with its 18 lbs., as against the others with 20 and 22,—Ayrshire and Holstein respectively. Of course we are not forgetting that they were all heifers last year, and that summer may tell another story. What at present about the character of the milk in winter?

BREED.	Cream per cent.	Butter, from 100 lbs. Cream.	Cheese Curd, from 100 lbs. Milk, less 10 per cent.
	Deep Setting at 40°.	lbs.	lbs.
Ayrshire	12.81	37½	13½
Holstein	11.68	30¾	10½
Jersey	18.52	43½	14

These represent as many as 134 separate tests in cream, 12 in butter, and 12 in cheese, distributed over the period from January to May. There is a distinct correspondence in the per cent. of cream with the amount of butter obtained, and while it may be said that none of the cream is high according to sources, the per cent. of butter is decidedly above the average, and may indicate a higher specific gravity of cream, because of winter conditions, than is usually got from pasture. The highest individual churning was 50 lbs. per 100 lbs. of cream from Jersey, and the lowest 17½ lbs. from the Ayrshire. The cheese curd was thoroughly dried, and I may observe here that, in all our tests for cheese during the last nine years at this station, the proportion is always considerably more than the usual factory returns throughout the Province. Even allowing for any waste, and general rough management at cheese factories, as against our more accurate work, there would still be a large margin. Do we get more milk solids in winter than in summer? The cream is more than, and of course helps the cheese record, but there are other solids that go to make cheese.

It will be interesting to examine the summer character of these milks, in comparison with winter, and then our notes will also be more full.

SUMMER MILKING OF THREE COWS OF PROMINENT DAIRY BREEDS.

May and June, 1885.

BREED.	Age.	Calved.	In Calf again.	Milk Average per day.	Per cent. of Cream.	Butter from 100lbs. Cream.	Cheese Curd per 100 lbs. Milk, less 10 p.c.
		1885.		lbs.			
Ayrshire	4	January ..	April	15	14.7	49.3	15.7
Holstein	3	January ..	March ...	21	8.8	31.0	12.3
Jersey	3	February .	April	22	14.2	61.0	17.3
				20	12.6	47.	15.

It is not true, then, that winter milk is richer than summer, even though showing nearly two per cent. more cream by bulk. This summer table is from the same cows, and hence makes a valuable comparison as to effects of seasons and food. The milk quantity remains unchanged from winter to summer—a feature in this testing that must be accounted for partly by time from calving, the effect of change perhaps, and the being again in calf. As regards cream quantity, there is all over nearly two per cent. less in summer, but there was obtained in May and June no less than 10 lbs. more butter from the same weight of cream than in winter—from 37 to 47 lbs. on an average. In cheese the difference is equally striking, from 12.2 in winter to 15 lbs. per 100 lbs. of milk in summer.

The conduct of cows individually is worth noting. The Ayrshire increased very prominently in cream, butter and cheese proportions from winter to summer, the only one to increase her cream percentage indeed, though the milk quantity was reduced, as explained elsewhere. That the Holstein decreased in cream from 11.68 to 8.8, and yet held almost exactly to butter yield, may appear a contradiction. Why did not the summer milk give an equal proportion of cream? But, the Jersey not only gave four per cent. less cream proportion in summer, she actually gave 18 lbs. more butter in summer from the 100 lbs. of cream, and 30 lbs. more from her cream than the Holstein did!—facts all through that point to the necessity of further inquiry as to animals, food and seasons.

6. DAIRY PRODUCTS FROM ENSILAGE AND TURNIP-FED COWS.

PER HEAD PER DAY.

	ENSILAGE.			TURNIPS.		
	Milk.	Cream.	Butter.	Milk.	Cream.	Butter.
	lbs.	per cent.	lbs. per 100 lbs. Cream.	lbs.	per cent.	lbs. per 100 lbs. Cream.
November	25	11	....	23½	7½	....
December	24½	8	38½	39	7½	39
January	33	8	44	26	8½	40
February	29	12½	....	27	12½	....
Means	28	9½	41	29	9	39½

DAIRY PRODUCTS FROM ENSILAGE AND TURNIP-FED COWS.

For the third time we have placed ensilaged corn against turnips in the production of milk in quantity and quality. The plan from 1884-85 was similar to others by setting aside four cows as equally matched as possible in regard to kind, size, time after calving, and apparent milking properties—two on ensilage and two on turnips,—alternating each pair every month, so that any condition, for or against, was met by alternating. At time of exchange, seven days were allowed for the new food to over-influence the old before testing reopened. The experiment began on the 19th November, and was closed on 2nd March last.

The average daily consumption of food per head in each case was :—

Ensilage—30 lbs.; hay, 9 lbs.; and bran, 13 lbs.

Turnips—30 lbs.; hay, 9 lbs.; and bran, 13 lbs.

The case was therefore equal weights of ensilage and turnips, and equal weights of hay and bran. It is then only necessary now to submit the results.

WEIGHT OF COWS UNDER THIS EXPERIMENT.

	Average weight on Entry.	Average weight at Finish.	Difference.
Ensilage	1187	1207	20
Turnips	1185	1192	7

This statement has one very prominent feature—uniformity of averages in all the three products, and there was not even any large difference any month.

Then also, the weight of the cows on entry and closing of each of the terms shews no practical difference, so that all over we are to gather up some points of real value.

That this preserved, short cut, green corn fodder has, weight for weight, been equal to turnips in the production of dairy products, demands some thought, for prejudice is still strong against this new form of winter green fodder. A fleshy bulb like turnips is, of course, a very different fodder to the stalk and leaves of one of the cereals, as corn, and hence it can be said of such an ensilaged plant that it is more likely to meet the wants of animal sustenance and produce, than a bulb having about 90 per cent. of water in its composition. Much, however, of the object of a green fodder in winter is to keep animals in a natural condition, not necessarily for much feeding value, but if feeding value can be combined with the green condition, then two objects are attained. Now, while I am an unflinching advocate of a root division in the rotation of every farm, for objects absolutely indispensable to first-class agriculture, I am prepared to accept ensilage if, as a crop, it can do the same thing. We require a change of crop, a cultivated crop, a deep-rooting crop, a crop that lives upon the subsoil and atmosphere, and a crop at all times sweet and good for food. Corn, and I speak of it now only because it is the standard of this country, cannot possibly take the place of roots in a division of cropping, for its whole character and requirements differ so essentially that neither fallowing nor soil relief could be brought about by its substitution for roots. I am not prepared at present to allow for both crops on a farm, as may be advanced by those who argue for variety, as a safer investment, until it is shown that both—place as a crop and crop value—are as good with corn fodder as with roots. With reference to food value, it cannot be shown that ensilaged corn fodder is either so natural, so palatable, or really of more value for any class of animals, as turnips and mangolds; animals will not eat so much of the one as of the other, nor can

corn stalks and leaves be possibly kept sweet: there is no such thing as sweet ensilage, and the writer has examined within the last three years silos in the States, in Canada, and in England. Then also, ensilage cannot be fed alone as roots can, nor even as hay,—it must be treated with some form of grain, or mixed with dry fodder such as hay.

I therefore respectfully submit to the farmers of Ontario that unless a majority of them desire to prosecute the enquiry in a different line to what we have done here, or should the Government desire to keep it up as a matter of interest, we do not propose continuing "Ensilage Experimentation."

7. CREAM AS OBTAINED BY DEEP SETTING UNDER TWO TEMPERATURES.

DURING WINTER.

It is not my purpose meantime to discuss all the conditions that go to make the best cream that makes the best butter—whether they be breed, food management, and the particular management of the milk to give the desired cream, as I wish in this chapter to obtain the greatest amount of cream from a given quantity of milk.

SOURCES.	Deep Setting at 40°.	Deep Setting at 60°.	Difference.
Jersey	19.2	11.2	8.0
Ayrshire	18.7	9.5	9.2
Short Horn	17.8	11.4	6.4
Short Horn Grade.....	15.6	12.8	2.8
Aberdeen Poll.....	12.7	8.4	4.3
Galloway	11.8	6.2	5.6
Holstein	10.0	1.9	8.1
Means	15.1	8.8	6.3

We did not think it necessary to wander over all the fields of depths of milk, but sufficient to confine the enquiry to what is most likely to benefit the factory system. The cans for this purpose are twenty inches deep and eight and one-half in diameter—the standard, at present, in which two inches of cream, on an average, give one pound of butter. Confining ourselves to this, and the corresponding test tubes, our winter work began on 26th November, and closed for that term on 1st May last. Our Experimental Dairy is heated by an underground stove, sending hot water to radiators, which are easily regulated. The temperature of the room was held at 60°, day and night. Here, then, we have taken, for the purpose of this chapter alone, no fewer than 750 separate tests. All milk was allowed to stand twenty-four hours before creaming.

It will be observed, first of all, that for a temperature of 60°, we had simply to use the room as it stood on an average—which was rarely below 55°, and never over 65°. In that case, the milk, coming from the stables at about 85°, was at once strained into the large glass test tubes and allowed to remain the prescribed time. There was then a falling temperature of 20° to 25°, and the milk usually came to 60° on an average of three hours. On the other hand, for a temperature of 40° we had to use water and ice. When

the milk was brought in, the tubes were immediately filled, allowed to stand in the room temperature for two hours; during the second two hours they were placed in water at a temperature of 50° , and afterwards were set in iced water that was held at an average temperature of 40° . These gradual steps were adopted upon the well-known fact that cream rises best *during* a falling temperature, so that it is of primary importance to give time, instead of plunging at once into the lower temperature. During the four hours thus arranged before getting to 40° , very much of the cream settled, and usually the reading of percentage of cream could be made before the end of six hours, and nearly all came up in eight hours. I think it well to be precise in describing the two methods, for, while some know what 60° and 40° mean, very many do not, and, besides, the results are so wide apart as to demand attention. The point accordingly is the really extraordinary difference of volume or bulk of cream in favor of 40° ; that, on an average of seven sources of milk, varying in condition, influenced by breed, and the other conditions, there should be such a range from 1.9 to 19.2 seemed almost beyond belief. Why is it so? Not food nor difference of management, nor temperature, but difference of source and the individual circumstances of the source. In the case of 60° , we have the range of 1.9 per cent. in that of the Holstein, up to 12.8 in that of the Short Horn grade. A mean of 8.8 from 60° , is not more than two and one-half per cent. more than the difference between the mean of the 60° and the 40° , which, as shown by the table, amounts to 6.3. It will be observed that deep setting at 60° has told best with the Short Horn Grade, for when submitted to 40° it only gave 2.8 per cent. more cream, and the other extreme is the Ayrshire, which debits 60° with actually as much as 9.2, or within three decimals of double; these figures are more than interesting—they should be of much practical value, for although generally known among experts, the experts themselves have never had the appliances we have for variety of proof. It may seem to some as either abnormal or otherwise doubtful, that the Holstein, by giving only 1.9 per cent. at 60° , should actually send up ten per cent. at 40° , but the table says that in the example of Jersey and Ayrshire there is as much *difference*, though starting from very different percentages. We know the general meaning of dead or heavy milk, and that milk that is “stiff” at parting with its cream is invariably fairly rich, but few know that as much as *double* can be got from it by the very same method with a lower temperature.

I ask the attention of the Province, at this early stage of our inquiries, to this subject, in order that, when making our next tour at Farmers' Institutes, suggestions may be submitted, and possibly a fuller line of work acted upon.

CREAM AS OBTAINED BY DEEP SETTING IN TWO TEMPERATURES DURING SUMMER.

SOURCES.	Deep Setting at 40° .	Deep Setting at 60° .	Difference.
Jersey	26.0	16.1	3.9
Ayrshire.....	18.8	15.5	3.3
Short Horn Grade	18.0	13.8	4.2
Short Horn	16.8	12.9	3.9
Guernsey	16.2	11.1	5.1
Quebec Grade.....	14.0	11.5	2.5
Holstein	13.8	8.5	5.3
Devon	11.7	7.5	4.2
Mean.....	16.2	12.1	4.1

During summer we had three more breeds to handle in this line of enquiry than for winter, and dropping out the Aberdeen Poll and Galloway as of less importance to the dairy interest. The Jersey, Ayrshire, and the two Short Horn sources, and Holstein, have kept their relative positions, the Short Horns only exchanging. Taking these to compare with winter results, there is only an increase of 6 per cent. more cream in summer by setting at 40°, but the large difference of 3·5 per cent. more during summer at 60° than the same in winter—a fact attributable, no doubt, to better rising conditions according to season.

The new sources called Guernsey, and Quebec Grade, have stepped in between the Holstein and Short Horn with an average of 15 per cent. at 40°, and 11·3 at 60°, so that Holland with us is still low, and that it is above the Devon—a fresh, newly calved five-year old—is even surprising under the other facts of both breeds. The Holstein still holds back more cream at 60° than any other, the Guernsey being about equal, with 5·1 per cent. We must congratulate Quebec on possessing a liberal and free character of milk through her common cattle, which are said to be not a little touched with Jersey. The three cows now in full milk here have given 14 per cent. of cream at 40°, and as much as 11·5 at 60°—the least of all in difference.

8.—THE CENTRIFUGAL SEPARATION OF CREAM FROM MILK OF TEN DIFFERENT BREEDS, IN COMPARISON WITH DEEP SETTING.

It is usually—not always—desirable to obtain *all* the cream from milk, whether for immediate sale, or to be changed into butter. In no case can cream be removed, as a pure oil, unaccompanied by any other material, and in any case about one-eighth of the volume of the globules remain in the milk. I do not know that it is possible to name all the influences that regulate the rising, or removal otherwise, of cream from milk, but generally they may be given as

Breed.
Season of the year.
Time after calving.
Mode of removal.
Temperature.

There may be—or come to be—an arrangement by which the butter globules are passed through some medium, liquid possibly, which would free them of all milk proper. I am not advising this necessarily for economy, or even for the production of a better article; because, as is well-known, a certain proportion of milk with the cream is liked for the sake of easy and better churning, but I note the point now as one of interest in connection with the removal of cream by machinery.

We possess a Fjord Centrifugal Tester with which twelve kinds of varieties of milk can be handled at the same time. It is driven by a side belt from the portable engine at a revolution of 1,200 per minute, and, as by the instructions, 40,000 revolutions are required to complete the separation, we have allowed from 32 to 35 minutes, according to circumstances. The size of the machine, its peculiar construction with the graduated bottles, mixing the milk with water at a certain temperature, etc., are matters of much interest, but unnecessary in these advance sheets, and those desirous of making its acquaintance should call at the Butter Factory during summer, and at the Experimental Dairy in winter. We have used it all winter and the past summer regularly, and systematically in connection with breeds and other methods of obtaining cream. The detail management of deep setting is explained in another chapter, and is applicable to this section of the work. I propose now to submit its work, and make some very interesting comparisons.

DURING WINTER.

From Short Horn Source.

Take the milk of the Short Horn first. By deep setting in a steady temperature of 60° we obtained 11.4 per cent. of cream from this source, and by deep setting and cooling down to 40°, 17.8 per cent. was got from the same milkings. We thus got a mean of 14.6 per cent. of cream by two methods of setting, or rather from two temperatures by the same method.

Now, the centrifugal took 15 per cent. from the whole series of Short Horn's milk; this, all over, is nearly an increase of one-half per cent., and three and one-half per cent. more than by deep setting at 60°; but, in comparison with deep setting or cooling with ice to 40°, is not so good by nearly three per cent. (2.8.)

It is not my present purpose to comment upon the extraordinary difference in per cent. of cream obtained by the two temperatures, as it forms subject for another chapter, and what we have to say on the whole aspect of centrifugal separation under these conditions will best follow the account of sources.

CREAM FROM DIFFERENT SOURCES BY DEEP SETTING IN COMPARISON WITH CENTRIFUGAL SEPARATION DURING WINTER.

SOURCE.	Deep Setting at 60°.	Deep Setting at 40°.	Centrifugal.
	per cent.	per cent.	per cent.
Aberdeen Poll.....	8.4	12.7	11.6
Ayrshire.....	9.5	18.7	15.0
Devon.....	8.0	....	14.5
Galloway.....	6.2	11.8	14.6
Guernsey.....	5.0	....	7.1
Jersey.....	11.2	19.2	13.0
Holstein.....	1.9	10.0	11.9
Quebec Grade.....	8.5	....	13.7
Short Horn.....	11.4	17.8	15.0
Short Horn Grade.....	12.8	15.6	14.7
Mean.....	8.5	15.1	13.1

From Short Horn Grade Source.

This has been a very uniform record comparatively. By deep setting at 60° we got 12.8 per cent. in cream, and 15.6 per cent. on cooling with ice to 40°—all the examples having stood for twenty-four hours. The milk from the same cows, at same time, gave 14.7 per cent. of cream on being subjected to centrifugal, so that the centrifugal drove two per cent. more cream from this source than by deep setting at 60°, but one per cent. less than when the temperature was lowered to 40°, while all over the centrifugal had the advantage to the extent of one-half per cent.

From Aberdeen Poll Source.

Here, from another beefing tribe, we have 8.4 per cent. of cream by deep setting at 60°, and 12.7 per cent. by cooling the same depth to 40° in the same time; the centrifugal machine gathered 11.6 per cent. of cream. Accordingly, the machine gave fully three per cent. more than the 60° temperature, but one per cent. less than cooling to 40°: yet, all over, the centrifugal made fully one per cent. more cream.

From Galloway Source.

Another of the breeds strong in beef has made an unusual record under these cream tests. With 6.2 per cent. from deep setting at 60°, and 11.8 per cent. at 40°, it afforded no less than 14.6 per cent. of cream when submitted to the centrifugal machine. This is eight and one-half per cent. more than from the 60°, and nearly three per cent. over the 40°. We have therefore obtained five and one-half more of cream by centrifugal separation from the Galloway than from an average of the deep setting at two temperatures.

From Ayrshire Source.

The Ayrshire by deep setting at 60° gave 9.5 per cent. of cream, and actually 18.7 per cent. when lowered to a temperature of 40°—a mean of 14.1 from the two. The centrifugal tester separated 15 per cent. of cream from the same source, which is therefore one per cent. more than the setting at 60°, but 3.7 per cent. less than that at 40°. All over the centrifugal made one per cent. more cream than the mean of the two settings.

From Holstein Source.

Even in these notes of simple facts it is difficult to hold comment from the comparatively unusual conduct of Holstein milk. Only 1.9 per cent.—say 2 per cent. of cream, as marked at least by the naked eye, from deep setting at a temperature of 60°—as much as 10.0 per cent. at 40°, and 11.9 per cent. under the centrifugal machine. Meantime, take the memoranda that at 40° we got eight per cent. more cream than at 60°, that the centrifugal drove ten per cent. more cream from the milk than deep setting at 60°, and two per cent. more than setting at 40°, and thus six per cent. more than the average of both settings.

From Devon Source.

This gave 8.0 per cent. of cream by deep setting at 60°, and 14.5 when submitted to the machine, and thus, meantime, six and one-half per cent. in favour of the centrifugal.

From Guernsey Source.

At the time we had two Guernseys in milk arrangements for cooling to 40° with ice were not completed, and hence, for winter, we have no comparisons to make in this respect, nor also with the Devon and Quebec grade. The Guernsey gave 5 per cent. cream from deep setting at 60°, and 7.1 per cent. by centrifugal, so that the machine gave fully two per cent. more than the other.

From Quebec Grade Source.

This possibly high graded Jersey or Guernsey, recorded 8.5 per cent. of cream by deep setting in a temperature of 60°, and 13.7 per cent. by the centrifugal tester; the difference is five per cent. in favour of the machine.

From Jersey Source.

In winter—a condition in many respects favourable to milk quality—the Jersey threw up 11.2 per cent. of its cream when set deep and held at a temperature of 60°, but when subjected to 40° it gave 19.2 per cent. or eight per cent. more. The centrifugal made 13.0 per cent. which is fully two per cent. more than setting at 60°, but six per cent. less than setting at 40°, and more than two per cent. less than a mean of the two settings.

RECAPITULATION AND CRITICISM.

As many of our readers will naturally think of the more common or summer conditions of obtaining milk, I beg first of all to remind them that the facts handled in the first part of this chapter were all obtained from 16th Dec. to 1st May, and consequently, under the more unnatural milk conditions. The point here is not so much the particular conditions that made the milk, as the power of the centrifugal machine in separating its cream, in comparison with other methods. Then, also, I must guard the patrons of any special breeds of cattle from necessarily drawing conclusions one way or the other without a very exact knowledge of the particular individual cow or cows, and the other regulators of milk; these are given elsewhere. And, also, it is a point of paramount importance to remember that we have yet to ascertain the exact *value* or butter produce from each of the methods, and to what extent the one, more or less than the other, takes milk with the cream, for undoubtedly the quality and keeping proportions of butter are affected by the purity of the cream. Under the proper head I shall ask attention to these as well as the quantity of butter proportionately to cream bulk. (See Chapter 23.)

Through ten distinct sources, or breeds of cattle, from December to May—entailing some 135 separate experiments, we obtained milk that was subjected to three conditions for the removal of its cream—the object being to test the power of the centrifugal machine in doing so in comparison with the best known method, or deep setting at two different temperatures. First, we naturally look at the abstract results, and note that deep setting in an uniform temperature of 60° for twenty-four hours gave 8.5 per cent. of cream—the extremes being 1.9 and 12.8. This is not a high average, being about the same as a large number of results from twelve sources at our station from 1881 to 1883, yet it may be a fair one under the particular conditions: dry fodder with roots and grain are no doubt producers of fat, but when asked to do so in a mean outside temperature of 16° and an inside one of 40°, the very best machinery—that is cow constitution—may refuse to do the work completely; fattening cattle did so very satisfactorily under precisely similar circumstances (see Chapter 33). Yet nature, it true to herself here, would rather hold the fat than give it away, as in the form of milk or cream.

Perhaps this criticism may appear unnecessary with the fact that we obtained from the same milk, as shewn by the table, as much as 15.1 per cent. of cream when its temperature was lowered to 40° with ice. That a high percentage of cream was the result of low cooling is clear, but that it was a corresponding butter product, even in quantity, is not at all certain. However, suffice it is to say, meantime, the 20° of lower temperature did raise nearly seven per cent. more cream, which of itself is a very important practical fact, and which is discussed elsewhere in these notes. The mean of the two temperature results is 11.8 per cent. of cream, and as the centrifugal drove 13.1 per cent. off we have to submit meantime that, over all the field, the machine is entitled to one and one-tenth per cent. credit, and this is, of course, ten per cent. more than the other.

It is a matter of very considerable interest to note the conduct of the milk from some sources. The most uniform under all the testing was Short Horn Grade—giving liberally everywhere, a condition evidencing possibly large size, and evenness of size, of butter globules, as well as a more watery milk, which alone can be told by chemical analysis—see chapters 9-10. The extreme to the Short Horn Grade in this milk conduct is that of the Holstein. I may remove much misconception of our winter facts in this particular source by saying that we submitted the skimmed milk of the Holstein, from which 1.9 per cent. of cream had been removed, to the centrifugal machine, and obtained actually

5 per cent. more cream from it,—strong evidence of two things: the dead or heavy, yet fairly rich milk of the Holstein in this case, and the reliability of centrifugal separation, for it even took two per cent. more away, after deep setting at 40° had removed ten per cent. Jersey skimmed milk that had given 14.7 per cent. of cream would only yield two per cent. more under the centrifugal, so that there is clearly “milk and milk.”

Another example from these tests is with reference to Galloway milk. Years ago we advanced some facts in regard to Galloway milk being heavy, and even now the facts are gathering, for in comparison with others—the Holstein excepted—it has given a greater result between the deep setting at 60° on the one hand and a mean of the other two methods. The mean of these two is double that of the other.

But even the Jersey requires a little pressing to submit all its richness; on this and other characteristics of milk we have checks from summer conditions.

NOTE.—All the foregoing percentages of cream for *centrifugal* separation are subject to an explanation as indicated in chapter 23 herewith, entitled “The Possibilities of the Centrifugal Separator.”

DURING SUMMER.

CREAM FROM DIFFERENT SOURCES BY DEEP SETTING IN COMPARISON WITH CENTRIFUGAL SEPARATION DURING SUMMER.

SOURCE.	Deep Setting at 60°.	Deep Setting at 40°.	Centrifugal.
Ayrshire.....	15.5	18.8	13.1
Devon.....	7.5	11.7	9.0
Guernsey.....	11.1	16.2	9.4
Jersey.....	16.1	20.0	13.3
Holstein.....	8.5	13.8	10.0
Quebec Grade.....	11.5	14.0	9.1
Short Horn.....	12.9	16.8	11.5
Short Horn Grade.....	13.8	18.0	11.6
	12.1	16.2	11.0

The first glance at the summer table, in comparison with the winter one, shows—allowing for the absence of the Aberdeen Poll and Galloway—a large difference in the per cent. of cream by deep setting at 60° in favour of summer, as well as a little at 40°,—by both temperatures as much as a mean of 2.5 per cent.; that, on the other hand, there is fully 2 per cent. less under the centrifugal in summer, so that all over the total average of cream is just 2.5 per cent. in favour of summer. The fact of the centrifugal not getting more than 11 per cent. in summer, a quantity less even than from deep setting at 60°, is evidence of a thinner condition of milk from pasture, no heavy milk, comparatively, and therefore less work for machinery to do: we may thus indicate that the use of the centrifugal separator may be more important in winter than in summer.

Whatever may be the cause, we now get the Holstein to yield 5 per cent. more cream in summer than in winter evidently more free being, of which we have also evidence in the butter produce. The Jersey again leads in every example, with close quarters from the Ayrshire and Short Horn Grade. If there were such a thing desirable as a poor man's milk in the sense of giving least trouble to secure the most cream at 60°, the Jersey and Ayrshire have led at 16 per cent.

9. THE CHEMICAL ANALYSIS OF WINTER MILK.

We often hear the remark that no test is equal to the churn ; this is true within the appliances of the practical dairyman. When it takes but eight hours to make the most thorough chemical analysis of milk as regards its proportion of water, fat and other solids, and as the operation is within the means and the skill of average men I see no reason why, in the future of dairying, the testing laboratory should not form a corner in every advanced factory. The system and beautiful accuracy of chemical analysis are being abundantly evidenced every week at our station by Dr. Hare, assisted by Mr. Shuttleworth. These gentlemen have so thoroughly and cordially co-operated with me in this work, that I ask these few lines of thanks to them ; and I know that Dr. Hare joins me in a special notice of Mr. Shuttleworth, whose devotion night and day to his duties calls for unqualified praise.*

Well, then, our milks are now in the hands of an unerring judge—the chemist—what has he said ? Study first the abstract results.

CHEMICAL ANALYSIS OF WINTER MILK.

(*Mean of several tests.*)

SOURCE OF MILK IN ORDER OF FATNESS.	Water.	Fat.	Solids other than Fat.	Total Solids.
	per cent.	per cent.	per cent.	per cent.
Jersey	84.55	7.35	8.10	15.45
Short Horn	85.17	5.63	9.20	14.83
Ontario Grade	86.75	4.65	8.60	13.25
Ayrshire	88.20	4.60	7.20	11.80
Devon	86.70	4.45	8.85	13.30
Short Horn Grade	87.40	4.40	8.20	12.60
Galloway	85.72	4.38	9.90	14.28
Quebec Grade	87.20	4.00	8.80	12.80
Holstein	87.45	3.55	9.00	12.55
Aberdeen Poll	88.43	2.87	8.70	10.80
Mean	86.77	4.58	8.65	13.16
Extremely rich milk, Britain	83.30	7.62	8.48	16.10
Extremely poor milk, Britain	90.20	1.90	7.90	10.80
British mean	87.25	3.50	9.25	12.75

That milk upon an average is made up of fully $86\frac{3}{4}$ per cent. of water most people know, though our best testers have great difficulty in recognizing when milk is adulterated with one gallon of water to ten of pure milk ; the extremes of percentage of water

* Since this was written for the Midsummer Report, Dr. Hare has gone to his long home. A more enthusiastic, careful, unselfish and gentlemanly chemist may not be found. We miss him very much indeed.

in winter with us have been 88.43 in the case of the Aberdeen Poll, and 84.55 in that of the Jersey: four per cent. thus, more or less water, means clearly a very different proportion of the other things in milk, and on an average amount to $8\frac{2}{3}$ per cent.—the extremes being 9.90 in the case of the Galloway and 8.10 per cent. in that of the Jersey; the extreme individual analysis occurred also with Galloway milk, and amounted to 10.9—the very lowest being 5.9 from an Ayrshire.

Solids, other than fat, are the sugar and salts, which are given together in the fourth column of the table. Water should be less in winter than in summer, because of the character of the food; the greatest extreme in any individual analysis was from an Ayrshire, which gave actually 90. per cent of water—a quantity looked upon as belonging to succulent herbage early in summer. In this individual example the fat was as much as 4.10, but other solids only 5.90 per cent. The least proportion of water was obtained from one of the samples of Short Horn, being 83.70, and as it had fat as high as 6.40 the result was, of course, also a large percentage of other solids—9.90. Fat, or cream largely, is the principal item we are in search of, and I have given the table of sources in the order from greatest to least fat; these are very interesting and, as we take them to be the base of all the other constituents of milk, some special criticism will not be out of place.

The least fat, or 2.4 per cent., got during winter was from the Aberdeen Poll—two cows, one three weeks after calving and the other six months, so that the conditions were, all over, favourable enough, and the greatest proportion of fat obtained from any source was 7.5 in a Jersey. Between these extremes the field is a curious one. I desire to place on record, to the credit of our chemists, that the uniformity of the analyses by breeds or sources came out very prettily. In nearly all the work from the ten sources, sent to the Laboratory by *numbers*, reports came back so defined by percentages that they looked like the production of an artist who had made the likeness of each of the cows; the exception to this rule was in the case of the Short Horn—from 4.8 to 6.4 of fat,—two days intervening between the analysis of milk from the same animal, but all other influencing conditions, so far as we knew, being equal; in no other case did we receive even one per cent. difference in the fat, so that in addition to the chemical accuracy the facts point to uniform conditions throughout—even to the machine called the cow.

That one breed should give only 2.87 per cent. of fat and another as high as 7.35 seems almost wonderful. The whole position is unmistakably one of breeds—not food, nor individual cow merit, nor time after calving, nor age, nor management. The first natural inclination is to classifying the sources, and endeavour to fix the production of fat according to what we think by long use is the characteristic of the source—that is, whether a beef-maker, a milk-maker, or a combination of both; or possibly some may be inclined to examine with the eye of a butter-maker or a cheese-maker.

As a matter of interest, then, bring the well-known beefers and milkers together.

MILK FROM BEEFING BREEDS OF CATTLE IN WINTER.

SOURCE.	Water per cent.	Fat per cent.	Solids other than Fat.	Total Solids.
Short Horn.	83.17	5.63	9.20	14.83
Galloway.	85.72	4.38	9.90	14.28
Aberdeen Poll.	88.43	2.87	8.70	10.80
Mean	86.44	4.29	9.27	13.30

MILK FROM DAIRY BREEDS OF CATTLE IN WINTER.

SOURCE.	Water per cent.	Fat per cent.	Solids other than Fat.	Total Solids.
Jersey	84.55	7.35	8.10	15.45
Ayrshire	88.20	4.60	7.20	11.80
Devon	86.70	4.45	8.85	13.30
Holstein	87.45	3.35	9.00	12.55
Mean	86.77	4.94	8.29	13.27

It is to be regretted, of course, that the Hereford is not with these tests, but though possessing several good specimens they were not in milk for the purpose. Summer may help us in this particular. We are now only criticising pure breeds—not any crosses or grades.

Here are three of the well known breeds, famous for "laying on" fat. Their average production of fat through milk is 4.29 per cent., somewhat less than the average of all the sources, 4.58 per cent., and decidedly less than the mean of the dairy breeds (4.94). The Short Horn has made such a high record that possibly an individual cow had much to say, and while I claim that breed is the greater regulator, it is fair to refer to this here (See chap. on animals). Not only so, but the world is always telling us of the strong lines still tying some Short Horns with their great milking ancestors. We are, no doubt, not satisfied with the Aberdeen Poll winter record of fat, good as the sources and conditions were, for as beefers they should show a good average of cream, as evidenced in our own previous records, and still evidenced in other parts of this report.

The Galloway takes a prominent position in milk quality, and by reference to centrifugal separation and other parts of our tests these chemical analyses support the fact of its richness, though difficult to obtain the cream or fat by ordinary methods.

But, in sort of opposition to the beefing breeds, look at the combination of milk analysis from dairy breeds. Could we get rid of that mysterious living churn, the Jersey, comparison would be much more easy and natural, but on every occasion it comes up as the unchallenged of milk quality: now, though the Jersey with its 7.35 per cent. of fat—a quantity approached only—and that even at a respectful distance—by the Short Horn, it is also well up in solids, (8.10) and holds altogether as much as 15.45 of what thickens milk and makes butter and cheese. But for this breed, the dairy list herewith would make a less record of fat than the beefers. The Devon—with the Ontario Grade which we do not at present include in these comparisons—has taken that exact middle place among breeds which its conduct at home and abroad has invariably indicated. Among dairy cows it averages their chemical analyses, and is still more so when the figures of all the *pure breeds* are tabled.

Perhaps no dairy breed, and no other breed, the Galloway excepted, has so much right to walk up to the chemist and ask for fair play as the Ayrshire. The facts elsewhere in our testing say so, and here also her "watery" milk wants not for average fat, and an apparent enigma is the small per cent. of solids other than fat (7.20), which, if having much to do with the production of cheese, does not agree with the facts in this specialty.

After the Aberdeen Poll, the Holstein is lowest in butter fats of all the breeds, yet good in other solids, and hence only one per cent. more in water than the average of all

10. THE CHEMICAL ANALYSIS OF SUMMER MILK.

MEAN OF SEVERAL TESTS.

SOURCE OF MILK IN ORDER OF FATNESS.	Water per cent.	Fat per cent.	Solids other than Fat.	Total Solids.
Ayrshire	84.75	6.85	8.40	15.25
Jersey	86.15	5.89	7.96	13.85
Short Horn.....	86.85	4.35	8.80	13.15
Quebec Grade	87.10	4.15	8.75	12.90
Holstein	88.80	3.90	7.30	11.00
Devon	89.00	3.80	7.20	11.00
Short Horn Grade	87.45	3.65	8.90	12.55
Mean	87.10	4.66	8.24	12.90

An examination of the chemical analysis of summer milk is, at present, more important than the same thing in winter, and though general criticism has been given to the latter by reason of precedence in time, some is due to the other as well. We did not keep up the testing of Aberdeen Poll, Galloway and the Ontario Grade during summer; these withdrawn from the winter table, so as to compare the general average with summer, make no practical difference in water, but increase the fat from 4.58 to 4.84.

Summer conditions have therefore added only about one per cent. more water, slightly reduced the fat, and added one-half per cent. to the other solids, so that all over variety of food and physical conditions appear to have little effect in changing the constituents of milk throughout a number of sources.

The greatest change occurred with the Ayrshire, and in a manner quite unexpected in milk from any source. From winter to summer it has *reduced* its proportion of water from 88.20 to 84.75, and *increased* the fat from 4.60 to 6.85, so that in solids it has changed from 11.80 to 15.25. This unusual feature is without example, except slightly in the case of Quebec Grade and the Holstein, which have also increased their fat from winter to summer, but so little in comparison with the Ayrshire as to pass without comment. Much of the Ayrshire grazing was upon our best permanent pasture (see chapter 20), and if fretting (so as to reduce quantity of milk) and the best of summer conditions are conducive to richness of milk, the apparent irregularity may be accounted for.

11.—CREAM FROM DIFFERENT BREEDS, AND DIFFERENT CONDITIONS OF THE SAME BREED IN RELATION TO PRICES PAID TO PATRONS OF CREAMERIES.

It must be obvious to even the very tyro in dairy matters that just as there are different causes influencing the character of milk there must be corresponding results in the outcome, and therefore in the value of any of its products. In the case of cream and its purchase for butter manufacture on a large scale at factories, it becomes a matter of serious practical importance whether carried out upon the co-operative plan or managed by a private individual, that we know what cream is. At the present time cream is paid

for by the inch in a given size of can that is said to give on an average one pound of butter, or it is paid for equally co-operatively by the total result, all over the patrons, in butter manufactured; for while the churning tests are made now and again at factories from a particular route, or even an individual herd for that matter, there is not any system by which each patron is paid for his cream according to its individual butter properties. The result is an unequal and unfair value paid for cream.

To impress the facts in these cases is the object of these notes.

Beginning with an extreme example under conditions almost precisely similar as to age of cow, time after calving, and food, as well as dairy breeds, we have had 45 lbs. of butter from the Devon and 31 lbs. from the Holstein. Here is a difference of 14 lbs. of butter from 100 lbs. of cream, where the possessor of the Holstein would gain an unfair advantage, on an average, granting the equality of cream produce, to the extent of \$21 per cow per milking season from May to October—and where the creamery would also have lost or gained—the balance depending upon the one class of cows over the other. Keeping to dairy breeds—look again at the position of the Jersey and Ayrshire, which have given us respectively 44 and 37 lbs. of butter from the like weight of cream; this difference of 7 lbs. would affect financially per cow to the extent of \$10 per season.

The value of cream is then a very uncertain thing, and from the four breeds named the butter maker would be justified in paying as follows for 100 lbs. of cream:—

Devon	\$7 65
Jersey	7 48
Ayrshire	6 29
Holstein	5 27

Or, for the two inches on the common shot gun can, would be—Ayrshire being the standard:

Devon	23 cts.
Jersey	22 “
Ayrshire	17 “
Holstein	13 “

This is calculated upon the basis of cream being worth 17 cents for every pound of butter it makes.

NOTE.—The Standard of WEIGHT of Milk in the United States and Europe is now 8½ lbs. per gallon

12.—THE SIZE OF BUTTER GLOBULES IN MILK FROM TWELVE DISTINCT SOURCES.

I have been for the last two years in search of information from works on dairying as to the size of butter globules in milk of cows. In every publication of any pretensions the subject is referred to in a general way, and in a few there is an illustration. What I desired to know was if those globules differed much in size in particular breeds, and to what extent, if any, the size had to do with the whole *character* of milk. Not finding what was wanted, and willing to help others if possible, I took up the study personally during the last winter, and find I have just made an opening into an extensive and beautiful field—old as it is, may be.

It will be obvious to those acquainted with our appliances here that we are favourably circumstanced for such an enquiry, because, with all the breeds and equal conditions, some light should be gathered. From what follows it will be seen that several bearings have already developed into matters of business, which may be anticipated by saying that the size of butter globules has a direct relation to:

1. The particular breed of cattle.
2. The time after calving.
3. The food given.
4. Individual character of animal.
5. Healthy conditions.

And commercially to :

1. Proportion of butter obtained.
2. Richness and poorness of skim milk.
3. Prices paid for milk and cream.
4. Quality of buttermilk, and generally have to do with the whole stamp and character of milk whether for cheese or butter, from any source.

In examination I have used a "Zeiss" microscope, magnifying up to 670, taking sizes and proportion of small globules with specially constructed scale. Of course it is plain that a few observations would go for little in such work, but having taken as many as 221 during the past winter there is, if not a complete set, at least sufficient data to draw the inferences I have now to submit.

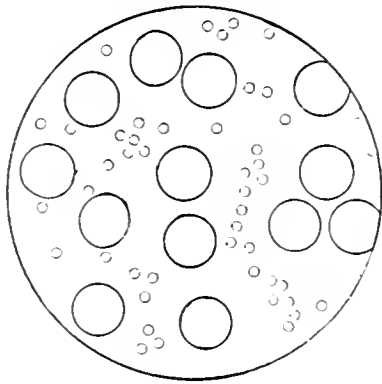
The following table of results and illustrations will help explanation.

SIZE OF BUTTER GLOBULES IN MILK OF TWELVE BREEDS OF CATTLE.

RESULT OF 221 OBSERVATIONS FROM DECEMBER, 1884, TO MAY, 1885.

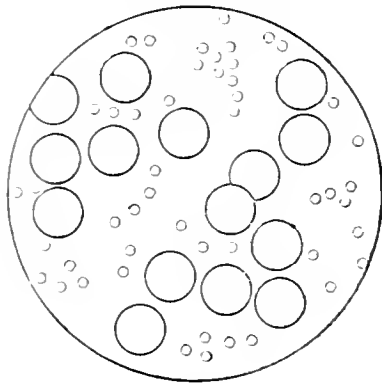
BREEDS.	Average Time after Calving.	Size of Large Globules.	Proportion of Small Globules.
	Months.		per cent.
1. Aberdeen Poll	1	1.40	.33
2. Jersey	6	1.39	.33
3. Ontario Grade	2	1.37	.33
4. Holstein	2	1.27	.50
5. Short Horn	3	1.25	.60
6. Galloway	3	1.14	.66
7. Devon	4	1.06	.33
8. Ayrshire	7	1.00	.50
9. Short Horn Grade	9	.95	.40
10. Guernsey	8	.93	.64
11. Quebec Grade	6	.78	.50
12. Hereford	8	.50	.68
Means	5	1.08	.48

HOLSTEIN



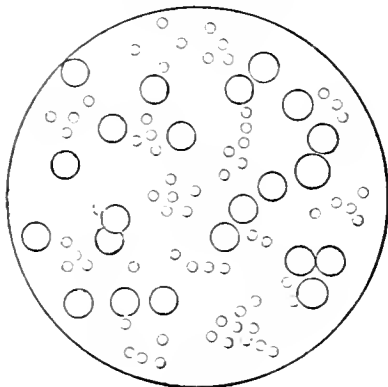
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SIZE OF BUTTER GLOBULES IN MILK

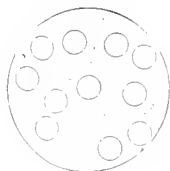
OF TWELVE BREEDS OF CATTLE

ABDN POLL



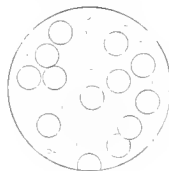
140

JERSEY



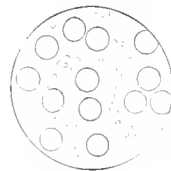
138

ONT GRADE



137

HOLSTEIN



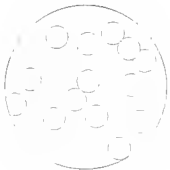
127

SHORT HORN



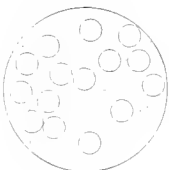
125

GALLOWAY



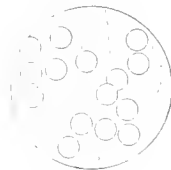
134

DEVON



106

AYRSHIRE



100

S H GRADE



95

G JERSEY



77

Q GRADE



90

HEREFORD



There being no standard to compare size with, and as the proportion of an inch when into the thousands is impossible of conception to any mind—common though the quotation be—I propose to call the size of butter globules in milk simply, 1.00 and so on, as applicable to their diameter. Now, as the milk of the Ayrshire breed is well known and has been more handled in this respect and oftener referred to in books than any other, and its size of butter globules well-known, I also propose to use it as the standard or unit (1.00), so that whatever microscope may be used the size of others relatively to it can at once be measured even by the eye without a scale or micrometer. Of course it is obvious by this method that in order to know whether the globules of any milk is more or less than the Ayrshire it would be necessary to possess the standard or 1.00. With reference to this I beg to say that after overtaking as many summer observations as the winter ones just completed, it may be well to prepare a microscopic specimen to be sold at a small price. Meantime, those who desire them can apply.

The cows from which specimens of milk were obtained are specified in chapter 2, and, as the average time since last calving forms the first column of figures in the table herewith, we have a good idea of the respective sources. In examining the table, take the standard Ayrshire with its valuation of butter globules at 1.00 and its proportion of small globules equal to one-half; above and below this, observe the variety of both sizes of globules.

The table indicates generally that size of butter globules has nothing to do with a dairy breed as against a beefing one; that nevertheless, the Short Horn and Aberdeen Poll hold a high place over the standard; that the proverbially rich Jersey and poor Holstein are equally high; yet all differing very much in proportion of small globules. We also gather that size of butter globules appears to have some connection with time after calving, as shown from Nos. 3 to 6 inclusive, and yet the two highest are just an average of the whole. It is evident, too, that the larger proportions of small globules have no connection with the largest globules—the Devon possibly being an exception in the sense of being a medium of both globules.

The illustrations are made not exactly as seen under the microscope, because there would be more variety of size, but giving one size as the *mean of the larger globules* of each, so that the eye can more readily make comparisons; the small globules are merely introduced to make the general appearance more natural, and therefore have no connection with the results tabulated.

That two beefing breeds should head and end the list may be noted as singular—the rather that the Hereford is lowest, for invariably a good beef maker is a rich milk maker. I think it is not so surprising that the Aberdeen Poll leads. Some will expect a higher place for the Devon and Quebec grades and Guernsey, and possibly extended observations may do so; the highest jump is from Hereford to Quebec grade, the least from Ontario grade to Jersey, and from Guernsey to Short Horn grade.

Why are the butter globules of some milk on an average nearly three times greater in diameter than those from another source?

I have observed what I do not find stated in works on dairying, that the butter globule is a very elastic thing; when compressed together as in the case of thick cream they give way to each other and assume a very distinct hexagon, the sides being perfectly straight, not curved, and on being relieved from pressure immediately resume their circular form. It must therefore be very harsh treatment, the worst of churning for example, that breaks the globules; and, as I have said in chapter 16, the butter globules are not broken under the best management.

13.—THE SIZE OF BUTTER GLOBULES IN RELATION TO CREAM OBTAINED BY SETTING.

This need be but a simple statement with little comment; and, first, the statement.

BREED.	Globule Size.	Cream, Mean of Deep Setting at 60° and 40°.	Fat by Chemical Analysis.
Aberdeen Poll	1.40	10.5	2.87
Jersey.....	1.38	15.2	7.35
Holstein.....	1.27	6.0	3.55
Short Horn.....	1.25	14.6	5.63
Galloway.....	1.14	9.0	4.38
Ayrshire.....	1.00	14.1	4.60
Short Horn Grade.....	.95	14.2	4.40

It would be natural reasoning to say that the larger the globules the more cream in the shortest time, because of their size floating easier and coming to the surface more rapidly. This is upon the supposition that globules are numerous, or, in other words, that the milk is rich in fat. In addition therefore to the cream obtained by a mean of deep setting in low temperatures, take also the chemical analysis of the milk. The only agreement of the three things is in the case of Jersey and Short Horn, so that the inference is that large globules do exist in "thin milk,"—example Holstein,—and that "thin milk," so called because it does not give off its cream readily—as example, the Galloway—does possess over an average proportion of fat, as well as an over-average size of butter globules.

14.—CHURNING IN RELATION TO SIZE OF BUTTER GLOBULES.

In the chapter on Judging Butter we have submitted an opinion as to the proper results of churning, and here I have pleasure in giving what must be new to most dairy-men, and not often treated of anywhere,—the old idea of temperature and ripeness of cream being the chief regulators, of free or fast time in butter-making must be most respectfully acknowledged still, but the size of globules is also no inconsiderable element in the act. During the past winter and spring we have kept an exact record of the time occupied in the churning of butter from all our sources; the churn is a common stone dash—a form we consider to be the truest in science and practice—and all conditions inside man's ken were carefully attended to at a temperature of 62°. The question now is, to what extent has size of butter globules to do with the time occupied in churning? The accompanying table is the mean of all the work referred to. As the winter is not separated from summer in this abstract, it is well to observe that the average time was twenty-five minutes in winter and thirty in summer, a fact of itself worthy of notice and not easily accounted for, unless it be that of nearness to time after calving.

BREED.	Time Churning.	Globule Size.	S = Summer. W = Winter.
	minutes.	diameter.	
Guernsey.....	10	2.00	S.
Jersey.....	17	1.64	S. W.
Ayrshire.....	22	1.45	S. W.
Devon.....	24	1.33	S. W.
Holstein.....	40	1.51	S. W.
Snort Horn.....	40	1.33	S. W.
Short Horn Grade.....	40	1.22	S. W.
	28	1.50	

The table requires little explanation. In every case but one, time and size of globules agree in a very marked manner, the short time and the large globule being inseparable. Step by step we are led up from 10 minutes with 2.00 as the globule size, to 40 minutes and a butter globule of 1.22. The exception named is that of Holstein, which, though possessing an average globule of 1.51 (the exact average being 1.50), has taken as much as 40 minutes to bring butter—the extremes being 20 and 53 minutes. Now, while the Holstein has always given a good average globule of the larger kind, it has also had much heavy cream, as clearly shown in other parts of this report, so that when any abnormal cream conditions occur it cannot be expected to act in uniformity with others.

The prosecution of this study is not only scientifically interesting but of direct practical value to our dairymen, for unquestionably it has also something to do with the ripening and keeping properties of cheese.

15.—THE QUESTION OF BUTTER-MAKING IN WINTER WITH SPECIAL REFERENCE TO CREAMERIES.

As a Province we have done nothing in the extensive manufacture of butter during winter. In the Northern States it is being introduced steadily, even with an amount of caution not usual with our neighbours in most other things. We therefore naturally look for any objections to the system; extreme frost is one as against milk particularly, though cream would be less affected; the want of the best of green fodder and cheap production may be called objections, but, on the other hand, there is the convenience and more systematic feeding and management otherwise, the richer milk, if in less quantity, the unquestionably more favourable temperature for manufacture, and particularly, farmers being able at that season to pay more attention to breeding and the care of calves.

The position of the business, commercially, in winter, is one I am not prepared to state with any certainty, though it is safe to infer that the production of a good article will no doubt command a market. My concern at present is with the farmer's side of the question: What does it mean financially to him, from November to May?

The breeding of a certain number of cows to come in October and November is already a point in management with many who have no view to its dairy value, but who desire to make better calves in connection with pure breeds and the fattening of stock. To catch the dairy with this system ought then to be their aim.

We have shown elsewhere in this report that ordinary cows calving in the fall will under moderately liberal treatment, give 25 lbs. of milk per head per day up to May, which milk threw off 10 per cent. of cream, which cream made 40 lbs. of butter from the hundred. The six months then from 1st Nov. to 1st May, being 180 days, would produce 4,500 lbs. of milk and 180 lbs. of butter. To a butter factory this would be worth \$30 at least, and therefore the farmer would receive that sum for the cream, at the same time having the sweet skim milk on hand. The food cost to produce these dairy products is given in chapter 19 herewith.

Value of 450 lbs. cream for factory	\$27 00
Value of 400 gallons skim milk	12 00
	\$39 00
Less cost of food	15 00
	\$24 00

16.—JUDGING BUTTER FROM DIFFERENT SOURCES.

We have not had an opportunity of comparing systems of judging butter either by points or with practical experts who are able to give reasons for all their opinions, and though the students and I have studied and handled a large variety for some years, our experience has necessarily been confined to small quantities and unchecked by any one. Our scale is this :

Texture (Grain)	50 per cent.
Globules	10 " "
Flavour	20 " "
Smell	10 " "
Colour	5 " "
General appearance	5 " "

100 per cent.

It is rare to find good texture with greasiness, and greasiness invariably accompanies poor keeping properties. Texture speaks of a particular source as well as proper churning and handling; flavour is rarely good without texture, and so in relation to greasiness,—flavour, as affected by food, is different from the natural aroma of butter, and may be classed with smell, and yet there is a smell that belongs to the aroma in question. Colour and general appearance are points that cannot be neglected though valued in judging at so little comparatively. Their actual value in the public market is nevertheless no inconsiderable thing; the best textures, flavour and smell will not sell butter without a taking colour and general appearance. But colour can be made, and general appearance is invariably right when texture is right.

JUDGING WINTER BUTTER FROM EIGHT SOURCES, IN ORDER OF GENERAL MERIT.

SOURCE.	Texture Grain. 50	Globules. 10	Flavour 20	Smell 10	Colour 5	Gen. App. 5	Total. value 100.
Jersey	50	7	17	8	4	4	88
Ontario Grade on Ensilage...	40	9	17	9	5	4	80
Devon	45	8	15	7	3	3	78
Holstein	35	8	15	9	4	4	76
Ontario Grade on Turnips....	38	8	10	8	4	3	68
Short Horn	30	4	14	6	2	3	60
Ayrshire	28	7	12	8	3	3	59
Aberdeen Poll.....	25	6	12	6	2	3	53

Allowance necessarily must be made for influences over which as yet we have no really *exact systematic control*—such as equal condition of milk, acidity of cream, temperature during and speed of churning, and working the butter, but as respects general good management all the samples were alike.

Properly made butter—from the receipt of the cream unto the packing—should have the greater number of its globules intact; the act of churning properly is one by which the globules are impacted and not broken—by which “like draws to like,”—a cohesion of similar particles without destruction, and which can be made to take place without agitation necessarily.

Now, while experience gives one a judgment of butter that is, or is not, in an unbroken globular state, as evidenced by its grain or texture, it is not always safe to decide as between a crisp, hard condition—as brought about by the nature of the source (breed) and good management in making,—and the real grain of full globules. The use of the microscope is best, and in the foregoing table of judging from different breeds I have given a column for “Globules,” as seen in the butter. In my opinion this should form part of all correct judgment in close competitions at exhibitions.

I had samples of all the kinds of butter named in the table exposed under equal conditions for *twelve months*, so as to note any marked differences in keeping properties. The result has been a lesson as regards pinning one’s faith to what, by such judging, would take prizes over others. The spoiling by bad colour—actual decay indeed—and smell, has overridden all notions of sequence as the following order from best to worst shows :

1. Devon.	5. Ayreshire.
2. Ontario Grade.	6. Jersey.
3. Holstein.	7. Short Horn.
4. Aberdeen Poll.	

17.—CHEESE FROM DIFFERENT BREEDS DURING WINTER AND SUMMER.

While as yet Canada has done nothing in the manufacture of cheese from November to April, and while possibly it could be shown that butter would be a more suitable dairy product in our special conditions then, as against cheese, it is a matter of considerable interest to know the condition of winter milk for such a purpose. We have for some years regularly tested varieties of milk for cheese, and the following are the results for 1884-5.

CHEESE FROM TEN BREEDS DURING WINTER. IN ORDER OF QUANTITY.

BREED.	Cheese from 100 lbs. Milk.		Total Solids by Chemical Analysis.
	Dried Curd.	Less 10 per cent. for Cheese.	
Guernsey	16	14 $\frac{1}{2}$	.....
Devon	14 $\frac{3}{4}$	13 $\frac{1}{5}$	13.30
Short Horn Grade	14 $\frac{1}{2}$	12 $\frac{8}{16}$	12.60
Jersey	14 $\frac{1}{4}$	12 $\frac{8}{16}$	15.45
Ontario Grade	14	12 $\frac{3}{8}$	13.25
Galloway	13	11 $\frac{3}{4}$	14.28
Short Horn	12 $\frac{1}{2}$	11 $\frac{1}{4}$	14.83
Ayrshire	12	10 $\frac{2}{5}$	11.80
Aberdeen Poll	11	10 $\frac{1}{16}$	10.80
Holstein	10 $\frac{1}{2}$	9 $\frac{1}{2}$	12.55
Mean	13	11 $\frac{3}{4}$	13.20

We are taught that cheese consists of,

Water.....	$\frac{1}{3}$
Fat.....	$\frac{1}{3}$
Protein and Ash.....	$\frac{1}{3}$

and not much, if any, sugar, which is another of the solids of milk. Meantime I submit the winter cheese from the Guernsey breed with caution, because for a considerable time the milk was obtained from two cows that were suckling calves, and consequently, by reason of *frequent draining*, would be richer in most things. Putting it aside and looking to the summer testing for its comparison, the first point to be noticed in the foregoing table is the very large average of *dried cheese curd* from a variety of sources. As I have elsewhere remarked, the mode of testing was alike to all kinds, and the curd was thoroughly dried before weighing; so that assuming that curd is not a ripened cheese, it remains a fact that all the kinds were treated alike, and can be fairly compared. What the difference is, if any, between cheese ready for the market and the dried curd I do not know, and meantime it will not affect our position, nor possibly would it be fair with dried curd, to deduct the usual ten per cent. for ripening a cheese, which is also given in the table.

The seemingly unusual amount—and the past year tallies with all our previous work—of 13 lbs. per hundred of milk will, no doubt, startle some factory patrons and raise the question of why summer gives only, in their experience, the old standard of 10 lbs.

It is a fact then that winter in Ontario, with the rich feeding of good clover hay, turnips, mangolds, bran and grain, in addition to quiet and non-ranging, gives a richer milk in every respect, and particularly adds to those solids that rennet converts into cheese? We need not necessarily ask for the special conditions of the cows in this generalizing, because the average condition may be taken as a safe ground to compare with summer results. On this footing, then, I ask the critic to accept of chemical evidence in justification of what rennet has said. On an average from nine breeds by several tests, Dr. Hare has shown that winter milk with us has given thirteen and one-fifth per cent. of solids—all the solids that could be obtained by the most correct chemical analysis, remember—the lowest being 10.80, and the highest 15.45. Is it not, to say the least, a somewhat remarkable fact that the proportion of cheese curd is almost exactly the same, thirteen per cent.? I am not able to point to the cause, and while I do not claim that our station has made a discovery in this respect I submit that we are the first to have the necessary variety of breeds under precisely similar conditions and management that alone can safely lead to such comparisons—and no station, private or public, has paid the like attention to these details that we have; at the same time we are aware that these tests are but a touch of what is required to a long series of them for reliable standards.

With reference to breeds, there is roughly an agreement with the chemist, and the Ontario Grade is again nearest the mean of all. The Jersey seems to bow to nothing—not even in cheese and solids in winter, for, taking an average of the rennet and chemical testing, its mean of 14.85 is considerably over all others. The Devon has rarely been second in cheese in our experience, and now again takes a lead, subject only to a fuller Guernsey record. The nearest agreement of rennet and chemist is in the case of the Ayrshire and Aberdeen Poll. The Ontario farmer will note with satisfaction the position taken by the Short Horn Grade, nor will he be displeased at that of the ordinary cow, whatever that may be. The Galloway and Short Horn are close competitors, the former leading.

CHEESE FROM DIFFERENT BREEDS DURING SUMMER.

It is not true, however, that winter milk gives more cheese than summer as the following table shows. Under deduction of the ten per cent. formerly referred to, it is seen that summer has given 14.6 lbs. of cheese from the 100 of milk, and from no source has it been so low as in winter—the lowest of summer being 11 lbs. as against winter 9½ lbs.

CHEESE FROM EIGHT BREEDS DURING SUMMER, IN ORDER OF QUANTITY.

BREED.	Cheese from 100 lbs. Milk.		Total Solids by Chemical Analysis.
	Dried Curd.	Less 10 per cent. for Cheese.	
	lbs.		
Short Horn.....	19.6	17.6	13.15
Jersey	19.4	17.5	13.85
Short Horn Grade	18.9	17.0	12.55
Ayrshire	16.9	15.2	15.25
Quebec Grade	16.9	15.2	12.90
Devon	13.2	11.8	11.00
Holstein	13.1	11.8	11.00
Guernsey.....	12.3	11.0	.....
Mean	16.7	14.6	12.81

The breeds have changed positions considerably from winter to summer; the Guernsey that stood highest, is actually at the foot of the summer list; and the Devon, that was second, is below summer average. On the other hand the Short Horn, Jersey and Short Horn Grade have stepped from average and under average up to first, second and third respectively. It would therefore be very difficult, if not almost impossible, to give as yet, in these early stages of such an extensive enquiry, anything like correct reasons for any of this going and coming in cheese among different breeds of cattle, food, and physical conditions. The chemical analysis of summer milk does not agree so closely with its corresponding cheese as winter did, and on the whole question of differences there is material for careful study in the table herewith.

18.—THE FEEDING OF CALVES ON SKIM MILK, IN CONNECTION WITH SELLING CREAM TO BUTTER FACTORIES.

This experiment was undertaken at the special suggestion of several of our stockmen. It suited our plans best to begin in winter, and hence the introduction will be more expensive than summer conditions. The period ran from November to April, when the calves were weaned; they are Short Horn Grades, one bull and one heifer, and were allowed three days with the mother before beginning skim milk. The average daily treatment consisted of two meals of skim milk; linseed boiled to a jelly and molasses and oatmeal mixed in the warmed skim milk; daily rate of milk 18 lbs., of oatmeal one teacup, of linseed meal $1\frac{1}{2}$ table spoon, of molasses $1\frac{3}{4}$ table spoon, and given quantities of clover hay. Beginning on the 12th week the calves got bran and roots with the hay.

One of the calves came nearly two months before time; was necessarily small—45 lbs. only—and did not increase in growth so much—a point, with the winter conditions, that held against the experiment. The whole position is summarised as follows:

Average results, per head, of feeding calves on skim milk, with substitutes for cream; during 150 days:—

Date of birth, 2nd November, 1884.

Weight, when calved, 72 lbs.

Skim milk consumed, 2,700 lbs.

Other food:

Oatmeal.....	41 lbs.
Linseed meal.....	14 “
Molasses.....	16 “
Hay.....	250 “
Bran.....	35 “
Roots.....	40 “

Weight of average calf at weaning = 376 lbs.

Cost of food:

Milk, skimmed.....	\$6 00
Other food, as above.....	2 82
Total cost of food.....	<u>\$8 82</u>

It appears, therefore, that an average calf of 72 lbs. at birth, getting two gallons of skim milk per day—the average of an Ontario cow by factory records—with varieties of other food as named, and kept on such for five months, will consume in value \$8.82. This is charging half the price of full milk for the skim, as shown by chapter 19 herewith, and other things at market rates. At the end of that period the average calf weighed 376 lbs.,—a daily rate of fully 2 lbs., not including birth weight, a rate therefore not large and yet fair under the circumstances. The animals were in good bloom all through, though not full fleshed, and could not be called “grand.”

The main object of the experiment was, if possible, to make a good calf at less cost—even in winter—than by giving it full rations of milk direct from the cow—selling the cream to a butter factory at 17 cents for the amount of cream that made one pound of butter. The cream thus fetched \$27.20.

Several arguments can be made from these facts. One is to ascertain the value of skim milk in calf-feeding, and is made thus:

A calf gained 304 lbs., with skim milk and other food; the food other than the milk cost \$2.82. The calf, as veal, is worth \$15, so that we received \$12.18 for the milk consumed. This is the lowest possible use of the milk. Were the calf retained for breeding, or for a store steer, its value is invariably placed at one-third more than veal price, so that in this case we find the value of the milk to be \$17.18. Then again, supposing the calf had got the whole of the full milk with the roots, bran and hay only, its production would have cost \$18.32, but by taking the cream from the milk and selling to a butter factory, and by adding concentrated foods to the milk, the calf was produced for \$8.82.

The practical value to be drawn from this experiment is, that under the more expensive and somewhat unnatural conditions of winter, good calves can be made at less than half the cost of allowing full milk, and at the same time realizing fully \$33 per cow during five months, by supplying cream to the butter factory.

19.—THE FOOD COST OF PRODUCING DAIRY PRODUCTS.

This subject has two divisions—summer and winter. Few know much about either, and winter is now as important as summer. This station has been credited with placing the cost of dairy products at about the same as beef, but our extended experience enables me to submit more full and reliable figures.

MILK IN SUMMER.

Going out in May, and coming in about 1st November, the six months of the present class of pasture in Ontario, gives, with the average cow that, however, is being gradually improved—just 3,500 lbs. of milk—no more. To do this she requires a range of three acres, cultivated hay pasture—timothy and clover—including a touch of the bush, natural meadow and roadside. I avoid the temptation thus given to use strong language on such waste of land and opportunities. The annual value of this cow's keep cannot be charged, as some contend, by first allowing so much to maintain life steadily and then debit the milk only with the balance. I cannot follow the argument that it is different here in comparison with beef; do we set aside the oil and tear and wear of a steam engine, as having nothing to do with the cutting of ensilage fodder, or can we separate from the cost of producing beef, that proportion of the food used in maintaining the animal heat and life?

To the farmer—not the milkman or cow-keeper near towns and cities necessarily—the grass of these three acres, with the additions named, is worth \$10 per season, and consequently the food cost of producing milk is about 3 mills per lb., or 3 cents per gallon, upon the present Ontario pasture.

But elsewhere in this report I have shown that the same cow, on permanent pasture of the right sort, not only gives more milk, but can be kept on one and one-half acres in place of three, which, subject to the extra cost of establishing and maintaining such pasture, reduces the cost of producing milk to 2 mills per lb., or 2 cents per gallon.

MILK IN WINTER.

The food of the cow from November to April inclusive, in Canada, is purely all preserved, and her management entirely in the house. For the best results there should be but one item of difference practically between her all-over-care, and that of a good steer—less grain only, and hence we do not introduce as a point in these notes the starvation system of cow management in winter. I ask that she receive 10 lbs. hay, 30 lbs. turnips or mangolds, 3 lbs. bran, and 2 lbs. crushed oats per day. (See chapter, entitled, "Guide to Winter Feeding," herewith.) The market value of these is 12½ cents, but this is selling at a distinct profit, and as the producer of the milk is the grower of the food it is not regular, in order to ascertain actual cost of production, to charge the cow with more than the cost of producing her food: on an average, therefore, the difference is fully one-half, and 6 cents is thus the daily cost of the cow's keep. Granting the same class of cows in winter as in summer, the yield of milk is not so large, but, in our experience, is not so different as is usually understood. During the past winter several of our cows gave 30 lbs. per head per day, from December to May, and as we are treating of the results obtained from the common Ontario cow, and the Short Horn Grade, their daily winter milking is safely set down at 25 lbs. At the market value for food, we can then produce milk in winter at an actual food cost of ½ cent per lb., or 4½ cents per gallon.

CREAM IN WINTER.

We have had extensive experience in this. Winter, with its quiet, its system, and liberal feeding, has always given a large proportion of cream—rarely under 10, and as

much as 15 lbs, from the 100 of milk, averaging 13 lbs. Two things require valuation here: the cream and the skim milk. As we have already seen; the 100 lbs. of sweet milk cost 50 cents; from this we have taken 13 lbs. cream, and as sweet skim milk is well worth one-half the cost of the full sweet milk, we obtain 22 cents for the 87 lbs. of skim, which leaves 28 cents for the cost of the cream, or say, 2 cents per lb. for cream, or 18 cents per gallon.

BUTTER IN WINTER.

The milk and the cream thus handled, under the conditions and from the sources named, will give $3\frac{1}{2}$ lbs. of butter from the milk, and $27\frac{1}{2}$ from the 100 lbs. of cream. The cream having cost \$2.00, and buttermilk being worth 3 cents per gallon, the two gallons of buttermilk, or 6 cents, have to be deducted. The result is fully $7\frac{1}{2}$ cents as the actual food cost of producing one pound of butter in winter.

CHEESE IN WINTER.

There is winter cheese, and, though not yet on a large scale, will eventually become an important product. Taking, again, the milk formerly obtained at a cost of 50 cents, and deducting the value of the whey at 8 cents for every 11 lbs. of cheese, the actual food cost of producing every pound of cheese amounts to nearly 4 cents.

CREAM IN SUMMER.

The summer average of cream being 16 per cent., and the milk in greater quantity than winter, it follows that the food cost of producing it is considerably less; on an average it is $1\frac{1}{2}$ cent per lb., or $12\frac{1}{2}$ cents per gallon, $5\frac{1}{2}$ less than winter.

BUTTER IN SUMMER.

Proportionately to the quantities in winter, as already explained, the food cost of producing one pound of butter in summer will range about 5 cents per lb. from ordinary pasture, and will come to 2 cents when we have the best of permanent pasture.

CHEESE IN SUMMER.

The greater proportion of cheese curd in summer as against winter, the greater quantity of milk produced per acre, and the nature of the maintenance, brings the food cost of producing cheese down to 2 cents per pound.

20.—MILK FROM PERMANENT PASTURE.

Until this season we have not had the best of facilities to ascertain the character of milk obtained by feeding cows solely on the best of pasture—such pasture as we have been recommending to the Province, and which is again specified in chapters 37 and 20 herewith, as well as in special letters to Ontario farmers in this report. The questions involved under the present inquiry are:

1. The quantity and character of milk per acre.
2. Effect of such pasture on milk from particular breeds.

ANALYSIS OF MILK FROM COWS ON PERMANENT PASTURE.

(Mean of Several Tests.)

BREED.	Water.	Fat.	Solids other than Fat.	Total Solids.
Ayrshire	84.8	6.8	8.4	15.2
Devon	89.0	3.7	7.3	11.0
Holstein	88.8	3.9	7.3	11.2
Jersey	86.1	5.9	8.0	13.9
Mean	87.2	5.1	7.7	12.8

ANALYSIS OF MILK FROM THE SAME COWS DURING WINTER.

(Mean of Several Tests.)

BREEDS.	Water.	Fat.	Solids other than Fat.	Total Solids.
Ayrshire	88.20	4.60	7.20	11.80
Devon.....	86.70	4.45	8.85	13.30
Holstein	87.45	3.55	9.00	12.55
Jersey	84.55	7.35	8.10	15.45
Mean	86.72	4.99	8.29	13.28

We seeded down in May, 1884, one acre of the plots in the Experimental Field (plots 61-70, Range 4), and hence the present season is the first that grazing could be safely adopted, though the catch was so good and strong last year as to require cutting with the mower. The pasture is already all that the most exacting could desire.

We set aside four cows for continuous depasturing all season on this acre—in couples alternating every two weeks—the Ayrshire and Holstein, and the Devon and Jersey, being together, named respectively, “Sensation,” “Verapina,” “Ruddie,” and “Beauty o’ the Mill”—See chapter 2. Water and shelter are supplied; the cows are left out day and night; milking is done in the field twice a day, and is weighed there also. The cows are weighed at each change, the manure regularly spread over the pasture; the milk daily tested for cream by different methods of setting, by centrifugal twice a week, chemically analysed every week and sent twice a week to myself for microscopic examination. We are aware of the extra “waste” by confining two animals to one acre—tramping, lying

upon, and manure dropping—than there is under ordinary circumstances of a farm, and so, partly to check this as well as to offer a fresh bite, the area is divided into two fields, and a change made every seven days. As I have said, it is proposed to carry this experiment through the season, because much of the value of such pasture should be in holding good during drought and late into the fall. It is possibly not too much to anticipate from present indications that one acre will actually maintain two cows; if not, we have other similar pasture adjoining that can be weighed and fed upon the original run, so that in any event the cows will be kept to the one influence as much as possible. The Ayrshire during the first week was very unsettled, and, communicating this to her Holstein mate, they both reduced in weight very heavily, consequently affecting the quantity, at least of their milk. The season being a late one, we did not put to grass until 24th May.

We consider the subject of permanent pasture and dairy products so important at the present moment to Ontario that we do not hesitate in giving her farmers this early touch of what is being done at their Experimental station :

1.—*The Quantity and Character of Milk per Acre from Permanent Pasture.*

The unsettled condition of all the cows when removed from the large herd on our ordinary pasture, and placed in the somewhat unusual circumstances in the experimental plots, have for the first month materially affected the daily yield of milk; it is therefore but fair to wait the results of the whole season as regards this item, but yet, 48 lbs. of milk per day from young cows three months after calving, and a mixture of breeds, is not unusually low. Assuming this very moderate quantity as an average, it is an indication that we will receive over 8,000 lbs. of milk per acre per season of five and one-half months—not six months because of the late spring growth. This would be a very high return per acre, the usual Ontario pasture giving 1,300 lbs. on an average per acre. It is perfectly evident that our choice permanent pasture will yield at *least* 5,000 lbs. of milk per acre, or four times that of timothy and clover as now prevails. I have been teaching to look for double the ordinary quantity, and those really interested may therefore guess how anxiously our Station is anticipating the full facts for the season by this very practical test through permanent pasture.

[For subsequent facts see Chapter entitled, “Some New Features of the Dairy Interest.”]

MAY AND JUNE DAIRY RECORDS OF FIVE BREEDS ON PERMANENT PASTURE, AT THE ONTARIO EXPERIMENTAL FARM, 1885.

BREEDS.	Age in Years.	Weight of Cow.	Had last Calf in	In Calf again in	Milk, average per day.	Per cent. of Cream.	Butter.		Cheese—Curd from 100 lbs. Milk, less 10 per cent.
							From 100 lbs. Milk.	From 100 lbs. Cream.	
Ayrshire	4	1155	1885. January.	1885. April.	15	At 40° 14.7	4.6	49.3	15.7
Devon	5	1100	April.	June.	28	8.5	.....	53.3	11.8
Jersey	3	840	February.	April.	22	14.2	3.3	61.0	17.3
Holstein	3	900	January.	March.	21	8.8	1.5	31.0	12.2
Quebec Grade.....	5	910	April.	June.	31	13.8	2.8	50.0	13.3

NOTE.—See Chapter V. for conduct of Ayrshire cow. Compare Chemical Analysis—Summer—Chapter X.

The general character of the milk is shown in various ways: Under the microscope it has changed from winter influences in a very striking manner; with the well known fact that the butter globules are always larger for some time after calving and lessen towards the end of the milking term, it is interesting and practically valuable to record that in their fourth month after calving the same cows put to permanent pasture have given butter globules fully one-half larger, and this relatively over the four cows, with the exception of the Ayrshire which has developed its globules to an extraordinary extent—from 1.00 (see chapter 12) to 1.90 in diameter. In the first place, that pasture increases the size of the butter globules of milk against what may be called the natural order of diminution is an important dairy item, and may help to explain some things in the physiology of the cow as affected by the extremes of weather and the extremes of kinds of food. The general character of the milk otherwise is evidenced under chemical analyses. The great change of food does not appear to affect the average amount of fat materially; 5.1 in winter and 4.99 in summer, but there is a little more water, not much, though, and a decided decrease in solids, from 13.28 to 12.8 per cent.

2.—Effect of such Pasture on Milk from Particular Breeds.

Space will not allow of more than a short notice of this point, meantime. The unusual circumstance to us is, as already hinted, the conduct of the Ayrshire: under all her fretting and diminution of quantity, she has given us in *every respect* richer milk than she did during winter. The increase of butter globules from 1.00 to 1.90, said so before even the cream rose or the chemist pronounced judgment. There is evidently a very intimate relation between the *size* of globules and butter results. We are not forgetting individual cow merits in these notes, but now it is not these, but conditions of food and seasons on the same animal. The Devon has yielded most to the watery influence of pasture, has lowered her record of fat very seriously, from 4.45 to 3.7 per cent., and consequently a corresponding reduction of total solids; the Holstein has stood the test more steadily, that is, in regularity of materials, than any of the others, and this circumstance we have observed elsewhere; a slight increase of fat on pasture is a feature of some importance in her case. The wonderful Jersey gave way in her characteristics from winter to summer conditions. Why so? In milk, water, fat and solids she has bowed to permanent pasture, and yet observe how high are all her averages above the averages of others.

Cream from permanent pasture: 15 per cent., by deep setting at 40°

Butter from permanent pasture: 3.2 lbs., from 100 of milk, 47 lbs., from 100 of cream.

Cheese curd from permanent pasture: 13½ lbs., from 100 of milk, dried and under deduction of ten per cent.

DAIRY PRODUCE PER ACRE.

All quotations of farm produce should be “per acre”—whether grain, fodder, flesh, wool or milk,—if not so, no correct estimate can be made of what an individual or a nation is doing in comparison with others. With reference to dairy products, the Province of Ontario cannot tell at the present time what she has done in the past as regards amount and value of milk, butter and cheese, per acre per annum. With all our high standing as cheese makers, how can we tell that our farmers are up to time, or are actually making any profits in dairy products in correspondence with grain and beef? I have no doubt our statistical department will overtake this line of enquiry ere long, and meantime I have pleasure in opening the gate with the dairy cow.

The average cow giving under 4,000 lbs. of milk from the required three acres of ordinary timothy and clover rotation pasture produces necessarily only \$10 an acre when the milk is sold to the cheese factory; if the cream is sold to the butter factory, and the sweet milk fed to calves, the revenue per acre will be about \$12. The same pasture with a better selected type of the same class of cows will produce 5,000 lbs. of milk, which would be equal to \$14 per acre on an average of cheese and butter.

But the same cow last referred to, on the best of permanent pasture, will average \$25 per acre per milking season, and were a very strong culling made with reference to

class and individual merit, it is not high to estimate the gross annual revenue per acre per annum up to \$30. These figures are no more than in correspondence with other farm crops: Grain profit per acre stands above \$16; hay, \$11; and roots \$25—say \$17 on an average. So that if we allow as much as ten per cent. for management, risks, etc., of a dairy herd, the profits of dairying will show at least \$15 per acre per annum, and should be \$25 when pasture and cow selection are what they can easily be made.

MILK PER SEASON: ESTIMATE OF AVERAGE OF DIFFERENT BREEDS.

BREEDS.	Milk—lbs.	Value of Milk alone.	Mean Value of Milk, Butter and Cheese.
Holstein	7,000	\$52	\$39
Ayrshire	6,000	45	48
Ontario Grade.....	5,000	37	33
Short Horn Grade	4,500	34	43
Guernsey.....	4,000	30	33
Quebec Grade	3,600	27	39
Jersey	3,500	26	46
Shorthorn.....	3,000	22	40
Devon	2,800	21	35
Galloway.....	2,500	19	28
Aberdeen Poll.....	2,300	17	26
Hereford	2,000	15	25
	3,850	29	33

I believe no one could do more than estimate this subject, for nowhere can we find enough material for definite figures. But, from European and American testing, from public and private dairies, exhibition tests, factories and experimental stations, an approximate estimate can be made of the average quantity of milk given by different breeds during a season—which ranges from 200 to 300 days, according to peculiarities of breeds and their management. In criticising the above estimate, therefore, remember the variety of the source of information, the more extensive use of some of the breeds in dairies, in comparison with others—such as Ayrshire vs. Hereford; consider, also, the duration of the milking season, as characteristic of breeds, the physical conditions appropriate or otherwise, for such production and continuance, and particularly, we must cautiously handle the record of individual cows that have of late been so much offered as public property.

21.—ABORTION AMONG COWS IN RELATION TO MILK PRODUCTION.

Happily the Ontario Experimental Farm herds are now free from this contagion, or whatever it should be called, for I think it has no definite obstetric name. In past year's report Professor Grenside accounted for some of it, and my purpose now is to show the immediate sympathy existing between cows and unnatural calving, which though known, is not often made subject for public information. Among our cases were the following:—

1. Aberdeen Poll aborted at 6 months in September, 1884.
2. Devon " 6 " October, 1884.
3. Shorthorn " 7 " November, 1884.
4. Ayrshire " 7 " January, 1885.

In every instance but that of the Devon, the calving and cleaning were natural enough, as regards ease, and free of any after trouble to the cow. All the calves were dead, and, as we desired to encourage the production of milk gradually, feeding was arranged accordingly. The Devon was set aside to help nurse an Aberdeen Poll bull calf, and in thus dismissing her case it is fair to say that this calf, which is valued at \$500 (the previous bull calf from the same cow fetched \$550 at our public sale), is due three-fourths of his condition to the Devon.

The Aberdeen Poll, a five-year old, aborted on grass, and had to be milked immediately after. In the course of ten days she milked freely, and up to the 9th December, about the time of her natural calving, was giving 14 lbs. per day, cream equal to ten per cent., butter 30 lbs. from 100 cream, and 10½ lbs. cheese from 100 of milk.

The Shorthorn is a high-priced seven-year old from Scotland, in good flesh, a very roomy, even animal, and yet one of the most feminine of cows, possessing that beautiful handling and delicate fore-quarter so much liked everywhere. Even before her abortion milk gathered, and an immediate flow came on parturition. She has kept her condition and health all through, and is still in fair quantity of milk. Throughout March and April, previous to what would have been her natural gestation, this cow gave 15 lbs. of milk per day under ordinary feeding, with thirteen per cent. cream from December to May, and 44 lbs. of butter from 100 of cream, with 13 lbs. of the dried cheese curd to 100 of milk.

The Ayrshire gave no trouble in any respect, and has now indeed too much flesh for her class. Her winter record has been 20 lbs. milk daily, 14 per cent of cream, 41 lbs. of butter per 100 of cream, and 12 lbs. dried cheese curd per 100 of milk.

Now, though these are but ordinary records, particularly in milk quantity, they yet indicate a condition of animal constitution, under what is unnatural, so little differing from what is natural that it is not only physiologically interesting, but of some value to practical dairymen. I am not speaking of the rarity of the facts, for unfortunately they are too plentiful in Ontario, but asking for the exact scientific reasons that give a cow, when she drops a calf three months previous to the regular time, immediate provision for the sustenance of that calf—which is generally, if not always, born dead. I am not prepared to take the common-place reason that "nature provides," and while it is true that milk can be induced by manipulation without reference to reproduction, it is doubtful if its character is similar to that otherwise secreted. The natural conduct of the milk, as regards cream, butter and cheese, is of itself evidence of natural provision, and if further evidence be needed to supplement these, chemical analysis can be added.

CHEMICAL ANALYSIS OF MILK FROM COWS THAT ABORTED AT SIX MONTHS.

Water, per cent.	Fat, per cent.	Solids, other than Fat, per cent.	Total Solids.
87.34	4.33	8.33	12.66

Thus equal to a good average of breeds in full natural milking. The conclusion is plain as regards the unrestricted resources of the cow under whatever circumstances.

22.—BUTTER FROM MILK AND CREAM OF DIFFERENT BREEDS— WINTER AND SUMMER.

This subject needs little explanation; the condition of the respective cows as given in Chapter II. should be studied in considering differences of quantity of butter, and the percentage of cream being also given here, interesting comparisons can be made.

DURING WINTER.

BREEDS IN ORDER OF MERIT FOR BUTTER QUANTITY FROM MILK.	Butter from 100 lbs. Milk.	Butter from 100 lbs. Cream.	Per cent. of Cream from Milk.
	lbs.	lbs.	at 40°.
Jersey	6.1	43½	19
Short Horn	5.2	44	16½
Ayrshire	4.9	37	15
Devon	4.7	45½	15
Ontario Grade.....	4.4	43	14
Short Horn Grade.....	4.1	42½	14
Aberdeen Poll.....	3.5	28	11½
Holstein	2.4	31	7½
Galloway.....	2.3	34	8¼
Mean	4.2	38½	13½

The extremes were 45½ lbs. of butter from Devon, and 17½ from Ayrshire.

When we are told from Europe that the average yield of butter from milk is 3 lbs., and compare it with our winter quantity of 4.2 on an average from breeds, the practical importance of studying the character of milk is very evident. Milk that gives during winter 13½ per cent. of cream, and 38½ lbs. of butter from 100 lbs. of that cream, is manifestly obtained from good cows, well fed. Had we now the mean quantity of milk per season from the various sources named, most important conclusions could be discussed as applicable to Canadian dairying, but, as it is, we are not without facts. The sources are divisible into three classes, as regards merits: the Jersey, Devon, Ayrshire and Short Horn rank first with a mean of 5 lbs. of butter from the 100 of milk, which is 20 per cent. more than the second class of Ontario Grade, and Short Horn Grade with their mean of 4.3, and nearly 50 per cent. more than the third class of Aberdeen Poll, Galloway and Holstein, which have a mean of 2.7.

If we take the prominent heavy milkers—Holstein and Ayrshire—that profess milk without beef, we have the mean of 3.6—where, but for the Ayrshire, the winter record would be a very low one indeed. Then, take the Jersey and Devon that speak of an under-average of milk, and slow and small in beef, and we obtain the very high average of 5.4 lbs. of butter from the 100 of milk. Cattle, such as the Short Horn, Aberdeen

Poll and Galloway—the three corners of the beefing world as regards quality, hardiness, and maturing—and their union of butter nearly touches the average of all kinds. If we be correct in naming the Short Horn Grade and the Ontario Grade as representatives of both *milk and beef*, their butter of 4.3 lbs. is probably the better record of anything thus submitted. Take next the *summer period*.

BUTTER DURING SUMMER.

BREEDS IN ORDER OF MERIT FOR BUTTER QUANTITY FROM MILK.	Butter from 100 lbs. Milk.	Butter from 100 lbs. Cream.	Per cent. of Cream from Milk.
	lbs.	lbs.	at 40°.
Jersey	4.2	60.1	21.0
Ayrshire	4.0	49.6	18.5
Quebec Grade	3.4	55.9	15.0
Short Horn Grade	3.3	50.0	16.0
Short Horn	3.3	47.6	14.0
Devon	2.7	51.0	12.0
Guernsey	2.5	44.5	12.5
Holstein	2.3	36.5	12.5
Mean	3.2	49.4	15.2

The extremes were 61 lbs. from Jersey, and 31 lbs. from Holstein.

We are now nearer the European proportion of butter from milk, if not that from cream, and in this connection I think it is important to note again that if it be true that food has little effect in regulating the proportion of butter fat, other conditions, such as temperature, and possibly the small relative production of milk proper in the animal system during cold weather, accounts for one per cent. more butter in winter than in summer. I trust the Province will not neglect winter dairying in future years.

But, with all that can be said for winter in some respects, it is the flush of nature, after all, that gives the wealth of butter. We may have the fat milk, and even the quantity in winter, but it takes pasture to give "character," as evidence the 49.4 lbs. of butter in summer from the same cream sources, as against the 38.5 lbs. of winter.

The Jersey is again distinctly ahead, with a very close neighbourhood from the Ayrshire. We have pleasure in introducing the Quebec Grade as second in butter from cream. The Holstein has more than any other kept up its butter from milk record.

23—THE POSSIBILITIES OF THE CENTRIFUGAL SEPARATOR.

In Chapter 8 I have submitted the work of mechanical separation of cream from different kinds of milk, winter and summer, in comparison with the best known other methods, and now, I presume, some thoughts on its possibilities, based partly upon these results and partly upon the history of the machine in Europe, the United States and Canada; Prof. Baré, now the dairy expert at this institution, was, I believe, the first to introduce the Centrifugal Separator into our country, and as he will be at Farmers

Institutes next winter, opportunity will be had of getting full information from the best source.

As I write, the public are told for the first time that electricity may very soon have a great deal to do with the separation of cream from milk. If this new agent acts in this relation as actively and efficiently as it does in some other things, then the centrifugal machine may soon be found in our museums as a relic of the genius of the middle of the nineteenth century; at present we are without facts in electro-creamology.

I am of opinion, if the centrifugal machine can be reduced in price to about \$100, and a one-horse power sufficient, that there is a very near place for it in the future, at any farm that has not less than twelve or fifteen cows contributing to a butter factory, or even making on the farm. The minimum of 280 lbs. of milk thus got could be separated from its cream in one hour—no waiting for cream gatherer, no setting at a certain depth and temperature, less risks from bad management, no possible sour milk for calves, no necessity whatever for ice or water, nor a specially constructed dairy, and no “heavy” milk losses.

Not being able to find any facts with reference to the butter-making properties of the cream centrifugally separated, in comparison with that from other methods, and being impressed with the belief that the *tester* of the centrifugal we are using has given a very different character of cream from anything else, or even from the centrifugal machine itself, we made the following tests: Chemical analysis of weight and volume; cream from centrifugal tester, in comparison with cream by deep setting at 40° for 24 hours.

CHEMICAL ANALYSIS OF CREAM FROM SHORT HORN GRADE.

	Centrifugal.	Deep Setting at 40°.
Water.....	58.4	73.9
Fat.....	39.4	22.9
Solids (other than Fat).....	2.2	3.2

In the first place, it is almost unnecessary to say that we used the same milk, the same kind of testing glasses, and that all conditions of cow and chemical management were alike.

The centrifugal recorded a mean of 10.7 per cent. of cream, and that by deep setting at 40° gave 18 per cent. From each of those the chemist removed 8 per cent. of cream, leaving sufficient space of cream below so as not to interfere with the milk. This 8 per cent. from centrifugal weighed 2.77, and that from deep setting, 3.02; these figures may for convenience be called ordinary pounds. Now, before looking at the chemical analysis, observe that whatever may be the character of the cream by deep setting—if much or little casein intermixed with the butter globules—there was to the naked eye fully seven per cent. more cream than the centrifugal indicated, and, when accurately weighed, the cream from deep setting was eight per cent. heavier—one of the evidences of the presence of more casein among the butter globules. To those acquainted with the characteristics of milk these tests would be sufficient to denote considerable difference in the butter-producing properties of the two samples of cream, but of course, without the churn, could not be accurately stated. Thus the chemist was called into requisition.

The above analysis is most suggestive indeed. Remembering the circumstances just narrated, there is surely food for thought in the very extraordinary difference in the

NOTE TO CHAPTER ON “THE POSSIBILITIES OF THE CENTRIFUGAL SEPARATOR.”—Since writing the above, *Bell's Weekly Messenger and Farmers' Journal*, of England, has come to hand, in which appears an excellent article by James Long, entitled, “Is the Centrifugal Separator adapted to the requirements of the British dairy farmer?” It is full of facts in favour of the machine. In addition to the points given by me as above, he says the separator can be economically used on any farm having from ten to twenty cows, that it costs £28, is driven by one horse, will separate twenty gallons per hour at a speed of 3,000, and as small a quantity as five gallons can be handled.

proportionate composition of the two samples of cream from the same milk, of the same milking, of the same cow—repeated twice, by the most accurate chemical work. The body of cream from the deep setting at 40° contained 73.9 per cent. of water, while that from the centrifugal was 58.4 per cent.—an actual difference of 15.5 per cent. less in the latter, so that we now gather why the deep setting weighed eight per cent. more than the other—water being of greater specific gravity than an oil called cream. It is obvious, therefore, than the one contained more butter fat than the other. The chemical analysis shows actually 16.5 per cent. more fat in the same volume of cream by centrifugal separation as against deep setting at 40°. We have now arrived at *the point* of this enquiry—the relative proportions of butter fat from the two systems of obtaining cream from milk. What does it mean? It means, if the larger centrifugal machine acts similarly to its tester, that, bulk for bulk of cream, the centrifugal will give 6 lbs. more butter from the 100 lbs. than the deep setting material would. I am not prepared meantime to show that the centrifugal machines named are alike or not, but certainly even supposing they are not, and that we have given some new light on this subject, it is plain that further invention would complete the separation equal to the tester. From what we have seen of the large centrifugal separator it is a point after all whether the cream is as completely separated from the milk, or compacted as much as in the glass bottles that accompany each for the purpose of testing the milk of each patron.

24.—SYNOPSIS OF DAIRY VALUE OF BREEDS OF CATTLE, PER 100 LBS. MILK, AS GATHERED FROM O. E. FARM EXPERIMENTS.

BREED.	CREAM.		BUTTER.		CHEESE.		MEAN, PER SEASON OF 210 DAYS.	
	Winter.	Summer.	Winter.	Summer.	Winter.	Summer.	Winter.	Summer.
Jersey	80 77	80 80	\$1 03	80 71	\$1 42	\$1 90	\$54 00	\$57 00
Short Horn.....	0 71	0 67	0 88	0 56	1 25	1 76	47 00	50 00
Ayrshire	0 75	0 75	0 83	0 68	1 20	1 52	46 00	50 00
Short Horn Grade	0 62	0 72	0 70	0 56	1 45	1 70	46 00	50 00
Quebec Grade	0 52	0 56	0 75	0 58	1 40	1 52	44 00	45 00
Devon	0 60	0 47	0 80	0 46	1 47	1 18	48 00	35 00
Holstein	0 40	0 55	0 40	0 39	1 00	1 18	30 00	36 00
Guernsey.....		0 65		0 42		1 10		36 00
Galloway.....	0 47		0 39		1 30		36 00	
Aberdeen Poll.....	0 50		0 59		1 10		36 00	
Mean	0 60	0 65	0 71	0 55	1 29	1 48	43 00	45 00

Subject to the actual quantities of milk and the duration of the milking season, as may characterize each breed, we obtain from this table a good idea of their value by every hundred pounds of milk for any special line of dairying; cream is charged at 4 cents, butter at 17 cents, and cheese at 10 cents per pound.

It is not at all likely that Ontario will agree for many years to come, as to the average quantity of milk per season from different breeds and grades; Europe is still quarrelling over this subject after one hundred years' experience; it is necessarily much more difficult than quality in all its forms, so that all we can do at present is to talk "*per 100 lbs. milk.*" A very superficial glance at this table gives rise to some very serious dairy thought.

If cream be the particular subject desired in value per 100 lbs. milk, the Jersey, Ayrshire and Short Horn with its grade make a very close competition and are away beyond comparison with others; a middle range is taken by all the others.

But if butter is wanted it would not be sound argument, necessarily, to follow the bulk of cream; were this the case, some that are high would stand second only to the Jersey, but they do not: the Ayrshire now ranks with the Jersey and Short Horn in first-class value of butter from the 100 lbs. milk.

Still further, if cheese be the principal object of the dairyman, the choice becomes more difficult, because it appears that the properties required for it are much more evenly balanced amongst breeds than either cream or butter. The Jersey and Short Horn grade are about equal in value of cheese per 100 lbs. milk; the Galloway, Ayrshire and Quebec grade are average, and the others under average.

Another view of the respective merits of breeds for dairy purposes is through a "mean of things." As the table is arranged in that order, it is unnecessary to repeat the list. Observe, however, the extraordinary range between the extremes of \$57 and \$33 per season of 210 making days. If the Ayrshire is taken as a standard—a position we have already given it on another subject in this report—its annual mean value of \$48 is just the mean of all the ten breeds, and we shall allow 5000 lbs. of milk for this standard annually from this standpoint. The following would be the *amount of milk required from each breed* in order to make each equal in value per season, for a mean of cream, butter and cheese, during winter and summer.

BREEDS IN ORDER OF MILK QUANTITY REQUIRED.	Quantity of Milk required per season of 210 days.
Holstein	7,270 lbs.
Devon	5,714 "
Quebec Grade	5,393 "
Ayrshire	5,000 "
Short Horn Grade	5,000 "
Jersey	4,324 "

Now, will any of the breeds produce in 210 days the milk placed opposite its name? We say, decidedly not for the Devon and Quebec grade, but on an average the position of all the others is possibly not wide of what is actually the case—not high for the Holstein, high for the Jersey, but otherwise a very good average.

Having gone this length with indications of value per season, it is but fair to add that, *granting the quantities of milk* as given, it could well be argued that some of the breeds would return more money by making a specialty of a line of dairying—whether milk for direct consumption, cream for butter, or for cheese.

25.—WHICH CATTLE FOR ONTARIO?

I think it is time the farmers of Ontario came to a decision as to breeds of cattle and sheep. We are not old, truly, but neither are we young in experience, nor in enterprise. Naturally during the past ten years the fever of breeds has occupied much of our atten

tion along with other nations, and while admitting the liability of the outside market to change, there can be but little in the future to affect our local wants. Our Provincial conditions are not of a kind to be twisted about by every wind of farm speculation, for we are solidly *crop growers* and must always remain so. We need not touch at present upon the legitimate fields of live stock open so favourably to us in breeding for neighbouring Provinces and the United States—in classes of cattle and sheep that are not so desirable for Ontario.

As crop growers, therefore, we must always remain prominent producers of cattle and sheep—even assuming we had no outside market, the very mention of grain growing implies live stock—now in our old arable conditions. Let us give up the much-talk about breeds suitable for Ontario: it is not necessary to keep in good terms—because of the peace at any price principle—with every admirer or patron of the ten or twelve classes each of cattle and sheep, and as it is easier for me to stand criticism by reason of thickened use, I shall now open what I trust may be the closing controversy.

We require cattle directly and indirectly for beef production and cattle for the dairy; I know of no other local cattle want. In each of these we wish to obtain the greatest amount of the best through the most permanent source, and at the least cost. We are perfectly satisfied that Aberdeen Poll, Hereford and Galloways are not the best for the first purpose, although they are certainly good, and to place them as competitors for the second would be an admission of great ignorance indeed. To meet any thickheadedness, allow the repetition that we are speaking for the average farmer of Ontario, and not for every farmer of the Province. It is not so easy, however, to dismiss the Jersey, Guernsey, Ayrshire and Holstein, but it has to be done. The three first are well enough known in Canada, and require no description now. Neither the Jersey, Guernsey, Ayrshire, nor Devon can possibly take the place of direct or indirect beef-makers: for the dairy they have strong claims, and hence the difficulty of many in choosing. Were the dairy to become one-half of all our agricultural interest, and one-half of our arable area became permanent pasture, we would hesitate in saying good bye to all these breeds; but, will Ontario ever change from her six months' dry fodder and her top beef? We are also still of opinion that Ontario judgment will always admire the milk, and butter, and cheese, as seen through the greatest consistent allowance of flesh—aye, even to the disadvantage of the former things, so that could we possibly get all the desired value from an Ayrshire, Jersey, Guernsey, or Devon—their size and form are against them. To say that this is foolish, would be right commercially, but what is bred in the bone is said to be invaluable so long as it is believed.

It is natural to pause on meeting the Holstein, because experience of them is short, and in some respects we see our typical mixture of butcher and dairyman—in the male especially. Holland does not care for the beef that England, and even Canada, loves to produce. Are we right then in expecting this breed to fill the account for Ontario, when in its own country it has not been managed for such an end? The possibilities are, therefore, against that union of beef and milk—unreasonable as such a general-purpose idea may be—and, in any case we have to wait for evidences.

The special dairy wants of Ontario can be fully maintained by selection from her common cows—the acclimated, hardy, ranging, non-beefy, and liberal milking grade.

The special beef and the conjoint beef and dairy wants of Ontario can be best upheld by the use of that stamp of Short Horn—so easy to select and so often met with. Why, then, the need of more discussion?

26. —THE SILO, 1884-5.

Like many others, we are still working for light on this subject. Light is a mild term here, when, on the one hand, the steady faith of the Walsingham trials in Norfolk, England, is considered, and the unmeasured disgust of some Americans on the other hand. All are looking to Rothamstead where Sir J. B. Lawes, for the first time, is putting preserved green fodder to thorough test.

Our third year's method of preserving was thus chronicled :

1884.

No. 1 SILO—UNCUT FODDER.

Aug. 29th.—In morning, team with reaper, cut one acre of broadcast corn fodder in No. 3 field. Team, with two men, began hauling-in at 1.30 p.m. for No. 1 Silo.

No. 1 Silo is constructed to hold 15 tons, having stone and brick walls, cemented, like floor; doorway to cattle on level with floor, and with appliances made air-tight. This Silo was filled with *uncut* fodder, carefully laid.

Aug. 30th.—Finished filling No. 1 Silo at noon, when 14,370 lbs. of fodder were laid in. Placed two-inch plank covering upon fodder, weighted with three tons of stone.

Sept. 2nd.—At noon removed weights and plank cover from No. 1 Silo, and added 6,680 lbs. of green fodder. Less weight than formerly was returned, and left untouched until the 6th inst.

Sept. 6th.—Removed cover from No. 1 Silo, and added 5,360 lbs. more fodder, which completed the filling of the pit. Returned plank, and just weight enough placed to press cover close to fodder as it settled. Left No. 1 Silo in this condition for two weeks.

Sept. 20th.—Put earth all over plank in No. 1 Silo, to a depth of 6 inches, or about 500 lbs. per square yard.

Silo No. 1, therefore, contained $13\frac{1}{2}$ tons of green corn fodder.

Sept. 24.—Placed a seven-feet "ground" thermometer horizontally through the door into the heart of the pit. It then registered 95° and gradually rose to 101° on the 3rd October. Pressure broke thermometer on 4th October.

Oct. 7th.—No. 1 Silo was uncovered, and 1,586 lbs. of rape, with 1.522 lbs. of prickly comfrey added. Covering finally replaced.

Nov. 19th.—Opened Silos to day; found the uncut fodder much damaged, but the short cut was green, fresh, moist, with a brown tinge and slightly acid smell and taste; concluded to use the latter only.

No. 2 SILO—SHORT CUT FODDER.

No. 2 Silo is of the same size and construction and under the same conditions as No. 1 Silo.

Sept. 1st.—Commenced at 1.30 p.m. to draw and fill No. 2 Silo with green corn fodder, cut into *half-inch lengths*. Two teams, two men loading in field, one man with boy spreading and tramping in pit, two men feeding cutter, and one man at engine.

Sept. 2nd.—At noon, had put 17,828 lbs. of cut fodder into No. 2 Silo, plank weighted with 3 tons of stone, and left until 6th September.

Sept. 6th.—Removed cover and added finally 17,060 lbs. more of cut fodder to No. 2 Silo. Closed similar to No. 1 Silo. Total fodder pitted in No. 2 Silo— $17\frac{1}{2}$ tons.

The temperature of No. 2 was also noted similarly to No. 1 Silo. On 24th September it stood at 92° ; on 3rd October it was 94° . After this it gradually fell to 64° ; on November 15th, when the Silo was opened; 64° appeared to be a normal temperature.

27.—BUYING AND FEEDING STORE CATTLE, AND SELLING AT SAME PRICE PER POUND AS WAS PAID FOR THEM.

Probably for the first time in the history of shipping live stock to Britain, and certainly for the first time in the experience of this farm, have store cattle been bought and, after fattening, sold at the same price per pound. If we do not hear of similar results from very many parts of the province, it is not for want of facts, but for want of willingness to submit them; we are not only not ashamed of the position, but feel it a duty to submit the whole as a national lesson in these times.

During the first and second weeks of November, 1884, we purchased eighteen two-year-old Short Horn grade steers that weighed 1,000 lbs. and cost \$46 per head on an average, or just $4\frac{2}{3}$ cts. per pound. They were allowed one week to settle down before actual weighing and noting of food. This was a very miscellaneous lot of cattle indeed—such as any Canadian would not care to say much about, and certainly would not introduce to any one whose judgment he wished to propitiate, or that they represented the Province of Ontario, as well as in preparation for the British market. Not that they wanted quality and health, but form and condition were things unnumbered in their belongings—some six head excepted.

The batch was therefore entered for serious work on 14th November in a specially built half-lean-to shed, having head and hind passages and tied with chain, two in each stall.

The food consisted of cut hay mixed with pulped turnips and bran from the large pile made thrice a week for the breeding stock, along with a mixture of grain and a forty days' topping-off with oil-cake—giving as much as the animals would consume—yet keeping free of surfeiting. We sold four culls to a local butcher on 1st April for four cents per pound: eleven tops for exportation to Britain, on 18th April, for five cents, and three second culls to the butcher on 21st April, at $4\frac{1}{2}$ cents per pound. The average time of feeding was thus 150 days, and other particulars are given in following list:

Particulars of *average animal* for 150 days:—

Weight on entry	1010 lbs.
Price paid	\$46

Food consumed daily:—

Hay	11 lbs.
Turnips	22 "
Bran	3 "
Oats	2 "
Wheat	3 "
Barley (white)	2 "
Barley (black)	2 "
Oil Cake (for 40 days.)	2 "
Market value of food	\$30 50
Weight at finish	1,369 lbs.
Price at finish	\$63 00
Difference in value	\$17 00

Naturally, the first consideration is cost of feed and increase of weight of the average animal. Entering at 1,010 lbs. in November, and carried on for 150 days, of a very severe Canadian winter—with hardly a touch of thaw for one hundred days—ordinary store steers were yet able easily, comfortably, and very healthily to come out in April with 350 lbs. added to their weight—or a daily rate of no less than $2\frac{1}{4}$ lbs. This is unquestionably unusually good under the circumstances—a fact in Ontario wintering that should always be held up to the world by our agricultural economists,—proof of a very busy farm time, though sealed up from the fields, and that rich crops can be produced twelve months a year. We could have held these animals over until May, when probably one-half cent per pound more would have been got for the tops, but grain was scarce, and the half cent did not tempt, and the experiment had reached the weight for exportation, part cargo of an early ship from Boston to Liverpool.

The food given was not only good, each of its kind, but good as giving variety for animal sustenance and increase: the grain proper was ground, mixed, and fed without any other preparation. Its value on the market amounted to \$30.50 per head for the period of 150 days.

As the *point* of this experiment was getting no more per pound live weight for the animals than what was paid for them as stores—a circumstance not uncommon in

England—it becomes our duty to shew cause for or against such a condition of beef in Ontario. Take first an abstract balance sheet thus :

Cost of store 1,019 lbs. at $4\frac{1}{2}$ (roughly).....	\$45 00
Market value of food consumed	30 50
	\$75 50
Sold 1,369 lbs. at $4\frac{2}{3}$	63 50
	\$12 00

So that to the rough calculator, there is a loss of \$12 per head. But the country is now over such a system of farm book-keeping.

Take another view of the case :

Cost of store	\$45 00
Cost to farmer of food consumed.....	14 00
	\$59 00
Actual cost of animal	59 00
Sold for	63 50
	\$4 50

Yet, in fair figuring, it is evident that as the feeder here is the producer of the food he should in the first place charge the animal only with what it cost him to produce that food, and thus arrive at the actual cash cost to him of finishing the piece of beef in question ; the result is a little profit—a little only, but a profit.

The farmer, however, must have more than this. He could have got \$16.50 more on the market for the food that was consumed by the average steer, and unless there be something else as the result of this making of beef, we are arguing a hard case indeed.

I have often said that the fattening of cattle with Ontario conditions is, *primarily*, to manufacture crops into manure, and *secondarily* to produce food ; that it must be so is perfectly clear, until we arrive at—if we ever do—a period in our profession when plant life will not be so dependent on animal life as animal life is upon plant life. Meantime, nothing as yet has taken the place of farm yard manure ; and while men of science and practical farmers in old nations are differing as to the real value of such a fertilizer under a variety of conditions, it is no matter of doubt that they agree as to its absolute necessity—whatever be its value. In such feeding as we are discussing, the value of the manure made by the animal, irrespective of chemical valuation, is usually placed as worth \$15—allowance being made for bedding and attendance. Our actual cash debit having been \$12, there is a safe credit balance of \$3 per head under the conditions we have enumerated, and under a better market it would be easy to show that, in combination with manure, a good steer always gives a profit of \$33 during its finishing period.

Now, while it would be foolish, under most circumstances, to advocate the prosecution of a branch of farming that, subject only to its cost of production, does not give an actual cash profit, which this grain feeding of cattle has not done, it is yet a matter of real vital importance to maintenance of proper soil fertility that so much of first-class stall-feeding be done every year—whatever the market.

28.—THE POSSIBILITY OF MAKING YEARLING BEEF FIT FOR EXPORTATION.

As was expected, we are having opponents to the early maturing management of live stock. Their criticism is doing much good—is simply making more prominent the advantages of the system. It is sound, nationally, because it means greater progress, more enterprise, more rapid circulation of money and a general well-doing ; and it is sound in farm practice, because it implies a better system, more scientific knowledge, greater

returns, and the investment of more capital in the business. Unquestionably it has some objectionable features, but they are of immeasurably minor importance; some people think only of present prominent contrasts with the old style, and overlook the widening field of a world's new work.

I wish to draw attention to the possibility of making yearling beef in Ontario fit for exportation, and submit a sample. The sample is a first cross with Hereford bull and Shorthorn grade cow, that was calved on 28th November, 1883. The calf weighed 103 lbs. at birth, suckled its mother for six months, got hay, bran, oats, and a smell of oil cake—all in moderate quantity, from three months old until now, was grazed last year, and is again on pasture. To-day (1st June) it weighs 1280 lbs. As it will not be two years old until next November, and its progress depending on the season, we may safely estimate that it will scale 1430 lbs., for late shipping on September 1st, when one year and nine months old. First of all, this is no extraordinary case and no unusual feeding; no doubt the breeding has a good deal to do with the stamp of the animal, which is what we call strong-built, and will never make a show steer as regards form. The weight at shipping time will be over the average now being exported, and all that is required for the best results, I believe. Such being the case the reasonable question may be asked,—why are we not making for more of this kind of work? It is also obvious from a consideration of the subjects treated of in chapters 15 and 18, that yearling beef would be more seasonably and economically handled. We are coming to it.

NOTE.—This animal weighed 1460 lbs. when exactly twenty-four months old.

29.—THE CLOSING BEEF CONTEST AT THE ONTARIO EXPERIMENTAL FARM.

Two of the top steers that have been held over from the nine head reported upon in our 1883 and 1884 annals, are to be put up to public sale on September 1st; these are the Hereford and Aberdeen Poll—the Short Horn was sold at Christmas last, having been taken out of the contest because of not being bred here, nor secured by us until nearly two years old. This is to be regretted, and yet I can say with every confidence that it would have had no chance of the first, and possibly not even of the second place in the competition. In closing the present contest, therefore, our remarks are confined to the Hereford and Aberdeen Poll steers.

Weight.—Though 104 days older, the Aberdeen Poll is only 75 lbs. more in weight than the Hereford; and so in this, the first consideration generally of a piece of beef, the Hereford is winner, according to age:

Aberdeen Poll.	1101	days old,	2028	lbs.,	1.85	daily rate.
Hereford,	997	“	1953	“	1.86	“

Form.—Irrespective of standard according to kind, there is in the case of the Hereford a more compact frame, a greater general evenness, and less irregularity of surface.

Fleshing.—For even covering all over—the loin especially—depth and thickness of flank, and filling of shoulder and breast, the Hereford is decidedly ahead.

Quality.—Again, there is no difficulty in awarding the Hereford first place in respect to bone, pelt, and general appearance.

Waste.—It is the opinion of butchers that the Hereford will give the largest per cent. of block meat, and indeed the previous points indicate this.

30.—SOME WOOL CLIPS, 1885.

I have pleasure in appending the average weight of fleeces from some of our rams and ewes this spring—all unwashed. They are from newly imported stock, and a few of both

classes were shorn of half their wool on arrival in quarantine last June; the others had been before importation:

BREED.	Rams.	Ewes.
	lbs.	lbs.
Lincoln	18	18½
Cotswold	20	18
Leicester	15	14
Highland	10	.....
Cheviot	10	10
Oxford	18½	.....
Shrops	13½	17
Hamps	12½	19½
South Down	10½	9
Merino .....	.....	12

31.—FATTENED SHEARLING WETHERS.

GRADE WETHER LAMBS IN COMPETITION—RESULTS PER HEAD.

CLASS.	Weight on Entry.	Food consumed during 119 days.						Weight at Finish.	Increase for Period.	Food cost of Increase.
		Hay.	Roots.	Cake.	Oats.	Peas.	Bran.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	£
Cotswold	106¼	202	377	80	56	112	34	147¼	41	4.54
Leicester	109½	144	384	78	56	111	34	140½	31	4.15
Oxford	95	140	384	77	55	110	33	136	41	4.08
Shrops	122	166	433	86	56	113	35	165	43	4.55
South Down	120	138	427	88	59	118	35	157½	37½	4.52
Average	110½	160	401	82	56	113	34	150	39	4.37

Began 21st November, 1884; closed 20th March, 1885.

CLIP OF WETHER LAMBS, 5TH JANUARY, 1885.

Cotswold	10¾ lbs. per fleece, unwashed.
Leicester	9½ " " "
Oxford	7⅓ " " "
Shrops	10 " " "
South Down	7 " " "

32.—LAMBS FROM NINE DISTINCT BREEDS; THEIR WEIGHT AND VALUE.

BREED.	Weight	Present average
	when lambed.	market value.
	lbs.	per head.
Lincoln	9	8 12
Leicester	9 $\frac{1}{4}$	15
Cotswold.....	7	13
Highland	7 $\frac{1}{4}$	7
Cheviot	12	10
Oxford	11	17
Shrops	9 $\frac{1}{2}$	27
Hamps.....	9	25
South Downs.....	7 $\frac{1}{2}$	20

Lambing began on 1st March, and ended 15th April this year. The weight of the Cheviot must be unusual, for the kind is not more than the Highland in that respect. Our South Downs have always been much more than this year's record. The valuation is simply an estimate.

33.—CROSS-BRED LAMBS FROM TWELVE SOURCES.

AVERAGE OF THIRTY HEAD.

BREEDING WITH CANADIAN GRADE EWE.	Weight
	when lambed.
	lbs.
Lincoln	8 $\frac{1}{2}$
Leicester.....	9 $\frac{1}{2}$
Highland.....	9
Cheviot	9
Cotswold.....	8
Oxford Down.....	10 $\frac{1}{2}$
Shrops	9 $\frac{1}{2}$
Hamps.....	10
South Down.....	10 $\frac{1}{2}$
Merino.....	8

Here also lambs came between 1st March and 15th April. Much could be said about this practically valuable business.

34.—THREE CROPS OF WOOL IN 15 MONTHS.

We find no practically sound reason why, in most countries, sheep are shorn but once a year; that nature says but once by shedding is only partially true, and in any case the question is now one of cultivated conditions. We do not now wait for the natural maturing of beef and mutton, and in the farm and garden we force most plants—taking three and four crops a year. Were cows permitted to give milk just as nature advised there would be less quantity and a shorter season—and so on with reference to other things that have been educated into the high pressure.

Since I submitted this question in our report of 1883, a few Ontario farmers have followed the practice. We are only continuing experimentally with fattening sheep, not with those for breeding, as in such a prominent departure caution is advisable.

Lambs are shorn in July, when, from a number of kinds we obtain an average of 3 lbs. of wool; feeding and management on to June the following year is of such a kind as to secure 165 lbs. for the British market, so that the growth of wool is no small feature: the second clip takes place in March, when we get a mean wool average per head from fattened grade wethers of fully 9 lbs. per head, and in June, one month before shipping, they are again shorn which clip on an average gives fully 5 lbs.

THREE CLIPS IN FIFTEEN MONTHS.

CLASS.	Clip, Lamb, July, 1884.	Clip, March, 1885.	Clip, June, 1885.	Total clip in 15 months.
	lbs.	lbs.	lbs.	lbs.
Cotswold	3½	11	6	20½
Leicester	3¼	10	5	18¼
Oxford Downs	3	8	5	16
Shrops	3	10½	5	18½
South Downs.....	2¼	7½	6½	16¼
Mean	3	9½	5½	17⅝

There is no space meantime to make comment on this system of growing wool and mutton—twice the usual amount of wool, and fifty per cent. more mutton in the same time as ordinary management. It can be done to the comfort of the animals, to the advantage of manufacturers, and clearly to greater profits.

35.—SOME NEW VARIETIES OF CULTIVATED GRASSES, AND MEMORANDA OF THE OLD ONES.

We are determined to leave nothing undone in securing all the best and reliable grasses for the Province. The public is aware of what we have already done, in showing the importance of variety for pastures, and now, more than ever, it is desirable in connection with our advancing agriculture to further prove and hold fast.

Timothy, Orchard, Meadow Fescue, Red Top, Yellow Oat, Tall Oat, Kentucky Blue, and the Common Bent are on the old list, with a doubtful look at Perennial Rye, Italian Rye and others.

I find some seedsmen still giving in their catalogues names of some grasses that we are certain are perfectly unreliable in our country—unwittingly, no doubt—for it is a common thing to repeat lists applicable to Europe. Let us first cull out the decidedly useless grasses for Ontario.

Sweet Vernal—Under any circumstances.

Crested Dog's Tail— “ “

Italian Rye—Good in association with others only.

In giving orders therefore to your seedsmen name the above as not wanted, and at the same time, if you are a believer in a small variety as against a very large number of kinds, tell him to keep out the following, which, though generally safe in our climate, are not always so, and those marked * are of second-rate importance for either cattle or sheep.

Small Fescue.

*Rough Stalked Meadow.

Wood Meadow.

Tall Oat.

*Creeping Bent.

So that the most reliable and most valuable for pasture are, in order of merit :

Meadow Fescue.

Meadow Fox Tail.

Perennial Rye.

Red Top.

Orchard.

Kentucky or Canadian Blue.

Yellow Oat.

Timothy.

Of the newer varieties, we find the Meadow Fox Tail the earliest of all grasses, in full bloom during May ; as a pasture plant it is somewhat short and bare in leaves, but rich and strong.

The Wood Meadow and Rough Stalked Meadow make a regular matting of close, fine short leaves and stems. The Tall Fescue wants body, is too open, bunches somewhat, but covers the ground irregularly well. The Small Fescue is a strong, bunchy, wiry, non-leaving grass, and Sheep Fescue as well as Red Fescue are somewhat similar, but more vigorous. The large-leaved Fescue has strong, broad leaves of a rich dark colour—a good grass, tending to bunch.

Our favorite mixture to date for permanent pasture is therefore the following :

<i>Grasses.</i>		<i>Clovers.</i>	
Meadow Fescue	6 lbs.	Lucerne	4 lbs.
Meadow Fox Tail	3 “	White	2 “
Red Top	2 “	Alsike	2 “
Orchard	3 “	Red	1 “
Kentucky Blue	4 “	Yellow	1 “
Timothy	3 “		
Perennial or English Rye	2 “		10 lbs.
Yellow Oat	2 “		25 “
	<hr/>		<hr/>
	25 lbs.	Per acre	35 lbs.

36.—OUR WALNUT AND LARCH CLUMPS.

We have established two very important facts for the forestry of the Province, namely, that on an exposed situation 880 feet above Lake Ontario (therefore 1,130 above the sea), black walnut can be successfully grown, sixty miles north of its natural habitat, and that the European larch in the same situation is also a success.

Our walnut clump has had three years' growth; the plants were one years seedlings averaging one foot above ground, many are now eight feet high and $2\frac{1}{2}$ inches in diameter at bottom; they show great vigour, and though planted seven feet apart are already touching each other. They form one acre between fields seventeen and eighteen, described in former reports and specially designed, by its form, to shelter animals in either field from any possible storm. In this respect it is matter of national gratulation that one of our most valuable timber trees will actually make such a shelter in less than ten years from time of planting. Thirty-five years ago, when a lad of fifteen, I assisted in establishing a larch plantation in Scotland, which I visited last year and found thinnings being removed for railway sleepers and ship-building. Three years ago the students and I planted a European larch clump round an old gravel pit in field two—seedlings from the States, per post—some of which are now eight feet in height and $2\frac{1}{2}$ inches in diameter.

What use of saying that man cannot realize matured timber during his life-time—if sure in Britain, how much surer here?

Our larch clump has not done so well as the walnut one, especially on a rich low-lying spot, where frost and snow have broken and dwarfed many, but among the *débris* of the old pit, where soil is fully half pure gravel and where no cultivation could be given, the plants are in full vigour and as handsome as any Scotch production.

37.—GUIDE TO WINTER FEEDING LIVE STOCK AT THE ONTARIO EXPERIMENTAL FARM.

DAILY RATION PER HEAD. QUANTITIES IN LBS.

CLASS.	Average Weight of Animal.	Hay.	Turnips and Mangolds.	Carrots.	Bran.	Oats.	Barley.	Peas.	Corn.	Linseed Cake.	Cotton Seed Meal.	Condi-ment.	Total Quantity.	Cost per day, Market Prices.
CATTLE.														
Calves on milk.....	300	1½	1	.....	1	1½	1	.....	.....	½	.....	.....	6½	1
Calves off milk.....	550	6	6	.....	2	4	.....	.....	.....	1½	.....	.....	19½	10
Cows off milk.....	1100	10	25	.....	2	1½	.....	.....	.....	.....	.....	.....	38½	11
Yearling Steers.....	900	6	20	.....	3	4	.....	4	2	1	1	.....	41	20
Yearling Bulls and Heifers.....	900	8	20	.....	1	4	3	2	.....	3	.....	.....	41	23
Stock Bulls.....	1700	10	20	.....	5	3	1½	2	.....	1	.....	1½	15½	21
Cows in milk.....	1050	12	30	.....	3	2	.....	.....	.....	.....	.....	1½	47	15
Priming Steers.....	1700	12	20	.....	3	2	2	3	.....	3	.....	1½	48	23
Fattening Store Steers.....	1000	10	25	.....	3	2	2	2	.....	2	2	1½	50	23
SHEEP.														
Breeding Ewes.....	180	5	2	.....	½	½	.....	½	.....	.....	.....	.....	8	3
Stock Rams.....	210	4	3	.....	4	½	.....	½	.....	2	.....	.....	8½	4
Fattening Wethers.....	95	5	1	.....	½	½	.....	1	.....	1	.....	.....	12	5
HORSES.														
Not at work.....	1350	10	.....	1	.....	6	.....	.....	.....	.....	.....	.....	17	11
Working half time.....	1350	14	.....	2	.....	10	.....	.....	.....	.....	.....	.....	26	17
Roadsters.....	1050	10	.....	1	.....	12	.....	.....	.....	.....	.....	.....	23	17

Physiological abstract reasoning for these rations :—

Cattle.—Calves on milk—confirming the jelly state. Calves off milk—beginning bone and muscle. Cows off milk—breeding a steady condition. Yearling steers—frame-preparing period. Yearling bulls and heifers—frame period for breeding. Stock bulls—nearing maturity, vigorous life, maintenance of heat. Cows in milk—production of milk, quantity and quality wanted. Priming steers—waiting for Christmas, a losing time, if no market. Stores—high pressure period.

Sheep.—Breeding to shear ewes—A steady condition with some growth.

Stock Rams—A make-up-cooling-down period.

Fattening Wethers.—Pressure for two crops.

Horses.—Not at work—Steady, no going back. Work half time—some waste,—steady. Roadsters—hard work, the best care.

MARKET PRICES OF FEED IN ONTARIO FROM 1874 TO 1884.

Corn	\$0 62 for 56 lbs.
Peas	0 72 “ 60 “
Oats	0 40 “ 34 “
Barley	0 66 “ 48 “
Rice Meal	35 00 per ton.
Bran	11 00 “
Hay	10 00 “
Turnips	0 08 for 60 lbs.
Mangolds	0 10 “ 60 “
Sugar Beet	0 12 “ 60 “
Linseed Cake	30 00 per ton.
Cotton Seed Meal	35 00 “
Thorley Condiment	0 05 per lb.

38.—CONCLUDING REMARKS.

In closing these notes of experiments for season 1884-85, some general remarks are naturally looked for.

I am of opinion that no time should be lost by this station as regards the elucidation of any facts not yet developed with reference to the dairy interest of Ontario. It would be a proud day for the Province were it to lead in the production of butter, as now in cheese; there seems to be no reason why this should not result within a few years. With the Dairymen's Associations, a special Professor of the Art now established at the Ontario Experimental Farm, with all the possible appliances in live stock, pastures, machinery, and opportunities for lecturing throughout the country, the industry should be so developed during the next ten years as to place us at least on a par with the best anywhere. Dairying requires more detail education than the growing of crops, as is abundantly evidenced by its condition in Britain and in the United States, where even after years of experience very many are still enquiring for the “reason” of this and that. At the present moment the small state of Denmark is expending annually \$30,000 on experimental dairying, so that if our Legislature is awake to the importance of this branch of agriculture it should at least double the \$5,000 now appropriated. It needs but a glance at the subjects treated of in this report to show how much is yet dark. The Presidents of each of the Dairymen's Associations should be members of an advisory committee, with the authorities of the College, for the purpose of furthering the interest they represent; and special prominent dairy exhibits at all our leading agricultural

exhibitions should be encouraged. With the exception of the Holstein breed, with which we have yet to make a thorough acquaintance, I think the Province need not trouble about "the best breed for the dairy," so long as we attend to proper selection by Short Horn grading, upon which subject this report contains some information.

The production of the best and cheapest can only be consummated, in addition to the education of the farmer, and the particular breed of cattle, by the establishment of permanent pasture, which our experiments have again and again shown can be so well done in Ontario: no more money, no more area, but a little more interest and a little more care; the result being fully double that of the rotation pasture.

V.—REPORT OF MECHANICAL FOREMAN.

MR. BROWN:

DEAR SIR,—I beg to submit to you the following statement in reference to the Mechanical Department of the Agricultural College. The records show that the term opened on the 3rd Oct., 1884, and the first work done by students was some repairing in class-rooms, among desks, seats, etc., likewise arrangement in lumber yard. A quantity of hurdle-fencing was built for separating the newly imported stock, which had lately arrived. There were also some improvements done on the cattle feeding stable which had recently been erected. The experimental dairy was also completed for winter work. Towards the end of November the outside windows of college building were repaired and put on.

I have stated in former reports the inconvenience I labour under in regard to not having a proper place to store those windows, which should be near the college and guarded against intruders.

For the month of December the repairs were in a general way, and to give the details of one class would be a repetition of the other. Take the third of twelfth month.

Owen, Moberley—General repairs of farm tools.

Madge, McLean—Repairing windows, putting glass in college.

Sharp, Creig—Repairing doors in college.

Notman, Marsh—Repairing tables in reading room.

Mills—Messages.

Those students were employed three and a half hours, at an average rate of seven cents per hour, amounting to \$7.15, and this is about the daily routine of the department?

On the 13th December, education closed for the holidays, resumed again on the 22nd January, 1885. The principal operation was erecting a house for portable engine at one end of implement shed, and putting in shafting and rollers for driving farm implements; this was purely as a means of education for the purpose of instructing with the machines in motion. Later on there was erected a small out-house at one of the cattlemen's cottages, and about this time we made calculations for a quantity of fencing to be erected during the coming summer, we advertised for tenders and purchased 1,000 cedar posts at 9¼ cents a piece and 60,000 of board fencing at \$13 per thousand. Of this we have on hand about 12,000 feet. As soon as weather permitted we erected about 300 rods of post and board fence at a labour cost (student's labour) of \$100. There were also made two neat gates for garden and four farm gates placed in lanes.

In these remarks you will find embodied the general operations which engaged the attention of the mechanical department from October, 1884, until October, 1885, being the eleventh year of the institution.

I am, Sir,

Your obedient servant,

JAMES McINTOSH.

Guelph, Dec. 18, 1885.

11 (O. A. C.)

VI.—MISCELLANEOUS.

(a) THE WORKING DAIRY AT THE PROVINCIAL AND TORONTO EXHIBITIONS, 1885.

(From the Public Press.)

“The Working Dairy at the Provincial and Toronto Industrial Exhibitions this year deserves special notice. The idea originated in a letter to Mr. Rennie, from Professor Brown, of the Agricultural College, and, as mentioned in the *Globe* at the time, the Executive Committee of the Industrial at once very heartily arranged for such an exhibit. Enlisting the services of Professor Barré, now the dairy expert at Guelph, a large and medium-sized centrifugal separator was obtained from Montreal, and in order still further to complete the appliances of this character, a one-horse centrifuge was ordered from Denmark, which latter has become the property of the Toronto Exhibition, and is the first of the kind ever brought into the country. Not only so, but Mr. Walton, of Hamilton, added a medium-sized machine, and thus altogether the dairy was equipped with four of these modern creamers. Milk was supplied by Mr. Walton, and half a ton used daily. This was but a mouthful, so to speak, for each as, had they worked even six hours together, they would have manipulated ten tons of milk: the large separator 1,200 lbs., the medium 700, and the small 300 lbs. per hour. It is not necessary to describe the mechanism, or detail working of the centrifuge, other than that used by the professors to the farmers, by saying that when you stand with a handful of grain and wheel rapidly round, at the same time allowing the grain to escape gradually, the heavy berries will be found farthest from, and the lightest ones nearest the operator—in the case of the milk enclosed in a drum of iron, the cream being the lightest remains near the centre and the milk proper thrown upon the side. With the exception of Mr. Walton's De Laval, all of the machines were of the Burmonster and Wain make. The respective merits of the two have been lately under trial in England, and a pretty even balancing reported; at the same time we think the Ontario Experimental Farm should possess one of each for thorough testing, and thus secure unprejudiced conclusions for our own farmers. The cream obtained daily at London and Toronto was at once churned, and, had the management desired, the novel feature of separating cream from its milk and making butter within one hour could have been shown. The butter was pronounced excellent, wanting a little of that flavour which time for the ripening of cream gives to suit some palates. There is possibly no arrangement without its trouble, and this was no exception. Party or parties unknown tampered with the one horse centrifuge, before unpacking, an essential piece being removed, which rendered its working impossible. This annoying circumstance was specially to be regretted, because it was the desire of the indefatigable Industrial Association to show farmers the possibility of an early date for any one who has, say fifteen or twenty cows in milk, and who with a one horse put on at 6 a.m. would remove the cream—more or less as found desirable—from all the milk in one hour, and serve the sweet warm skim milk to calves at 7.30 a.m., making his own butter or selling the cream to a factory as found most suitable. This one-horse centrifuge will be sent to Guelph for repairs and testing.

Another department of this working dairy was the testing of all the milch cows in competition for prizes offered by the Association. This proved so interesting and instructive that we gladly take space for some details. Several visitors acknowledged that such a systematic, reliable, and fair testing for quantity and quality has possibly never been made either in Europe or on this continent. In saying so we do not forget that chemical analysis is always the unfailing judge, but, while Professor Brown was prepared to have this done, it was considered better, meantime, to test in such a way that farmers could

copy, and certainly would appreciate more fully. Taking hints from the present year's competitions at the Royal, of England, and Highland, of Scotland, the College secured the approval of our corresponding societies to use the following in judging milch cows:—

	lbs.	Points.
1. Quantity of milk in 24 hours	24.12	
Allow 1 point for every pound		24.12
2. Butter per 100 lbs. milk	8.81	
3.5 being standard, add or deduct 10 for every 1 above or below		53.10
3. Wet cheese curd per 100 lbs. milk.....	20.60	
Allow 1 point for every pound.....		20.60
4. Time since calving	114 days	
Allow 1 point for every 10 days.....		11.40
Total value.....		109.22

In this they increased the per cent. of butter per hundred pounds of milk from 3 to $3\frac{1}{2}$, as the Ontario Experimental Farm tests have shown that Canadian milk, on an average from various sources, is richer in fat than European averages. Then, also, in view to partly meet the solids that chemistry would best submit, the wet cheese curd is given as a point. Altogether the system is similar to British. Of course in a brief contest of this kind, where many meet for only a week's work, the element of feeding and such like cannot be considered. The figures in the example we have given are those of the Jersey cow "Rose of Eden," the property of V. A. Fuller, of Hamilton, that took first in her class at London. At London the contest was by breeds separately, at Toronto open to all comers. The following were the prize winners respectively:—

	LONDON.	Points.
Jerseys—1st, V. E. Fuller		109.22
" 2nd, " 		78.10
Short Horn grade—1st, W. Patrick.....		81.52
" 2nd, " 		55.57
Ayrshires—1st, G. Hill.....		83.85
" 2nd, T. Gray		68.27
Holstein—1st, H. M. Williams.....		64.29
" 2nd, M. Cook & Sons.....		59.07

TORONTO.

Jersey—1st, W. A. Reburn.....	89.55
" 2nd, V. E. Fuller	86.82
" 3rd, A. Jeffrey	83.66

Along with these the percentages of cream from each of the cows, and any others—for all were invited—were shown in test tubes in a neatly constructed case holding iced water so as to make the temperature 40° . The great range from 9 to 35 per cent.,

according to breed, individual character, and time after calving, was a source of unfailing interest and discussion amongst the farmers and their wives. The cheese curd was obtained by careful weighings and manipulation.

Altogether, Professors Brown and Barré have to be congratulated on the success of the first really working Exhibition Dairy in Canada, and both gave large praise to their assistants, Messrs. Shuttleworth, Caswell, Zivitz, and Denton, all students from the college, and no small measure of the good work of the centrifuge was due to Mr. A. Garth, of Montreal, who, with all the others, gave gratuitous service both at London and Toronto. The arrangement to lecture daily did not succeed. It was found simply impossible to hold an audience with any advantage that would keep move, moving; people go to such exhibitions to see everything in one day, and cannot be held perforce at any one spot unless where variety and excitement is presented, such as in the ring. Some fifteen large maps were arranged round the building, showing dairy statistics of all kinds, from the breeds, by milk, cream, butter, cheese, chemical analysis, cost of production, revenue per acre, and the many items of interest and value in connection with results through various methods of obtaining the products.

On visiting the Exhibition Sir Charles Tupper at once realized the importance of the whole dairy display, and is arranging for a similar Canadian one next year at the Indian and Colonial Exposition in England."

(b) SOME NEW FEATURES OF THE DAIRY INTEREST.

I have said elsewhere that the country is not full of facts with reference to any branch of farming, and is certainly not so as regards dairying. The use of cow's milk has been, and is perhaps even now, of more importance than flesh, and no product of the soil has stood the vicissitudes of time, of markets, of climate and of fashion, so well as this has done. It has never been superseded in food value by anything else in nature or art, and yet it is the most easily spoiled of animal products; not only so, but man himself is less certain about its physiological source, knows less about its variety of source, is less able to regulate its quality, and thinks less about its actual value, or even what it costs to produce it—all the while that most men use it daily.

This is simply the result of milk having been so long looked upon as a "thing of course," and the general ignorance that milk is milk, from whatever source. It stands as a remarkable fact, however, in the agricultural history of nations, that whatever be their position—in age or civilization—whatever their wealth and resources of any other kind, if troubles arise in the growing of crops from causes within or without themselves—climatic, diseases, or competition causes, then recourse is had to the dairy. One of the oldest and one of the newest civilized countries are to-day examples of this striking fact. Britain and the North American continent are dipping deep into dairy products, and hence is a phase in the agricultural battle that will likely draw out some scientific and practical revolutions.

One of the first newest things must be the production of crops—whether milk, butter or cheese—during twelve, in place of six months a year. The activity of this nation especially, will not long rest satisfied with half measures, and the very difficulties now towards the prosecution of the business in winter will the sooner send us to victory. If dairying is to become a wide and established branch of our rural economy, as seems to be almost ensured, it is as evident that the field of production will extend into winter, and indeed, it is not unlikely that the winter products will be the better for several purposes. The want of the best of green fodder, and the greater cost of production, may be called objections, but these may be met partly by the growing of different crops, as to which I shall say something further on—and partly by the systematic incoming of cows. On the other hand there would be the advantages of more systematic feeding and management, perhaps richer products, the unquestionably more favourable temperature, and its easier regulation, and particularly, farmers at that season being able to pay more personal attention to the care of calves and the dairy work itself.

Financially, as we shall see, it would mean such an increase to revenue as to draw men where even now men are looked upon as either old school, stiff-necked, or blind.

I desire still further to impress the immense importance under our physical conditions, of obtaining crops twelve months a year. Practically, we are one half our life dead. Why should this be so? What is the difference between "soiling" in summer and our winter management? None really—for both are the best maintenance of live stock to produce the most and the best, cheapest. Of course you can see that I am aiming at butter and cheese, and not so much the milk as a retail product, which, nevertheless, is a mismanaged branch of the interest, both in quantity and quality, cheaply, during winter.

Yes, why not go on growing crops all the year round, other than wheat and corn, for half the time? The national energy should be roused up. Though not old, we are not young in experience nor in enterprise. Our rural conditions are undoubtedly not of a kind to be twisted by every wind of farm speculation, for we are solidly summer crop growers, and must always remain such, but it is this very fact that backs up the necessity of better and more extensive winter work. Winter cropping cannot long remain the dead letter it has hitherto been. There should even be a greater produce per acre than from summer results, when we look at the five crops of flesh, wool, breeding, manure and dairy products against those of summer, in which comparison we would likely find the over-balancing regulated by the value of the crop called *manure*.

And now naturally we are concerned to know something either not already known, or that remains obscure, on this subject.

I think one of the weak things in our agriculture is the "*per acre per annum*" knowledge. All quotations of farm produce should be "per acre," whether grain, fodder, flesh, wool or milk. If not so, no correct estimate can be made of what an individual or a nation is doing in comparison with others. With reference to dairy products, can we tell at the present moment what we have done in the past as regards amount and value of milk, butter and cheese per acre per annum? With all the high standing of the States and Canada in cheese, how can we judge that our farmers are up to the time, or are actually making any profit in dairying in correspondence with grain and beef?

Take an average farm of 150 acres, and we know from long experience, that the average annual profits, not allowing for household maintenance other than the direct farm food consumed, is about \$500.00 or \$3.50 per acre. I think this position will not be disputed, at least as regards being too high.

Now, individually and nationally, we have been looking to this as representative of the "per acre per annum," and throwing anything that has or may result from *winter*, either "into the bargain," or more possibly have taken the position of calling the summer crops as the necessary preparation for winter maintenance only, without reference to any profits being realized during winter. I think this is a false position or wrong to the country, and the profession at least, if not to the individual who, of course, realizes whether he knows it or not. No part of the world is so much concerned in this as we are, for nowhere else is there such a distinct necessity of housing of live stock. I contend most unhesitatingly that all our past agricultural comparisons—nation with nation, and acre per acre—have been clearly against the Northern States and Canada. When we harvest summer crops north of latitude 40° we close the book, shut the door, and virtually move upon new land, taking up farming in another physical world. But the change of scene has still reference to the 150 acres, and I venture to make a close under-estimate of the winter "per acre per annum" thus, from—

Flesh	\$1 50
Manure	1 50
Dairy	1 00
Breeding	0 80
Wool	0 20

\$5 00

These figures necessarily are more Ontario than elsewhere, but I think that both

the general idea and principle are applicable, and there is no time at present to explain every item; so then winter crops are so prominent with us as to demand separate national recognition.

This leads me to another branch as a new feature in dairying—the comparison of cost of producing dairy products with their actual price in the market, and it will save complication that we confine our figures, first of all, to the *food cost* of producing them.

There are the divisions of summer and winter. In summer, upon the average pasture of our cultivated timothy and clover, pasture that is really not up to the times, as I shall ask you to consider—and with cows of the average type, milk costs 2 cents per gallon, cream 12½ cents per gallon, butter 5 cents per lb., and cheese 2 cents per lb. We could take advantage of these summer rates to make, possibly, a somewhat unfavourable comparison with their market prices, but looking even to part of our present practice in winter, and particularly to the future—the *new* feature of the work—it is better to make one average for the two divisions. During winter, by present average practice, milk costs 4½ cents per gallon, cream 18 cents per gallon, and butter 7½ cents per lb.—by the food consumed that enabled the cow to produce them.

So then, *all the year over*, milk cannot be produced at less than 3 cents per gallon of 9 lbs.; cream 15 cents per gallon, butter 6 cents per lb., and cheese 3 cents per lb.—allowance having to be made for manufacturing in each case, which should not be more than 1 cent per gallon for milk, 8 cents for cream, 4 cents per lb. for butter, and 2 cents for cheese. The interesting point now is: how do these prices correspond with what we have to pay *on the market*?

If milk be retailed at 25 cents per gallon, summer and winter, there appears to be the enormous figure of 21 cents per gallon as going to the retailer, who may, of course, be also the producer. Pay him for cost of distribution, at rate of 9 cents per gallon, however, and there is left 12 cents as the real or apparent profit on a gallon of milk retailed in cities—a sum four times more than the food cost of producing it. When cream is retailed at 80 cents per gallon, or when we get 50 from butter factories, the profit is three times more than its cost of production in the one case, and even sufficient in the other to draw the worry and labour from our wives and daughters.

FINANCIAL POSITION OF DAIRY PRODUCTS.

	Milk per gallon.	Butter per lb.	Cheese per lb.
	c.	c.	c.
Food cost	3	6	3
Manufacturing	1	4	2
Marketing	9	2	1
	13	12	6
Market price	25	15	10½
Profit	12	3	4½

Cream is such an uncertain thing, pure or otherwise, that little can be said about its position in the retail market. Its production costing, as we have said, about 6 cents per

quart, and its delivery to customers 2 cents per quart, it is evident that to obtain a corresponding profit, it is worth 20 cents a quart. Remembering that this has been a low season in butter factories (the cream for them has been worth 12 cents a quart, delivered), there is a good margin at 20 to retail cream.

Butter is a more definite article, if not always a more reliable one as to purity, in our agricultural debit and credit. We have placed its production cost at 10 cents per lb. in ordinary farm practice—not in butter factories necessarily. When, therefore, the farmer gets 15 cents, he is well paid, for the delivery is practically nil. When, however, butter factories, as they do, give the farmer on his own floor, as much for the cream that makes the pound of butter, as the farmer gets for his butter on the market, the place of the farm, now, in the butter industry, is a very clear one indeed. Five cents will produce one pound of cheese, and as cheese has averaged 10½ cents wholesale during the last ten years, this dairy article stands as a well-balanced agricultural crop.

We shall now examine some new things in the sources of dairy products, and first as regards food.

The world does not agree as to the exact effect of different kinds of food on milk. Most men agree that the strongest effect, more or less, of food, is to produce quantity, the least effect being quality. Therefore, before closing, I think I shall have no difficulty in showing that it is the animal agency more than the food that regulates what is called the quality of milk; meantime look at the great and cheap source of dairy products.—*pasture.*

I wish we had time to tell all about that combination of grasses and clovers properly established and maintained—that we term Permanent Pasture. I desire to place on record to-day, what a Scotch Canadian thinks is the biggest weakness of the agriculture of this Province, in correspondence with all the aims and actual work in progress. I do so now for the first time, and it is, that we have *no pasture in our cultivation.* There is nothing in all agricultural practice anywhere so neglected as pasture. The average rotation after-math of timothy and clover is not pasture, but hay, and hay is not pasture, nor never will be. Hay is not made subservient to its pasture. Were it so, the results would be much better; but even allowing this, there is nothing in these two plants at all able to meet the wants of even reasonable animal life. But pasture made permanent with its reliable ten or twelve grasses and four clovers for our agricultural conditions, there is an incomparable annual offering, reliability and value. Such pasture gives several crops per annum; offers an earlier and later bite; animals are more healthy and less liable to disease upon it; it cannot possibly be destroyed by either drought or frost, it gives more daily produce than any other kind of fodder, it gives three times more of any animal produce per acre, it can be used as a soiling crop every year, it is less expensive to produce and maintain than any other crop, it is a continual source of reliance and wealth, and it is *permanent.* What more need be said than to shew what it can do in dairy products, as realized at our Experimental Station for several years, and particularly during 1884-5.

We set aside six cows and one acre for continuous depasturing, in couples alternating every two weeks, so as to secure an average of sources—using the Ayrshire, Holstein, Devon, Jersey, and what we call a Quebec grade. Water and shelter were good, cows left out day and night, milking in the field twice a day, and weighed there also. The cows were weighed at each change, the manure regularly spread over the pasture, the milk daily tested for cream by different methods of setting, by centrifugal twice a week, chemically analysed every week, and sent twice a week to myself for microscopic examination. We were aware of the extra “waste” by confining two animals to one acre—tramping, lying upon, and manure-dropping—than there is under the ordinary circumstances of a farm, and so, partly to check this as well as to offer a *fresh* bite, the area was divided into two fields, and a change made every seven days. We had plenty more acres of the same, but decided to make a very severe test.

The Ayrshire during the first week was very unsettled, and communicating this to her Holstein mate, they both reduced in weight very heavily, consequently affecting at least the quantity of their milk—in other respects nothing marred the test. The average daily yield of milk per cow from May to October, was 23½ lbs., which for four year old

cows three months after calving, and a mixture of breeds, is neither low nor high. One acre maintained the two cows *all the season through* for five and a half months, say 165 days, so that we got 7,800 lbs. of milk from that acre. Or we got per acre, 1,090 lbs. cream, or 270 lbs. butter, or 800 lbs. cheese. It requires three acres to maintain one cow per pasture season in Ontario, which gives on an average 3,900 lbs. milk, therefore 1,300 lbs. of milk per acre; and recent returns from some of the Northern States give fully four acres as needed for one cow, so that granting the like cows, the milk per acre is only 950 lbs. Such is our national position of dairy produce per acre—a humiliating position in all truth, an extraordinary admission of something worse than indifference.

In the States and Canada we are harvesting 1,200 lbs. of milk per acre, while it should be at least 5,000. In place of 200 lbs. cream, it should be 1,000 lbs. per acre. Butter per acre with us is only 40 lbs. in place of 200 lbs., and cheese should be 600 lbs. and not 150 only, per acre. We are coming to it, though.

(c) LETTER TO ONTARIO FARMERS ON PERMANENT PASTURE.

During my recent run at Farmers' Institutes throughout the Province, every one without exception chose the subject of Permanent Pastures as part of the programme, and such was the keen interest manifested that even after much discussion and the apparent exhaustion of explanations, I was asked and promised to give a full statement in the *Globe* and *Mail*, in order that others should copy, and every part of the country be thus placed in possession of the facts in good time for spring work.

Permit me introductorily to say what is implied by our farmers taking the interest they do in this seemingly simple crop.

It needs no great wisdom to tell that our agriculture must advance with the times as regulated by the great markets of the world, and that, if it does not do so, we must take a second or third place and learn to be content, for it is only the progressive that have any legitimate claim to grumbling. Fifteen years ago it was easy enough for Ontario to calmly hold fast and look on, but now that the agricultural world is strung upon the sharpest lines of science and practice—crossing each other as they do at even many uncivilized corners of this big earth—nations are bound to go ahead or suffer. The very fact of Ontario being in advance of other countries as regards several branches of rural economy, makes her position more dangerous as a competitor—dangerous not only to her reputation, but seriously so financially. No nation of our age, experience, and wealth, is to-day doing so much in the best introduction, maintenance, and production of farm live stock, nor of dairy products, nor even of grain, and certainly there is no climate and soil so suitable and reliable as ours for variety of products. Yet we lack. Our reliability can be greatly increased by associating scientific and practical arboriculture with our everyday farming; we are not recognizing the undeveloped resources of districts within our own bounds, and particularly seem afraid to do anything that does not immediately return a large profit. The undrained lands and natural pastures of the Province are yet unknown in their area and value. Our wool and mutton produce, of the right sorts, have actually no place in our statistics—the while our own people are calling for them—and the land rich with all the virtues that make them. After all our education, specially designed, very many of us are still in doubt as to the propriety of growing finished beef, whatever the condition of the market—unable yet to see that the flesh in question is the secondary object in connection with our cultivation of crops, and maintenance of fertility. Then, also, unless it be at once clearly apprehended by the country that it is absolutely necessary to produce more crops systematically during winter as well as in summer, we shall certainly fall terribly short. We are bound to produce cheaper and in greater quantity. It is not so much the area that is troubling, but the “per acre per annum,”—than which there is no truer gauge of national or individual well-doing. Once our national pride is thoroughly aroused the world will soon hear from us with a great big sound that shall

shake old farming tracks and constitutions. The admirable address of our Lieutenant-Governor the other day is enough to band the farmers of Ontario in an impolitical union stronger and broader than from ocean to ocean.

Towards these ends I respectfully submit that permanent pasture will have a great deal to say. As a stimulus to healthy appreciation of the importance of permanent pasture, and as one of the best possible ways to impress our people, I may ask why it is that Britain, with all her age, experience, and wealth of other things, has already placed half her arable under this crop? It is not altogether because of outside competition in other crops, nor of climatic trouble, but because she knows of no better way to conserve, to wait, and to make money by doing little at the least risk and outlay. Britain has never hesitated how to "hedge" in her agriculture when troubles arose, and to-day her farmers make more revenue per acre per annum on the best pasture than from any other source. One cow per acre being her average, there is a gross return of three times more money than Ontario now shows, and thousands of prime bullocks are annually produced from the same source.

Another stimulus to the extension of such pasture is the examples already existing in the Province, and that have been established since the prominence given the subject by this Experimental Farm some five years ago. As nothing goes home so strongly as neighbouring examples—stronger even than that of an experimental station—I beg indulgence for a few of them:—

Near Belleville twenty acres were seeded down four years ago, and so profuse was the first years' growth that pasturing and haying had to be adopted in order to prevent smothering. The second year was pastured, when fully two head of cattle were kept per acre; during the third year twenty cows were grazed up to 11th July, when ten tons of first-class hay was harvested from one-half of the field, and, after the hay was removed, seventeen cattle were grazed for the remainder of the season, leaving the pasture with a much better bottom. The enterprising farmer in this example gave particular attention to the effect of the variety of grasses and clovers upon dairy products. He says:—"The milk produced was richer and of a peculiar flavour, having, directly after milking, a greasy appearance like oil on the top of water; the butter had also a peculiar flavour and a richer yellow colour;" the same effect was produced on the butter when cows were fed on the hay.

Not far from the same place a prominent public man seeded some forty acres, and he expressed his satisfaction to the writer in this way:—"If the farmers take advantage of what the Experimental Farm has shown can be done with permanent pasture alone, it has more than paid all its cost to the country for many years to come." I am not aware exactly how the calculation was made, but probably somewhat in this manner:—The present cultivated pasture of Ontario maintains one cow on every three acres (it is really three and a quarter acres), and as the average cow gives 3,800 lbs of milk per grass season, the produce is 1,270 lbs. per acre per annum. As the permanent pasture in question can hold more than one cow per acre, and enables the same cow to give one-fourth more milk, the acre produces 4,750 lbs. of milk every season. There being about 15,000,000 acres of arable land in Ontario it results that if ten acres of permanent pasture were established to every one hundred acres, the 1,500,000 acres thus changed from the present stamp of pasture would actually give a cash difference of \$25,000,000, or \$250 a year to every farmer of the Province. The cash cost to the Province of the Ontario Agricultural College and Experimental Farm is about \$20,000 a year. If this rough estimate is wide of the position taken by the gentleman referred to, I shall be glad to have it corrected, as his congratulations were hurriedly made in a railway car two years ago.

Another example is near Stratford that laid down twenty-five acres two years ago. For the first year the farmer was obliged to graze as well as make hay. Twenty store cattle, yearlings and two year olds, were kept on these acres, and they would have held more, he said. The land was newly cleared and had never been cropped. Here was a case of a cash receipt of \$15 of beef per acre per annum, as against the average of \$5.25 from timothy and clover pasture.

At Meaford, a hilly piece of naturally poor and light land, has been put to permanent pasture, and is giving unexpected results under the conditions. In the county of Simcoe a three hundred acre farm, largely devoted to raising thoroughbred cattle, has placed no less than eighty acres under this class of pasture—being satisfied that its character will, better than anything else, meet all the wants of such an establishment. I could cite other cases, but these are enough. In order, however, to keep the principal facts to date, in a bunch, I shall now abstract the results of this Experimental Station. When I took charge of the farm in 1876, and opened a small separate experimental department, we never hesitated in giving a prominent place to grasses and green fodders. Ever since we have systematically obtained a large number of varieties, both from England and our own seedsmen, in order to thoroughly test their character and reliability for Ontario conditions. Our annual reports give the details, and as the situation at Guelph is comparatively high lying and exposed, what succeeds there is almost certain to do so in any other part of the Province, if not all Canada. Until last year we had no opportunity and appliances to undertake the “per acre per annum,” when, however, a very full and fair test of such produce was carried out, as detailed in the Midsummer Advance Report, 1885, and which is repeated in this one. I may also note here that we have planned to test this summer the ability of this pasture to produce finished beef by the ordinary store steers of the country—a feature of our work that cannot fail to be very valuable—and of course we should continue testing dairy products from the same plots of last year. The dairy testing last year was a product of 7,800 pounds of milk per acre, where one acre maintained two cows, all the year through—a result so apparently remarkable in comparison with the present Provincial average of 1,300 pounds, that comment stands still.

The conduct of this class of pasture is very uniform and characteristic. On all hands the complaint has been that it comes so strong and profuse the first year, necessitating a kind of management contrary to the best practice in Europe. As an example of this, take the case of the four acres we seeded in May last in preparation for the store steers of 1886. A late spring made a late seed-bed of good clay loam, in good trim, however, in May. Growth became so rank that for the sake of giving air and a better chance to roots, we ran the mower over in May, and left the cutting as a mulch. In June another cutting was considered necessary for the like objects, as well as to check some soft milk-thistles that had come with the grass seeds. Again the mower was used for the third time, and finally in September, fearing that the continued profuse growth might smother out some plants when winter came, we took off a crop of hay—the fourth cutting—that averaged $1\frac{1}{4}$ tons per acre. Thus, the same season the seeding was done we had to cut four times, and could have pastured afterwards had it been consistent with good management.

What we have realized with others are the following facts: That permanent pasture, after the first year, is the earliest of most green things, some of the grasses and the lucerne clover growing under the snow—if deep and late in going. The meadow fox tail leads in earliness, and with the English rye, orchard, and lucerne, offers a full bite even for cattle early in May; these are followed by meadow fescue, blue grass, red top, yellow oat, and timothy, in regular order, so that with the five clovers the animals are presented with a succession of different crops throughout summer and right into the snows of November—never bare and always fresh. The meadow fescue may be termed the “general purpose” plant of the mixture, no other is equal in an average of good things; never coarse, always in leaf, a good spreader, and a good neighbour; other grasses could be dispensed with—the meadow fescue never. Animal health is better where a variety of plants exist, though England has found, in some instances, that heifers grazed alone upon such pasture are more difficult to get in calf by reason of too many good things giving over-much fat.

Another feature of this crop will be the use of part of it all season as green fodder for housed animals, and part to be made hay for milch cows in winter. The Experimental Station has had the experience that the feeding of timothy hay without much clover

tends to dry up the flow of milk in winter, and as winter must become a largely extended dairy field, if Ontario means to cope with other countries in these competitive times, she must secure the kind of meadow hay that has always helped to give Britain her winter milk.

The soils best adapted for permanent pasture are those with a decided clayey tendency. Whatever the soil be, secure a firm, friable, rich seed bed, naturally or artificially dry. The best preparatory crop is roots that have been liberally dealt with as to manures and cultivation, so as to obtain a rich and clear surface. We agree with the Belleville farmer that it is better not to turn under this surface but till only, in the fall as well as spring, if you desire to run no risks, but conserve everything for the future crop, seed in the spring and seed without a crop of grain of any kind. Sow immediately the land is mellow enough, never deeper than half an inch, and therefore, after, and rarely before the harrows, the roller is usually sufficient to cover. The grasses and clovers, with quantities that are best and most reliable to date, are as follows:—

GRASSES.

	Lbs.
Meadow Fescue.....	6
Meadow Fox Tail	3
English Rye.....	2
Timothy.....	3
Canadian Blue.....	4
Orchard.....	3
Red Top	2
Yellow Oat.....	2
	—
	25

CLOVERS.

Lucerne.....	4
White.....	2
Alsike.....	2
Red.....	1
Yellow.....	1
	—
	10
	25
	—
Per acre.....	35

The quantity can be varied according to circumstances ; never less than 25 pounds under the best conditions, and not more than 35 upon the poorest conditions.

Avoid grazing any class of animals the first year, and if blessed with much rankness mow and mulch as previously explained. If weeds should trouble they cannot remain long were liberal treatment is carried out in after years, because the cultivated plants thus encouraged soon kill out the poorer. Believe and practise rolling every year, and top dressing with compost, or farm yard manure every third year. For my extended views of the best management of permanent pasture I beg to refer to the "Canadian Farm Cyclopaedia" as published by Hunter Rose & Co., Toronto. Do not be afraid of heavy depasturing early in the season and use the mower to keep under what the animals won't touch. Lime and salt sweeten and stimulate pastures, when never more than 5,000 lbs. every eighth year per acre, and 300 lbs., respectively, every fourth year per acre. If any difficulty arises in securing a good crop by the use of ordinary appliances, try 300 lbs. of bone dust ; if this fails break up. Manuring is usually best after haying

or in early fall, as, if in spring with a succeeding dry season, the effect is not good. Take advantage of any natural irrigation from streams or barnyard liquid, which are best in winter, or spring rains, so that the position of the plot of permanent pasture is an important one indeed.

A few of the Farmers' Institutes have petitioned the Commissioner of Agriculture to this effect:—That in view of the importance of permanent pasture, and the desirability of securing reliable seeds, the officers of the Ontario Experimental Farm be authorized to advise with the principal seedsmen of the Province for this purpose; and it was also at the earnest solicitation of several thousand farmers that I promised to publish this letter, in order that others would unite in assuring these seedsmen, that, provided some guarantee be obtained as to purity of kind, good germination and freedom from foreign seeds, the demand for the grasses and clovers this spring would be very large. The demand may, indeed, be now assured, and I therefore beg hereby to notify all interested seedsmen to prepare and place the price as shall hold reasonable profit only, so as to beget encouragement for a very fine future business.

But I must now close. If the 100,000 farmers of Ontario do not within ten years make up one million acres of permanent pasture, we shall not only suffer for lack of progress but have to change our belief in the cupidity of average humanity.

INVENTORY AND VALUATION OF LIVE STOCK AND IMPLEMENTS ON
HAND DECEMBER 31st, 1885.

HORSES :

8 working horses	\$1,550 00	
1 cart horse.....	80 00	
1 express horse	50 00	
		\$1,680 00

CATTLE :

1 Shorthorn bull	\$2,500 00	
2 Shorthorn cows	1,975 00	
		4,475 00
1 Hereford bull	\$2,600 00	
2 Hereford cows.....	1,060 00	
1 Hereford bull calf	250 00	
		3,910 00
1 Polled Angus bull	\$2,600 00	
3 Polled Angus cows.....	2,300 00	
1 Polled Angus bull calf	100 00	
		5,000 00
1 Galloway bull	\$600 00	
2 Galloway cows	700 00	
1 Galloway bull calf	80 00	
		1,380 00
1 Jersey bull	\$325 00	
2 Jersey cows.....	550 00	
		875 00
1 Guernsey bull	\$350 00	
1 Guernsey cow	275 00	
1 Guernsey heifer calf	50 00	
		675 00
1 Devon bull	\$325 00	
1 Devon cow	300 00	
		625 00
1 Holstein bull	\$1,100 00	
2 Holstein cows	800 00	
1 Holstein heifer calf.....	50 00	
		1,950 00
1 Ayrshire bull	\$300 00	
2 Ayrshire cows.....	500 00	
		800 00
1 West Highland bull	\$200 00	
		200 00
8 Grade cows	\$481 00	
3 Grade calves	80 00	
5 feeding cattle	200 00	
		761 00

SHEEP :

3 Cotswold rams	\$310 00	
10 Cotswold ewes	250 00	
		<u>560 00</u>
1 Leicester ram	\$260 00	
6 Leicester ewes	310 00	
		<u>570 00</u>
1 Lincoln ram	\$160 00	
3 Lincoln ewes	180 00	
		<u>340 00</u>
3 Oxford rams	\$250 00	
9 Oxford ewes	480 00	
		<u>730 00</u>
3 Shropshire rams	\$580 00	
10 Shropshire ewes	350 00	
		<u>930 00</u>
1 Hampshire ram	\$200 00	
5 Hampshire ewes	200 00	
		<u>400 00</u>
1 Southdown ram	\$270 00	
6 Southdown ewes	370 00	
		<u>640 00</u>
1 Cheviot ram	\$60 00	
2 Cheviot ewes	45 00	
		<u>105 00</u>
1 Highland ram	\$60 00	
4 Highland ewes	50 00	
		<u>110 00</u>
2 Merino ewes		25 00

PIGS :

1 Berkshire boar	\$50 00	
1 Middle York sow	50 00	
1 Essex boar	40 00	
1 Essex sow	30 00	
		<u>170 00</u>
Total Live Stock		<u>\$26,911 00</u>

IMPLEMENTS :

Value of farm implements, per inventory	\$4,020 00	
Value of mechanical stock and implements	1,128 25	
Value of experimental implements	1,247 50	
		<u>6,395 75</u>
Total		<u>\$33,306 75</u>

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

W. BROWN.

PART V.

REPORT OF THE FOREMAN

OF THE

HORTICULTURAL DEPARTMENT.

GUELPH, December 31st, 1885.

*Honourable A. M. Ross,**Commissioner of Agriculture:*

SIR,—In very briefly reporting on the practical horticultural work of this Institution for the closing year, I would say that, notwithstanding some failures, chiefly from causes beyond our control, on the whole satisfactory progress has been made. Although not much new work has been accomplished or attempted this season, the labor of the past few years on the grounds in front of and surrounding the College buildings, we think, will prove equal to the anticipation of its originators and fully justify the expenditure caused by the grading, road-making, levelling and planting done on the lawn, the grass on which, although only two years from seed, has formed a tolerably close matted turf, that to the casual observer would pass as an established lawn of many years' standing.

The planting in front of the College buildings is composed of the smaller-sized trees and shrubs, embracing a variety of about three hundred, arranged in groups according to the families or natural orders to which they belong. Thirty-two distinct families are represented, which were named in last year's report, and a complete list of the varieties was given in the report of 1882; since then some of the tenderer species have been lost, and have not as yet been replaced. Arranged and planted in their present position in the spring of 1884, they continued to grow later in the summer months, and consequently the young wood was not so well matured and conditioned to withstand the coming frosts, to provide against which we were specially careful to protect all transplanted that season by mulching well with stable manure, and further protecting all those deemed the least tender by surrounding them with evergreen brush, and fortunately so, as we believe the winter proved to be the most trying of a succession of severe winters, which have left their traces in most parts of the Province, and we think specially so in this section. A like precaution has been taken this fall by giving all possible protection for the winter, and we await the result, but fear that we will yet lose a further portion of our large collection. The flower beds immediately in front of the College buildings (more minutely described last year) were as usual filled with all the ordinary bedding and other ornamental plants, which kept up a succession of bloom from the first of June to the middle of October, and throughout the summer months were noted by several visitors, whose opinions we respect, as at least equal to any other flower garden in the Province. The older flower beds and borders near the greenhouses were equally attractive and satisfactory during the season; the whole being furnished with over nine thousand plants of all sorts, either propagated by cuttings, or raised from seed in the early spring months, under glass, including outside hotbeds.

THE KITCHEN GARDEN.

I have pleasure in saying that the vegetable crops—due to a specially favourable season for growth—were all that could be desired, good and plentiful in their season. Asparagus, beans, peas, spinach, beets, carrots, corn, cabbage, celery, cucumbers, squash and tomatoes, were all good in quality and abundant in quantity, considerably in excess of an average crop; yet we had some partial failures. Potatoes were very promising until about the middle of August, when disease made its appearance, probably caused by the unusual amount of moisture and a week or two of very cool nights which occurred at that time, succeeding a season of strong growth, and thus checking them previous to maturity. Be this as it may, when dug the last week in September, fully a third of the crop was found to be useless. Onions, at an early stage of their growth, were attacked by the well-known root maggot, whose ravages thinned them out to about half a crop. Fall cauliflower, although planted the first of July, proved somewhat late,—the variety being Autumn Giant, perhaps not so suitable for general crop in this section as some others. Still, sufficient came in to meet the demand for a time, and, as a whole, the vegetable supply has met all requirements throughout the season, and what can be preserved are stored in sufficient quantity for winter use.

ORCHARD.

I regret to say that fruit trees, from a succession of severe winters, have suffered much in this locality. After the first severe winter of 1880-81, it was said by many of the hopeful that we may not have such a winter again for twenty years, but the fact is that three out of the four succeeding winters have proved equally as severe, and the last worse than the first. Such experience, we think, is sufficient to shake the faith and discourage the efforts of any one short of a confirmed enthusiast.

The young trees planted in the borders of the kitchen garden here ten or eleven years ago, about 280 in number, in the summer of 1880 looked as healthy and promising as any one could desire; but since then each successive year has had its victims, killing some and injuring the vitality of others, until nearly half the original number are gone. Composed of apple, pear, plum and cherry, all have alike shared in the devastation. The young orchard established in field known as No. 10, as an experimental ground for testing what varieties of fruits may be profitably produced in the Province, as well as showing to students and others the comparative merits of as many varieties as possible, from a small beginning in 1880, it was enlarged the three following years, until we had reached 130 varieties of apples, 55 of pears, 29 of plum and 21 of cherry, including in all nearly 1,400 trees. An attempt was made to keep up all the varieties by replacing all failures and adding to the collection from year to year as new varieties were commended, until last spring, when the number of deaths were found to be so great, and entirely from winter killing, that it was deemed inadvisable to continue the course hitherto pursued. On referring the matter to yourself and after consultation, it was decided to give up about a third of the field on the south side, which is low, flat and only partially drained in such a position that, on the occasion of a winter thaw or spring freshet, it has to take the surface water of over fifty acres. On this portion of the ground, containing from four to five hundred trees, we found but few with vitality enough left to be worth transplanting. The north half of the field which is more rolling, with a somewhat gravelly subsoil, the trees have stood better, although there are many vacancies throughout which I should recommend filling with the best hardy variety obtainable, and fortunately we have many good apples, chiefly of Russian origin, said to withstand the severest tests, and favoured by some fertile mind with the name of ironclads, such as Yellow Transparent, Tetofsky, Duchess of Oldenburgh, Haas, Alexander, Stump, Red Brietigheimer, New Brunswick, Pewauka, Ben Davis, Wealthy, Wallbridge, Mann, Rubicon, and others highly recommended as perfectly hardy varieties of good quality.

Small fruits, viz., Goosberries, Currants, Raspberries and Strawberries, planted in a portion of the orchard between the rows of the larger trees, fruited fairly well for the season. Goosberries and Currants were somewhat punished by the usual attacks of the

caterpillars which caused both attention and labour to keep them under, but sufficient fruit was produced for college use. Strawberries being planted between the lines of grape vines in rather an exposed situation, suffered considerably by winter killing, and consequently but a sparse crop was secured. Crescent Seedling kept the ground the best, and in early spring was quite promising, but the fruiting season was short. Cumberland Triumph and Monarch of the West were our next best, and produced an ordinary crop of fair sample. The remaining varieties were so much injured that but little could be said of their respective merits, and being for three years in the same ground materially interfering with efficient cultivation and fertilizing of the grape vines, we decided to make a new plantation in a portion of the apple orchard, which we did in September, planting from the varieties on hand in the following proportion: 1,500 Crescent Seedling, 1,200 Cumberland Triumph, 600 Wilson's Albany, 600 Monarch of the West, 500 Nicinor, 500 Maggie, 150 Alpha, and 150 Sharpless, in all about 5,000.

Raspberries, notwithstanding the severity of the winter, turned out better than expected; the Philadelphia was but little injured and bore an abundant crop; Cuthbert was our next favorite, having a fair crop of fine, large, firm and showy fruit; Herstine was perhaps the next in order, a hardy, vigorous grower, and fairly prolific, but the fruit is soft and watery, and does not stand handling so well as most of the other varieties; Turner, Thwack, Brandywine, Niagara, Clark, and Caroline, were all more or less killed back, although a limited quantity of fruit was procured from all; Black Caps, Davison's Thornless, Dorchester, Gregg, and Mammoth Cluster, whether from being on the lower part of the field or other cause, were the most injured, and but very little fruit was got from them, but on the whole, abundance of fruit was produced to meet all demands from the college and quite a few cases were marketed, which is a new departure for us.

VINEYARD.

The grapevines, as stated in previous reports, are planted in field No. 17, north of the College buildings, and occupy a space of about two and a half acres. The planting was commenced in 1881, and the two following years enlarged to its present dimensions, containing about 750 vines in all, and embracing some 90 varieties, each having claims to some special property of merit according to the taste or prejudice of its originator or patron. Many of the newer and untried sorts were represented only by a single plant, and through failure or other mishap incidental to cultivation some of them were lost, and have not as yet been replaced, but the collection still contains from 70 to 75 distinct varieties, which with ordinary success could not fail to be interesting as well as instructive to the students or others interested in grape culture. Unfortunately, thus far our success has been very limited. Last two years, either by late season or early fall frosts, scarcely a bunch of good ripe fruit was matured. Still, the vines continue to grow healthy and some of them vigorous, but to keep them in this condition it is necessary to lay them down every fall and cover for winter protection. To make this practicable it is necessary to train and prune on the renewal system, that is, to grow the bearing canes on two horizontal limbs from each vine, the limbs being tied to the lower wire of the trellis right and left, so that they may be loosened and lowered every fall for covering, an operation simple enough to perform, but causing a tax on time and labour in this section of the Province which is unnecessary in a more favoured locality. Having had almost a complete failure of the grape crop for two years in succession, we hoped for better success this season, and appearances during the spring and early summer months warranted this prospect. The healthy growth and weight of fruit on the vines were all that could be desired, but the season was late throughout, and from a continuance of cool weather and unusual amount of moisture during the month of August and first weeks of September the fruit of only a very few varieties were sufficiently ripe to be cut before getting injured by the early fall frosts. In looking over some notes of observation taken during the fall months, I find under date of September 1st the varieties Champion and Janesville just showing colour, evidently the earliest in the collection. Again, on the 7th, the above fairly coloured and as near equal as possible, but not by any means ripe, Moor's early and Massasiot colouring distinctly, and Early Dawn, Masatawney, Brant, Clinton, and

Othello just on the change. Sept. 14th, after a week of very unpropitious weather for maturing grapes, we intended cutting a few of the earliest, but found that we had been anticipated by some smarter and less particular party, who in a very unceremonious way had helped themselves to the best they could find. On the 21st we cut about 100lbs of Moor's early, Massasiot, and Delaware. The 23rd showing a great indication of frost we cut all that was useful of the above named, as well as Brant, Early Dawn, Masatawny, Othello, Brighton, Lindley, Wilder, Clinton, and a very few Concords. The frost not proving so severe as we expected, we cut a few from day to day up to October the 6th, when the final cutting was made for the season, and included more or less of each of the following sorts,—Cottage Dempsey, No. 4, Ives Seedling, Black Hawk, Emmeline, Herbert, Gartner, Amber, Salem, Duchess, Alvery, Rogers No. 30, Lady, Barry, Merrimack, Hartford prolific, Wilden, Amber Queen and Worden, the majority of which, so far as the season would permit of judging, came in about equal with Concord, of which we secured only about one-third of the crop, proving as clear as may be from our experience of the past five years in this locality, that only the very earliest varieties of grape-vines can be relied on.

FOREST TREE CLUMPS.

In 1880 and two following years, a number of tree clumps were planted on various parts of the farm, the objects being two-fold, first for landscape effect, in breaking views, and secondly for the purpose of showing what progress may be made by forest trees under cultivation; a question that of late years has caused considerable discussion among those who not only believe it to be our duty to do what we can to prevent the depletion of our forests, but who see that the time is not far distant, when it will become a necessity to replant in order to keep up a supply to meet the ever increasing demands for timbers; to such, our small experiment, however limited, may be of some interest. The first of these, a clump of five hundred black walnut planted between fields 17 and 18 four years ago, the plants were seedlings from six inches to a foot in height, and planted in rows seven feet apart, thus occupying about an acre of ground. The planting was a good average success, only a slight growth was made the first season, but for the last three years the growth has been healthy and vigorous, so that many of them now stand from six to eight feet high, with strong spreading, but very irregular, tops. Believing that trees of this class having large top-roots would grow cleaner, taller and straighter specimens if not transplanted, an operation causing the cutting of tap roots, and thus checking the leading shoot, I have this fall procured a small quantity of nuts of each of the following trees, viz: black walnt, butternut, hickory and sweet chesnut, planting the seed in a spare piece of ground where they may remain as permanent trees; in the course of a few years the effect of this experiment may be noted, as compared with those transplanted. Another clump planted the same year as the above, and consisting of nearly an equal number of European Larch, situated in field number two, intended to screen an old and somewhat unsightly gravel pit, lying almost in front of the College buildings; from being planted rather late in the season and many of the plants in poor condition, this group was a partial failure the first year, but renewed the following spring by filling up all vacancies and thoroughly cultivating the soil, they have since done remarkably well, and may be called an established success; some of the best trees have attained a height of from six to eight feet—although the soil is almost a pure gravel; showing evidently that the larch is suitable for land of this description. A clump of young butternuts was also planted in a similar soil and position as the above, in field number four, on the face of a gravel ridge adjoining a pit still in use; the ground was in sod at the time of planting, and from the extra amount of work on hand we were unable to give it due cultivation for the first two years, which undoubtedly had a deteriorating effect, but whether from this cause or unsuitable composition of soil it is difficult to determine. The plants, however, have never come up to our expectation, showing that free and healthy growth, characteristic of this tree under favourable conditions, but we have now in stock a fine healthy lot of young plants with which we intend to fill up all vacancies and give this group a further trial.

The two following years three additional clumps were planted, one of white ash, one of hard maple, and the third a mixed group, composed of black walnut, ash, birch, American larch, linden and elms; the white ash being planted in field No. 14 which was selected the following year for permanent experimental purposes, in consequence of which, this clump had to be removed; the plants were therefore carefully transplanted into close lines in our small nursery ground, where they still remain until a new situation is decided on.

The hard maple, from the roots getting somewhat dry in transshipment, and planted rather late in the season, did not succeed so well as we could wish. Although there were but few failures from planting, they started into growth very weakly, and the tops of many afterwards died off, but they are now pushing from the roots and lower portion of the stems, and we have no doubt, with a little training and pruning, most of them will ultimately become good trees.

The mixed group which was planted in a low lying and rather moist portion of No. 2 field has quite exceeded our expectations, especially last two years, by a luxurious, healthy and vigorous growth, so much so that in cultivating the past summer it was difficult for a horse to pass between the lines.

Nursery.—The nursery ground above referred to, is situated in, and laid out in accordance with the general plan of the experimental field; and was established three years ago for the purpose of keeping a stock of young trees and shrubs, for the renewal or extension of the arboretum and forest tree clump as may be required; the ground is only half an acre in extent, consisting of five plots, each one-tenth of an acre; the plots are bounded on the north and south sides by hedges of different shrubs, intended as permanent specimen hedges of a useful or ornamental character. With the exception of due and necessary cultivation, very little change has been made in the nursery this year, but the whole stock, consisting of walnut, butternut, hickory, white oak, ash, birch, elm, linden, maple, Norway and native spruce, etc., as well as barberry and other shrubs, over three thousand in all, having been three years in their present position, ought, and with justice to the trees, be transplanted the coming spring.

Greenhouses.—With the exception of some necessary and indispensable repairs to furnaces and flues, which have always been in a very defective condition, no material change has been made in the structure of the buildings, which consist of a greenhouse, an intermediate house and a propagating house. The two latter are required principally for the propagation and raising of bedding and other ornamental plants necessary to furnish the flower beds and borders, which of late years has been increased so that all our available room for plant raising is fully occupied, especially in the spring months, when we, in addition to the houses, require a good many hotbeds to furnish, as we did last spring, fully nine thousand bedding plants. In the larger building, we have a fair collection of ordinary greenhouse plants, a complete list of which was given in the report of 1883. They are chiefly of the soft wooded class, and, consequently, not the most expensive or difficult to grow. But, as I have stated on former occasions, I believe they are about all, both in variety and value, that can be grown with satisfaction in the present building, which is heated by flues of very defective construction. This season we have got some alterations and improvements made to the tool-house and workshop connected with the greenhouses, which will make it more commodious and comfortable for the students during the winter months, when a portion of their time is devoted to practical instruction in this department, which consists of practice in grafting, budding, potting and the various modes of propagating and keeping up a stock of greenhouse, half-hardy and bedding plants—with general instruction as to temperature and moisture—including the use and general management of hot-beds, etc., etc.

For several years past, the senior division or second year students took a more complete course, by becoming acquainted with the technical and common names of all the plants we have in stock, as well as the family or natural order to which each belongs; but last winter, on account of experimental feeding of cattle, dairy work, etc., the senior students were not in this department during the winter months; consequently, the subject was deferred until after the Easter holidays, when Professor Pantou took it up, and, no

doubt, did good service in thus practically illustrating his more systematic lectures on botany.

The following are the vegetables, fruits, etc., supplied to the College during the year.

JAS. FORSYTH,

Superintendent, Practical Horticulture.

January.

Onions, $3\frac{3}{4}$ bush. at 90c.....	\$3 37	
Cabbage, $3\frac{1}{2}$ doz. at 70c.....	2 45	
Carrots, $3\frac{1}{4}$ bush. at 25c.....	81	
Vegetable Marrow, $1\frac{1}{4}$ doz. at 60c.....	75	
Salsify, 2 bush. at 75c.....	1 50	
Parsnips, $4\frac{1}{4}$ bush. at 40c.....	1 70	
Turnips, 4 bush. at 20c.....	80	
Squash, 22 bush. at 5c.....	1 10	
Beet, $\frac{1}{2}$ bush. at 30.....	15	
		\$12 63

February.

Carrots, $5\frac{1}{4}$ bush. at 25c.....	\$1 31	
Onions, $6\frac{1}{4}$ bush. at 90c.....	5 62	
Cabbage, $3\frac{1}{2}$ doz. at 70c.....	2 45	
Turnips, $4\frac{1}{2}$ bush. at 20c.....	90	
Parsnips, 5 bush. 40c.....	2 00	
Squash, 16 at 5c.....	80	
Vegetable Marrow, 10 at 5c.....	50	
Herbs, 4 bunches at 5c.....	20	
Beet, $\frac{1}{2}$ bush. at 30c.....	15	
		\$14 56

March.

Carrots, $8\frac{1}{2}$ bush. at 25c.....	\$2 12	
Beets, $1\frac{1}{2}$ bush. at 30c.....	45	
Onions, $1\frac{1}{2}$ bush. at 90c.....	1 35	
Squash, 33 bush. at 5c.....	1 65	
Cabbage, $2\frac{1}{2}$ doz. at 60c.....	1 50	
Parsnips, $7\frac{1}{2}$ bush. at 45c.....	3 37	
Turnips, $7\frac{1}{2}$ bush. at 20c.....	1 50	
Herbs, 1 bunch at 10.....	10	
		\$12 04

April.

Carrots, $8\frac{1}{2}$ bush. at 25c.....	\$2 12	
Squash, 24 bush. at 5c.....	1 20	
Parsnips, $7\frac{1}{2}$ bush. at 45c.....	3 27	
Beets, $2\frac{1}{2}$ bush. at 30c.....	75	
Cabbage, $5\frac{1}{4}$ doz. at 75c.....	3 93	
Lettuce, $\frac{3}{4}$ bush. at 60c.....	45	
		\$11 82

May.

Carrots, 4½ bush. at 25c.....	\$ 1 12	
Salsify, 4½ bush. at 60c.....	2 70	
Parsnips, 3½ bush. at 45c.....	1 57	
Cabbage, 1½ doz. at 75c.....	1 12	
Turnips, 1 bush. at 20c.....	20	
Beets, 1½ bush. at 30c.....	45	
Asparagus, 435 bunches at 4c.....	17 40	
Rhubarb, 7 bush. at 75c.....	5 25	
Lettuce, 2 bush. at 70c.....	1 40	
Spinach, 1 bush. at 50c.....	50	
		\$31 71

June.

Lettuce, 9 bush. at 50c.....	\$ 4 50	
Rhubarb, 25½ bush. at 65c.....	16 57	
Carrots, 1 bush. at 25c.....	25	
Asparagus, 614 bunches at 4c.....	24 56	
Parsnips, 5 bush. at 45c.....	2 25	
Onions, 1 bush. at 90c.....	90	
Beets, ½ bush. at 30c.....	15	
Spinach, 13½ bush. at 50c.....	6 75	
Strawberries, 216 boxes at 7c.....	15 12	
Herbs, 2 bunches at 5c.....	10	
		\$71 15

July.

Spinach, 8 bush. at 50c.....	\$ 4 00	
Gooseberries, 112 qrts. at 8c.....	8 96	
Rhubarb, 5 bush. at 70c.....	3 50	
Lettuce, 6 bush. at 50c.....	3 00	
Asparagus, 131 bunches at 4c.....	5 24	
Strawberries, 508 boxes at 6c.....	30 48	
Herbs, 2 bunches at 5c.....	10	
Onions, 36 bunches at 5c.....	1 80	
Raspberries, 658 boxes at 6c.....	39 30	
Peas, 12½ bush. at 90c.....	11 25	
Beets, 3 bush. at 80c.....	2 40	
Currants, 88 qrts. at 10c.....	8 80	
Beans, 3½ bush. at \$1.....	3 50	
Potatoes, 7½ bush. at \$1.25.....	9 37	
Currants, white, 20 quarts at 10c.....	2 00	
Cauliflower, 22, each at 7c.....	1 54	
Carrots, 6 bunches at 5c.....	30	
Radish, 7 bunches at 5c.....	35	
Cabbage, 10 at 5c.....	50	
Cucumbers, 1½ pk. 2 doz, pickle and table.....	1 00	
		\$137 39

August.

Potatoes, 29 bush. at 50c.....	\$14 50
Beans, 5 bush at \$1.....	5 00
Radish, 64 bunches at 5c.....	3 20
Raspberries, 418 boxes at 6c.....	24 08
Cucumbers, 9½ bush. at \$1.50.....	14 25

Rhubarb, $\frac{1}{2}$ bush. at 60c.	30	
Cabbage, 7 doz. at 60c.	4	20
Peas, 6 bush at 90c.	5	40
Onions, $\frac{1}{2}$ bush. at 80c.		40
Currants, black, 3 quarts at 12c.		36
Apples, 8 bush. at \$1.20.	9	60
Carrots, 1 bush. at 35c.		35
Tomatoes, 4 bush. at \$1.25.	5	00
Corn, 43 doz. at 8c.	3	44
Cauliflower, 6 at 5c.		30
Beets, $\frac{1}{2}$ bush. at 20c.		10
Plums, 13 quarts at 10c.	1	30
		\$91 78

September.

Pears, $1\frac{1}{2}$ pks. at 50c.	\$	0	75
Plums, 80 quarts at 8c.		6	40
Apples, 2 bush. at 50c.		1	00
Potatoes, $8\frac{1}{2}$ bush. at 50c.		4	25
Corn, 74 doz. at 8c.		5	92
Cucumbers, 5 bush. at 75c.		3	75
Tomatoes, $19\frac{1}{2}$ bush. at 80c.		15	90
Celery, $10\frac{1}{2}$ doz. at 60c.		6	30
Onions, $1\frac{1}{4}$ bush. at 90c.		1	12
Cabbage, 14 at 5c.			70
Salsify, $\frac{1}{2}$ bush. at 75c.			37
Citron, 50 at 5c.		2	50
Vegetable Marrow, 12 at 5c.			60
Carrots, 1 bush. at 30c.			30
Radish, 6 bunchs at 5c.			30
Grapes, 150 lbs. at 4c.		6	00
Potatoes, 110 bush. at 40c.		44	00
		\$100 16	

October.

Grapes, 137 lbs. at 4c.	\$	5	48
Onions, $6\frac{1}{2}$ bush. at 90c.		5	85
Tomatoes, $14\frac{1}{2}$ bush. at 60c.		8	70
Celery, $24\frac{1}{2}$ doz. at 60c.		14	70
Cabbage, $8\frac{1}{2}$ doz. at 60c.		5	10
Carrots, $5\frac{1}{4}$ bush. at 25c.		1	37
Beets, $1\frac{1}{2}$ bush. at 30c.			45
Radish, 6 bunches at 5c.			30
Vegetable Marrow, 8 doz. at 60c.		4	80
Turnips, 1 bush. at 10c.			10
Cauliflower, $2\frac{1}{2}$ bush. at \$1.		2	50
Artichokes, $13\frac{1}{2}$ bush. at 75c.		9	92
Herbs, 4 bunches at 5c.			20
Parsnips, 1 bush. at 40c.			40
Salsify, 8 bush. at 75c.		6	00
		\$65 87	

November.

Carrots, $6\frac{1}{2}$ bush. at 25c.	\$	1	63
Celery, $24\frac{1}{2}$ doz. at 70c.		17	15
Onions, $2\frac{3}{4}$ bush. at 90c.		2	47

Turnips, 6 bush. at 12c.	72	
Parsnips, 6 bush. at 40c.	2 40	
Beets, 2 bush. at 30c.	60	
Horse Radish, 1 doz. at 20c.	20	
Vegetable Marrow, 4½ doz. at 60c.	2 70	
Cabbage, 4 doz. at 70c.	4 80	
Cauliflower, 8½ doz. at \$1.	8 50	
Red Cabbage, 9½ doz. at 65c.	5 85	
Herbs, 5 bunches at 5c.	25	
Radish, ½ peck at 20c.	10	
		\$45 37

December.

Celery, 18½ doz. at 70c.	\$12 95	
Onions, 5½ bush. at 90c.	4 95	
Turnips, 8 bush. at 15c.	1 20	
Vegetable Marrow, 3 doz. at 60c.	1 80	
Cabbage, 4 doz. at 70c.	2 80	
Carrots, 5½ bush. at 25c.	1 37	
Beets, 1 bush. at 30c.	30	
Parsnips, 1½ bush. at 40c.	60	
Herbs, 2 bunches at 5c.	10	
Artichokes, ¾ bush. at 75c.	55	
		\$26 62

		\$621 10
Supplied to Prof. Brown at above rates.		121 21
Sold and cash paid to Bursar.		74 37
		\$816 68

Inventory—Stock and implements on hand, as per list in
office \$1,813 25.

PART VI.

REPORT

OF THE

PROFESSOR OF DAIRYING.

The Honourable A. M. Ross,
Commissioner of Agriculture.

SIR,—In submitting this report I beg to state that the duties of my position are both numerous and varied. In fact they are now so numerous and varied as not to permit of complete justice being done to all departments. The work to be done comprises:—

1. *A course of lectures to students in the College.* These lectures, to be of value, must be practical and progressive. For lectures of the stamp indicated, the lecturer must think, improve, and, above all, study with attention in the works and periodicals devoted to the subject elsewhere. All of which, it is needless to say, requires much time.

2. *The management of the creamery.* This requires the undivided attention of one man. The sub-manager should be a person of some age and experience. Students are not competent.

3. *A series of experiments.* Dairy experiments require to be closely followed, and cannot be trusted to inexperienced hands. My time has been so much taken up with other departments of the work that very little attention could be paid to experimenting. Besides, the quantity of milk at our disposal for experimental purposes is far too small. During a portion of the year we have none at all. Some of the modern dairy appliances, such as centrifugal separators, are also required.

4. *Lecturing throughout the Province.* Never in the history of Ontario agriculture was there so much interest taken in dairy matters. The farming community is in great need of information, and eagerly asks for it.

5. *Answering numerous questions on dairy subjects from all parts of the Province.* Although we are not obliged to answer these questions, we are naturally forced by circumstances to do so.

This creamery was organized and already in operation when I took charge of it. I regret to state that a worse creamery section than Guelph I never met. The dairy herds are small and scattered, the routes are long and hilly, and in consequence the cost of drawing the cream is proportionately high. However, in spite of all these disadvantages, it is very gratifying to know that the creamery is a success, financially and otherwise.

FINANCIAL STATEMENT OF THE CREAMERY.

RECEIPTS FROM SALE OF PRODUCTS.

Butter sold	\$12,253 00	
Butter sold to patrons	20 79	
Cream sold	12 00	
Buttermilk sold and collected	331 43	
Buttermilk sold to the farm	42 90	
	\$12,660 12	

EXPENDITURE.

Amount of Expenditure.....	\$13,524 30
Less Capital Account.....	1,041 54
	\$12,482 76
Balance.....	\$177 36

NOTES ON CREAMERY OPERATIONS FOR THE SEASON.

The quantity of cream received was 126,076 inches, and the quantity of butter made was 63,337 lbs., or 1.99½ inches of cream to a pound of butter.

The creamery was worked from the 18th of May to the 15th of October, or 129 days.

There were 225 patrons, who gave the cream from the milk of about 800 cows.

The milk was set twelve and twenty-four hours in common shot gun cans, 8½x17 inches for milk space, two inches of cream on which are supposed to make one pound of butter.

The average temperature at which the milk was cooled by patrons on the different farms was, for June, July and August, 52° Fahr.

The skimming was done by the teamsters, and the cream was brought every day to the factory.

The drivers or cream collectors received \$2.00 to \$2.25 for single horses, and \$3.00 for teams, per day.

On arrival at the factory the cream was emptied into vats, and generally kept twelve hours before being churned.

The temperature at which the cream arrived at the creamery was: For July, 65°; for August, 64°; for September, 58°; and for October 56°; being an average of 60¾° Fahr.

In hot weather the cream was cooled to below churning temperature, and in cold weather it was heated to facilitate ripening.

It was churned at a temperature of 58° in plain box churns. Towards the end of the churning operation a quantity of cold water was added to the contents of the churn, in order to reduce the temperature and help the separation of the butter from the milk.

The butter was washed in the churn with cold water (ranging from 52° to 58°) after the removal of the buttermilk. It was then taken out of the churn, and from seven-eighths to one ounce of salt to the pound of butter was added to it. It was worked just enough to incorporate the salt throughout the mass, and allowed to stand in a cool place until the following morning.

The butter was then re-worked and closely packed in 56 to 70lb. white-ash or oak tubs; these tubs had previously been thoroughly soaked in brine. The average daily make was 491lbs.

SUGGESTIONS ON CREAMERY AND DAIRY MANAGEMENT.

1. The cost of drawing the cream should be reduced. This could be done by drawing every second day, one driver going over two routes. If this suggestion be adopted the farmers will skim the milk, and keep the cream in a can set in cold water. The drivers will measure the cream in a tin pail with a steel rule.

2. The proceeds should be divided amongst the patrons according to the churn test or butter value of the cream furnished by different patrons.

3. The ice-house and butter storage of the creamery are both too small. The ice-house should be made into a butter storage and a new building constructed for storing ice.

4. The inside walls and the floors should be painted.

5. The best way to provide practical dairy work for the students would be to turn the farm, as much as possible, into a dairy farm, with cows well selected from the best of the common stock. The calving time could be so regulated as to obtain an even

supply of milk during the whole year. Then there would be at least from 400 to 500lbs. of milk per day to work upon. In this way experiments could be made and practical education given. At present the students work in the creamery while it is in operation, but the dairy season barely allows all the students to work a day or two each. This is evidently insufficient.

6. That experiments of practical utility may be performed, an ample supply of milk is needed; for some experiments have to be carried on through a whole season. Experiments on the following subjects would be of great value:—(1) Reducing the cost of milk production. (2) Milk *vs.* feed, bad milking period, temperature and methods of cream separation. (3) Effects of heat and cold upon milk and its products. (4) The development of keeping quality in butter. (5) Milk and cream testing instruments. (6) Dairy utensils and machinery.

THE CREAMERIES OF ONTARIO.

The demand for information in connection with the establishment and working of creameries is now very great, and I shall devote most of the present report to the treatment of this important subject.

According to your instructions, I visited most of the creameries of Ontario and gave to proprietors and patrons whatever advice and information was thought necessary. Unfortunately, at the season when visited, there was but a part of them in operation. I have gathered information on this subject which I hope will prove of value.

As far as I have been able to ascertain there are, in Ontario, twenty-eight creameries, exclusive of the College one, of which sixteen are conducted on the cream gathering plan; seven on the flat pan plan; three on the centrifugal plan; one on the deep setting plan; and one on the deep setting and centrifugal plan. Twenty-five are making butter only, and three are making butter and skim milk cheese.

During the last season four creameries were worked as cheese factories, but, on the other hand, eight new creameries were started.

No. of Creamery, Stock Companies, Private Concerns.	How many years in operation.	Quantity of Butter made last season.	Number of patrons.	Number of patrons using Ice for milk setting.	Average number of Cows in herds.	Number of Cream gatherers Employed.	Daily wages of gatherers using their own teams.	Daily wages of gatherers using the creamery teams.	Kind of cans used for milk setting.	Number of times the cream is drawn.	Patrons allowed to skim cream into a special gauge can.	Patrons allowed to skim into any can. Cream measured in a pail with a rule by drivers.	Cream measured on the setting can.
Stock Company.							£ c.	£ c.					
1	5	.....	120	50	5	2	.....	.....	Cherry.	Ev'ry 2d day	Yes	.....	.....
2	4	53274	120	30	5	3	2 00	.....	Cooly.	"	Yes	.....	.....
3	3	35839	142	95	5	3	{ 2 00 } { 3 00 }	.....	"	"	.....	Yes	.....
4	1	29550	80	30	5	2	{ 1 50 } { 1 75 }	.....	Sturgeon.	"	.....	Yes	.....
5	2	20503	90	60	4	2	2 00	.....	Cooly.	"	Yes	.....	.....
Private concerns													
6	8	68840	170	45	6	3	.....	1 15	Cooly.	"	Yes	.....	.....
7	2	53100	.....	.....	.....	.....	.....	.....	"	"	Yes	.....	.....
8	3	36283	110	None	.....	2	.....	.....	"	Every day.	.....	.....	Yes
9	2	30000	80	40	5	2	2 00	.....	"	Ev'ry 2d day	Yes	.....	.....
10	1	27180	.....	.....	.....	.....	.....	.....	"	"	Yes	.....	.....
11	2	26000	75	4	5	2	.....	0 80	Cherry.	"	.....	.....	Yes
12	3	18210	57	14	6	1	of butter 1 ³ / ₄ c. @ lb.	.....	Cooly.	"	Yes	.....	.....
13	2	15000	25	4	7	.....	.....	.....	Cherry.	"	Yes	.....	.....
14	1	15000	30	6	4	1	.....	1 00	"	"	.....	Yes	.....
15	1	12000	42	6	6	2	.....	1 00	Cooly.	"	Yes	.....	.....
16	1	10068	35	3	6	1	.....	.....	"	"	Yes	.....	.....
Total..16	41	450847	1174	387	69	26	14 25	.....	.....	.....	.....	.....	.....
Averages.....	2 ¹ / ₂	30056	84	27	5	2	2 00	.....	.....	.....	.....	.....	.....

Returns distributed to patrons according to butter value of cream.	Cream tested how often?	Cost of drawing per lb. of butter.	Price paid per butter inch of cream.	Combined cost of making butter and drawing cream per lb.	Kind of vat used to hold cream.	Kind of churn used.	Kind of butter worker used.	Engine and Boiler. Number of horse-power.	Cost of building and plant.	Remarks.
Yes	3 times a m'nth	2 cts.	.....	.....	Cheese vat	Blanchard Cylindrical Box churn.	Lever	4 x 6	\$2000	Build'g 30x36 ft
.....	.....	.....	15 cts.	4½c.	.....	.....	.....	.....	.....
Yes	Every week.	1½ cts.	16 cts.	.....	Cream vat	"	"	"	.....	.....
Yes	3 times a m'nth	.....	.....	4c.	Cheese vat	Blanchard	"	"	1500	.....
.....	.....	.....	13 cts.	4½c.	"	.....	"	"	.....	.....
.....	.....	.....	14 cts.	.....	"	Blanchard	"	3 x 10	.....	.....
.....	.....	1½ cts.	15 cts.	.....	Cream vat	Blanchard and barrel.	"	Waterpower	.....	.....
.....	3 times a m'nth	.....	14 cts.	.....	Cheese vat	Dash churn	"	4 x 6	.....	.....
.....	.....	.....	14 cts.	.....	"	Blanchard	"	6 x 10	.....	.....
.....	.....	.....	14½ cts.	.....	"	.....	"	.....	.....	.....
Yes	3 times a m'nth	.....	.....	4c.	"	Blanchard	"	4 x 6	.....	.....
.....	.....	1¾ cts.	14½ cts.	.....	"	.....	"	8 x 10	.....	.....
Yes	3 times a m'nth	.....	15 cts.	.....	"	Box churn	"	Horse power	.....	.....
Yes	.....	.....	.....	4½c.	Cream vat	"	"	6 x 8	.....	.....
.....	.....	1½ cts.	14 cts.	.....	"	"	"	6 x 10	.....	.....
.....	.....	.....	.....	4c.	Cheese vat	"	"	Water power	.....	.....
.....	.....	7 11-12 cts.	1.59	25½c.	.....	.....	.....	.....	.....	.....
.....	.....	1.6	14 1-11 cts.	4½c.	.....	.....	.....	.....	.....	.....

 CREAMERIES MANAGED ON THE CREAM GATHERING PLAN.

The foregoing table shows the following facts of creameries of this description, the average age is two and a-half years. The youngest is one year old, and the oldest eight years. The average number of patrons is 84. The average product of butter is 30,056 pounds. The average number of patrons using ice for milk setting is 27, or nearly one-third of the whole. The average number of cows in herds is five. The average number of drivers employed at a creamery is two, or one driver for every 45 patrons. Most of the creameries draw the cream every second day. Ten creameries allow the farmers to skim the milk into a specially constructed cream gauge can, in which it is measured by the drivers. Five creameries allow the farmers to strain into any can. The cream is measured in a special pail, with a steel rule, by the driver. In two creameries the cream was measured by the drivers in the setter can. Six creameries applied the churn test, and distributed the proceeds to the patrons, according to the butter value of the cream. The cost of drawing the cream is about 1.6 cents per pound of butter, and the combined cost of drawing the cream and making the butter averages $4\frac{1}{6}$ cents per pound of butter. The average price paid to drivers is \$2.00 per day.

REMARKS ON THE STOCK CREAMERIES.

No. 1.—The building is two stories high, the lower of brick and the upper of wood. Everything was nice and tidy about the factory. This is one of the first cream-gathering factories of Ontario. It was managed for a number of years by Mr. George Browning, one of the pioneers of the Ontario Creameries.

No. 2.—The building is a good one. It was constructed for the flat pan system. This factory was conducted for five years under the flat pan method, but was changed into a cream-gathering creamery four years ago. I believe the centrifugal could be used here with advantage.

No. 3.—The building was only temporary, and a new one is being put up. This paid the largest dividends of any factory in Ontario. The cream was drawn most of the time twice a week, a practice not to be recommended, especially during hot weather. Nearly all the patrons used ice in connection with milk setting.

No. 4.—The building is two stories high, half stone and half wood. It is badly divided; dark, damp, too small and low, and the machinery is not well placed. The building and plant cost \$1,500.

No. 5.—The building is two stories high, of stone and wood. It is badly divided. The plant is inconveniently situated. The churn used is antiquated.

REMARKS ON THE PRIVATE CREAMERIES.

No. 6.—An old cheese factory building transformed into a creamery. There are too many buildings, which are rather dark and gloomy.

No. 7.—A good stone building, formerly used for making butter and skim cheese. It is doing a good business, but requires a better place for storing butter.

No. 8.—The building is a good one, but dark and damp. It is to be improved for next season. The butter was cheesy during the hot weather. This defect would disappear if ice were used by the patrons and the creamery.

No. 9.—Fine brick building, formerly used as a cheese factory. The creamery own the horses and waggons for hauling the cream, and the drivers are hired by the day. One horse travels from twenty to thirty miles a day, and brings from 1700 to 2200 pounds of cream.

No. 10.—The building is small and the churn is antiquated

No. 11.—The building was formerly used for a cheese factory, and is in a rather dilapidated condition. It will be renovated for next season. The owner uses his own horses for drawing the cream.

No. 12.—The building is too small, low and damp, and the churn is out of date. The plant is inconveniently placed. I found the cellar flooded by a spring. When a current of water is used for cooling a cellar it should pass through it in a tin pipe or spout.

No. 13.—The building is to be enlarged and improved for next season. A submerged and ventilated can is used.

No. 14.—The plant is conveniently placed, but the building is rather light.

No. 15.—This being a new creamery, a temporary building was used. A new building is being put up.

No. 16.—The plant is inconveniently placed.

DEFECTS AND DIFFICULTIES OF CREAM-GATHERING FACTORIES.

The defects of these creameries may be classified under three heads:—(1) In the buildings; (2) in the requisites; and (3) in handling, setting of the milk, and transporting of the cream. A few buildings are very good, but there has been a tendency to erecting buildings with but little regard to the purpose for which required, and without any regard to conditions necessary to save labor and protect the product against deleterious influences. As a rule, the buildings are too small, too low, too dark and damp. They lack ventilation and drainage. The floors are constructed of poor material—the general placing of the plant is inconvenient, thus throwing unnecessary labor on the operator. The vessels generally used for holding the cream in the factories are similar in construction to cheese vats. Such vats do not cool the cream with sufficient rapidity, neither do they cool it low enough. Many of Blanchard's cylindrical churns are used. The objections to this churn are the following:—(1) A portion of the cream adheres to the inside of the cover and remains unchurned; (2) it requires a great deal of attention at the end of the operation to prevent overchurning. The quality of the creamery butter is yet much impaired by the want of care of the milk and cream on the farm. Cleanliness and temperature, two of the most important elements in milk setting, are in a great many places ignored. The milk is kept near the stables or barn yard. It is sometimes set in unclean vessels, and, as a rule, at a too high temperature. In consequence, the cream is sour or tainted, and the butter is cheesy and off flavor. Hardly one-third of the patrons use ice in connection with milk setting. They generally use well or spring water, and the temperature of such water soon rises in the tanks above 50° Fahrenheit. The water in the tanks is changed occasionally, but in many cases not often enough. In the summer months such a mode of cream separation leaves nearly one-third of the butter fat in the skim milk. This is proved by the result of a chemical analysis of skim milk obtained from patrons of the O. A. C. Creamery in the month of August. The milk was set at the ordinary temperature of well and spring water, or at about 50° Fahr.

AVERAGE RESULTS OF 12 AND 24 HOURS SETTING.

Patron's Number.	Temperature of Milk at the time of Setting.	Butter Fat Contained in the Whole Milk.	Butter Fat Contained in the Skim Milk	Percentage.
		Lbs.	Lbs.	
1	86 Fahr	3.50	0.723	21 Per Cent.
2	94 "	3.30	1.267	34 "
3	88 "	4.32	1.290	30 "
4	88 "	3.90	1.090	27 "

According to the result of these experiments, the average quantity of butter fat left in the skim milk, of 100 pounds of whole milk, is 29 per cent. of all the butter fat, or 1½ pounds.

At the end of the milking period, when the milk is "heavy," a good portion of the cream remains in the skim milk. This peculiarity of the milk does not exist in the same degree of intensity in all the farms; but I am aware that in October last, on one farm sending cream to a gathering factory, it took from 35 to 40 pounds of milk to make a pound of butter, when from the same milk it should not have required more than 20 lbs.

Taking all the facts into consideration it is not surprising to find that creameries have not given large returns to patrons.

Let the farmers use plenty of ice in connection with milk setting. Let them cool the milk below 40° Fahr. A judicious use of ice will give more butter, save the labor of pumping the water and filling the tanks three or four times a day, besides keeping the cream and skim milk in fine condition for the creamery and the farmer. The use of ice will allow the cream being drawn every second day without any trouble.

The cream drivers are, as a rule, a cause of trouble. Some factories own the horses and waggons, and hire men to drive them. It is said that this plan gives far better satisfaction than when the drivers are hired with their own teams at so much per day. In this case they are interested in having short routes and bringing small loads. The best way is to hire the cream drivers at so much per pound of butter brought by themselves to the creamery. The price paid ranges from $1\frac{1}{4}$ to 2 cents per pound. One horse should draw cream enough to make from 150 lbs. to 200 lbs. of butter at a load. Two horses should draw cream enough to make from 200 lbs. to 400 lbs. of butter, according to the size of the herds and the length of the routes.

The proceeds should be distributed according to the butter value of each patron's cream, as determined by the test churn. The extreme limit of variation, as determined in this way, is from 3 to 12oz.; the average is from 5 to 9oz. of butter from a quart of cream.

MILK-GATHERING CREAMERIES

There are two on the deep setting method. One is owned by a Company, the other is a private concern.

In the Stock Company, four cents a pound is charged for making butter, and two for cheese. It costs 25 cents to work 100 lbs. of milk into cheese and butter.

In the private concern the quantity of butter made was 59,140 lbs.; deep setting and centrifugal plans combined. Average quantity of milk required to make a pound of butter, $25\frac{1}{2}$ lbs.; average net value of 100 lbs. of milk, 63 cents. Some farmers bring the milk once and others twice a day. Three and a half cents is charged for making. Butter sold from 19 cents to 23 cents per pound; average price, $20\frac{1}{3}$ cents per pound.

FLAT PAN CREAMERIES.

There are seven creameries worked on this plan. All are private concerns.

No. 1.—Butter made, 23,000 lbs. First class building. Farmers bring the milk twice a day. Twenty-six pounds of milk required to make a pound of butter. The milk was bought, and paid 80 cents during the last season. This was too high if the price of butter be considered.

No. 2.—Butter made, 39,308 lbs. First class building. Took from 24 lbs. to 28 lbs. of milk to a pound of butter. Farmers bring the milk twice a day.

No. 3.—Butter made, 16,000 lbs. Good building. Pounds of milk to a pound of butter, 26. Butter sold from 19 cents to 22 cents per pound. Charges $3\frac{1}{2}$ cents for making. Farmers pay \$1.25 per cow to have the milk brought to the creamery.

No. 4.—Butter made, 10,000 lbs. Good building. Pounds of milk to a pound of butter, 26. Three cents a pound is charged for making. This price is too low. Place well kept and neat. There is a lack of interest on the part of the farmers; lecturing would do there some good.

Nos. 5, 6 and 7.—I did not visit.

As a rule, the buildings are very good. The milk is brought twice a day by the farmers themselves. In some cases the patrons pay \$1.25 per cow per season for the carrying of the milk. This is equal to \$1.25 a ton. It takes from 24 lbs. to 28 lbs. of milk to make a pound of butter, or an average of 26 lbs.

CENTRIFUGAL FACTORIES.

Of these there are three, all private concerns.

No. 1.—First year in operation. The proprietor is entitled to a great deal of credit for the pluck and energy displayed in the management of this enterprise. Number of patrons, 75. Average size of the herds, six cows. Milk drawn on some routes from as far as seven miles. Cost of drawing the milk, \$2.50 a ton. Quantity of milk received, 667,331 lbs.; butter made, 25,951 lbs. Pounds of milk to a pound of butter, 25.71. The creamery was worked 138 days. Average quantity of milk received per day, 4,834 lbs. Three De Laval milk separators are used for skimming milk. Maximum quantity of milk worked per hour by one separator, 600 lbs. The milk is drawn once a day, in the morning, and the skim milk is returned to farmers in the forenoon of the same day. The building is 18 ft. by 27 ft., and with the plant it cost nearly \$2,000. The building is too small, and the general placing of the machinery is inconvenient. However, the patrons are well pleased and there is a very good prospect of a reduction in the cost of drawing the milk, by an increase of patrons, etc.

No. 2.—First year's operation. Butter and cheese made; cheese during the latter part of the season only. Number of patrons, 14. Size of the herds, eight cows. Milk drawn $2\frac{1}{2}$ miles. Cost of drawing the milk, \$2.60 per ton. Average quantity of milk required to make a pound of butter, 25 lbs. Milk brought once a day to the factory. One De Laval separator used. Good prospect for an increase of business next year.

No. 3.—Butter and cheese made. Milk received, 633,392 lbs. Butter made, 8,331 lbs. Cheese made, 54,352 lbs. Cost of drawing the milk, from \$1.00 to \$2.50 a ton; average, \$2.00. The building is to be enlarged for next season. The farmers are well satisfied. Two DeLaval separators used. The milk is brought once a day to the factory.

Some of these creameries have not given such good results here as elsewhere. Many centrifugal creameries established in other parts of the Dominion have repeatedly shown results of $22\frac{1}{2}$ lbs. and 23 lbs. of milk to a pound of butter. It took 25 lbs. and $25\frac{3}{4}$ lbs. in Ontario. This may depend to a certain extent on the milk, but I am inclined to think that the inferior yield of the Ontario centrifugal creameries is due to a want of experience in their management.

Some of the agencies tending to decrease the butter yield of the centrifugal creameries are the following:—(1) The partial skimming of the milk on the farm. (2) Feeding too much milk to the separators. (3) Insufficient cooling of the cream obtained from heated milk. Things to be remembered in using a milk separator:—(1) The quantity of butter fat left in the centrifugal skim milk should not exceed 0.25 per cent., or four ounces per 100 lbs. of whole milk. (2) Let the speed be constant. Use the best of regulators on the engine, and a belt strainer on all separators. (3) Regulate the inflow of milk according to the square of the speed, and also according to the known capacity of the separator. When the speed decreases, diminish the inflow; when the speed increases, increase the inflow. (4) Skim the milk while warm from the cow. If this be inconvenient, the milk can be warmed to 88° Fahr. before skimming. (5) For cold milk, let the inflow be one-third less than for warm milk. If a machine skims 1,500 lbs. of warm milk in an hour, it will skim 1,000 lbs. of cold milk during the same time. (6) Regulate your separator, or the skimming tubes of the same, so as to allow from 15 to 18 per cent. of the liquid to come out in the shape of cream. (7) As the season advances and the quantity of fat contained in milk increases, diminish the inflow proportionately. (8) Keep the working parts very well oiled. Use for this purpose the very best of lard oil. (9) Clean immediately after using. These notes are to be applied to all milk separators, as they are all constructed on the same principle.;

GENERAL REMARKS.

Out of 29 creameries six are owned and managed by stock companies. Regarding creameries owned by stock companies, one reliable person should be manager. Such institutions managed by half a dozen very seldom succeed.

Good butter makers are scarce. There is now a good opening for young men willing to go into dairying. There seems to be a desire to get cheap butter makers, cheap milk or cream drivers, in fact, everything cheap. It is wise, economy, to pay fair wages to a good workman. Cheap butter makers will make cheap butter. The difference between the value of good butter and of cheap butter amounts to more than two cents per pound. If you are making 300 lbs. of butter per day, two cents a pound equals \$6.00 a day, or \$180 per month, lost by employing an inferior hand.

COST OF MAKING BUTTER ON THE CREAM-GATHERING PLAN.

The table on page 188 shows the average to be $4\frac{1}{6}$ cents per pound; but I am inclined to believe that many managers, being pressed by a close competition, do not allow enough for wear and tear and interest on the capital. At present it may be estimated as follows:

To draw the cream from $1\frac{3}{4}$ cts. to 2 cts. per pound of butter.

To make the butter " $1\frac{3}{4}$ " 2 " "

Wear and tear and interest on capital, from $\frac{1}{2}$ ct. to 1 ct. per pound of butter.

The average would probably be $4\frac{1}{2}$ cents. The cost of making may be reduced according as the cost of drawing decreases, and the quantity of butter made in one factory increases.

The cream-gathering plan is the most advantageous to start with in all sections, where the herds are small and scattered. In localities where the drawing of the milk would not cost over \$1.75 per ton, the centrifugal may be used with advantage.

REQUISITES OF THE CREAM-GATHERING PLAN.

The milk-room should be away from the barnyard, and also from all odors and smells, in a dry airy position. The room should be kept scrupulously clean and well-ventilated. The proper place is near a spring or a well from which the water can be easily led to it. The milk-room should be well protected against the heat or rain. It should not be forgotten that dampness is deleterious to milk and its products.

The vessels generally used for setting the milk are deep cans holding from 40 to 50 pounds of milk. Provided the milk is cooled below 40° Fahrenheit, and kept in a place where the air is pure, the size, form, or submersion of a can, has but very little effect on the quantity and quality of cream obtained. The best can for the purpose is the one which will give ventilation, combined with rapid cooling and easy cleaning.

Whether the milk cans are to have gauges or not, depends altogether upon the method of measurement adopted by the creamery.

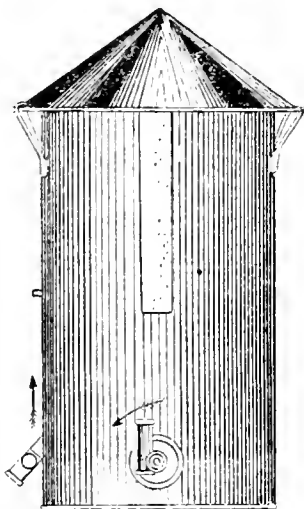


FIG. 1.—THE COOLY CAN

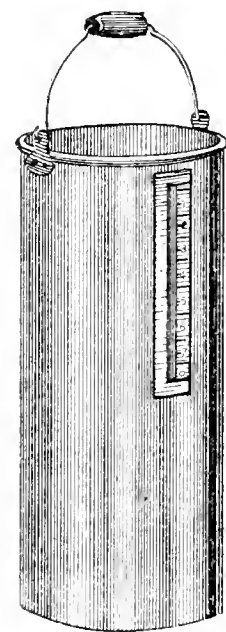


FIG. 2.—THE SHOT GUN CAN.

The skimmers generally used for taking the cream from the top of the cans are conical in form.

The size of the tank should be adapted to the number and form of the cans used. The tanks should be four inches higher than the cans. There should be a space of five inches between each can and between the last two cans and the extremities of the tank. It should be large enough to hold three milkings, and should be divided so as to hold each milking separate. These tanks are made of good dry two-inch lumber, with or without double sides. With double sides, the vacant space, (two or three inches) between the sides is filled with charcoal or saw dust. These tanks are sometimes lined with zinc or tin. If not lined with tin, a coat of varnish or paint should be given inside, as is done with brewer's vats. This precaution makes them easier to clean.

The milk should be set immediately after milking, and cooled down below 40 degrees Fahrenheit. First fill the tank two-thirds full of cold water, then strain the milk into the cans, and set them into the water. Let the warm milk stand say twenty minutes; the top of the water in the tank should then be drawn off, (as it has become warm) and replaced with fresh water, and a sufficient quantity of ice to keep the temperature below 40° during at least twelve hours.

When skimming from the top of the can care should be taken not to disturb the cream any more than can be helped. Place the skimmer so as to let cream into it slowly, remove it full of cream, and so continue taking the cream from one place. Do not run after the cream with the skimmer; such practice mixes the cream with the milk.

Three different plans have been used for measuring the cream in connection with the gathering plans.

1st.—It is measured on the setter can by the cream collector, who also skims the milk. A gauge placed in the inside of the can, at the top, indicates the number of inches, and two inches of cream are supposed to make a pound of butter. In some cases the cream is measured in the can and skimmed alternately, one day by the cream collector, and the next by the patron.

2nd.—The farmers are allowed to skim the milk, and the cream is kept in a can bearing a gauge from the bottom upwards, in which it can be measured later by the cream collector. In this case the skimming must be done eight or ten hours before the arrival of the gatherer, in order to allow that portion of the skim milk which is necessarily mixed with the cream to separate again and settle at the bottom of the can.

3rd.—The milk is skimmed by the farmers, and the cream is kept in any can in cold water. It is measured in a special pail with a steel rule by the collector. This method does away with all gauges, either in the setting or cream cans. But it can only be used in connection with the test churn. In this case the proceeds of the factory are divided according to the butter value of the cream.

THE BUILDING.

The essentials of a good Creamery building are:—1. Ample space, ample height between floors, plenty of light, good ventilation and perfect drainage. 2. The building should be divided, and the machinery placed with an eye to convenience and saving of labor. 3. It need not be ornamental, but it ought to be tasteful and neat. 4. It should be substantial and secure against changes of temperature. 5. It should be wide so as to allow of more compactness in the placing of the plant, and also so that it could be enlarged with little trouble and expense without impairing this compactness which is so desirable. 6. It may have two stories, according as a dwelling is required for the operator.

A stone wall, 18 inches thick, is excellent for the purpose. A brick wall, with a dead air space, is also excellent.

Some wooden walls are constructed in the following manner:—Place on the sills upright, 3 or 4 by 10 or 12 inches, from 3 to 4 feet apart; over these, on both sides, nail rough boards and fill in with sawdust; next, side and ceil with pine timber. In some cases, previous to nailing the rough boards, the studding is covered on both sides with ceiling paper, and the space between the two papers remains empty.

The following description of a good wall was given to me by Prof. Roberts, of Cornell University:—1. On sills which are made of lumber 6 x 6 inches, place 2 x 4 inch studding, from 16 to 18 inches apart. 2. Fasten a layer of strong building paper to the face of the studs which is turned towards the inside of the building. 3. At a distance of 2 inches from the first layer of paper, between each couple of studs, insert another layer of paper. It is held on by strips of wood nailed to the studding. 4. To the outer edge of the studding nail a third layer. It must be remembered that the paper runs up and down. Each strip of paper will cover two spaces. To make this clearer, we may state that a strip laid on will cover the edges of three studs. 5. On the inside and outside, over the edges, where two strips meet, nail slats of wood an inch thick, making the joints as air tight as possible. 6. Over these slats, on the outside of the building, nail tongued and grooved boards as tightly as possible. On the inside nail narrow timber, tongued and grooved, and give it an oil finish.

This plan gives a wall about $7\frac{1}{2}$ inches thick, containing four air chambers. The two central ones are two inches, and inside and outside ones, one inch each.

The roof of such a building is made double. This effect is obtained by boarding the rafters on each side. It forms a draft chamber from the eaves to the ventilator at the peak. The draft chamber is left open under the eaves. Wooden walls should stand on stone foundations, carried below the line of frost.

Floors may be made of stone flags, well burnt bricks, cement or asphalt. When flags or bricks are used the interstices should be filled with cement, so that they may be easily cleaned. When wood is used it should be neatly and tightly matched, and well covered with a couple coats of paint. Floors of any description should be made to incline from each side to a fixed line of depression, so that all slops may be quickly removed, or drained into a gutter specially built for this purpose.

The windows, which should be large, may stand four or five feet from the ground. There should be a good number of them, especially on the north side. Outside wire screens are attached to them to keep out the flies, and also outside blinds or shutters to exclude the light when it is required to do so.

Ventilation should be sufficient to completely renew the air in the room from time to time. For this purpose a series of flues are sometimes constructed in the walls. When opened they create a draught towards the central ventilator, which should be from twenty to twenty-four inches square.

The Cream-gathering method requires a building with five or six divisions:—1. A cream room. 2. A churn room. (These may be united into one). 3. A butter store room. 4. An ice house. 5. An engine room which may also be used for a wash room. 6. A store room. The cream room containing the cream vats should be in front of the working room. The floor of the cream room should be thirty inches higher than that of the churn room so as enable the cream to run off itself from the vats into the churns.

The churn or working room is that in which all operations of butter making are carried on. It should be in the centre of the building and have easy and free access to all other parts. It generally contains the churns, the butter worker, the salt box, the scales, the hot water tank, etc. The cream and churn rooms may be in one, provided that the vats are properly constructed and kept covered when necessary. In the plans given below the cream and churn room can be made into one or two at will.

The engine room should stand near the working room. In the case of a small creamery it should be placed on the side farthest from the ice house. In the case of a large creamery it can be placed on either side of it.

Butter is no longer stored in cellars in the best creameries. Cellars, it is well known, are often damp and musty. The mould would appear in such places, which does not improve the flavor or the keeping quality of butter. The custom at the present time is to build a store room on a level with or slightly below the rest of the building. It is generally built against the ice house, and two openings are made through the walls of the latter into the store room, one close to the floor and the other close to the ceiling, in order to create a current of cold air from the ice house into the store room. These openings are provided with sliding covers, by which the current can be increased or decreased at will, thus regulating the temperature.

An ice house should have a well drained and air-tight foundation. The walls should be built to exclude the outside air. Ample ventilation should be maintained over the ice. The walls are now made from 15 to 18 inches thick, and no sawdust is allowed inside. A covering of clean straw or, better, of swamp rushes, is all that is required. Dairy ice houses are no longer a separate construction from the best creamery buildings. They form a part of the whole, and are built against the butter store room, so as to cool the latter as well as the rest of the building. The cold air may be brought from the ice house to the working room, etc., by means of pipes.

When ice houses form a part of the dairy or creamery building the entrance to the ice house should be in the garret. In front of this entrance a porch should be built, underneath which a shaft is constructed reaching almost to the floor of the working room. In the wall of the ice house at different heights are openings into this shaft. Through these the ice is thrown into the shaft, from which it falls into a box at the bottom of the shaft. The bottom of the shaft is covered with iron plates to protect it against the blows of the blocks of ice. The shaft is closed by means of a trap door.

PLANS OF CREAMERIES.

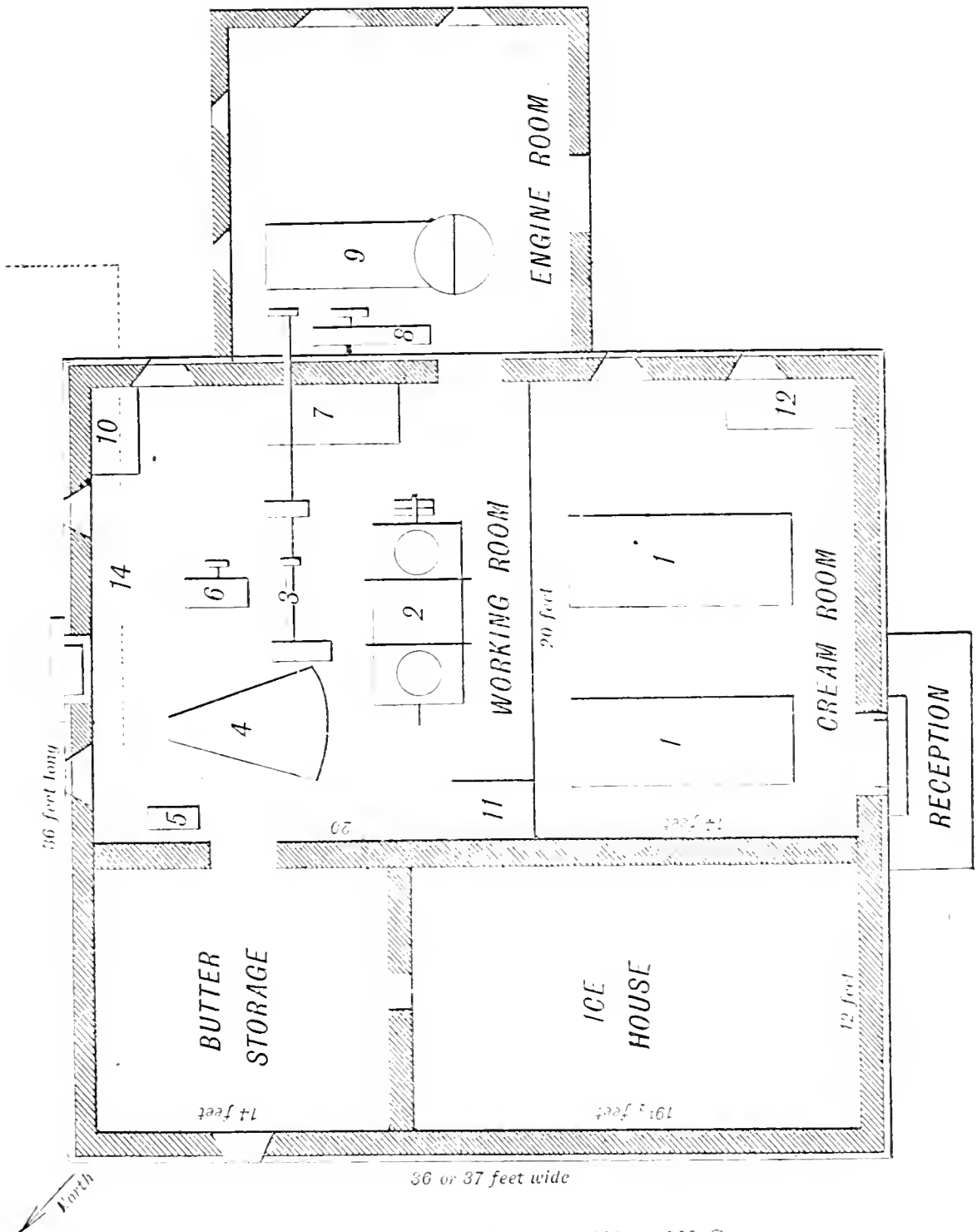


FIG. 3.—PLAN OF CREAMERY FOR 300 TO 500 Cows.

- | | |
|---------------------------------|-----------------------------------|
| A. Cream room, 14 by 18 feet. | D. Butter Storage, 12 by 14 feet. |
| B. Working room, 20 by 18 feet. | E. Engine house, 15 by 18 feet. |
| C. Ice house, 12 by 20 feet. | F. Reception stand, 5 by 10 feet. |

1, Cream vat : 2, churn : 3, shaft : 4, butter worker : 5, salt box : 6, water tank : 7, ice box : 8, boiler
9, engine : 10, test churn : 11, table : 12, desk

Ground plan No. 4 is intended for a creamery working the cream of from 800 to 1,200 cows.

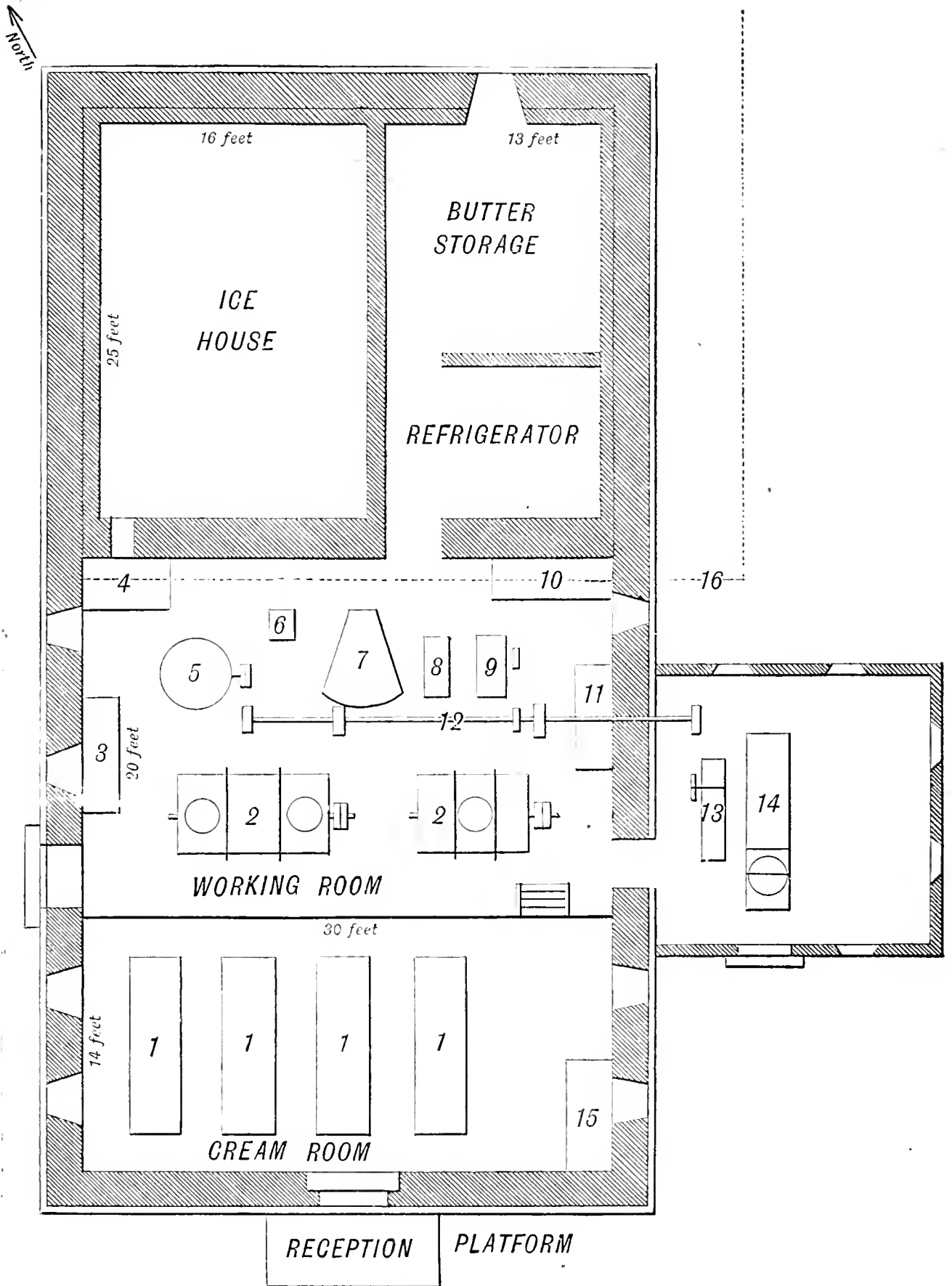


FIGURE 4.

- | | |
|---|-----------------------------------|
| A. Cream rooms, 30 by 14 feet. | E. Refrigerator, 28 by 14 feet. |
| B. Working room, 30 by 20 feet. | F. Engine house, 15 by 15 feet. |
| C. Ice house, 25 by 16 feet. | G. Reception stand, 5 by 10 feet. |
| D. Butter storage, 14 by 16 feet. | |
| 1, Cream vat; 2, churn; 3, shaft; 4, butter worker; 5, salt box; 6, water tank; 7, ice box; 8, boiler; | |
| 9, engine; 10, test churn; 11, table; 12, desk; 13, test churn; 14, prepared tub; 15, table; 16, drain. | |

Plan No. 3 is meant for parties wishing to start on a small scale. When an increase of business necessitates a large building, all that is required to be done is to pull down the partitions extend the platform across the entire width of the building, and put up an addition at the back of it for an ice house and butter store room. The engine, shafting, the churns, and even the doors are in the right position. By this means a creamery building equal in size to No. 4 is obtained.

It is in the cream transportation can that the cream is carried from the farm to the factory. It holds twenty to thirty gallons. The body is generally made of the best XXXX tin, the jacket of galvanized iron, with a dead air space to keep the cream cool. With some cans this space contains several thicknesses of building paper, which affords still more protection against the heat. A float placed inside of the can prevents the churning of the cream during transport.

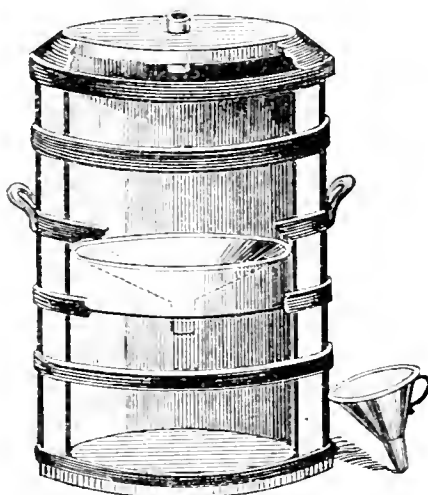


FIGURE 5.—THE TRANSPORTATION CAN.

In some cases large wooden vessels lined with tin are used for transporting the cream.

The covered skimming pail is used by drivers to transport the cream from the farmer's milk house to the cream waggon. In this pail the cream is sometimes measured with a steel rule. A butter inch of cream in the pail should be equal in bulk to two inches of the same liquid in the $8\frac{1}{2} \times 20$ inch setting can.

The cream vats are used to hold the cream, and to cool or warm it, if required when it comes to the factory. They are constructed somewhat like cheese vats, with the difference that the space between the tin and wood vats is much larger. It is from four to six inches at both sides, and at one end. This space is made larger for the purpose of filling with ice in order to cool rapidly the cream obtained in warm weather. (See Fig. 6)

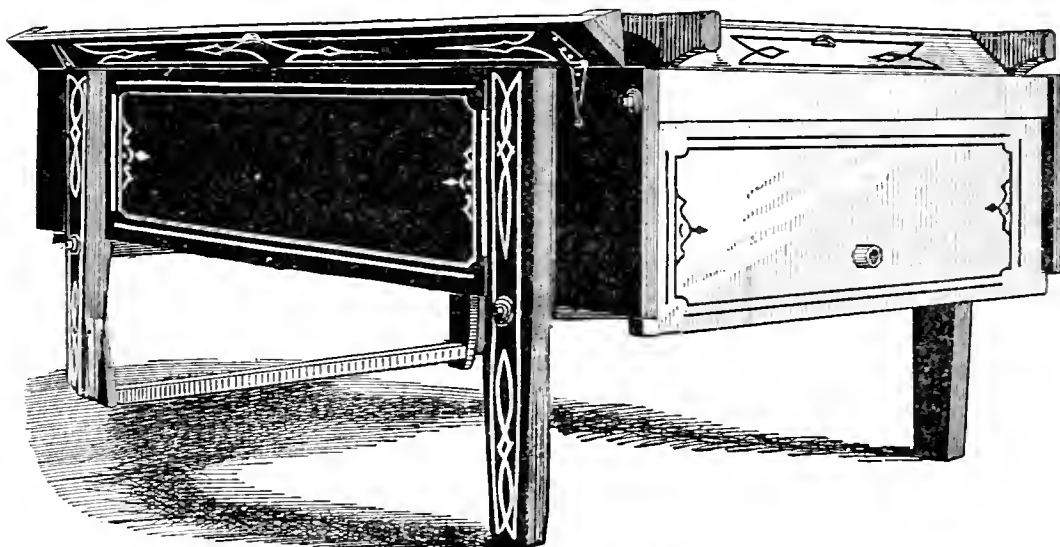


FIG. 6.—THE CREAM VAT.

Following are the specifications for a 200 gallon cream vat :—

Inside length of wood vat, 6 feet 8 inches ; inside width of wood vat, 4 feet 8 inches ; inside height of wood vat, $14\frac{1}{2}$ inches. Length of tin vat (inside measure) at the top, 6 feet 11 inches ; length of tin vat (inside measure) at the bottom, 6 feet 9 inches ; width of tin vat (inside measure) at the top, 3 feet $1\frac{1}{2}$ inches ; width of tin vat (inside measure) at the bottom, 2 feet 11 inches. Height of tin vat (inside measure) 16 inches.

The tin is nailed inside to a frame 2x4 inches. It rests on $2\frac{1}{2}$ x1 inch slats, nailed to the bottom of the wood vat. The tin vat is hooked to the wood vat. These vats are also provided with water and cream faucets. The cream faucet is $1\frac{3}{4}$ to 2 inches in diameter.

The extremity of the vessel upon which are fixed the faucets is called the front part, the opposite end is called the back part of the vat.

A cold water inflow consisting of a rubber pipe fixed to the back part enters the wooden vat near the bottom of it. A cold water outflow is found in the front part of the vat, one inch from the top of the wooden vat. The height of the vat is two feet ten inches from the floor. It stands on four or six legs. The lumber used is $2\frac{1}{2}$ x6 inches. The length of the legs is nineteen and a half inches, with the exception of the front ones, which are only seventeen and a half inches. The dumping arrangement is very simple. To the front legs is bolted a moveable frame (see fig.), which when placed vertically, raises the front of the vat on a level with the back. When this frame is moved out of the vertical line the vat is inclined forward.

The Cream Strainer is used to strain the cream into the vats and churns. This strainer is of tin, with perforated bottom and sides, and made to fit the openings of the churn. It can also be held on a frame stretched across the cream vat.

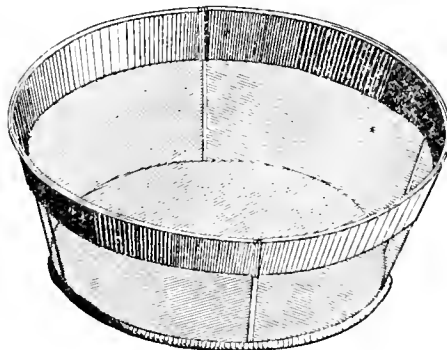


FIG. 7.—THE CREAM STRAINER.

THE CHURN.

I know of no better factory churn than the revolving box. It is made to hold from 100 to 500 gallons of cream. To churn to the best advantage, it ought not to be filled more than half full. Thus, a 400 gallon churn will churn 200 gallons of cream. The wood used in the construction of the churn may be of white pine, white wood, oak or beech, free from sap, knots, shakes or pitch. It is generally put together with white lead cement, to insure durability and tightness in all the joints. It is strengthened with heavy braces (3x2 inches) fastened with iron rods, tightened by nuts.

Large churns should have two openings, one at each extremity of one of the sides. A strong piece of glass one and a-half inches in diameter, fixed in one of the sides, allows the operator to examine the contents during the operation. The churns may be of the following sizes :—

For 400 and 500 gallon churns, from seven to eight feet long by two feet nine inches wide ; openings, sixteen inches in diameter ; the axle is from two to two and a half inches in diameter.

For a 300 gallon churn, four feet ten inches long, by two feet nine inches wide ; one opening in the center, sixteen inches in diameter.

Each churn should be provided with fast and loose pulleys so that it may be stopped at any time, without interfering with the rest of the machinery. A continuous and self-acting vent placed in the axle is very desirable for churning gathered cream. The churns are generally hung on eight inch square posts, running from floor to floor. The axles may stand two feet ten inches from the floor.

Steam power workers are used in some of the large creameries, but the lever is yet the best of the two. The use of a power worker for kneading butter requires great care and attention. As a rule such workers are very apt to injure the grain of the butter.

A factory lever worker is made V shape, five feet wide at one end and one foot at the other. The height is two feet four inches at the highest extremity, and two feet at the lowest, giving a slant of four inches; length, four and three-quarter feet. Some use one lever, others use two. These levers are generally made octagonal in shape. The worker described above requires levers six feet long by four inches in diameter.

The test churn consists of an uncovered flat box fixed on a frame, which, when in operation, moves to and fro. In the box can be placed horizontally from twelve to twenty-four tin jars. Springs hold the jars in place. They can be put in or removed while the churn is in operation.

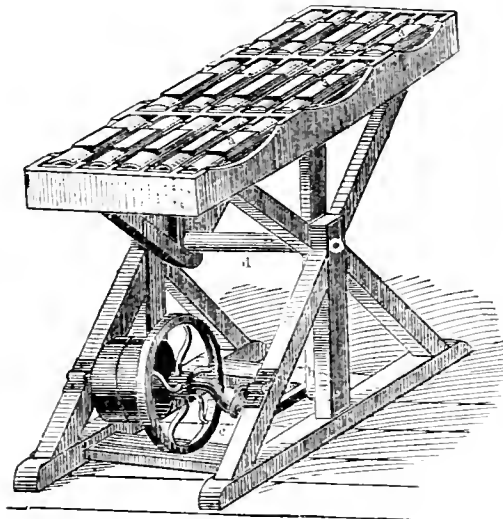


FIG. 8.—THE TEST CHURN.

Fig. 9 represents a number of test collecting tin cans, holding exactly one quart. A number is stamped on the top, and a tin tag with corresponding number is furnished with each.



FIG. 9.—THE COLLECTING CANS.

The quantity of cream used for a test is exactly one quart. This quantity is supposed to be equal in bulk and value to one inch of cream on the setting can ($8\frac{1}{2}$ x 20 inches), or half an inch in the measuring pail.

Supposing that a sample of cream yields half a pound of butter, it would indicate that the patron's cream was going one pound to the butter inch of cream, either in the setting can or the pail; so the standard of results is half a pound of butter per quart of cream.

The samples of cream are collected by the drivers. After thoroughly mixing the cream to be tested, by turning it three or four times from one vessel into another, a sample is taken, and the test can be completely filled. No skum should be allowed to accumulate at the top of the test can and so reduce the quantity of cream contained in it. The number of the can is registered in a book opposite the patron's number, and brought to the factory. After filling the churn jars from the collecting cans, place your thumb over the vent tube and shake violently several times; let the gas escape, and repeat the operation of shaking at least three times. Then place the jars in their respective places in the churn, and when the churn is filled to one-half its capacity set it in motion; the remaining places can be filled while the churn is in motion. In this way the butter will come in the jars at different times, and will keep the operator busy putting in, working and taking off. When a jar is sufficiently churned remove it and pour full contents into a dipper having a perforated bottom. After the butter-milk has drained off, the dipper is moved up and down in a pail of clean cold water, until every trace of butter-milk is removed from the butter. Allow all the water to drain out, shake the butter into a mass, weigh it, and credit the amount to patron. The difference over or below the standard is added to or taken from the number of inches. A ready-reckoner is used, showing at a glance the number of pounds of butter contained in a given number of inches of cream, at any number of ounces per cent. obtained by testing.

The Rubber Mop is quite handy in butter and cheese factories. The iron should be strong and the rubber "pure gum" about a foot in length.

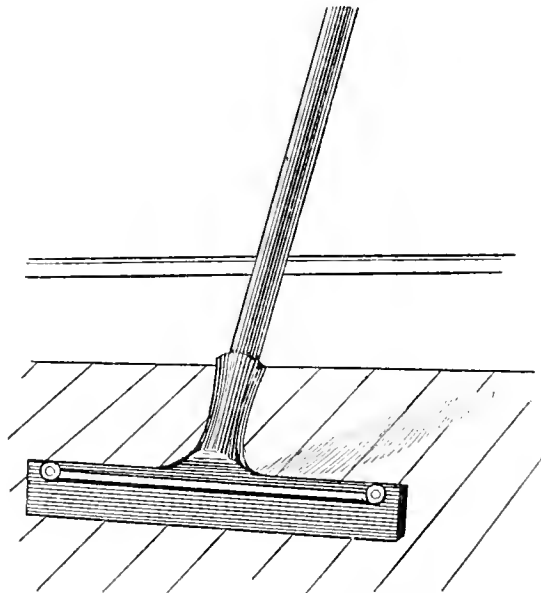


FIGURE 10.—RUBBER MOP.

THE CENTRIFUGAL PLAN.

The centrifugal plan requires the milk to be brought once a day to the factory. It consists in separating the cream from the milk by centrifugal force.

Fig. 11 represents an apparatus for straining and cooling the milk kept on the farm over night. It is made in three parts—1. The base, a dish-shaped receptacle. 2. Into the receptacle is placed a vessel like an inverted butter-tub. 3. On this latter is placed a pail with a perforated bottom. The inverted tub-like vessel is simply a cooler containing the cooling medium.

The warm milk is emptied into the pail : it is distributed in a thin sheet over the cold conical surface ; it collects into the dish below, and finally falls into a pail or milk can

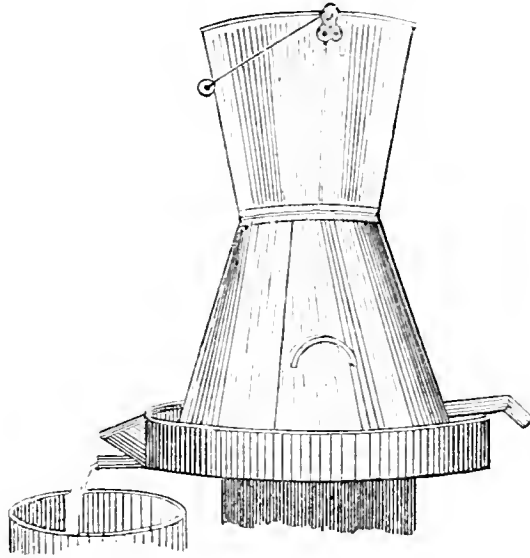


FIGURE 11.—THE MILK COOLER.

The milk carrying can is made with a solid pressed iron bottom and hoisting handles. It holds from 15 to 40 gallons of milk.

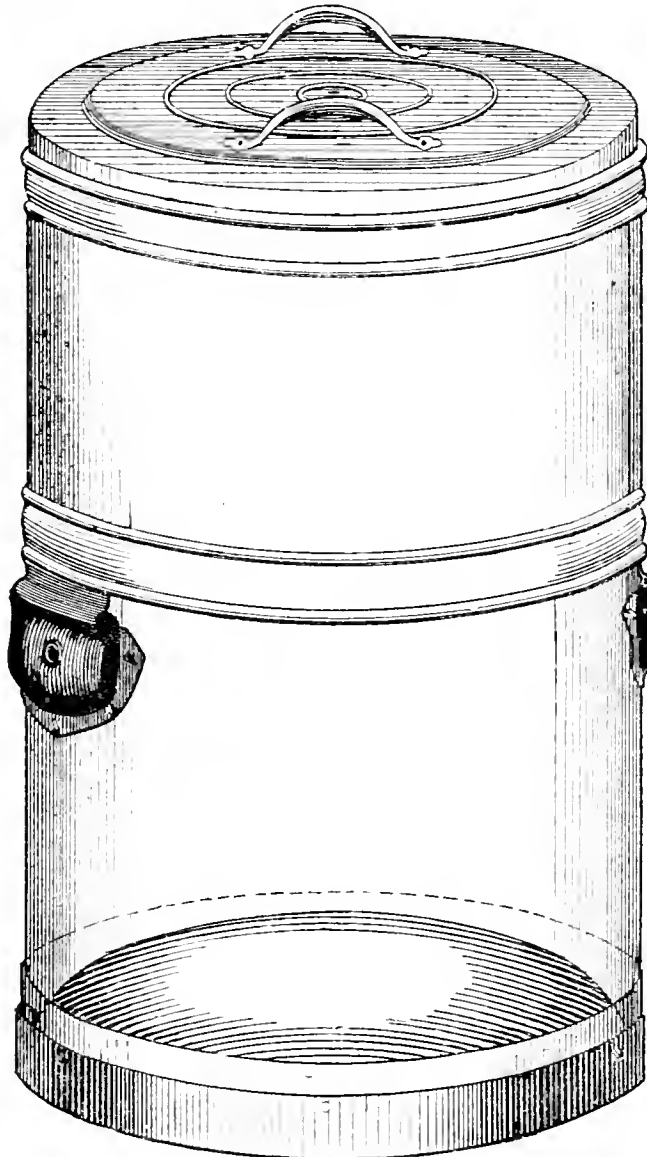


FIG 12.—THE MILK CARRYING CAN.

THE BUILDING.

For the construction of building see instructions given on page 194 and the following :

The centrifugal method requires a building having six divisions. 1. A churning room. 2. A working room. 3. A butter store room. 4. An ice house. 5. An engine room. 6th. A general storage.

The centrifugal room contains the milk vat, the centrifugal separators and heaters, the churns, the cream cooler, the cream vat, etc. It should occupy the front part of the building.

Centrifugal factories require a cool room for butter-making, in which the butter is worked and salted. In it are found the butter worker, salt box, butter scale, etc.

For the construction of butter store rooms and ice houses, see page 195.

The engine and boiler-room should be placed against one of the sides of the centrifugal room, so as to allow of easy communication between the two.

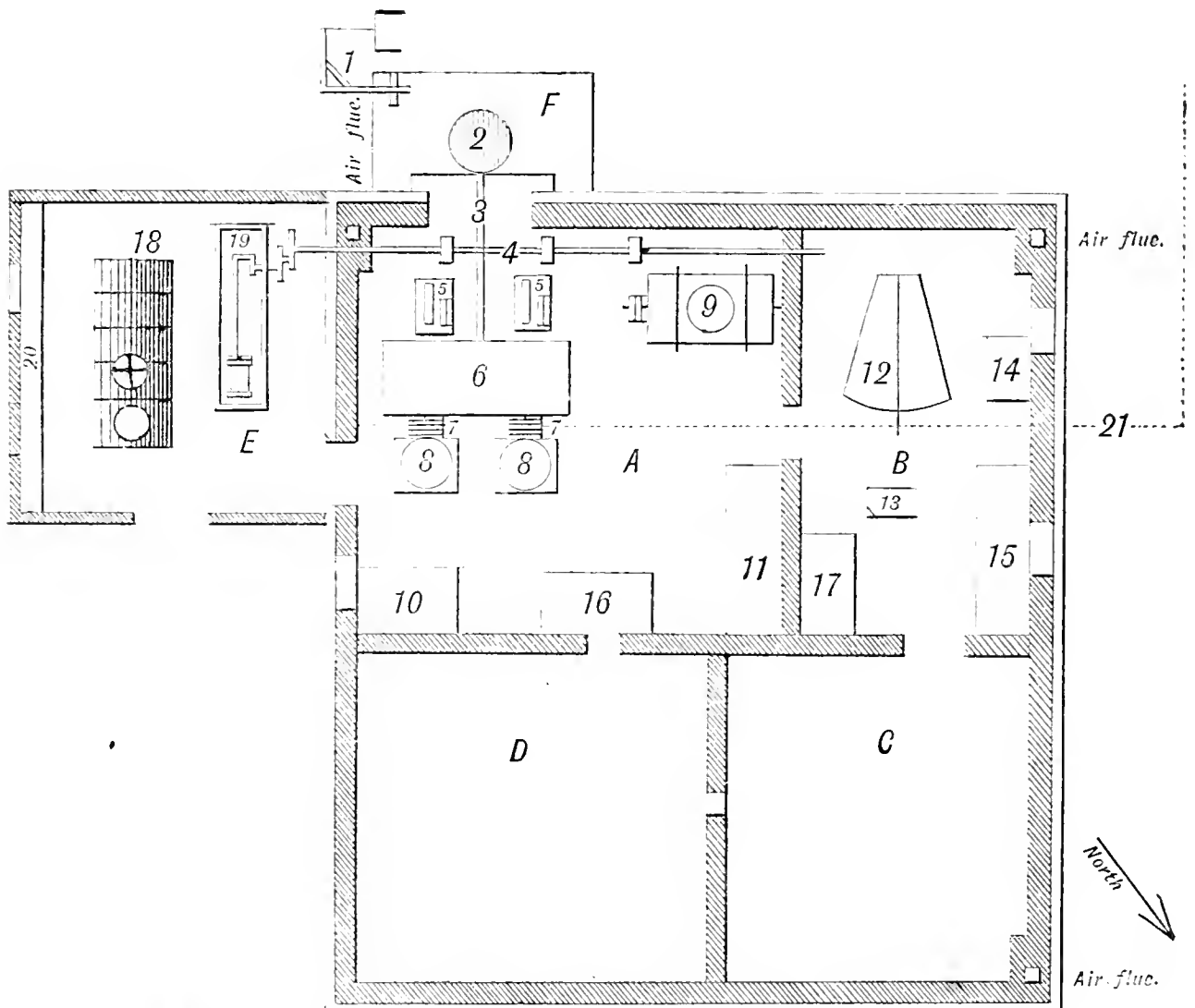


FIG. 13.—GROUND PLAN OF CENTRIFUGAL CREAMERY FOR 300 TO 500 COWS.

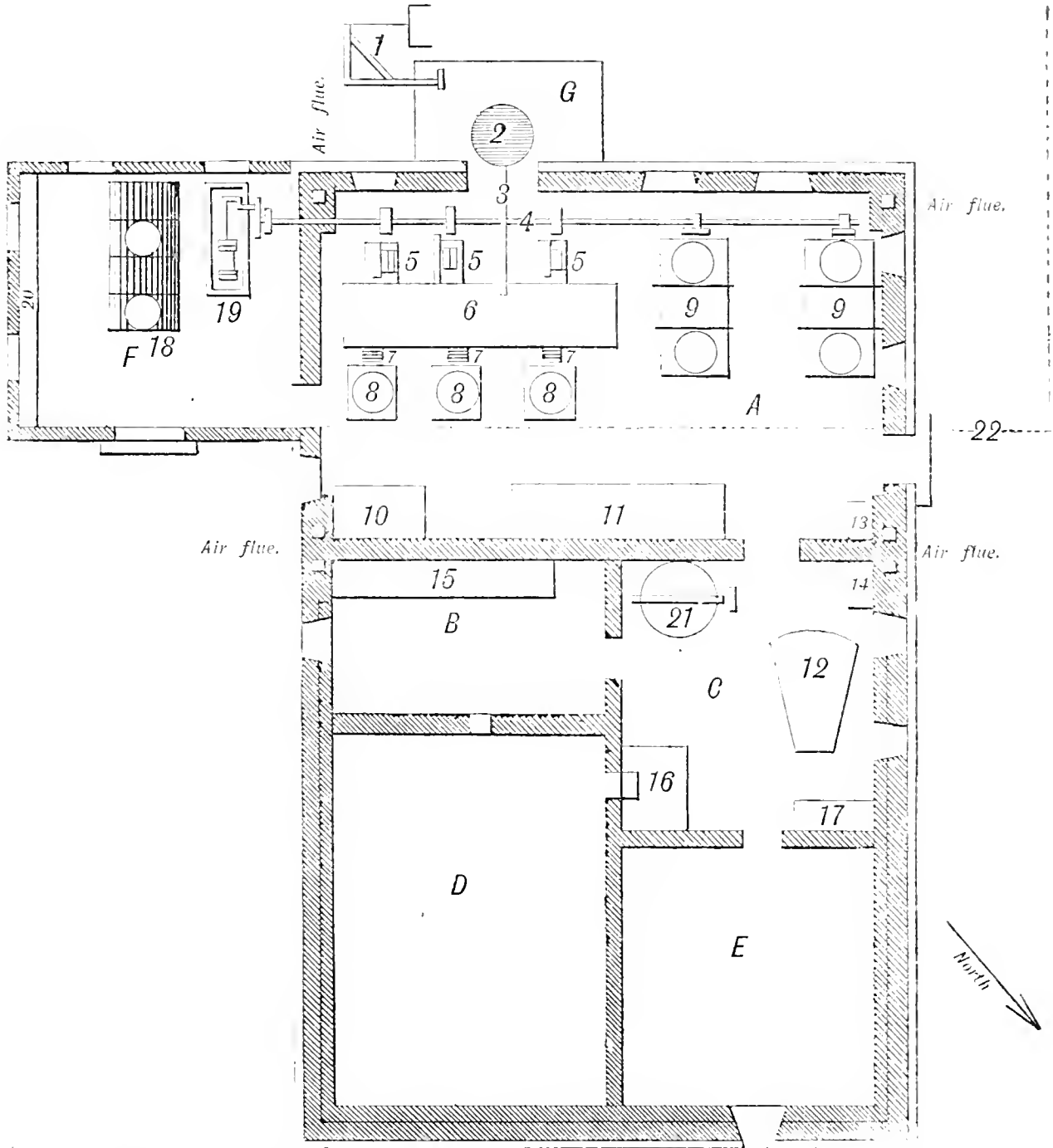
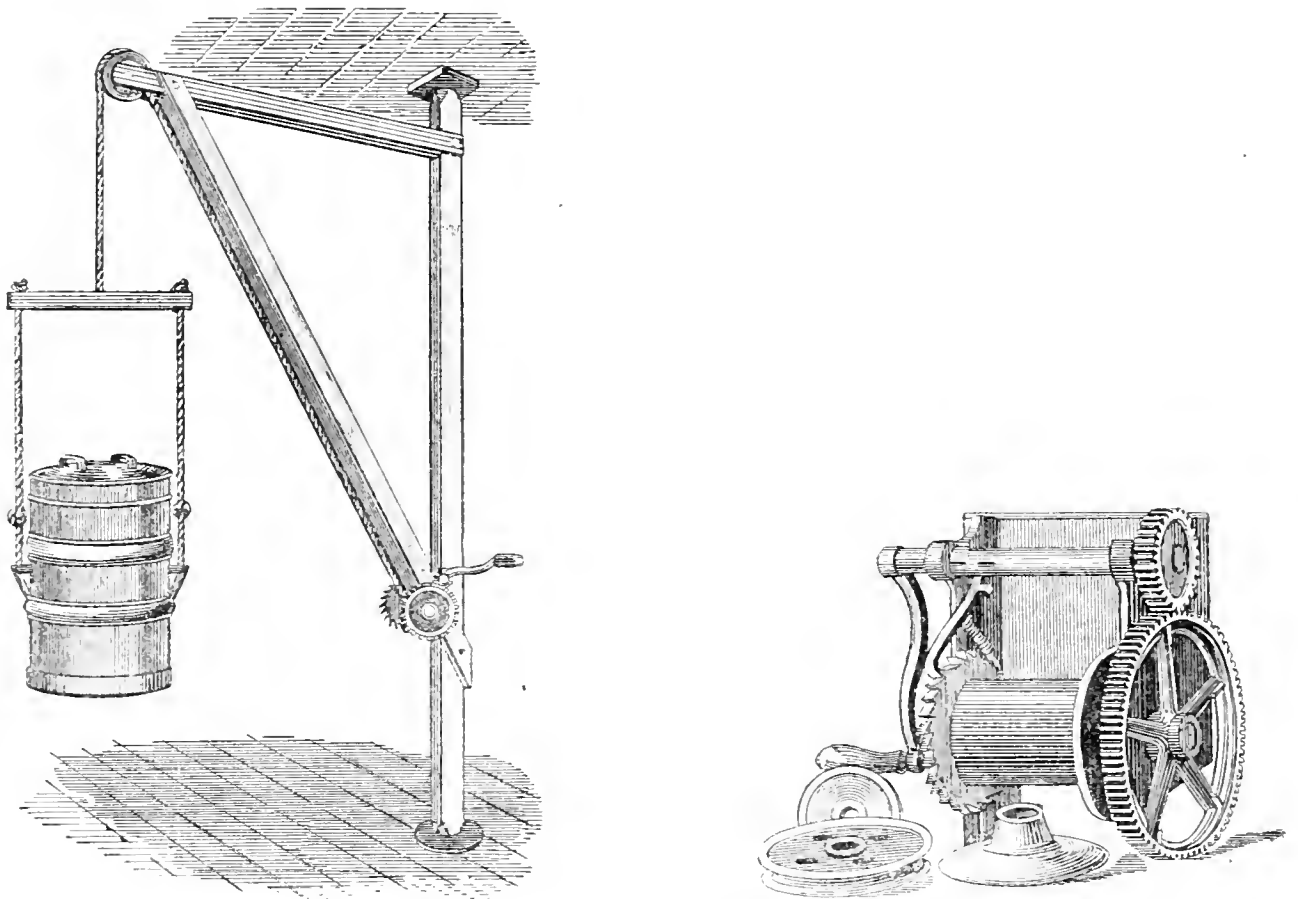


FIGURE 14.—GROUND PLAN OF CENTRIFUGAL CREAMERY FOR 800 TO 1,000 COWS.

Fig. 15 and 16 represent a hoisting crane for lifting milk cans from the waggon to the reception stand.



FIGS. 15 AND 16.—THE HOISTING CRANE.

The Platform Scale is provided with double and sometimes treble beams, and enables the operators to weigh three or four cans of milk before emptying the weighing can.

The Factory Weighing Can is made with large heavy sheets of tin, with convex bottom, pitched so as to empty quickly. It is provided with a $2\frac{1}{2}$ inch to 3 inch discharge gate, and contains from 40 to 80 gallons of milk.

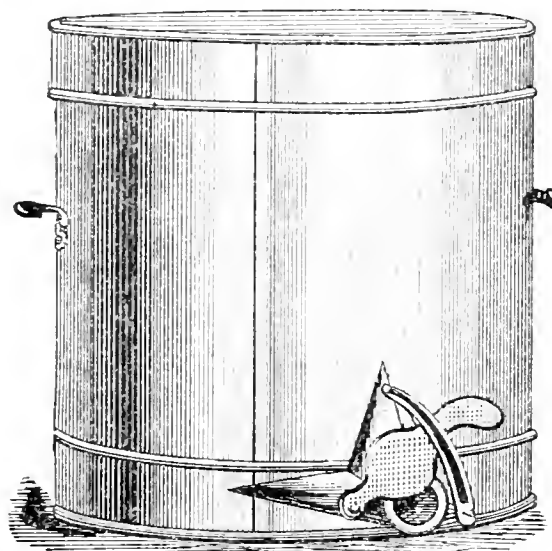


FIG. 17.—THE WEIGHING CAN.

Hereen's Lactoscope is a simple and convenient instrument used in the following manner:—Place a drop of milk over the centre of the round piece of ebonite. Next place the varnished side of the round glass over it in such a manner that the varnished part of the glass will correspond with the central ring of the ebonite.



FIGS. 18 AND 19.—HEREEN'S LACTOSCOPE.

On account of its opacity, the milk will resemble in color one of the parts of the painted glass, according to its quality. The quality of the milk is indicated by the words:

Cream.
Very Fat.
Normal.

Less Fat.
Poor.
Very Poor.

This instrument will in a moment detect poor milk, but can not determine the quantity of water added or cream extracted from it. Its purpose is to detect poor milk, which must be further examined by more efficient instruments.

Lactometers and Creamometers consist of three glass jars and lactometer. The smallest of these is a one per cent. jar, called a creamometer; the other two are equal in size. The lactometer, when plunged into the milk will sink more or less, according to the density of the liquid. This instrument is generally used at a given temperature, generally 60°. It can also be used at any temperature by using a correction table to get at the exact result. In the creamometer a small quantity of milk is set, and the cream is raised: a graduated scale on the sides of them. When filled with milk they should be kept in a cool place 24 hours.

In order to be complete, this mode of testing requires three operations:—1. The testing of the new milk with the lactometer. 2. The raising of the cream from the same milk in the creamometers. 3. The testing of the skim milk with the lactometer. Good new milk should indicate from 97 to 102 on the lactometer. Doubtful milk would show from 103 to 105, and very poor or skimmed milk, from 106 to 112. Good milk should give no less than 8 per cent. of cream in the creamometer. The difference between the results of the whole milk and skim milk tests by the lactometer should be at least 7. That is, a sample of new milk showing 103 should indicate 110 when skimmed.

Milk-testing tubes serve to test the quality of the milk obtained from different patrons. They are very good to indicate which sours first, taints, etc.

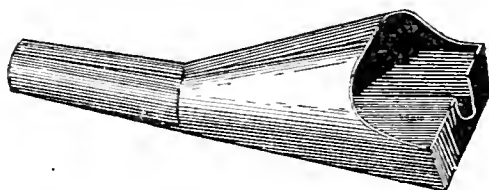


FIG. 20.—MILK TESTING TUBES.

Fjord's centrifugal milk controller is the best and most accurate instrument yet devised for testing milk in a butter or cheese factory. With this instrument the proceeds of the milk gathering creameries can be distributed to the patrons according to the butter value of milk furnished by each. It is also useful for determining the quantity of fat left in the skim milk. It should be used in centrifugal creameries. It can determine in a few minutes the richness of twelve or more samples of milk. It consists of a scalloped disk of copper, which can be made to revolve upon the spindle of a large size Burmeister and Wain Centrifugal, or on any other rapidly revolving vertical pivot. To this disk can be hooked from 2 to 34 copper tubes. In these tubes are placed graduated bottles, holding samples of milk (see fig 21). When at rest, these tubes assume a perpendicular position and hang down, but when in motion they fly out and become horizontal, like the two at the right of the figure.

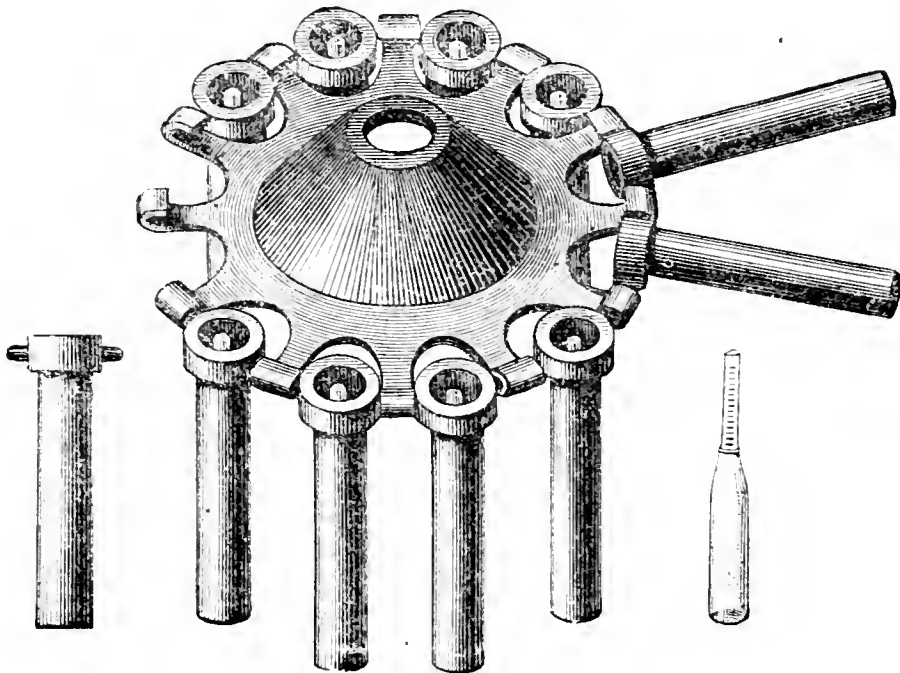


FIG. 21.—FJORD'S CENTRIFUGAL CONTROLLER.

Each bottle has on its neck a scale divided into units and halves, from 0 to 12, to indicate at the end of the operation the quantity of cream in the milk. These bottles are numbered so that they may be identified.

The separation takes place by centrifugal force in the milk bottles, the cream accumulating in the neck. The bottles are first half filled with the milk to be tested, (a mark on the outside indicates the half). The remaining space is then filled up with hot water to mark 0 in the neck, and the whole is heated up to 90° Fahr. When the milk has attained the required temperature the bottles are placed in the metal tubes, at the bottom of which rubber is placed to prevent breakage. The disk is then made to revolve.

Mr. Fjord estimates that 40,000 revolutions are required to completely separate the cream. This apparatus should not be made to go faster than 1200 revolutions per minute.

Allow for the time which the disk takes to reach the maximum speed one half the number of revolutions per minute that is counted when it has attained the highest speed.

For the first four minutes, while the machine is acquiring the required speed, we count 600 revolutions per minute; this gives for these four minutes 2400 revolutions. There now remain 40,000 revolutions, less 2400 to be made, equal to 37,600. The machine having acquired its speed is then running 1200 revolutions a minute. Therefore, the number of times which 37,600 will contain 1200 is exactly the number of minutes which it will take to complete the operation. This is $31\frac{1}{3}$, and $31\frac{1}{3}$ added to 4 is $35\frac{1}{3}$ minutes, the time required.

The Conductor Heads are used in connection with open conductor spouts, to carry the milk from the weigh can to the receiving vat.

A piece of strainer cloth, stretched double over a frame such as described in Fig. 22, is better than a wire gauze strainer. This strainer is placed across the receiving vat.

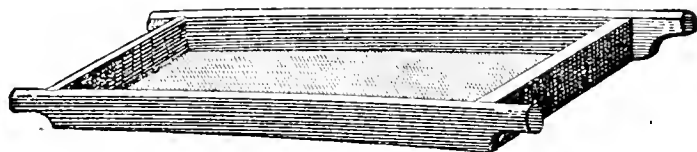


FIG. 22.—A STRAINER.

The receiving vat is simply a tin-lined box, from 8 to 16 feet long, 3 or $3\frac{1}{2}$ feet wide and about 18 inches high. Gates placed in one of the sides, near the bottom of the vat, feed the milk through heaters, into the milk separators. The bottom of the vat slopes towards the side on which the gates are fixed, in order to empty with facility. These vats stand upon legs.

Heaters are used in connection with the mill vats and centrifugal separators, to restore to cold milk a part of its cream yielding power. They consist of a copper box with an inclined ribbed surface. A perforated spout is placed across this inclined surface, at its highest extremity.

In operation, the cold milk falls through a tap from the receiving vat into the perforated spout over the inclined surface, and by the time it reaches the other extremity it has acquired sufficient heat to be led through a pipe directly into the separators. Thus the milk is constantly heated, and only in sufficient quantity to feed the separators.

The Burmeister & Wain separator, whose action is continuous, consists of a hollow steel drum revolving on a vertical axis. This separator differs from others in the manner of removing the cream and skim milk. Two curved metallic tubes (see fig. 23) are used which are screwed on and curved around the safety cap of the drum without interfering with its workings. These tubes draw up the cream and skim milk from their respective receptacles. They are pointed at both ends, and are inserted one in the inside surface of the cream ring and the other in that of the skim milk ring. They are moved to and from the centre of the drum, thereby cream of any desired thickness (from the consistency of butter almost to the consistency of milk) can be obtained while the machine is working. The drum has attached to its inside three vertical flanges extending five inches towards the centre. These flanges extend from the bottom almost to the top. They serve a double purpose: (1) They prevent the milk from revolving independently of the drum. (2) They serve to support the cream cover. The cream cover is a horizontal, flat ring of metal which rests on these vertical flanges. It does not touch the sides. Its use is to keep the cream and skim milk separate at the outflow. With this separator the skim milk, by means of elevating tubes, may be raised by centrifugal force six or eight

feet, and led into a cheese vat reservoir, or to a great distance from the factory to a barn, etc.

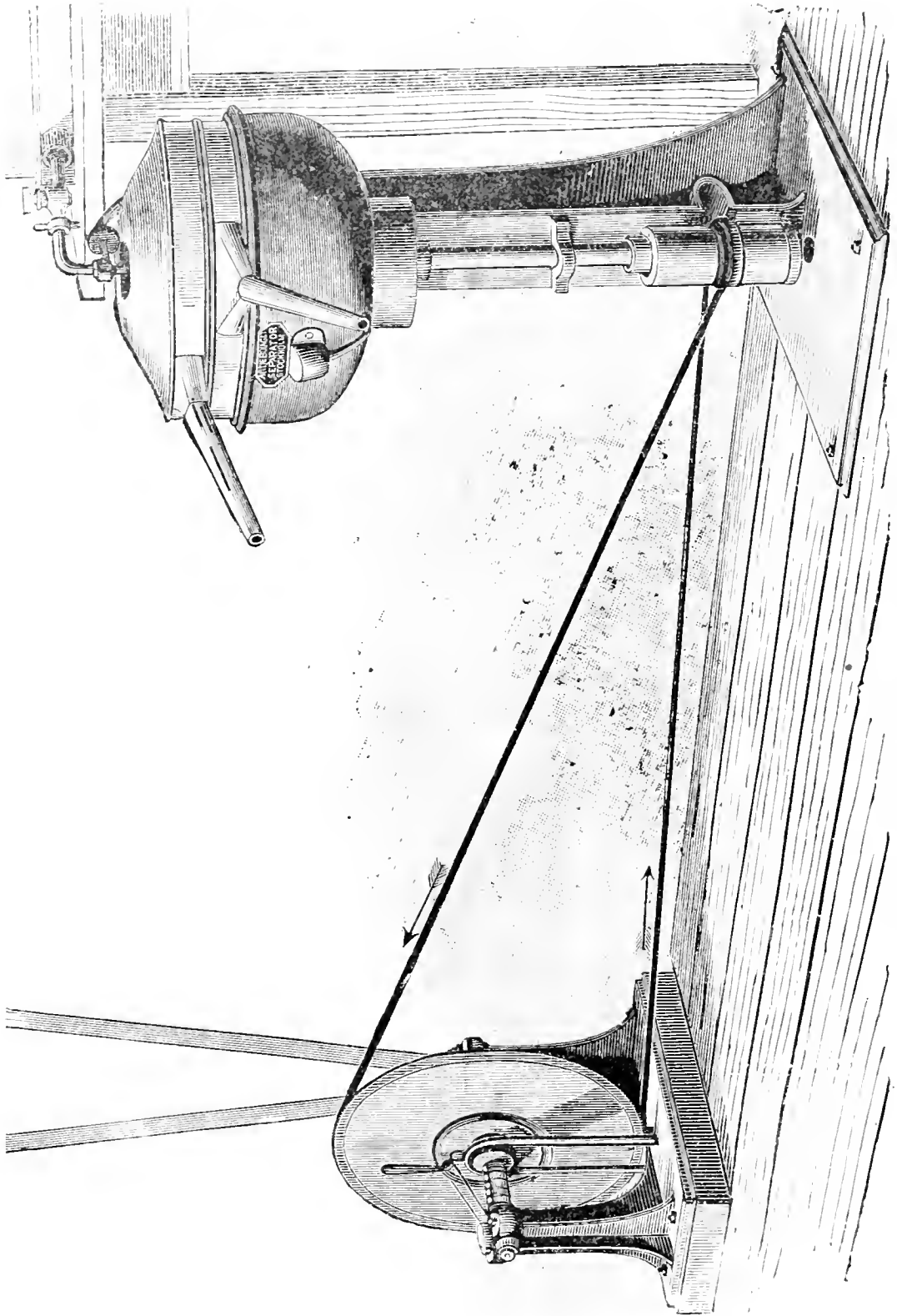


FIG. 23.—THE BURMEISTER & WAIN SEPARATOR.

These machines are now made of three different sizes : The A, for large creameries ; the B, for smaller creameries, and the C, for private dairies of 20 to 40 cows. This separator has found its way into ten of the largest creameries in Canada.

The milk flows from the milk vat into the centrifugal drum, which revolves rapidly ; the centrifugal force thus generated separates the different substances according to their weight. The impurities being the heaviest, collect upon the sides of the drum. The

skim milk, next in weight, collects next, and by constant inflow of new milk it gradually rises to the top, where it is stopped by the cover and formed into the outflow pipe by a constant inflow, as well as by centrifugal force. The cream collects upon a wall upon the inner surface of the skim milk, and flows in a constant stream through another tube similar to the first. From the above description it will be seen that once started it works continuously until the whole amount of milk is separated.

The skimming of the first and last milk contained in the Separator is done in the following manner :—

For First Contents.—After filling the drum three-quarters full, the machine is started slowly, and the milk is allowed to run into the drum at the ordinary flow until it reaches the skimming tubes. The tubes must then be regulated in such a manner as to draw off the cream. It must be remembered that *both* the tubes draw off cream at the beginning. But the operator should let the flow from the cream tube run into the cream receiver, and the flow from the other tube (although it is cream and partially skimmed milk) run to the skim milk receiver. The flow should now be considerably checked, and should remain so until one-fifth of the first contents has been drawn off. At this point the milk is allowed to enter the drum at the regular flow. The tubes are then regulated so that from eighteen to twenty per cent. of the contents of the drum shall be drawn off in the shape of cream. The machine is now in full operation.

For Last Contents.—When the whole milk vat is empty, there remain but the last contents of the drum to be skimmed. Partially unscrew the skim milk tube so as to check entirely the skim milk flow, and keep up the cream flow until the end of the operation. To displace the last contents, allow an intermittent inflow of skim milk. The quantity of skim milk necessary, is equal to one-fifth of what the drum is capable of containing while in operation. This operation takes from ten to fifteen minutes.

THE DELAVAL MILK SEPARATOR.

Fig. 24 gives an outside view of the machine when in operation. The standard and bed-plate are in one piece, so that the whole can be attached to the floor of the dairy, or to the frame of the intermediate machinery. Its action is also continuous.

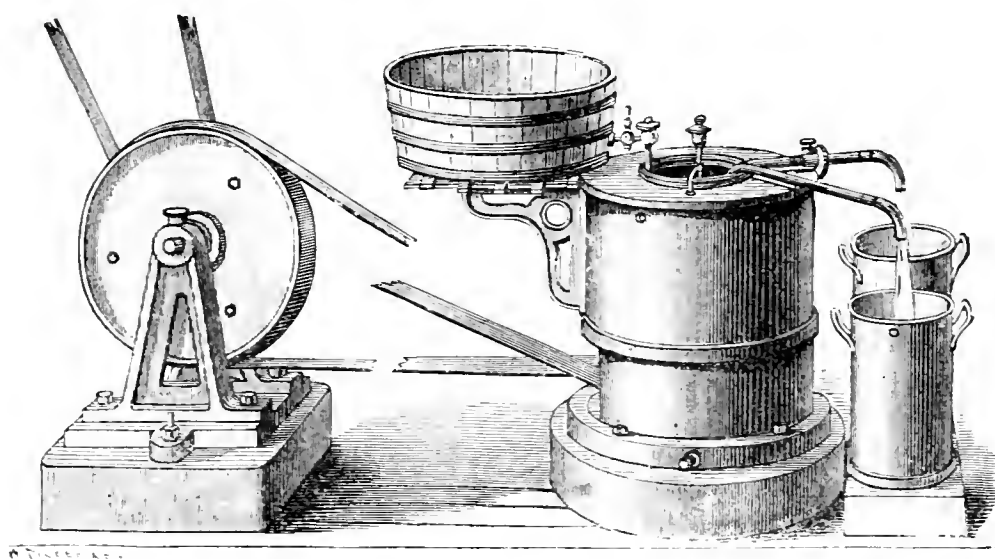


FIG. 24.—THE DELAVAL MILK SEPARATOR.—(Outside view of the machine.)

When in operation the standard and bed-plate are in one piece, so that the whole can be at once attached to the floor of the dairy, or to the frame of the intermediate machinery. Its action is also continuous.

The cream and skim milk flow out of this Separator by the power of gravitation alone, and such power is not sufficient to allow of the use of elevating tubes, to lead the cream and skim milk through a cooler to their respective vessels.

Fig. 24 gives a sectional view of this cream separator, consisting of a steel drum capable of resisting a pressure of 42 atmospheres ; but as these machines are not sent out from the factory until they are tested at a pressure of 250 atmospheres they are perfectly safe.

The machine is worked in the following manner : The new milk runs into the bottom of the centrifugal chamber, from which, by means of a small tube, it flows to that spot in the drum where the separation of the cream and skim milk takes place by centrifugal force. A flange fixed to the side of the milk chamber prevents the milk from revolving independently of the rotating vessel. The skim milk is forced into a pipe ; it enters an aperture in the stationery chamber and runs out by means of an exit spout. At the same time the cream collecting in the centre rises along the neck, escaping by an opening into the stationery chamber. The opening for the outflow of cream may be enlarged or diminished at will by means of a small screw placed above the chamber to regulate the amount of cream taken from a certain amount of new milk, but this regulation of the density of cream must take place while the machine is stationery. Thus it is impossible to obtain thick or thin cream while the apparatus is in operation. The spindle supporting the rotary vessel is mounted on bearings surrounded by an elastic packing, and its lower end fits in a socket upon the upper end of the shaft which is mounted on bearings, and is set into motion by a belt or band. The stand supports the machine which requires no heavy foundation. A small lubricating cup attached to the lower part of the spindle, gives through a pipe a constant supply of the oil required for lubricating the spindle. The milk drum is driven at the rate of 6,000 to 7,000 revolutions per minute. The cream cooler is very important to cool the cream from heated milk directly as it comes from the separator.

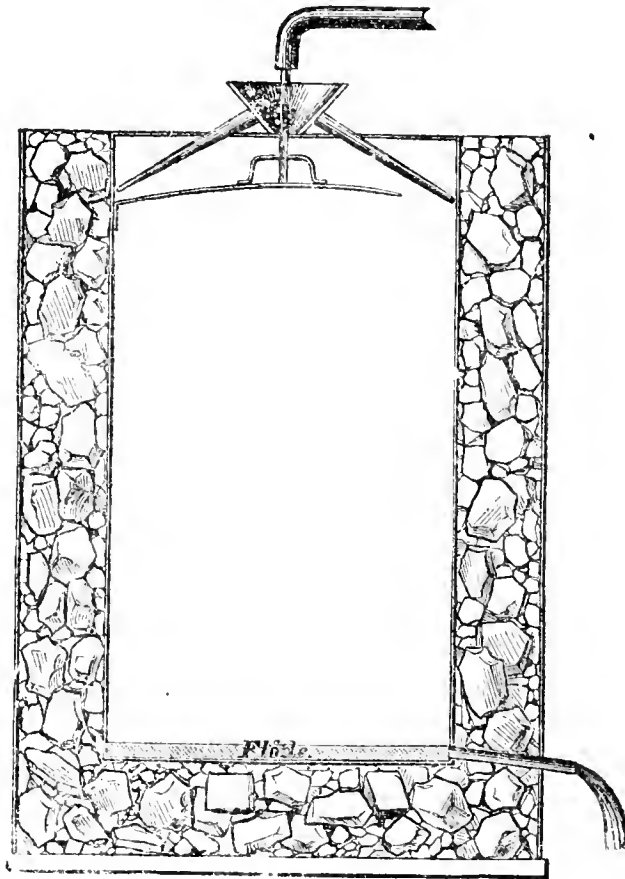


FIG. 25.—THE CREAM COOLER.

A cream cooler is a tin vessel placed inside another, leaving a space to be filled with ice. From the bottom of the inner can a tube extends through the side of the other on

the partial cover of the inner can. A funnel-shaped cup is placed so arranged as to revolve easily around a spindle at its lower extremity. See Fig. 25. This cup is provided with four discharge pipes extending close to the circumference of the can and bent at the ends. The cream drops from the skimmer pipe of the separator, which, if necessary, may be extended above the separator into this cup, and flowing through the four tubes it makes the cup revolve, distributing the cream around the sides of the can. Flowing down in a very thin sheet along the wall of the can, it is cooled to a temperature below 50° Fahr. before reaching the bottom. A similar apparatus may be used for cooling the skim milk.

The cream vats are similar in construction to those described on page 194 of the cream gathering plan. If a special cooler is used such vats would require no space for ice. They may be made like cheese vats.

For butter worker, butter scale, etc, see page 194 of the cream gathering plan.

CREAMERY ESTIMATES.

A Creamery on the Cream Gathering Plan.

Building and outfit for from 300 to 500 cows :—

Building, wood.....	
Engine	\$350 00
2 Cream vats	80 00
1 Churn.....	50 00
1 Butter worker	10 00
Collecting cans	70 00
3 Cream pails	9 00
1 Salt scale ..	5 00
1 Scale	15 00
Shafting, Pulleys, etc	35 00
Miscellaneous expense	50 00
1 Test churn.....	40 00

Building and outfit for 800 to 1000 cows :—

Building	
Engine and boiler	\$350 00
3 200 Gallon vats.....	120 00
1 400 " churn	50 00
1 300 " "	35 00
1 Steam worker	50 00
1 Lever worker	10 00
Collecting cans.....	140 00
1 Test churn.....	40 00
5 Cream pails	15 00
1 Butter scale	5 00
1 Scale	15 00
Shafting, pulleys, etc	50 00
Miscellaneous expense.....	75 00

Centrifugal Plan.

Building and outfit for 300 to 500 cows.

Building	
1 Scale	\$15 00
1 Conductor and head	4 50
1 Weighing can	10 00
2 small separators or 1 large one	500 00
Shafting, pulleys, etc	75 00
1 Butter worker	10 00
Engine and boiler	350 00
1 Churn	50 00
1 Cream vat	30 00
1 Milk vat	40 00
1 Heater	15 00
1 Salt scale	5 00
Miscellaneous expense	75 00

Building and outfit for 800 to 1,000 cows.

Building	
10 Horse-power boiler }	\$450 00
8 " " engine }	
2 or 3 Large separators	950 00 to \$1,400 00
Shafting, pulleys, etc	75 00
1 Milk vat	50 00
1 Cream vat	35 00
Heaters	20 00
1 Scale (treble beam)	20 00
1 Weighing can	10 00
Conductor and head	4 50
2 Churns	85 00
1 Butter worker	50 00
1 Salt scale	5 00
1 Cream strainer	3 00
1 Centrifugal milk tester	60 00
Miscellaneous expense	75 00

REPORT OF WORK AT THE LONDON AND TORONTO EXHIBITIONS.

Professor Brown and I were asked to take charge of the dairy exhibition in connection with the Toronto and London exhibitions. Hoping to be able to render the dairy interests of the Province some service, we accepted. The work was divided in two departments: 1. The working dairy. 2. The milch cow competition.

It is to be regretted that the dairy buildings, particularly at Toronto, were not adapted to the requirements of modern butter making. It was thought advisable to

show not only the machinery required in a large private dairy, but also such plant as is generally used in large creameries in this country.

For this purpose two Burmeister & Wain Separators, the heaters, pans, etc., in a word, all the plant used in a creamery, were secured. The milk vats, heaters and milk separators combined, which required only a room (space) of 12x15 feet, to skim the milk of 800 cows, attracted much attention.

A small Centrifugal Separator, to be run with a horse-gear, imported specially for the Toronto Exhibition, came in due time and was set in working order, but some party intentionally tampered with the machinery in such a manner that it could not be used.

This department was left in charge of Mr. Albert Garth, of St. Therése, Que., who is one of the pioneers of the centrifugal system in Canada. Two men attended the working creamery, and the rest of the staff were occupied with the milch cow competition.

THE MILCH COW COMPETITION.

The methods adopted by European experts in deciding competitions of the kind were used. The following card gives the scale of points, with results of the tests, given by Rose of Eden:—

	LBS. AND DAYS.	POINTS.
1—Weight of Milk in 24 hours.....	24.12	
Allow 1 point for every pound.....		24.12
2—Butter per 100 lbs. Milk.....	8.81	
3.5 being standard, add or deduct 10 for every 1 above or below.....		53.10
3—Cheese curd per 100 lbs. milk.....	20.60	
Allow 1 point for every pound.....		20.60
4—Time since calving.....	114	
Add 1 point for every ten days.....		11.40
Total value.....		109.22

The morning and evening milkings were used for the test. The cows were milked under the eyes of Prof. Brown. Each cow's milk was set in separate ordinary deep cans, and kept at a uniform temperature of 40° Fahrenheit.

The tanks containing the milk were kept under lock and key. The skimming took place after twelve hours' setting. The cream was kept twelve hours, ripened and churned in an ordinary test churn. The setting and skimming of the milk, and the ripening and churning of the cream, were done under my supervision. Following are the results:—

AT PROVINCIAL EXHIBITION, LONDON, 9TH AND 10TH SEPTEMBER, 1885.

No.	BREED.	EXHIBITOR.	COW AND AGE.	Milk per Day.	Days since Calving.	Butter per 100 lbs. Milk.	Wet cheese curd per 100 lbs. Milk.	Total Value	PRIZES.
1	Holstein	J. T. Ferguson	Aggie Belle, 5	37.60	113	2.75	11.25	52.65	
2	Holstein	E. Macklin & Sons	Sunnyside, 2	26.25	83	3.62	16.87	52.62	
5	Holstein	M. Cook & Sons	Jenny Lord, 7	28.80	153	3.31	16.87	59.07	2nd.
6	Holstein	Wyton Stock Breeders' Association	Aggie Ida, 4	35.00	116	2.81	15.60	55.30	
7	Holstein	Wyton Stock Breeders' Association	Lapolka, 3	23.60	109	2.65	20.00	46.00	
8	Holstein	H. M. Williams	Lerena, 2	30.90	133	2.37	19.37	52.27	
9	Holstein	H. M. Williams	Nixil L, 6	25.37	207	3.36	19.62	64.29	1st.
10	Holstein	H. M. Williams	Denice, 8	26.00	75	2.94	13.12	40.22	
11	Ayrshire	T. Guy	Rosette, 8	18.12	161	4.53	23.75	68.27	2nd.
12	Ayrshire	A. Nankin	Lady Belle, 3	25.90	79	2.75	23.12	49.42	
13	Ayrshire	G. Hill	Louise, 5	29.50	138	5.43	21.25	83.85	1st.
14	S. H. Grade	W. Patrick	Rosie, 7	46.80	129	3.62	20.62	81.52	1st.
15	S. H. Grade	W. Patrick	Queenie of West, 6	24.25	145	3.12	20.62	55.57	2nd.
3	Jersey	V. E. Fuller	Belle of Glengairn, 5	27.00	86	5.75	20.00	78.10	2nd.
4	Jersey	V. E. Fuller	Rose of Eden, 6	24.12	114	8.81	20.60	109.22	1st.

AT INDUSTRIAL EXHIBITION, TORONTO, 16TH AND 17TH SEPTEMBER, 1885.

No.	BREED.	EXHIBITOR.	COW AND AGE.	Milk per Day.	Days since Calving.	Butter per 100 lbs. Milk.	Wet cheese curd per 100 lbs. Milk.	Total Value	PRIZES.
1	Devon	Harper	Rose of Cobourg, 3	33.00	105	3.31	13.33	54.91	
2	Ayrshire	T. Guy	Rosette, 9	23.00	167	4.68	18.40	69.90	
3	Ayrshire	T. Guy	Oshawa Lass, 6	32.60	14	4.18	13.33	54.13	
4	Ayrshire	Smith	Gerty, 4	33.50	11	3.59	14.90	50.40	
5	Jersey	V. E. Fuller	Jessy Brown, 6	27.60	141	3.38	15.50	56.00	
6	Jersey	V. E. Fuller	Belle of Glasgow, 5	25.40	91	4.72	17.10	63.80	
7	Jersey	V. E. Fuller	Rose of Eden, 6	24.25	119	6.87	16.80	86.65	2nd.
8	Jersey	Jeffrey	Sweet Brier, 9	17.75	190	6.72	14.90	83.85	3rd.
9	Jersey	Jeffrey	Princess Alexandria, 6	13.62	145	5.34	16.80	63.32	
10	Jersey	W. A. Reburn	Jolie of St. Lambert, 11	31.62	118	6.41	17.10	89.62	1st.

In London the breeds were tested against breeds, giving prizes to the best of each breed. In Toronto the cows were tested against cows, giving three prizes in all. The Jersey breed carried off the palm at both exhibitions. In London Rory Eden, the 1st prize Jersey, gave the extraordinary yield of 8.81 lbs. of butter per hundred lbs of milk. Her removal to Toronto, the miserable accomodation afforded her while in London, and the wet weather affected her yield in Toronto, where she gave 6.87 lbs of butter per 100 lbs. of milk. Difference between the results of the two tests, 1.94 lbs. of butter. This decrease under the circumstances will not surprise any person of experience.

The Ayrshires showed themselves to be valuable cows for milk and butter.

The Holsteins maintained their reputation as heavy milkers, but failed to produce butter in quantity equal to the other breeds. This is hardly expected of them. However, in this connection, it is well to remember the fact that Holstein milk is naturally "heavy," that is, the cream from such milk rises slowly and imperfectly, whilst the cream from Jersey milk comes up readily when treated by the deep setting method. It is probable that a centrifugal test would be more favourable to the Holstein.

Respectfully submitted,

S. M. BARRÉ.

REPORT

OF THE

ONTARIO AGRICULTURAL AND EXPERIMENTAL UNION.

The objects of this Association are to form a bond of union among the officers and students, past and present, of the Ontario Agricultural College and Experimental Farm, and the most eminent agriculturists throughout the Province, to promote their intercourse with a view to mutual information ; also to try and elevate the profession of agriculture, with its allied sciences and arts, to its proper level ; to hear papers and addresses delivered by competent parties, and to meet at least once annually for these purposes.

All officers and students, past and present, are entitled to become members of the Union on payment of an annual fee of fifty cents. They are eligible to all offices of the Union, and will receive gratuitously any reports of the same which may be published after the date of their becoming members. Every officer and ex-student who is in regular accord with the Union is considered as a corresponding member thereof, and each one is entitled to the privilege of receiving, for experimental purposes, at least five samples annually of such agricultural seeds as may be on hand for distribution at the Ontario Experimental Farm—the results to be reported to the Union at the annual meeting which is held for one or more days at the College, at such time as is fixed upon by the executive committee, due notice of which is to be given to each member at least one month before such meeting is held.

GUELPH, March 12th, 1885.

The sixth annual convention of the Experimental Union opened in the class-room of the Agricultural College at 10 a.m., the President, Mr. Campbell, in the chair. After roll-calling, the minutes of last meeting were read and adopted.

The Corresponding Secretary and the Treasurer's reports were read and adopted, showing the Union to be in a better financial state than at any time heretofore, thanks to the Commissioner of Agriculture for his liberal assistance in carrying out the experiments. After the reading of communications, &c., by the Secretary, the literary part of the programme was entered upon.

THE PRESIDENT'S ADDRESS.

As you all know, gentlemen, this is the tenth anniversary of the Ontario Agricultural College and Experimental Farm, and I purpose giving a short review of its history. In 1870 Mr. John Sandfield Macdonald introduced a Bill into the Ontario House having for its object the establishment of an agricultural college. In 1871 a farm was purchased at Mimico, and the Government appointed Rev. W. F. Clarke, to visit the agricultural colleges in the several States of the Union, and report as to a suitable plan to pursue in reference to the proposed college. A commission was also appointed to look into the Mimico farm, and it advised the Government to sell it. In 1873 the present farm was purchased from Mr. F. W. Stone, and a commission of good, practical farmers was appointed to report as to the best means of adapting the farm to the purpose required of it. That commission reported that the name of the proposed institution should be "The Ontario Agricultural College and Experimental Farm," and that its object should be to give a thorough mastering

of the theory and practice of agriculture and horticulture. The report referred to the few facilities existing at the time for the attainment of that object, but did not advance any ideas in regard to the means to be pursued; they were not prepared to say anything definite, but advised the Government to go ahead and learn by experience, as they had no precedent before them. They reported that the country was hardly prepared to support such an institution, and would not recommend the Government to grant the large amount of money necessary to place it on a substantial footing. The choice of the name was rather unfortunate, and the report implied that a thorough knowledge of the principles and practice of agriculture could be acquired in two years. The College was opened in May, 1874, and Prof. McCandless, of Cornell University, New York, was appointed to manage the institution. He was not fitted for the work, and after open war with the students for some time, resigned the position. In the Legislature the College was badly used, and the attacks made upon it on the floor of the House did more injury to the College than to the Government. In the fall of 1874, Mr. William Johnston was placed in charge. He was a hard worker, conscientious, and, gifted with a large amount of common sense, and he endeavoured to put the College on a sound basis. In the fall of 1875 Prof. Brown was appointed Professor of Agriculture, and at once began to direct attention to the live stock interests of Canada, and the trade with Great Britain. In this and other ways much was done to patronize the Farm. In 1879 a committee of the Provincial Grange visited the Farm, and after a thorough inspection pronounced it a step in the right direction. In 1884, on the advice of Principal Mills, Farmers' Institutes were established. This was a recognition of the necessity of a closer intercourse between the students, the College and the farmers, and the good effect of these was very apparent.

The first difficulty met with in the establishing of the College was that such a step was far in advance of public opinion. They had no trained men competent to go into the work, or to draw out a plan for the working of the College. The students who came were not prepared to open on the course prescribed. The Commissioner made a great mistake in the prominence given to practical farming; the scientific and most necessary work was partially left out. As a Government institution it was dragged into the arena of politics, and every action and expenditure of the Government was closely criticised and opposed. Since Mr. Johnston took charge it has been in a far better position. Prominent English agriculturists, like Prof. Sheldon and Sir J. B. Lawes, gave it a high character, and the editor of the *Rural New Yorker* did not withhold the praise which he considered it merited.

In 1880 the Agricultural and Experimental Union, composed of the professors, students and ex-students of the College, was formed. Last year the presidents of agricultural societies were made honorary members of the Union, and their presence and advice were of much benefit. In experimental work, when an increase of a cent a bushel on wheat, means a gain to the country of several millions of dollars a year, it is worth while experimenting to produce a perfect grain. In horticultural work there has been rapid improvement, in fruit, flowers and vegetables. In America, Great Britain, Germany and France men are at work originating new vegetables. These are brought on the markets, and are bought by the farmer, who finds out that the new variety is not much good. Grains and agricultural products will improve in the near future, because by careful and repeated selection, improvement can be made. During the past few years the new varieties have been largely increased. One man cannot test all these, therefore some systematic plan should be devised by which it could be ascertained what improved grains and products are suitable to this country. In the experiments with grains and horticultural products at the Farm, there is the one defect, that the experiments made are not sufficiently extended and diversified, to make them of much value. This difficulty could be overcome by the establishment of agricultural stations in different parts of the Province, and it would be the duty of this Society to correct and modify the experiments made at the Farm by the reports from the stations. A committee would make a plan of the new varieties of seeds to be tested, and the same experiment could be made in different places and on different soils, and the results could be given in tabulated form and circulated through the country. If the Society would prosper and become firmly settled on a

good basis, they should have a journal, to be published, say, quarterly. It should contain short articles from the members of the Union, an account of the experiments being conducted might be given, and all matters of interest pertaining to the College and Farm might be discussed. The cost would be small, and it would prove of much benefit to the College, the Union and all concerned. A society is what its members make it.

I would also suggest the propriety of asking the Government for a small grant to help in the experiments. This is probably the last year that the grant of \$10,000 to the Agricultural and Arts Association will be given, in its present shape; the money will not be withdrawn from the agricultural interests of the country but applied in different channels. This Union can relieve the Commissioner of Agriculture of the bother of deciding where to appropriate \$100 or \$150, and can use it with much benefit to the country.

I have sketched out a rather ambitious programme, some may say, but I think there is work to be done, and something should be undertaken by this society to advance the agricultural interests of the country.

The following paper was read by C. H. F. Major, a graduate of the College:—

THE O. A. C. AND THE UNION.

It was not without much hesitation that I ventured to discuss the work, and the worth of the work, of our Agricultural College. The wide field of agriculture embraces so many different lines of research, its problems wear so many various aspects, and the means for their solution, far from being intimately connected, are so diversified, and are only to be found among the ascertained truths of so many different sciences, that one may well pause before he undertakes to discuss so pregnant and important a subject as that of agricultural education. Moreover I felt that I was practically opening up the subject before this Union, for though now and then a short discussion has arisen upon some one or two points, the subject has never been dilated upon to any very material extent. It seems to me that if there is one subject which more than any other deserves to be well ventilated, and thoroughly exhausted by the deliberations of this assembly, it is that of the Ontario Agricultural College, its aim, and its work; and I was indeed gratified to find that agricultural education was to hold a prominent place among the subjects submitted for your discussion this year. Indeed I may say I was relieved to know that I was not after all to be the only one in the field, and that the duty of awakening interest and inviting discussion was not to devolve upon me.

I have several times asked myself why our members have never yet ventured to discuss this great question, and several answers have presented themselves. The students themselves—I was one myself nine months ago—do not like to get up at our meetings and discuss subjects which they feel can be more ably dealt with by others, whose experience is wider and knowledge greater; and above all they do not quite like the idea of criticising the different departments of the College; in fact they feel that until examinations are over “silence is golden.” One reason is, no doubt, that the literary society training has not been long enough to give them that experience, and that self-confidence necessary to those who wish to express their thoughts at a public meeting. Now this is to be deplored, for if any one knows the weak points of the College work it is the intelligent student. The students know their wants; they know how far these are satisfied better than any one else. Ex-students when they leave the college, are engaged more or less with certain departments of agriculture and develop pet subjects upon which they like to dilate, leaving to others the important work of criticism. Now I do not say that there are not many subjects which, from their more detailed and confined scope, afford our members a better chance for that maturity of thought and weighing of practical experience which is necessary in order to write a paper of sufficient value to claim the attention of our Union, but I have yet to be shown the reasons why such subjects as “Underdraining,” “Beef Raising,” “Fertilizers,” and others, all I grant of importance, are to be considered by this Union of greater interest and importance than the question “Why is our College

useful or popular?" or "Why is it not?" This institution does not stand so "high in all the people's hearts," that a body so closely connected with and even dependent upon it as our Experimental Union can afford to ignore the question of agricultural education. Were the institution, which now shelters our bodies and inspires our minds, to crumble before an adverse public opinion, the Experimental Union would dissolve into dust, as the trailing and climbing Virginia creeper would wither and shrivel upon the walls it fondly clung to when a fire was destroying the house. We might be able to hold together and build from the ashes of our Alma Mater an edifice that could survive "the whips and scorns of time;" but let us, gentlemen, not waiting for that sad task, bind the interests and energies of the Agricultural College and the Experimental Union so closely together that the one shall be the inseparable auxiliary to the success, and participator in the honour, that shall crown the endeavors of the other. Let us recognize this our duty as an assembled body of students and ex-students, and others interested in this great branch of industry, banded together for the purpose of advancing the noble science of Agriculture. Let us, the students and ex-students, maintain our independence and freely speak out our thoughts, while the professors and practical farmers amongst us shall, showing us the practical ideas of all questions, and, enlarging our minds to realize the great national importance of the science and its bearings on the prosperity of the country at large, temper our zeal and render useful our knowledge, that we may all work to the best advantage in the cause which we have espoused. Let us, inviting free and searching criticism, engender that hearty discussion which shall bear the results of rendering the College an efficient and popular exponent of the principles of Agricultural Science.

THE LENGTH OF THE COURSE OF STUDY.

The main defect in connection with the institution is the shortness of the term of study. Two years only, with holidays taken out, is, to say the least of it, not a very long time to spend in endeavoring to become proficient in some twenty-six subjects taught as the course of study, and some five outside departments embracing all the manifold operations of practical farming, taken up as the course of apprenticeship. It must be remembered that the smattering that the student gets of those twenty-six subjects is not merely a smattering, but usually only a very superficial knowledge of the elementary parts of a subject. It is needless to say that even a good insight into practical farming is hardly to be acquired in so short a time. A student going up to the University has three years in which to study. If studying for a pass degree, he takes at the end of the first year what is called the "Previous examination," the "General examination" at the end of the second year, and the "Special" at the end of the third year. If up for honours he takes the "Previous" and the "Special," skipping the "General," so that after his first year he has two years to specialize. Now, I do not mean to affirm that the agricultural community is ready to recognize that the science of Agriculture is one that more deeply affects the interests of the human race than any other, for I know that they are not. Indeed the theory has not yet been sufficiently disentangled from the practice for the subject to stand first among the sciences. But why is that science upon the development of which depend the happiness and well-being, and even the daily life of the whole human race, to hold a subordinate place, while those sciences which pamper the love of luxury and which strive to set right the many social disorders springing from the exercise of the jealousies and foibles of men, are to have the best trained intellects in the world as their advocates and devotees? The bread and meat of the world, the daily, hourly existence of mankind are allowed to hang upon the results of the exertions of the most indifferent class, and in some cases of the most illiterate numskulls of society, while the best men turn to other occupations more retired in scope, and of far less importance than this great and honorable profession. If society recognizes the doctor as a saviour of life, the lawyer as a harmonizer of life, and the artist and the musician, the poet and the sculptor as refiners of life, why will not they recognize the agriculturist as the supporter of life, and allow him position and education as it does to members of the other learned professions? Common sense has made many a successful farmer, aided by education—there would have been few if it

had not, but that is no reason why education should not aid common sense to make far more than it has already, and those, far more successful men. Society has done something for us; this college is evidence of that, but not enough, and the reason I think can be found in these words of Cassius—

“The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings.”

We must have three or more years in which to fit the students of this college for their life work. I am inclined to advocate one year's general and two years' special instruction, or at least half and half. To be a graduate of the Ontario Agricultural College may not sound so well as to be a bachelor or master of arts, but if we have the substance of a sound practical education without its corresponding flunkey, we need neither grumble nor be ashamed. Many will no doubt advocate two years' general education and one year's special, but I am inclined to adhere to the belief that Lord Chesterfield's advice, “Be a whole man at one thing at a time,” is sounder than the advice, “Be jack of all trades and master of none.”

Some will ask, Why lengthen the course of study when so few stop here two years? There, gentlemen, you have the question I would like to hear answered, with the remedy suggested, by your discussions. Why do so few stop here? Why is this called the *Ontario* Agricultural College, and why were there only nine *Ontario* farmer's sons here last spring term? Why are there only twelve second year students here this year? I should be inclined to answer: “Too much show of learning, and not enough solid acquisition; too much harrowing and rolling, and not enough ploughing and manuring of the mind.” Taking the average Ontario farmer as I have found him, I have come to the conclusion that the Ontario Agricultural College is too far in advance of public opinion. I say not that it should not be ahead, but it is *too far* ahead of the country. The average farmer looks more to the weight of cash in his pocket than to the realizations of the projects of scientists and agricultural educationists. The College curriculum is too theoretical and the subjects too numerous to impress favorably the mind of the average Ontario farmer, who is after all not very many generations removed from the pioneers of the bush.

I shall endeavor now to criticise briefly the work of the Institution.

AGRICULTURE.

I would like to call your attention to the fact that, while this department is supposed to have, as it should have, the lion's share of attention, it has only one Professor, and Natural Science has two. This is an anomaly that should not exist. I have heard the Professor of Agriculture's lectures spoken of as incomplete and not sufficiently detailed. Now will any one who thinks that ask himself, or if he asks the Professor himself, he may get a more satisfactory answer, why he is not a first class scientific and practical stock raiser, dairyman, agriculturist and arboriculturist all in one, and why, he does not give first class notes up to date on all these subjects? What the Professor's answer would be I cannot say, but I know Pope would answer—

“One science only will one genius fit,
So wide is art, so narrow human wit.”

If agricultural subjects proper are to receive the greatest amount of attention, why are they only to be taught by one Professor and that Professor one of the busiest bees in our hive? People say, “Read up the subjects for yourself, don't trust only to lectures.” I say, “Come and do it.” We are not reading men at a University, able to put in six and eight hours reading a day. We have to pass more or less on the lectures themselves, and study very largely to that end. We have daily to hear and study the lectures, as well as work outside. If we are the muscles of the farm, we are the human, not the equine muscles.

The want of time is indeed felt in the outside department, and it is there that many students look for that instruction, which is to place them in such a position that when they leave the College they may be able to show that they have received a training which will be no discredit to their Alma Mater. But do we get that training? I think not.

It seems to me—and I have experienced it often in the field—that a knowledge of how to perform some practical operation, such as mowing or hay loading, would be of greater use to the student and do more credit to the College training than if he knew the probable constituents of a hay crop and their percentages at a certain date, and knew not how to harvest the crop. It seems to me that it is more desirable for a graduate of this place to be able to take his place on the waggon and load hay, than for him to be obliged to tramp hay in the mow while he shoots off to his comrade about this crop containing probably somewhere in the region of 76.19 per cent. of H²O, and only 23.81 per cent. of solid matter.

Now I know very well that the College does not expect to turn out practical farmers of thirty years' experience in two years, for that is impossible, and the country, I hope, does not expect that from it; but, be it remembered in a practical country which judges the College by its practical results, the practical training is what shows well to advantage now is what benefits us now, while the benefits of our scientific training must be evolved after years of patient work. But why, may I ask, was there only one student last summer who learned to load hay? Why were no students allowed to drive the mower? Some will answer, that anyone who can drive a team can also drive a mower behind it. I imagine there is all the difference in the world, if only the difference of increased confidence. Again I ask, Which is the most important for a student to be able to say, that he has learned to appreciate Shakespeare and Milton, or for him to be able to cut down a meadow and draw it in? Some years ago I believe two teams ran away with the students on the the mowers, and that has stifled all attempts at education in that line. My answer is, that if it will pay a farmer to give a man wages to walk behind the plough all day, it will also pay the Government to give a man enough to remunerate him for walking behind a mower until students get used to the work. The question boils down to this: What are we aiming at? Is it to train students as practical farmers, letting no one graduate here who cannot worthily uphold the position of a hired man? or is it merely to educate the farmer's son, with a view to giving him a higher education than he now gets, without alienating him from his profession? The latter is the inevitable result if he seeks mental advancement in our city schools, presupposing that he is trained practically at home, while he merely sees enough work at the College to show the relation existing between science and practice, and while we tell city boys to go to the farmers for the practice of their profession while the College gives them the science. Let us by all means know what we are aiming at, and how far we are from the realization of that aim.

I take it upon myself to say that the College report and circular are too full in their descriptions of the course of instruction. There can be nothing gained by saying that a student receives instruction in certain things when he does not. All that is stated may be very desirable, but if the country is taught that the College is a model dictionary of instruction when it is not, not seeing wherein the course of instruction is incomplete, they will neither make enquiry nor instigate any needful reform. I recognize as fully as any one, for I have been in places where I have heard adverse criticism on the College—springing sometimes from the highest reason and common sense, and sometimes from the most lowminded and bigoted ignorance—that an undue exposure of defects could be made to a very damaging extent by anyone who was against the College, and had been behind the scenes and used his knowledge with sinister political or personal intentions. But I put it to your common sense, I put it to your principles of rectitude and honour, do you think the College will approach that high state of perfection which we would fain see her attain to if we, her well-wishers and upholders, see fit to cover up her imperfections by such deplorable short-sightedness, enabling the country to see her only as she should be and not as she is? I think you will allow that in this honesty will be found to be our best policy, while it will cover more sins in the eyes of our opponents than we can possibly hope to do by the opposite course.

I have never been able to see why there should only be one instructor at the College. Let all the men, at least such as are competent, and I hope there are some such, be recognized as instructors. Let them also teach the students that essential part of our profession, the details of its practice. Why, when I have only a few odd half-days in which to learn

ploughing before the examination, am I to wait for my turn to go to the instructor, who is perhaps teaching ploughing in field 11, while the other four men are ploughing say in field 13? The instructor himself says all he can do is to see that a student can turn a passable furrow by the time examinations come on, and to that end can do little better than let him go ahead almost as best he can, neglecting that valuable instruction which every experienced ploughman can give. Plowing is but one example.

A large covered place is needed very much for such winter instruction as handling cattle and veterinary operations, which is uninteresting in the extreme when a Guelph wind happens to be playing with the snow. Handsowing could also be taught in here. The taking to pieces of harness, cleaning it, and putting it together again, would be a not to be despised item of winter instruction. I would here mention how inadequately the shop is fitted up, and how little time there is for real solid useful instruction in this department. All these subjects deserve more than a passing notice, but space and the length of your patience have to be considered.

FORESTRY.

Would that I had time and space to do justice to this interesting and important subject. It deserves it, and, to one who has studied it, it would seem to be the vital question concerning Ontario's future prosperity. Those who would like to ignore this subject should read Mr. Phipps' report of two years ago on the "Necessity of Preserving and Replanting Forests." When one reads, learns and believes what wonderful factors the leafy denizens of the forest are influencing, controlling, and to a large extent determining the fertility of a country's soil and the character of its climate, one stands aghast to think that those who cry out against the fearful waste of resources that is yearly going on, and point out the inevitable impoverishment which will end in national disaster, should be in such a minority. When one learns that whole tracts of land in the Old World, which were once smiling with all the beauty and wealth of fertility, have been rendered waste and desolate solely by the ruthless hand of improvident man, and when we learn that Ontario's climate is year by year becoming more capricious, her streams drying up, and her fertility vanishing with those wonderful conservators of a country's health and wealth, with which the provident hand of God has so richly clothed our country, how can we lie in apathy, and live on with contented minds, and talk wildly of the future prosperity and growth of our beloved land? And as we are clearing away the forests from the head waters of our streams, denuding the land of those mighty condensers and vast reservoirs of water from which truly issue the springs of life and the waters of wealth, annually sending in part to the heavens and in part to other lands our stable climate, and our country's fertility in exchange for cold and wind, drought and deluge, hard labour, and little to live for, we might, had we the close observation and acute hearing accorded by Nature to some of her most lowly forms, be able to detect that the decreasing resources of Niagara himself were enabling him to thunder less loudly year by year his own majestic *Te Deum* of praise for the wisdom and bounty of a beneficent Creator, whose loving kindness man so loudly vaunts in his churches while he spurns His mercies from his door.

Gentlemen, what are you here for? Are you here to discuss the minor operations of field work, or are you here to undertake duties of a higher nature and try and fight your way to demanding a settlement of those questions of vital importance, whose non-settlement must cause anxious misgivings in the minds of all true lovers of their country? In the north of Bruce county, where I have been working this winter, whole acres of swamp and rock have been sacrificed to the relentless butchery of fire and axe. What was Prof. Brown's paper for last year on this subject, before this union? What was Mr. Phipps' report for, if things are to drag slowly, and the remedies come too late? Are you here to read and to enjoy hearing papers, acquiesce in their sentiments, and then go away and forget them, waiting till next year's passing pleasure? These questions need time for settlement; they can be pushed, but only by earnest, energetic action, springing from resolutions that have realized the truth. How, may I ask, with the limited time and

educational materials at the College, can students be imbued with a sense of this and kindred national responsibilities, and none should leave here without a knowledge of their nature ?

A VARIETY OF SUBJECTS.

It is to be hoped that the question of the bi-annual cropping of wool will not be overlooked by this union, nor research discontinued by Prof. Brown. Who knows what it may not mean to the country ? A select committee was appointed by the House of Commons at Ottawa last year to obtain "information as to the agriculture interests of Canada," and their report is one of very great interest to every intelligent Canadian farmer. Had the Experimental Union furnished their members with copies and asked them to read up with the intention of discussing nothing only some of the most important questions there dwelt upon, the time would indeed have been well spent. The committee examined several members of our several Canadian agricultural industries, and also issued a series of questions, twenty-two in number, by which means they obtained a large amount of very valuable information as to the present state and future prospects of Canadian agricultural interests, and were able to probe the mind of the agricultural community. It is a report which all intelligent farmers should study and ponder privately, and discuss among themselves very fully.

Mr. Barnard, the Director of Agriculture for Quebec, says : "The loss occasioned to the Dominion and to the farmers themselves is stupendous, and equals annually the whole agricultural production of Canada—a loss amounting to over two hundred millions of dollars every year. In other words, our farmers in the aggregate do not produce over one-half of what they might and should." Take that statement, gentlemen, and make the most of it.

The exportation of eggs alone exceeds in value by forty per cent. the value of our exports of horses, and also that of sheep. Yet what farmer seeing the hens picking at the manure-pile imagines that the united efforts of our feathered allies, annually bring in to the country over \$2,200,000 for the exportation of eggs alone, which, added to the estimated home consumption of eggs and fowls, reaches a grand total of ten millions ! And, be it remembered, this crop beyond housing and winter feed is practically left to take care of itself. What might not be done ?

Hay and coarse grains are exported in quantities sufficient to raise easily ten times more horses than at present. "Why not," says Mr. Barnard, "keep this coarse feed, raise excellent horses, benefit by the very high profits in so doing, besides securing to the farm the not to be despised manure." Mr. Barnard estimates that Canada loses over fifteen millions annually on butter and cheese, from inferior quality, not counting what they fail to make, I presume from inferior appliances. We are told by a gentleman from Halifax that a cheese company has given up cheese and gone into condensed milk with Winnipeg for a market, and the prospect of handling eight tons of milk the second year after starting. Ontario can raise milk and is a little bit nearer.

I cannot but mention the information given on the subjects of the adaptabilities of sorghum and beets to Canada for making sugar. Sorghum is analagous to maize in treatment and the climate needed. Russia, the chief beet sugar producing country of Europe, has a climate similar to Canada, and finds that the percentage of sugar is higher the farther north the beets are grown. All these questions are well worthy the attention of the Experimental Union. How far the Ontario Agricultural College is equipped for imparting instruction and aiding re-search in all these various subjects, I leave you to say, as I also leave you to decide whether it is worth your while to endeavor to see her placed in a position to meet, if not the public wishes, at least the public needs.

VETERINARY DEPARTMENT.

It is a mystery to me why, in a stock raising country, the veterinary education at its Agricultural College should be in comparison with its importance so inadequately

provided for. Why is our Veterinary Professor obliged to make his college work more or less subservient to his own professional work, when their relation should just be reversed? I mean that our surgeon should not be a Guelph man lecturing here, but a college professor practising around Guelph. He should live at the college and be able to work among us. He should have an infirmary here, and be able to treat those animals he deemed advisable, where he could not only study their diseases better himself, but could also instruct the students by actual cases before their eyes, while not materially interfering with his own practice. What an advantage for him to be living here during the lambing season and be able to study sheep birth and life, which he said in one of his reports was a great desideratum among members of his profession. If a blacksmith had his shop on the college grounds, instructions could be given in that important branch of work, while all college and farm work could be done here, and the department could be profitably made to work in with the veterinary and mechanical department. The professor might also thus be enabled to study and introduce the best modes of shoeing. I see that the Rev. J. G. Woods has studied shoeing in England, and people are following his advice to leave their horses unshod, and are even unshoeing them, with no evil results. That could hardly be done during our winter, however. Farm hygiene is a subject we are not taught very much about. Is this, the veterinary department, to be ignored by you or not?

THEORY AND PRACTICE.

Much as I would like to, space prevents me from dilating upon the many, various, and all of them important subjects of natural science. The chief trouble seems to me to what extent to subordinate the theoretical to the more practical subjects, or to what extent to equalize them. Farmers believe more in the practical exposition of the principles of agriculture than they do in what many of them would term "the chimerical dreams and learned hobbies of crazy scientists." We must remember that we are advocating agricultural education in young and practical Ontario, and not in old and scientific Germany or England. When we read in Dr. Hare's report that a firm in New Jersey is able to charge the innocent farmer, who often knows "as much and more about agriculture as any book scientist," as he will call him, \$58 for every ton of a certain fertilizer worth only \$4.08 a ton, thus guzzling him out of \$53.92 on each ton, we are inclined to think that the study of chemistry can hardly be worth nothing to the farmer, and that the agricultural chemist who can thus practically show the farmer the advantage of not giving for nothing over half a hundred dollars is hardly the crazy scientist some would deem him. We ought also not to neglect the discussion of the question of the Select Committee concerning the appointment of a public analyst, and that question should be answered by this Union in connection with the thorough maintenance of the chemical department of the College. You have only to read the report to see that the question concerning the appointment of a public entomologist is equally worthy of your attention. When I closed that report after a cursory perusal of its contents I realized, as I have never done before, what untold wealth lies buried beneath the broad surface of the science of agriculture. And as I thought of the immense and diversified possibilities which energy, intelligence, and perseverance may turn into reality, I contrasted them with the universal lethargy and indifference of the farming community, while I could not but lament my own.

I trust that recognizing not merely what can be done, but also what ought to be done, you will consent to employ the latent energies and intellects of our Union to promote the efficiency of our Alma Mater, whose object is to further that science which, seeing that it forms the groundwork of our chosen calling, should be the study and the pride of our lives. I know that to-day's dinner and to-morrow's dollar are of greater immediate vital importance than even the discussion of the fulfilment of the most vivid, patriotic, and high-minded conceptions, for it is only by the continual attainment of the former over and over again that we can hope to realize the latter; but do not let the practical and material interests of life crush out its underlying sentiment.

ENGLISH DEPARTMENT.

It would be hard to overestimate the importance of instruction in this department. Many a farmer will give a grunt and laugh at this department of instruction, and affirm with a self-sufficient grin and many grammatical errors, "that learning 'ow to speak and rite good pure Henglish, hand hacquiring a taste for Henglish literature will never 'elp 'im to make a cent out of 'is farm." Possibly it will not; probably it will. At any rate it will help his money to do what it could not do alone. It will give him not only the substantial position in society, but society's respect as well; it will enable him to employ his talents and the experience of his life to the best possible advantage to himself and others, and giving him the power to look after and advocate his own interests himself, instead of having to get others to do it for him, will give him that fullness of independence which belongs to the sons of the soil, but which refined intelligence alone can give them; and allow him the means of gaining and guarding "the purest treasure mortal times afford," which Shakespeare tells us "is spotless reputation." And above all, it will give him that field for the exercise of his reason and imagination, supply him with those materials for the elevation of the ambitions of his life and those means of appreciation and profiting by all that is pure and noble, true and manly, in the utterances and writings of great minds past and present, which alone can render him capable of living his life in its best, its fullest, its widest and its grandest sense, and prepare his soul for the realization of the inevitable unknown experiences which await us all in "That undiscovered country from whose bourn no traveller returns."

The study of political economy is an essential training now-a-days for the mind of every man who hopes intelligently to perform the higher duties of citizenship. Farmers must realize that it is not mere book farming, but education, the sound *mind* in the sound body, which the advocates of agricultural education affirm alone can aid the farmer to be the man he should be, and occupy his proper position in the community. In the present two years' system of instruction this department of study is but touched upon.

WORK AND PLAY.

Gentlemen, it was with infinite regret that I saw the old gymnasium, incomplete as it was, taken away from us, even though it was to promote the cause of chemical science. I believe that many of the disturbances which Mr. Mills has had cause to regret, and certain students to lament, can be traced partly to that cause. To put it on the simple ground of conduct, I consider that a gymnasium is intimately connected with the internal maintenance of discipline. In fact, the rule that says we are to avoid all boisterous conduct in or about the building I have always looked upon as unkind, to say the least about it, if not a restraint involving a point of cruelty to animals. Sometimes when sitting in this room, listening to what we in our respectful language call a "Speech from the Throne," I have said to myself, "It is all very well for you to ask us to be young men and be orderly and quiet. All very well theoretically, but practically it will not work; we are half of us boys, and boys we can but be." The animal spirits of youth must have room for effervescence; cork them up and they will inevitably burst out by forbidden channels. "We have worked half a day; that's work. We have had lectures three hours and study two hours; that, also, is work. Now we want some fun. "Go outside and play like good boys, or read or talk in your rooms." "Thanks, it's pitch dark outside, freezing or snowing hard, and talking and reading are too intellectual." "Then, be quiet." "Can't possibly," says nature. The result, endless row in the halls till lights go out, half an hour's quiet, then the glorious fun of a sound old bolster fight by fifty students, or perhaps a feather-covered floor, or some other form of so-called youthful deviltry. If there was a good gymnasium much of that sort of work would be stopped, the students would develop healthy and manly frames, and the college would be left quiet for those who wished to study, read or talk. A good gymnasium would be an inducement to the boys to take an interest in gymnastics and drill, and Adjutant Clark, who does not care to put in an appearance in order to drill four or five enthusiasts on

cold wet days, would show us his welcome military face more often. The idea of a steward to help look after the college could be carried out in this connection.

TEXT BOOKS.

Much as has been said about the importance of different subjects, much remains to be said as to the manner of instruction. Far too much dictation is done here. Professors stand on the platform dictating sentences and spelling long words and technical names. Silence while one sentence is being written does not seem much time to lose, but time lost during two years while the students are writing down several note books of lectures, professors standing silent meanwhile, is not to be despised in our short term of study. If a text book will not suit, printed lectures interleaved with blank spaces for explanations would be useful in many cases, especially in that of veterinary science. Lectures will not get out of date sufficiently often to prevent such a system, and much practical information and many useful hints could be given. Time would be saved, knowledge gained, and our writing would not be spoilt, which is usually the effect of the present system.

CONCLUSION.

Gentlemen have expressed their opinion in former years that this Experimental Union will become one of the leading Canadian agricultural societies. I trust that it will. If it does, it will not be by confining ourselves too closely to details while we neglect to lay down a broad and well-defined policy, which shall recognize the importance of dealing with, and if need be, of taking the initiative in the settlement of those many questions of national import which are inseparably connected with the country's weal and wealth. Above all, gentlemen, the life of our society will not be full of beneficial influence and respected power if we neglect to rally round the institution whose inborn auxiliaries we are, and do something more than annually come here to sit under the shade of the tree which has sheltered so many of us, to discuss questions of restricted scope, while we allow that tree to live untended and unpruned. The stability of our Alma Mater should be our engrossing care now; and I may say that I am of opinion that the importance of the work lying before you entitles you to ask on your own behalf and that of the college such a hall as is necessary for the successful prosecution of public business, and that you will find two days utterly inadequate for the expounding and deciding of the questions submitted to your consideration.

And now, gentlemen, when the Provinces are urging the establishment of Agricultural Colleges and the idea of a Dominion College has even been mooted, I leave it to you whether, having been first started, our college is to keep ahead. I leave it for you to decide upon the best means to be taken to remove it from the blighting breath of political supervision, and I leave it for you to decide upon the manner in which the duties incumbent upon you shall be performed.

I have not sought to instruct you, for that is beyond me, but I have sought to inspire you with the thought that it is necessary to instruct yourselves, that you may be capable by the influence exerted where it is needed, which shall be the outcome of your deliberations of carrying out those duties whose performance, stretching beyond narrow confines of individual or even class success, touches the welfare and prosperity of the whole community.

It is to you now that I appeal,—students, ex-students, professors and farmers—to unite all your energies to the attaining of this great object,—the rapid advancement of that branch of human labour and research upon which the very life of the human race depends, and consequently the fulfilment of the immutable designs of the Creator, Agricultural Science.

Some discussion followed the paper in the afternoon session arising out of the reference in it to the independence of the Union, but the general conclusion was that no formal expression of opinion on this subject was necessary.

Prof. Panton asked permission to make a few remarks as he would be absent when the question came up again. He thought the essayist forgot to take into account what a motley group of students the professors had to deal with in this institution, and how hard it was to combine the theoretical with the practical. Some of the students wanted a lot of outside practical work ; others again, the farmers' sons, more especially, wished to attend the lectures and not be required to perform work with which they were already fully acquainted. This rendered it a very difficult matter for the persons who had to draw up the curriculum to suit everybody. Again, some of the students had only the rudiments of an English education, while others were undergraduates of universities. If the professor in charge pursues a simple line of instruction the advanced students grumble because they do not get along faster, while if they are less minute in their explanations the less advanced students fail to catch the drift of the meaning intended. Some are well up in practice and not in theory ; others in theory but not in practice. It had been suggested to establish an honor class, and by placing the more advanced students in it get them on faster in their work ; but for this they required a large staff. They might devote their attention to one subject exclusively, and when through at Christmas with one study take up another for the next term. The professors had often consulted on the question but never could see their way clear, under the circumstances he had explained, towards overcoming the difficulties. The students required a longer course. Some did come back the third year, but there was no course provided for them, and very few will study long without lectures ; so those that came back did not derive much benefit by so doing.

SCIENCE IN CONNECTION WITH AGRICULTURAL EDUCATION.

Prof. Panton read the following paper :

It affords me great pleasure to be present with you to-day, and particularly so to have the privilege of addressing you upon a subject which is of great importance to agricultural progress at this period of Canadian farming. I consider the subject which has been given me by your secretary especially opportune, when farmers' sons seem to be exceedingly desirous to secure a sort of practical knowledge of some things which come under the province of farm knowledge, but which in many respects lamentably fail to supply an education. To an observing mind the term of years which indicate Canadian farming appears capable of being divided into several distinct periods, which may for convenience be termed the clearing, crude farming, ploughing, machinery and scientific periods. These may be compared with each other by reference to the condition of home life in the period ; to what extent woman worked in the field ; the beast of burden employed ; the machinery used ; the amount of cultivation done ; the rewards returned for the toil, and the relation of physical to mental labor.

From these standpoints each period will be found to be in advance of the preceding until the last is reached. The scientific period stands above all others, and is especially distinguished by a desire on the part of farmers for education and greater knowledge in agricultural science. It is with this last period we have most to deal, and without further reference to the preceding periods I shall endeavour to address myself to the method by which an agricultural education is to be obtained.

At the outset it is necessary to remark that agricultural knowledge is not an agricultural education. The former is a cultivation of some facts ; the latter is a disciplined mind capable of grasping with problems which are usually met with in farm life.

It is unfortunate that there are at times students found within these walls who do not seem to understand this, and appear to be satisfied to pass away with a few facts learned in some of the departments. As far as an education is concerned, they have derived little or nothing. I do hope that if there are any before me this day who have had an inclination to neglect *education*, they will bestir themselves and endeavour by application to study to reach that state of culture which can only be attained by systematic study, close application and mental discipline. Those of the faculty who appeared

at the Farmers' Institutes during the early part of this year were struck with the desire manifested by farmers for more knowledge in agricultural science. Among the old, or better, those whose opportunities for attending school are past, the only remedy is Farmers' Institutes, where men of experience may read papers, and instructive discussions arise. But to the young our College is open, where an agricultural education is obtained in the most practical manner. I say practical, because the means by which the faculties of the mind are developed and improved are facts which are continually coming under notice in the work of after life, and thus the knowledge by which his education has been improved is retained, and frequently proves of service in the field. When those of us who have passed through long years of study recall some of the subjects we spent weary hours in learning, we find that we have remembered very little of the knowledge we then acquired, but our disciplined minds remain educated though the facts have passed away and are now of no further use.

Had we been like some of our exceedingly practical students who imagine that unless every lecture can be shown to directly bear on the farm the time is lost, and who, unless what is said will come up almost in every day life, feel disposed to turn away from the lecture-room and desire to linger around what they imagine is more practical—had we, I say, been so exceedingly practical, our education would have been of a very rudimentary nature indeed. One of the great strides in education now is reaching it by this practical method, viz.: the study of subjects which are of such a nature as to be continually brought into notice in after life. By such means the knowledge is retained and education obtained.

It is in this way, I feel confident, that science will occupy a very important place in the curriculum of study in Colleges and High Schools as the years roll on. During the past fifty years it is wonderful what progress science has made as a subject of study. Colleges, where only one professor was found in the departments of science, have now four and even more. Scientific subjects are now taught in nearly all schools. The whole tendency is in the line of scientific knowledge as an educator, replacing some of these dry subjects which, though the study of them educated the mind, the knowledge was of little or no service afterwards. Here the question naturally presents itself, to what extent is science of service to a study of agriculture? To answer this I shall endeavour to show some advantages derived from its study.

1. There are several faculties of the mind largely developed by the study of science, and especially those subjects which we find on the College curriculum, viz.: Botany, Geology, Chemistry, Zoology, Meteorology and Entomology.

Let us examine some of these faculties. Observation is of great use to the agriculturist; as this improves, his knowledge must naturally increase. No study is better fitted to improve this than science, which consists largely in the accumulation of facts.

The successful student in Botany and kindred studies must observe, and in the course of time acquire such habits of observation that he sees much full of interest where there seemed little or no attraction before. At this period in Canadian farming, the successful man must rely upon mental power more than physical. He must be observant, thoughtful and shrewd.

2. Comparison is the result of observation, for it leads to a consideration of his facts and is a faculty well worth cultivating.

3. Induction enables the student to arrive at proper conclusions. It naturally results from his study of facts.

4. Method also is an outcome from a study of the sciences, and is certainly a faculty of immense importance to the farmer. Much valuable time is lost on the farm from a lack of method in work and arrangement. Who has not seen hours wasted in the harvest field hunting for tools to make some repair? The tool sought may be any place, for there is no system followed in having a particular place for each thing. Were farmers to charge themselves with the loss of time resulting from an unmethodical way of working, they would be surprised at the wasted time of a year. No subject in the whole curriculum of study equals science to develop system or method in work, and hence should be emphasized for that purpose. No habit can surpass industry to insure a young man success in the world's battle, and few things are better calculated to develop this than

attractive subjects of study. We are not mistaken if we claim for science many attractions, for the facts upon which it is found are all derived from the great book of nature spread open before the farmer and profusely illustrated on every page.

One more faculty I shall mention that rapidly develops under the study of science, viz: Memory. Who can suggest a better line of study to strengthen this very important faculty than Science? At first the facts may appear isolated, but as study progresses the common bond of union daily appears, and further illustrations of the great principles of science are continually being presented in farm life, so that what has once been learned remains. The second advantage claimed for science in connection with an agricultural education is, that it enables the possessor to read intelligently the current literature on agricultural science. You cannot take up an agricultural journal or magazine of any pretensions to-day without finding many references to subjects interwoven with science, and which cannot be understood unless the reader is familiar with the principles of that study.

How, then, are these great lights, flashing out from the darkened recesses of nature, to be understood by the farmer, unless he has a knowledge of science? This accounts for the desire among intelligent agriculturists for more extended knowledge, and which some thoughtful ones are eagerly striving to secure by reading and private study. Many of them would fain spend a session within these walls in order to improve their knowledge in subjects which they find have so much to do with the calling they have taken for a life-work. What shall we say, then, of the young men who, with all the lecture-rooms open, and affording every facility for the acquirement of a superior education attained by studies bearing on the plant, the soil, the atmosphere and animals, amongst which they are to toil spurn these opportunities and lead a life of comparative indolence, while they attempt at getting what they term a thoroughly practical knowledge? Will such elevate the status of the farming community? Will they return with minds improved by the attendance at college? Methinks I hear but one answer. The farmer who seeks to win success in the coming days must possess more than physical power; he will require a well trained disciplined mind.

How sad it is to see many young men so thoughtless, so regardless of their future success, as to imagine that because some in the earlier periods of this country's history succeeded principally by physical effort, that that may indifferently sacrifice the opportunities to secure an education and expect success without mental development. They forget that they are to work a soil which has been robbed of much of its fertility by unscientific farming, and compete with innumerable producers in a market which is yearly becoming more precarious. I would emphasize the statement that you cannot read intelligently the agricultural literature of the day without a fair knowledge of science at least.

Thirdly, the study of science is a source of endless pleasure to one whose life-work is largely concerned in understanding the book of nature. What a field of interest opens out to the farmer who has a general knowledge of science! The plant he grows, the soil he cultivates, the animal he raises, the air he breathes, combine to afford his reflective mind objects of thought and study. The soil recalls its source, its origin and formation, and carries the mind along lines of interesting and entrancing contemplation. He sees a panorama of the earth's geological history as he considers the boulders lying by the roadside. These silent monuments suggest periods long receded into the past, when his clay beds were formed from the disintegration of similar rocks ground down by immense rivers of ice wending their way across the American continent, and finally passing into regions where increased temperature released from their icy grasp the "hard heads" of the field. His study of botany supplies endless thought on the appearance of every plant. The very weeds become a source of interest, and he sees they are only plants out of place. Unable to move about for sustenance, he knows how they subsist, and reflects upon the wonderful manner by which they secure the perpetuation of the species. He contemplates how wind and insects lend an aiding hand to fertilize the helpless flower. The complex problems of plant growth are continually before him for solution, and though he may never altogether know the why and wherefore, still he finds a halo of

interest surrounding his life unknown to the poor illiterate follower of the plough, whose life is less to be desired than the creatures he drives before him.

No labourer in the world's great field is surrounded by so many sources of delight as the farmer, and yet how few are able to experience this happiness. If young men could see this, and by patient study equip themselves for it, the work now looked upon by many as having a tendency to lower man would be found to elevate him, and bring him daily nearer what his Maker intended him to be: the head of all animate nature.

I do not require to enlarge upon the idea of happiness derived from the surroundings of farm life to a student of science. I have up to the present directed your attention chiefly to what might be termed questions of theory, but I now wish to direct you to something which is in all probability of a more practical nature. This is a practical age, and the cry is always heard by the student, *cui bono?*—for what good is such?—ignoring the mental discipline entirely. To answer this I shall produce one or two illustrations to show that from a practical standpoint science has strong claims upon the student of agriculture.

Some who are before me have heard much about the importance of certain constituents in animal food—that a great deal depends upon what you want to do with the animal, as well as the nature of the food it is to receive. In other words, animals for work, maintenance, fat, milk, or growth should not be fed in the same manner.

Foods differ much in composition as regards their *fat forming* and *flesh forming* properties. Consequently the intelligent farmer should ask himself the questions:—What do I require from the animal I am about to feed, and what food has most of the properties suited to serve this purpose?

This has led to what is now becoming a very important factor among cattle feeders, the *nutritive ratio*, *i.e.*, the relation of *fat forming* substances to the *flesh forming*.

From innumerable experiments carried on at great expense, and performed with the greatest accuracy, it has been found that a certain ratio is suited for the different purposes desired from farm animals; for instance, that best suited for fat production is 1:5½—one proportion of flesh forming (nitrogenous substances) to 5½ fat forming (fats, etc.) If this is the case, is it not of intense importance that a farmer has some knowledge of the chemical composition of foods, etc., and the part they play in the animal economy. During the month of January, when the members of the College faculty were attending Farmers' Institutes, one of the interesting items produced at some was a card containing the result of Professor Brown's experiments in cattle feeding over a period of some nine years. This statement showed the gain per day and the cost. Twenty-one different rations had been tried, and that which gave the best results was found on calculation to have a nutritive ratio 1 to 5½, precisely what scientific research had arrived at in Germany. Here, then, is a most important factor in making up a ration for feeding purposes.

How important, then, that more science should be known in this direction, that feeding may no longer be carried on in a sort of hap-hazard manner. If the laws which underlie scientific feeding were better known, and the chemical composition of plants understood, much waste would certainly be prevented, and a knowledge of science be found to be of the utmost practical importance.

Further, Ontario soil is rapidly becoming impoverished from unscientific culture, and, if not already at hand, the day is not far when fertilizers will require to be largely used. Now, there is nothing in which a man can be more readily deceived than the value of a fertilizer. This has been ascertained to be the case in countries where such are used more than here. Consequently it was found that some check must be made upon unscrupulous dealers in super-phosphates, etc.

The plan adopted in many of the adjacent States is to demand a chemical analysis of each. Experience shows that the most valuable ingredients in a fertilizer are nitrogen, potash and phosphorus, and that these have a comparatively regular market value: consequently, knowing these prices, and the chemical composition of the fertilizer, we can arrive at a fair estimate of the substance. Now, if the selling price is much in excess of the estimated value, you may be pretty sure that you are paying far too much for the fertilizer. In some cases in the United States it has been found that farmers paid as high as \$35 per ton for what, according to the estimated value, was worth

only \$1.03. The result has been that of late years a great improvement has been effected in the fertilizing mixtures sold, and now there is seldom much difference between the selling and estimated price. This has saved thousands of dollars to the farming community, and is a strong proof of the practical benefit which arises from understanding the scientific principles which underlie the use of fertilizers.

Many of the most destructive foes to the farmer are microscopic, such as rust, smut, potato blight, plum disease, etc. Before we can combat with these successfully we must know something of their life history, and this leads to a study of minute parasitic plants among the fungi. These present some of the most interesting subjects of study in the whole realm of the plant kingdom. Insects, too, are foes which do an immense amount of injury to crops of various kinds, and anything we can learn that will assist to diminish their numbers is of vital and practical importance. From what I have directed your attention to you will, I think, be constrained to believe much of practical importance is to be derived from a study of science in the pursuit of an agricultural education.

I have now reached the conclusion of my address, throughout which I have endeavored to show the importance of the study of science to a young man desiring to get an agricultural education. This has been forced upon me by circumstances which I have observed since I returned this year to assist in the education of young men who, by their presence here, confess that it is their purpose to follow farming for a calling through life. I perceive an indifference of some to study and a tendency to fall into habits of indolence by taking one or two subjects while their general education is lamentably poor. I fail to find such studying in the reading room; I cannot find that they take more books from the library than those who attend a far greater number of lectures. At the close of a term their names are not higher on the prize lists than those who studied double the number of subjects during the term. In fact, experience goes to show that those who have the most subjects are usually the best students in the end. There seems a tendency in human nature to prove that the less we have to do the more imperfectly it is done.

Young men, if you have any desire to raise the status of Canadian farming, secure by all means an education; not a few facts pertaining to one or two subjects of study, but knowledge that will discipline your mind, mould you into methodical habits, and, above all, develop industry in your nature. Without industry, without system and without education you must expect that in the race of life your highest place will be a hewer of wood and a drawer of water. Rise from indolence and rise from indifference to study, apply the vigor of your body to the cultivation of your mind, and

“ In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle!
Be a hero in the strife! ”

EXPERIMENTAL REPORTS.

Mr. Shuttleworth, on behalf of the committee appointed to carry out experiments undertaken at the last session of the Union and to receive reports from the same, verbally reported that most of the reports had been received, but two of them were not on hand in time to prepare the summary of results that day. The experiments had been arranged last year by Prof. Hare, and nine or ten of the ex-students had volunteered to assist in the work. The plan proposed was for each experimenter to set apart, say an acre of land, divided into ten plots. The rotation for each plot was to be different, and as the experiments would be conducted in different parts of the Province, and in different soils, it could be ascertained what grains and vegetables were suited to each soil and locality. The tabulated results of the experiments would be very valuable. One rotation was: First year, turnips; second year, barley; then seeded down with grass the third year; and in fourth year plow up and sow wheat. One object of the experiments was to find out the full value of clover. That subject would, however, be taken up the next day. Mr. Shuttleworth then read the following reports:

Co-operative field experiments with "natural" and "artificial" fertilizers, with a four years' rotation of crops, conducted by the following gentlemen under the direction of the Ontario Agricultural and Experimental Union :

- Jas. Laidlaw, M.P.P. Guelph P.O., Wellington County.
- J. R. Job Waterdown P.O., Wentworth County.
- W. H. Stubbs Drayton P.O., Wellington County.
- J. & R. Ramsay Eden Mills, Wellington County.
- E. A. Rennie Hamilton, Wentworth County.
- T. R. Parker Ivy, Simcoe County.
- Ontario Experimental Farm Guelph, Wellington County.

- 1. No manure.
- 2. Farm-yard manure, 14 tons per acre.
- 3. Nitrogen mixture, ($\frac{1}{2}$ Nitrate of Soda, $\frac{1}{2}$ Sulphate of Ammonia, and $\frac{1}{3}$ dried blood, 150 pounds per acre.
- 4. Superphosphate, 350 pounds per acre.
- 5. Muriate of Potash, 150 pounds per acre.
- 6. { Nitrogen mixture, 150 pounds per acre
Superphosphate, 350 pounds per acre
- 7. { Nitrogen mixture, 150 pounds per acre
Muriate of Potash, 150 pounds per acre
- 8. { Superphosphate, 350 pounds per acre
Muriate of Potash, 150 pounds per acre
- 9. { Nitrogen mixture, 150 pounds per acre
Superphosphate, 350 pounds per acre
Muriate of Potash, 150 pounds per acre
- 10. Quick Lime, 400 pounds per acre.

Plot.	J. & R. RAMSAY.		J. R. JOB.		W. H. STUBBS.		O. E. F.	
	Roots per Acre.		Roots per Acre.		Roots per Acre.		Roots per Acre.	
	Pounds.	Bushels.	Pounds.	Bushels.	Pounds.	Bushels.	Pounds.	Bushels.
1	11,000	183	9,900	165	10,800	180	18,900	315
2	16,800	281	10,400	173	12,600	210	32,640	544
3	11,700	195	7,650	127	11,850	197	25,440	424
4	19,580	326	9,000	150	12,100	201	25,320	422
5	19,400	323	9,600	160	12,000	200	22,860	381
6	24,980	416	10,400	173	12,250	204	19,500	325
7	21,600	360	10,440	174	11,800	196	.....	.....
8	22,500	375	9,450	157	12,350	205	.....	.....
9	18,900	315	12,240	204	12,500	208	.....	.....
10	10,000	166	9,960	166	13,200	220	.....	.....

Mr. Shuttleworth explained that a certain sum was voted annually for experimental purposes, and on Prof. Brown's recommendation the Minister of Agriculture made a grant of \$100 to the Union, enabling them to print 1,000 copies of their 1884 report, which were distributed to the members of the Union, leading agriculturists, and the press.

Mr. Campbell said the people were highly pleased with the reports, and had formed a better opinion of the Union, the College, and their work.

BENEFITS AND RESULTS OF EXPERIMENTS.

Mr. Shuttleworth wanted to hear from Prof. Hare as to the future benefits and results of these experiments.

Prof. Hare said that crop growing was an experiment of years. Have we any idea of the chemical conditions under which crops grow? Do we know the results of *flesh formers and of beef producers*? Do we know when we have the right quality of flesh-forming constituent, and when we have it abundantly enough? We have to consider and endeavour to understand fodders, their ingredients and properties. They were not in a position to analyse fodders at the College, as their laboratory appliances were very insufficient for the purposes of analysis. We cannot find if the grain of a certain district is normal or deficient. With regard to root crops, many of them had small eyes of which they had not yet been able to find out the cause. Experiments on roots were necessary. If the turnips in one district were better in quality and quantity than those in another, they should find out what element of the soil is lacking in the one district and present in the other to produce such a result, and they would find the same state of things in regard to all agricultural plants. For finding out the character of the soils of this Province, and the places where certain plants could best grow, this series of experiments was instituted. The Union wanted the experimenters to do a certain amount of practical work and report their results. He would see that the rest of the work was attended to. Botanists wanted experiments with wheat, barley, roots, etc., to ascertain whether it were possible to find out the grains and roots best adapted to the different climates and different soils of Canada. Individual plants have peculiar features; each variety of soil has peculiar elements. The soil in extensive districts was largely uniform, its geological structure consisting of a basis of limestone covered with glacial deposits. The soil in a certain large district would be found to be peculiarly adapted for wheat, another for oats, another for roots, and so on; and they wanted to find out how much per acre of a certain grain could be grown under the most favourable conditions of soil and climate. The rotation they had arranged at the Farm was wheat, turnips, hay, and barley. The rotation could be adapted, however, to the wish of the experimenters, taking into consideration the general character of the soil you till and surrounding circumstances. They wish to bring into existence the perfectly developed plant; not a poor specimen, but the best wheat, the best barley, the best roots, by the application of the manurial properties which the soil was deficient in. Farmyard manure was the best if the liquid excrement was not let run to waste and the solid manure properly kept and covered. It was all taken from the soil and should go back to the soil. But it was generally found that they had not sufficient of this manure to cover all the soil, and the soil was not so rich but that the application of manure was necessary. Then came the question, what artificial manure applied to the soil can produce the plant best adapted to that soil in a perfectly developed state? Nothing could bring more honor on the Union than an endeavor among its members to find out these things. The old hap-hazard experiments should be dropped, and the new shape and bent of the experiments should be towards definiteness, both in application and result. We should know the relation, the composition of the manure, the quantity applied, and then the definite results would be valuable. In different sections, and on different soils, different manures would have to be applied to produce a perfect plant. On some soils we would have to use phosphoric acid, on another sodium, on another nitrate of potash, and so on. In some districts we might get a perfect plant, and then by analysis of the soil and observation of the climate we might arrive at some idea as to what was wanting in other soils to produce that particular plant in perfection. In the United States, by continued experiment, they have found out what one district can produce best and what another, what one soil needs and what another. In Canada the soil is harder to study. It has a distinct geological formation; rocks had been brought down on its soil at the glacial period. In conclusion he would endeavor to answer any questions that might be asked.

Mr. T. Shaw wished to know if it were possible to maintain the fertility of the soil of a country without the aid of artificial fertilizers if all the produce grown on the land is kept on it and used there.

Prof. Hare answered that, with all the conditions mentioned by Mr. Shaw, the fertility of the land would increase. Carbon, carbonic acid and nitrogen are the elements which the plants principally take from the soil and from the atmosphere, and if these elements are returned to the soil, if all grown on the farm is used on the farm, the soil will increase in fertility.

Mr. Shaw said that his opinion on the question coincided with Dr. Hare's. He wished to impress the idea on farmers of the utter folly of selling their produce off the farm and thus impoverishing it. When we can, we should increase the fertility of the soil by using artificial fertilizers also. If artificial fertilizers are largely used, the increase in fertility will follow. A farm is like a bank, and a farmer should live on his interest and not impair his principal. Farmers were foolish to send their grain to Britain, and then send their cattle there to be fed on it.

Rev. W. F. Clarke was glad to hear Dr. Hare give no uncertain sound on this matter, that it was possible to maintain and increase the fertility of the soil, contingent upon the observance of certain conditions. He would like to hear about the manurial properties of clover, which he considered one of the most important crops in the rotation; also about manure production and manure protection, how the grain should be fed to make the least waste, and how it should be cared for to have it in the best condition. He had seen weather-beaten heaps of manure which he should be sorry to put on his land. He would give Mr. Shaw a slight cautionary hint: they were not going to have live stock alone. True, no stock, no manure; no manure, no crops. But he would have not live stock alone, but mixed husbandry. He would like the Union to take in the question: How much can we sell off a farm without impoverishing it, keeping enough on it to keep up its fertility? We have no right to impoverish the land; we are not to diminish our capital, but to have a surplus. In its virgin state nature gains from year to year from the trees of the forest; the soil is enriched by the falling leaves. A farmer can raise and should raise good crops, and use them mainly in feeding stock, and thus keep the soil up to its proper fertility. This is the only proper method. All others are wickedness, robbery and spoliation. He would like the question settled as to what proper margin we can create in order to maintain or increase the fertility of the soil.

Mr. Macdonald knew that nitric acid and other elements came down in rain on the soil. But what about it when these elements got there? He wanted to know the gain or loss in drainage—whether the soluble parts would be lost.

Dr. Hare explained that last summer six lysimeters or rain gauges were established at the Experimental Farm. These were large roomed wooden vessels, lined with copper and filled with soil to the depth of three feet. They were exposed in a suitable place and from only two of them was drainage water got. It was an ordinary summer, neither very wet nor very dry. There was no opportunity of any water escaping into the ground without their knowledge. Usually the rain sank down about an inch and then went back into the atmosphere in the form of vapor, leaving the nitrogen and other plant foods in the soil. One of the lysimeters was filled with clay soil, one with sandy soil, one with humus, and the other three with soils from the experimental field. Very singularly not a drop of water was lost from the sandy soil, nor from the experimental field soils, and but little from the clay and the humus: very little food was lost. They reckoned the loss in the lysimeter by comparison, and could estimate the loss in an ordinary clay soil. Would there never be any waste in sandy soil? Well, that depends on the quantity of rain and how it comes down. If rain falls heavily, loss will occur; but if gradual, there will be none. In the three experimental field soils, not a drop of plant soil was lost. In pastures the rain does not wash away the plant food from the soil; there had been found not a particle of waste in two hundred acres. They had got drainage water from summer fallow, but none from wheat land. He believed that no loss occurred where the soil grew grain, hay, or pasture; the loss was in roots and summer fallow; but the waste could easily be reckoned. If the instrument goes down three feet and the waste is nothing, or very small, no plants but the clover and the thistle can use the soil at a greater depth. The results showed that but little was lost to the soil by drainage water.

Mr. Rennie wanted to know if all the water went through the soil in the lysimeter, and if all the surface water was retained.

Prof. Hare said the rain guage was water-tight. Every drop of water that fell on the soil in it must either evaporate or go down into the water guage.

Mr. Rennie said that drainage was beneficial in clay soils. It would take off the stagnant water, which would otherwise rise to the surface.

Mr. Shaw thought that in the spring of the year the waste would be more, as the drains would be unable to take off all the surface water.

Prof. Hare replied that he expected waste in the spring, but when the spring came he would be in a better position to give results.

Mr. Shaw said that the fertility of the soil could be increased by drainage.

Mr. Macdonald said that from decaying vegetation ammonia was given out. If the Professor could guarantee that the ammonia from his soil would not go on Mr. Shaw's, but benefit his own soil, then he would believe that the draining of his soil would not benefit his neighbour.

Prof. Mills remarked that he had noticed that one and a-half inches of the copper lining of the lysimeters was often exposed, and on touching it with his hand he had found it quite hot. He thought this exposed heated surface would tend to materially increase the evaporation of the water, and vitiate Prof. Hare's results considerably.

Prof. Hare explained that when the rain fell it would make the exposed copper the same temperature as the soil; but after the rain was below the surface of the soil the copper would exercise no decided influence upon it. The lysimeters were filled in winter, but possibly not so full as might be. He did not think the influence of the heated copper would amount to much.

Prof. Mills still thought that the presence of a heated surface in the lysimeter must have some appreciable effect on the evaporation of the water in it.

Prof. Hare maintained that the heat given to the soil by the copper was not worth taking into account, the specific heat was so little. Three of the lysimeters were filled to the top, and from two of these no drainage water was taken. Therefore he thought no particular influence was exercised, as the results were similar whether filled to the top or nearly so.

CATTLE-FEEDING.

Mr. Rennie then read a paper on Cattle-feeding in its different phases, which gave rise to an interesting discussion.

Mr. Macdonald said he had had high hopes of nutritive ratio when at the Farm, but in his reading and observation he had met with no such system as they had here. Prof. Sanborn, of the Missouri station, had made extensive experiments in feeding. For instance, he fed peas as against corn, corn against roots, and so on, and although he made no comparison of nutritive ratios he believed a high nutritive ratio to be the best. This rotation had the disadvantage of the animal being fed on one food all the time. He claimed the necessity of changing food, and advised the making a study of the combination of foods. In the co-operative method the food was changed every day and meal was also given. If the food was given in the right proportion, it did not matter much what it was. He thought the facilities at the Farm insufficient, but yet the experiments were not up to a correct principle. He was not satisfied with the method of feeding. If bulk grain was fed, the nutritive ratio would necessarily be small; if concentrated foods were fed, the ratio would be large. He advised the using of concentrated food, such as cut hay and roots. He thought it was important to be careful in this, rather than in an analysis of food. Prof. Sanborn has deviated from the standard in studying out differences in ratios. It was not wise to depend too much on Wolff's standard of 1:5½. Sanborn thought 1:10 a good ratio. For himself, he thought 1:6 gave the best results, but he advised a wider limit of ratio. He thought some reason ought to have been given for the new departure. He had seen nothing of it in his reading.

Mr. Rennie said farmers were continually experimenting on a small scale and the results are handed down from father to son, and from neighbor to neighbor. The farmers

are now experimenting on combinations of grain and fodder. The experiments at the Farm were like these, but much more accurate. Previous to the scientific advances in Germany, no scientific experiments were made. This system was the old one, only more accurate. In new experiments, it was found that the proper nutritive ratio was $1.5\frac{1}{2}$. In practice, it was found that the ratio of $1:5\frac{1}{2}$ was good; therefore, it was good in practice as well as in theory.

Prof. Hare stated that Prof. Brown's experiments were along the same lines as the old experiments. Definite amounts of food were given to each animal according to its choice, and they had found the best result. He had not looked into the matter with a view to any public result, but when out last summer he found that he had been able to increase his animal $2\frac{1}{2}$ lbs. a day. He then hunted up the feeding tables and found that the result gave a nutritive ratio of $1:5\frac{1}{2}$, which was exactly what had been claimed as a standard. The nutritive ratio affects the progress in fattening animals very materially, and by experiment they had found that the best and most thorough results were obtainable by feeding a ratio of $1:5\frac{1}{2}$. He honored the farmers for finding out by practical experiment what the scientist had maintained was the correct ratio. If a farmer will go in for experimenting he will find by feeding what ratio is best. This was not necessary, as farmers now thoroughly understood that the nutritive ratio of fodder producing the best results by practical experiment agreed with that of the scientist, and tallied with the old experiments made when the ratio was established. They should not laugh at the German scientists; he agreed with Mr. Macdonald there. We are better able to feed rightly by our scientific knowledge in comparison and combination of foods, and of liquid and solid excrement. These experiments conducted at the Farm were accurate. If one food has a nutritive ratio of $1:5\frac{1}{2}$ and another $1:6$ the latter is not as good as the former. He thought the Sanborn ratio of $1:10$ a little weak. It was opposed to the best results of the German experiments in chemistry. He would pass judgment on the Missouri Station experiments when he had read their report.

Prof. Mills enquired if it was an established fact that if any foods were combined in such proportion as to give a nutritive ratio of $1:5\frac{1}{2}$ it would produce the best results. If so, what necessity of further experimenting?

Prof. Hare said albumen in the food produced flesh. Enclosing this albumen there was certain albumenoid material which is not used. The animal is not able to take out of one albumenoid as much flesh forming material as out of another. By comparing one fodder with another in the same ratio we obtain different results; one albumenoid has been digested better than the other, and by experiment we find out which one it is. He thought there was no further use of experimenting for a nutritive ratio.

Mr. Macdonald thought there was no misunderstanding as to that. Professor Brown's experiments were supposed to be conducted on a practical method. He knew when he was at the Farm, during the course of these experiments, animals had been fed for three weeks on the same food, and their appetite not consulted at all. If the practical method gives the same result as the scientific, what is the use of comparing them? He took a practical objection to the Wolff method. In feeding hay at one time the hay food would be good; at another time it would be somewhat deteriorated, and its relative value for nutritive purposes would be lessened; it would vary with the state and condition of the food. He wanted to know whether these experiments in fodders were to be carried on on a practical or scientific basis. The *Chicago Live Stock Journal* thinks there is altogether too much fat in the marketable beast of to-day. There is more demand for lean, and farmers should feed and exercise their animals to produce this lean. Sanborn was of opinion that in the earlier days, when the country was poor and cold, the necessity of fat was more apparent than it is with our modern advantages. He said that there was no necessity for so much fat. Sanborn experimented with a view to producing lean meat, feeding dried blood and other concentrated foods in a ratio of 1 to $1\frac{1}{2}$, against a corn ratio of 1 to 8, and he came to the conclusion that a high nutritive ratio would have effect in producing fat, while a low nutritive ratio would produce lean. This question would be well worth studying out. In pigs a high nutritive ratio produces fat, and a low ratio lean. As to the matter of the digestive albumenoids in one food being better than

in another, science was as yet not pronounced. He would feed the nutritive ratio without reference to the character of the food outside the digestible elements.

Dr. Hare said he was along the same line as Mr. Macdonald. By experience they had found that a high ratio gave better results than a low one. We want to produce flesh as well as fat, and he thought that the chemical method should be used. By feeding a high ratio of 1 to 10 and exercising your animals you will make the flesh stiffer than by feeding a ratio of 1 to $5\frac{1}{2}$ without much exercise. The albumenoids produce a quick fat. Albumen is not used to produce flesh. The animal cannot use all the albumen in making lean, but it is used in fat and heat. The albumenoids are not wasted because they do not produce lean. He would call a healthy animal one that has increased at the rate of $2\frac{1}{2}$ pounds a day. In answer to a question the doctor stated that, although a high nutritive ratio produced less fat than a low one, he believed that the lean in a fat animal was more tender and more in quantity than in a lean one. There were some diseases incident to the fat animal, but he did not take these into consideration as they could be prevented.

Mr. Rennie had heard that a judicious amount of exercise was good for a beefing beast.

Professor Hare had found that a short walk every day produced as much lean as was necessary.

Professor Panton wished to speak a few words about the nutritive ratio. He thought when facts were against you, you should adapt yourself to the facts. In Germany, by long and careful experimenting, they have come to the conclusion that the best ratio for feeding purposes was 1 to $5\frac{1}{2}$. Professor Brown did not think of the nutritive ratio in his nine years of experiments; but they had found out that the food which produced the best results had a nutritive ratio of 1 to $5\frac{1}{2}$. The American experiments point to a higher ratio, say 1 to 10. He thought it would be wise to wait before accepting that. The young farmers had facilities for experimental work on a small scale: let them watch their nutritive ratio closely, and when they come together again and find, for instance, that a ratio of 1 to 8 suits the Canadian climate better, then adopt it. Let them think and watch over the ratios which produce the best results. It might be worth their while to start another nutritive ratio, to give different animals different fodders, in different ratios, to find out whether carbohydrates in different fodders produce different results.

Mr. Macdonald asked whether Professor Panton thought that the experiments at the Farm were rightly conducted.

Professor Panton had no information that would lead him to think that they were not.

Mr. Shaw asked Mr. Macdonald whether he looked upon the experiments as conducted at the Farm as being of no value.

Mr. Macdonald did not say so. He thought the basis not accurate enough, and made some practical objections, as to the hay being uncut and to the smaller grains. He believed some things were not right.

Mr. Rennie thought that it was a blessing that Professor Brown had no thought of nutritive ratio in his experiments, as their testimony was so valuable in favour of 1 to $5\frac{1}{2}$.

Mr. Macdonald said that if they fed a nutritive ratio of 1 to 4 last year, then that year's experiments were no good.

Mr. Holterman delivered an address on the habits of bees, their diseases, and the best means of caring for them. A discussion followed in which Rev. Mr. Clarke and Mr. Ramsay took part.

HIGHER EDUCATION OF FARMERS' SONS.

A paper on this subject was read by Mr. Campbell, and a discussion followed.

Mr. Shaw remarked that although not one line of communication had passed between them, the previous speaker had gone over all the ground which he had thought to speak on, and he could only clench the nails driven home. It was humiliating to think that farmers were so little alive to privileges within their reach. In no phase of human life are men less alive to their opportunities. Neither in social nor spiritual life are they living up to the privileges within their reach. In their attitude towards this institution they did not attach enough value to the privileges offered therein to their sons, and it was so in other matters. They were not open to conviction as to the benefit of keeping better stock; they were not doing enough to advance their stock. So in considering these things, the first question was as to whether there was any money in it, and he was not at all surprised at the reference in the paper to farmers' sons. Mr. Campbell had placed his recommendations under three heads: First, a two years' course on a farm for those coming from cities and towns. In no single instance would he admit a town-bred youth without a two years' course with a farmer. It would be doing him a kindness; it would injure no one, and would have the interest of the institution at heart. He would have it imperative if a young man did not come from a farm. Young men from cities and towns did not know what farming is; they have not gone through the hard work of the farm. He would not have them deceive themselves: life at the college is not life on the farm. There were things which a man would learn in one year's practical work on a farm which the professors had not the power to teach him, and to a person ignorant of farm work one year on a farm would fit him better for the life of a farmer than the whole College course. Here he looks on the outside work in the summer, now and then takes up a pitch-fork, works for an hour or so, and then reads. But let the farmer insist on him rising early in the morning; let the sun burn brightly; let him work hard and at night he will envy the dog. Let him be roused in the middle of a cold winter night to attend to the sheep; and then he will have some idea of the hard side of farm life. Some of the young men from the College know nothing about this and are disappointed when they go from the College to the hard routine of the farm, and often disgrace both the Experimental Farm and themselves. The Union could urge this change and accomplish it. It was important that every intending student not brought up on a farm should have a two years' course on a farm and a certificate of character and fitness from the farmer with whom he put in his time. He often pitied the professors in the institution: he had an idea of what they had to put up with. He was delighted to hear of the improvement in the morals of the College during the past few years. He had an idea of the doings of some of the students in the past, and such conduct by incapables of other lands should not be tolerated. If a young man from Great Britain comes to the College with an earnest desire to learn and work, he will be assisted and respected, but young men had come out in the past because their fathers could not manage them at home. Young men should come here to learn, not to make mischief. He asked the privilege of publishing these papers. He was rather in favor of narrowing the course, but of keeping up the standard. Do not lower your standard, raise it. Do not let the earnest student go away half equipped. A lot of information is imparted here which can be got much better elsewhere. Get it there, and both professors and students will then gladly turn to the work which can be done here far better than anywhere else, and the result will be beneficial on all hands. A tree is judged by its fruits. Newspapers and professors and friends can talk of the advantages of the College, but unless the men going from it do not prove themselves the better for their stay thereat it is of no use. A little while ago feeding cattle was looked upon as foolish, and now there are so many cattle feeders that 60,000 head of cattle are sent annually to Great Britain to cheer the hearts of the people there. If young men from the college distance the farmers' sons alongside of them, then farmers will believe in the college. He was inclined to be in favor of shortening the hours of labor if a two years' preparatory course were required, as the student having a thorough training in farm work could make it his business at the college to acquire the knowledge he wants; but he never felt justified in giving an opinion until

he had thought the subject out. He believed the board of representative farmers to be a step in the right direction. It would do away with the idea that the College was a Reform institution. If the board were composed of farmers of both sides of politics, it could then be called an institution for farmers. The agricultural institutes had done good work, and he had no doubt but that they would reap the result of their work in an increased attendance of students next year. The professors had done a great and a good work; they had instructed many and changed minds that were disposed to oppose their ideas and methods. And yet the work was not so complete as it might be. No address on the subject of agricultural education could ignore the College, and no college professor was in a position to handle the college as it should be handled in speaking along this line. Agricultural education brought out the prominence of the college, and its benefits could not be so well pointed out by the professors as by others, outsiders. Some person or persons fluent in speech and reliable in character should be appointed to attend at the next Farmer's Institute to discuss agricultural education in all its bearings, with special reference to the college. It would bring out a large attendance.

Prof. Brown contended that they should talk endowment first. Nothing could be done independently without endowment.

Mr. Hannah, of Clinton, thought we could not expect that yet. He was much pleased with the paper and the discussion, and could endorse nearly every sentiment uttered. With reference to the independent board of management he was of opinion that the board as proposed to be constituted by Mr. Campbell would not work. In the Dairymen's Association there were few farmers. There were some prominent farmers, of course, but more of other professions. In the Agricultural and Arts Association they had not all farmers. Such a scheme should be adopted only after due caution and consideration. The necessity and benefit of a good agricultural education should be brought prominently before farmers. You could supply a lecturer but not an audience. The great mass of the agricultural community are hard to reach on that subject; they don't believe in it; the attendance is often poor and only those alive to the importance of the subject are there. The meeting at Clinton was poorly attended, but the feeling left there by the professors did more to instil a longing for a better agricultural education and to dispel many erroneous ideas about the college than anything else could have done. One prominent farmer there was always opposed to the college, and has talked hard against it, but after hearing Prof. Mills' address on agricultural education he has gone away with his ideas considerably shaken up and changed. The institutes do a great deal towards awakening an interest in this institution, but it is the work the students of the institution do that make for it enemies or friends. If the education given here makes a boy better, not in the line of sentiment, literature, etc., but in practical agricultural work, it will come home quicker to the farmers than any other way. It is a practical matter; a farmer must make a little money to have a little comfort, and unless the education given here will pay farmers will oppose it. If they see such an education can be made to pay they will get it. Just complaints had been made against the High Schools. Farmers often send their boys there with the idea of giving them a little better education than they themselves possess, and then of having them back again on the farm. But the whole drift of the High School is away from the farm. No subject in connection with agriculture is taught; the studies they pursue lead them away from agriculture and are of no practical use. If a boy spends four or five years of the most impressionable part of his youth far away from what is destined to be the business of his life, he does not take much interest in the farm when he returns to it. That is the reason so many High School pupils are failures on the farm. He believed it was a great mistake not to give farmers' sons a liberal English education, but agriculture had more followers and was a wider subject than any other and it should not be neglected. Young and old have to learn by their own experience, and also from the experience and teaching of others. It was no good to go it blindly. You should get all the outside information you can, but also use your own judgment. He thought that reading the report either of the College or of the Union would have an influence for good. He was glad to hear of the improvement in the conduct of the students, as they had given the College a hard name in the past.

Mr. Owen, as an English student, strongly censured those who had dubbed them "incapables," "loafers," and other choice names. They did not get fair play. The English student of the present should not be condemned to suffer, or be compelled to rank with those of the past, whose actions may not have been what they should be. He referred to an article in the *Live Stock Journal* in which they were called "incapables from other lands," and denounced it as a libel on the present English students. They were not incapables. They were of a higher class than those who had thus spoken of them. (No! No!) All they wanted was to be treated justly.

Mr. Shaw believed the last speaker had spoken conscientiously, and that he came to the college to learn, and not to misconduct himself. He would be glad to be his friend. But he wished he would read again the article of which he complained. There was a reference in that article to incapables from other lands, but he was certain that it was qualified by the statement that others came with a laudable purpose. Again, in that article, the English student of the present was not referred to; it was the student of the past, the rascals who had made the college a by-word and a stench in the nostrils of respectable and respecting people. And they were not all Englishmen; some were Canadians, he was sorry to say. He was afraid that the idea had gone abroad that this institution was an asylum for hard seeds and riffraff, instead of a school for scientific education in agriculture. It was intended mainly for Ontario, but they did not intend to shut out young men from England and other countries, provided they put in their two years hard tack on a farm. He had no intention of insulting the English students. On the contrary, he should be pleased to help them in any way that lay in his power.

Mr. Workman was very glad to hear the English students defended. He had come out to Canada with the idea of farming. He had made up his mind that the life was rough, and he was prepared to face it. He did not hear of the Agricultural College until he got to Canada, and then he came to the College, where he was told the course was partly practical and partly theoretical. It was difficult to find men in England who would spend two year's on an English farm and then come out here to study at this College. He thought the two year's rule would shut the Englishmen out altogether; two years on some farms would take away all desire for farming. To insist that all should have two years' preparatory training in practical farm work might be all very well for Canadians, but where would the Englishmen get this training? The majority in England are not farmers; the majority in Canada are. Canada is more different from England than it is supposed to be; very largely different. If the chairman knew anything about English wages, he would not advise a two years' preparatory course. England overflows with the educated classes, large numbers of whom come to Canada. The Canadian farmer looks upon an Englishman not accustomed to manual toil as a non-paying speculation, and where is the Englishman to get the necessary education? There was no other place than the College to come to. Before passing this two years' restriction, they should remember that these Englishman will pick up knowledge faster than an uneducated man would. This matter should be thoroughly considered with an eye to Canada's interest; these men bring out large sums of money with them which is invested in the country, and this benefits the Canadian taxpayer. With reference to the proposition to form a syndicate of farmers to run the Institution, he thought the Government would object to handing over the management and still paying the expenses of working. He had read over the article in the *Live Stock Journal*, and was grieved that the editor of a Canadian journal of such influence should make such statements. If the wrong was done in the past, he should have said so, and not let the onus of the accusation rest on the present students. From what little he knew of Canada, he thought that the farmers did not know much about the College, and this would give them a bad opinion of it. He considered that the matter ought to be explained. All he asked for the Englishmen was fair play and kindness.

Rev. W. F. Clarke, from his past connection with the College, had given these recommendations a great deal of thought. In its past history these things had been brought forward; he had advocated a one year's preparatory course years ago, for those in towns and cities whose fathers wanted to send them to learn farming. The original recommendation with reference to the practical work of the College was three hours compulsory, and six hours optional labor. He thought three hours necessary to bring them

up to the physical standard required. A Board of Management has been thought of, but there was no provision for endowment. All the colleges in the States were independent of the State; they had handsome endowments from lands, and the sale of lands, making them every one independent. Without independent means of support it cannot be independent of the Government, and nothing can be done without this. This change must be made step by step, but it was too long in advance for the present temper of the people. Hon. A. M. Ross is in favor of an Advisory Board. He thought it better to move for that first, not as an ultimatum, but as a step towards the goal they were seeking. An Advisory Board to advise him, not the Professors. If the Board were made up of farmers from both sides of politics the Commissioners would be free from party attack if he acted on their advice, but entirely independent management would meet the case better. The Agricultural College is the people's college as such, and he was surprised to learn that in the composition of the students the Grits were so largely in the majority. He had no idea that political prejudice against the college could have gone so far, and he regretted it. He was every day losing faith more and more in party principles. This was not an incidental case. "Pairty" does not spell purity, as *Grip* says. Let this spirit of party be exorcised from the College. He was glad to find that the pulse of the students beat fair and true. He thought the general plan authorized by Mr. Campbell for education in High Schools an excellent one. This was not an infant class, but of a higher grade. They should not restrict the standard of this institution, but rather raise it. We want practical farmers. It would be a good idea for the meeting to give expression to its views; they would have great weight. He regretted to see the little jealousy springing up between Canadians and Englishmen. Whatever may have been true in the past concerning incapables from both sides of the water, and that there had been such there was no denying, still all felt that wherever they came from, or whatever they were, they were all British and under the old "flag that braved a thousand years the battle and the breeze." He was sorry this feeling had been brought out. Mr. Shaw was a kind-hearted man, and he could promise on Mr. Shaw's behalf an explanation in a future number.

Mr. Workman asked, if a two years' preparatory course was decided on, who would find the farmer with whom to put in the two years?

Mr. Holterman thought a one or two years' preparatory course right, and considered the speakers from the English point of view admitted this. Many things could be learned by practical work on a farm which would be dollars in a learner's pocket. Then bring out ten or twenty thousand dollars to the North-West, and spend money every year in getting experience which every farmer's boy possesses. This step would also do away with so many who take only a short course. He would not say two years, but certainly one.

In response to an opinion that it would not be very hard to find farmers to take new beginners, Prof. Brown said he was glad to hear it, but he doubted it. They had great difficulty every year in finding places for a few, and they could fill easily all the places that were offered.

Mr. Holterman thought the objection the farmer had to the English student was, because he was not willing to put up with the hard lines many Canadian farmers had to endure. If they are in earnest in their work there is no trouble, but they choose what work they will do and what they do not feel inclined to do, and the farmer objects to this way of doing things.

Mr. Workman knew a little about farming in Canada. He had come out determined to put up with any kind of hardship. He had not openly objected on the farm where he was put. Many things were distasteful to him, but he thought his forbearance had gone far enough when the farmer's wife objected to his washing in his bedroom before dinner. She wanted him to wash in the kitchen with the others.

Rev. W. F. Clarke thought that was a very fair example to show how the English and Canadian ways did not hitch. Mr. Workman probably forgot of how much he increased the labor of the farmer's wife by adhering to these habits which were not suited to a farm. He thought Mr. Workman ought to have given in on that point. Everything possible should be done to lighten the labors of the farmer's wife. She has more than she ought to do now. Many a time, when pastoral visiting, he had washed on the old log at the back door of the house. There were a great many inconveniences perhaps in this

country which we never noticed, but which would come hard on one from a country where everything is up to the nines. Some people pride themselves on their roughness; this goes hard against English pride and ideas. Young men from England cannot earn their salt when they first come on a farm, and yet expect good wages. Farmers are sometimes unreasonable. He was not greatly surprised; the gauge of a man's ability on a farm is often muscular strength. These and other things must be recognized and mastered, and it is months before they are worth much.

[The meeting then adjourned till two o'clock, when the morning's discussion was continued.]

Mr. Owen looked upon this college as a preparatory course—a training for the work that came afterwards. College first, work afterwards in other professions, and why not in this? not farm first, college afterwards.

President Mills thought the college should not be a preparatory school for those wishing to become farmers.

Mr. Owen said too much time was occupied in teaching inside elementary work, and not the higher work. They had direct instruction there, but no direct instruction outside. They were looked upon as simply labourers, and instead of being taught and trained as students, they had to work five hours a day as labourers.

Mr. Files was of opinion that the speakers on the side of the city and town youths furnished enough forcible argument for the two years' preparatory course without advancing anything further.

Mr. Ramsay, Eden Mills, said that it had narrowed down to the question, Ontario *vs.* England. Was this college to be a preparatory school for city youths and Englishmen? No, but for the higher education of the sons of Ontario farmers. They were all agreed to do away with a certain amount of work. Let the education given be confined to stock, chemistry, etc., for the boys know the practical work of the farm. He thought there was a lot of unnecessary stock kept. He could not see how to take the institution out of the control of the Government. It would be a white elephant on the farmers' hands. The principle of the Advisory Board should be looked up and considered. He thought this board should make recommendations, but he objected to its composition as outlined by Mr. Campbell. Three representatives from the graduates was too many. The Agricultural Societies should also have a representative.

Mr. Rennie considered that two hours' work each day should be imperative, and five hours optional. The winter class had too much lecture, too little time for study, and too much cram. Some came to the college to be farmers others came with no definite idea, and therefore are dilatory in their work. He maintained that they cannot have more than two or three hours a day work, and study properly.

Mr. Holterman thought if a person did not want to derive benefit from the lectures he certainly would not.

Mr. Files believed the farmer's son came to get instruction which he could not get at home, and not to work, which he knew all about.

Mr. Muir said it was not possible to keep up with the lectures, do outside work, and read up besides. Let them have less outside work and more reading.

Mr. Workman, as a member of a special class, had plenty of time outside and plenty of time inside.

Mr. Carpenter fully agreed with Mr. Muir about the farmer's sons. They come to the college to improve themselves by study and reading, and would do it if they had the time. Of course there were a certain class who would waste this extra study time, but not many.

Mr. Ramsay, jr., found that some occupied their time, others did not. They could change their time every other day and have five hours work. The professors could then look after them on somewhat the same system as had been followed before in the evening class by the resident master. Farmers' sons do not read enough. They have not the time at home.

Mr. Major advised that this personal feeling be buried, and not to have any further squabbling as to the respective rights of Englishmen and Canadians. He did not believe special legislation would be necessary; events would remedy themselves. He thought

working on a farm a great benefit; by it he was able to see where the College was wrong and where it could be improved. As Englishmen, they should remember that this College was instituted, paid for, and carried on by the Ontario farmers. Farmers' sons had not much time to read at home, and therefore wanted all the time they could get at the College for reading and studying.

Mr. Shuttleworth wanted the English students; they had no desire to shut them out. The Ontario farmer's son wanted more time to study; the city youth and the Englishman wanted more time to work. He believed a preparatory course would settle the difficulty.

Mr. Raynor found that to a farmer's son there was certain time thrown away. He thought a certain amount of manual labor necessary; he believed in working, and working heartily. Outside work improved them. But farmers' sons should have time to read the papers and books at the College. There were two alternatives—either the division of lectures and labour should be changed, or the course lengthened. The latter was neither advisable nor necessary. He felt for the English students. He suggested that the students and ex-students outline some plan to give them the training which they want.

Mr. Ballantyne said two hours' work was impracticable. They should be shown how to work, not work for work's sake. With regard to the constitution of the Advisory Board, he did not believe in three men retiring each year; their term should be lengthened.

Mr. Lehman did not think that the outside work should be compulsory. Some distinction should be made between the work done by farmers' sons and that by those unaccustomed to the farm. The farmer's son gets no more credit for his intelligent labor than the other, and so gets discouraged and falls into a habit of scamping his work. If the city men had a year's preparatory course, the value of their work would be more on a par. If the outside work were not compulsory, farmers' sons could turn their attention to reading. Students from the cities cannot learn farming unless they learn what real manual labor is.

Mr. Mark considered that too much time was spent in work. As he had been through the mill, he knew that more reading would have done him good. It took all his time to study and attend lectures.

Mr. Owen was pleased with the discussion, but thought it hardly fair to apply the same rule to those not accustomed to a farm as to those who had been brought up on it. It took them some time to get accustomed to the work.

Mr. Sturge agreed with Mr. Owen that the English boys could not work very hard when they first came. Two hours' work was as hard on them at first as five hours on others.

Mr. Ramsay moved the following resolutions, which were carried:—

Resolved, That the following changes would be beneficial to the Ontario Agricultural College:

1. That no student be admitted to the College without having at least one year's practical experience on a farm, and a recommendation from his employer.
2. That the time of daily manual labor required of students be reduced one-half.
3. That an Advisory Board, composed of practical farmers, be appointed to assist the Commissioner of Agriculture in the oversight of the institution.

Prof. Mills suggested further consideration of the matter.

Mr. Clarke would disagree with the shape of the petition. He thought a memorial should be presented by a committee to be appointed.

Mr. Ramsay, jr., said he did not want to be dictatorial, but wished to expedite business.

Mr. Clarke said the resolutions would bear smoothing off.

Mr. Anderson thought the English boys and city boys might have a one year's preparatory course at the Farm.

Mr. Clarke thought that would complicate matters more than they were at present. It would be apt to create a feeling in the College against the "greenhorns."

Mr. Anderson—There are greenhorns in all colleges.

Mr. Rennie believed if the resolutions were carried into effect the College would be half empty for awhile.

After further desultory discussion by Messrs. Joyce, Shuttleworth and Clark, it was resolved to memorialize the Government in the purport of Mr. Ramsay's resolutions, and a committee was appointed to submit the memorial.

POINTS OF HORSES, AND THE HEAVY BREEDS.

On this subject Prof. Grenside read the following paper:—

No one but the tyro expects to find perfection in any breed, or even in any individual member of a breed of horses, so that those who are most conversant with horse-flesh are content to define a good horse as one possessing a number of good points and few bad ones. Let us advert to some of the more important points in a general way. First and foremost we have the nervous system, the central portion of which is the brain and spinal cord and it also may be termed the fountain from which flows streams of nervous force to the various parts of the body, and on which all portions are dependent not only for their existence but also for their power to perform their respective functions. The manner in which this nervous force is supplied has an important influence upon the physical ability of a horse. Although this nerve power may be abundantly supplied, it depends upon the intelligence of the individual as to whether it is economized or dissipated; so that if plenty of power of this kind is possessed it is of no advantage if not under proper control. Horsemen are wont to observe the dimensions of the forehead as an index to proper brain development, and although this is somewhat valuable it cannot be considered an encouraging guide as to the amount of intelligence possessed. Courage, tractability and good temper can only be determined with certainty by making a practical trial of an animal. The mechanism may be perfect, but in use the instability for a French dancing master may be shown, or on the other hand the dullness of a bovine. In order that this nervous power can be generated adequately, the brain must receive a blood supply of proper quantity and quality. The digestive and respiratory organs co-operate in furnishing this, the former in providing nutriment and the latter is in a great measure accountable for its purity. The volume of the chest is an index of the capacity of the lungs, and it is very important that it should have a full proportionate development. The lighter breeds get this capacity by depth rather than by breadth of chest, for excessive breadth is opposed to the free and rapid action of the blade bones, and consequently speed would be impaired from such a formation. In the heavier breeds a chest roomy in all directions is desirable, and in addition to depth the ribs should be well arched, thus affording breadth and giving roundness to the barrel, a point so often spoken of and admired. A horse so formed is pretty sure to have good wind, but well sprung ribs in addition to decided length of the hind or false ribs has another signification; or, pointing to the likelihood of well developed digestive organs being possessed, and consequently of ability to consume and convert nutritious matter into healthy blood. These points are among the most important, for it is on their perfectness that the thrift, vigour and staying power of a horse largely depends. But unfortunately we too often find them coming very far short of what is desirable, so that poor feeding, easily fatigued unthrifty horses are by no means rare.

We have so far concluded that a sufficiency of nerve power, properly economized and regularly supplied by a nervous system that receives adequate material to work with, is essential to an animal machine. In order that this power may be used to the best advantage, the machine upon which it acts should be made up of parts of sufficient strength to endure severe taxing, and that these parts may be so put together, and related to one another, as to enable them to take advantage of all the motive power. In looking critically at the points of an animated machine from a structural standpoint, it is only rational to look at the foundation or skeleton first, primarily considering whether the constituent elements possess bulk or volume sufficient to afford support and stand the

strain of the muscles; and secondly, whether the material of which the bones are composed is good. Texture of bone is of more importance, in so far as durability is concerned, than mere size, for we know that the comparatively slight and compact bone of the thoroughbred will stand concussive shocks with impunity which the spongy bone of the heavy draught would succumb under. It is, therefore, desirable in addition to a sufficiency of weight that the texture be good, in order to form a substantial framework. The external evidence of proper quality of texture is afforded by flatness of the cannon bones, so that the nearer these bones approach the formation the closer approximation there is to perfection. In addition to finding flatness and good size of the cannons, it is very essential that they should be short, for this improves the animal's power of co-ordination, as the muscular force is economized. Good bone development is further evidenced by prominence of such eminences as the point of the elbow, hock and hip, in addition to conferring leverage to the muscles acting upon them. The organs of motion and locomotion, called the muscles, are not secondary in importance to the framework; and it is very essential to the judge of horseflesh in the selection of an animal, with the power to move heavy weights, and to proceed with agility or speed, to be able to detect indications of such ability, and to be able to discriminate between muscle and fat. There are several situations to be observed for such indications, and first we may look at the forearms and gaskin, and notice whether there is a swelling out or prominence of these organs, for in those situations we don't find fat accumulating to any extent, so that what we find there we can rely upon as being muscle. By raising the tail and glancing between the quarters, defecting muscular development can be detected by the existence of a space in this region, commonly described by saying that such an animal is "slit-up," and such a formation is regarded as a sure accompaniment of a lack of staying power. Narrowness of the loin is sure to be associated with a sparse clothing of muscles, which deficiency is well marked when compared with a well furnished loin, where the muscles are broad, prominent, and well defined.

Horses with bull necks are generally hardy ones, and this thickness is due to bulky muscles, but the seeming excess of volume is rather the result of shortness of the organ, a formation which certainly does not add to the horse's appearance, and cannot be compared in this respect with one of moderate length, but clean cut, and with a feeling of firmness.

There is another factor in the locomotory apparatus which is by no means to be ignored if full benefit is to be derived from proper bone and muscle, and that is the joints. If an animal is to possess freedom and elasticity of motion with plenty of surface for the attachment of muscles and ligaments, the joints should be large; but this, however, does not necessitate roughness, which is a usual accompaniment of large, round and spongy bone.

We have so far discussed some of the more important elements in forming equine perfection; there are a great many minor ones, which, however, it would be tedious to advert to.

I may perhaps be pardoned if I touch upon one of these, and that is the subject of hair on the legs. I would ask of what benefit is this superabundant growth of hair on the lower extremities, and in answer can only quote the reason assigned for desiring it by its most ardent admirers, and that is that it adds to their appearance. If this can be called a good and sufficient reason for the cultivation of this feature in breeding, it can hardly be held to counterbalance the many disadvantages its presence entails. A profusion of hair presupposes a coarse skin, and a coarse skin means a corresponding decrease in vitality, and consequently a greater tendency to diseases of mal-nutrition, such as grease, thick legs and cracked heels. Bushy hair is also a splendid harbourer of dirt, and being very retentive of moisture it leads to excessive irritation and itching. It is doubtful, however, if where horses are bred for weight at any expense for docking purposes etc., whether such a feature could be bred out of them, for the whole tendency is to grossness of constitution; but where 1,500 weight horses are required—and surely this is heavy enough for most purposes—it is quite possible to breed without long, coarse hair. It is strange that hairy legs should be looked upon as a point of beauty in heavy draughts, and its absence equally pleasing to the eye in the thoroughbred.

The four heavy breeds to which the attention of the agriculturist is most given in this country are the Clyde, English cart or Shire horse, Suffolk punch and Percheron.

We have no authentic date with regard to the origin of any of these breeds, which is evidence that they all had an existence at a somewhat remote period. The Suffolk horse has perhaps retained his characteristics since the earliest recorded accounts of him with fewer modifications than any of the other breeds. He has always been described as the chestnut, and the chestnut he still remains, although there are half a dozen shades of that color. Other characteristics he has retained with equal tenacity, showing that he belongs to a breed of some purity. The reason for this uniformity of the breed is attributable in a great measure to the one county only producing them, and their not being subject to living on varieties of soils, as the Clydesand Shires have been, thus suffering modification. But the chief reason for their having retained their identity is on account of the good people of Suffolk being so satisfied with their breed that they did not seek to alter it by the introduction of extraneous blood. They are a breed remarkable for their endurance and longevity, which is no doubt due to their middle piece, as it shows strong evidence of affording plenty of breathing capacity in addition to well developed digestive organs. Their contour is more calculated to impress one favourably with their hardihood and utility than with their symmetry and stylishness. They belong more to the agricultural class than the heavy draught, but during twenty-three years' when Clydes, Shires and all comers were shown, fourteen first prizes were carried off by this breed. They are frequently found fault with for not having enough bone, but it is evident that what they do possess is of good quality, for they are an unusually sound breed and very free from bone diseases. There is a marked absence of the long hair on the limbs, which is so prominent a feature in the English cart horse and the Clyde, and a proportionate freedom from skin diseases of the extremities. They are a remarkably unexcitable breed, but with plenty of pluck, and there are no truer drawing horses in the world.

In the English cart and Clyde horses we have specimens of, perhaps, the best draught horses in the world, for they possess the characteristic, which is that of great weight and consequent ability to move heavy loads, which entitles them to be put in the first rank. Neither breed, taken as a whole, can boast of great purity of blood, for there is not that uniformity of colour and other features that would allay all suspicion of the introduction of extraneous blood at no very remote period, and that interbreeding between the two breeds under discussion had been indulged in from time to time. I think it would puzzle some of the denizens of the banks of the Clyde to say in which stud book some registered animals are from their appearance. The Clydes certainly possess greater regularity of features, there being a large number of them of the same light bay colour, and, although some modification is noticable in different localities, as, for example, the Galway and Kintyre breeds, yet there is nothing like the variety seen in the English breed, for nearly every county has its own style of the same breed. Of the two breeds, the English horse is, on the whole, the heavier; he possesses a very upright shoulder, which gives him greater power in the collar, but less freedom of action than the Clyde. Both breeds possess a large quantity of bone, but I am inclined to the opinion, that the Clyde is, in the majority of cases, flatter, of better texture, and associated with a finer quality of hair, although it would seem that those who have endeavoured by careful breeding to increase the quality of bone, to meet the never ceasing cry for that element, have succeeded too well, and have produced it to an extent not proportionate to the other parts of the animal in a great many cases. Dark bays or browns are much desired by breeders of Clydes now-a-days, and it certainly will be to the advantage and credit of the breed when they become more common, and take the place of the light bay, which colour the majority of the breed are at the present time. This light colour is certainly anything but pleasing to the eye, and it is held by many to be indicative of a lack of hardiness. Greys are not favoured by Clyde breeders at the present time, but are not objected to to the same extent by producers of Shire breeds—blacks, browns and greys being the recognized colours amongst them. Both breeds, as a rule, show well developed and muscular hind and fore quarters. These points, so much to be desired and admired as agents of propulsion, show prominently the defects of the middle piece, and render conspicuous long backs, shallow, flat sided chests, short back ribs and weak loins. In comparing the

two breeds, I am of the opinion that these last named imperfections are more frequently seen in the Clyde than in the cart horse. So that in comparing the constitutional strength of the two breeds, it is to the advantage of the latter.

It is only within the last few years that our acquaintance with the Percheron has become at all intimate, and during that time they have made a good many friends amongst the admirers of horse flesh. It certainly seems to be a breed of some purity, for they present a very uniform conformation, and a very large proportion of them are grey, being a very good grey at that. Their popularity is, to some extent, owing to the flashiness of their colour having an influence upon some of their supporters; but they undoubtedly possess merit of more sterling worth than mere colour, and there are those that think this their worst point. They are lighter, as a breed, than the Suffolks, consequently, lay no claim to be called heavy draughts, but they are more correctly classed as agricultural, and are not inappropriately styled general purpose, if there is such a thing. Being as a rule rather oblique in the shoulder, many of them are pretty good travellers; they are, however, of rather a dull temperament, which disposition seems intensified in the progeny of a cross with our common mares, endowing such offspring with a want of style, ambition and animation. They are well topped horses, in a great measure, but show a marked want of length of neck, which suspends a head of rather interesting character. Although they have very little long hair on the legs, their skin is rather inclined to be thick; that envelopes a common bone with a tendency to roundness, locked up with a lack of tissue development.

Prof. Brown asked Prof. Grenside if breeding out the hair would cause the horse to deteriorate.

Prof. Grenside thought it would not.

Mr. John Duff said if he had time he could refute Mr. Grenside's arguments. Mr. Grenside thought the Suffolk Punch was ahead. [Mr. Grenside.—I did not say so.] He Mr. D. maintained that the Clydesdales were away head. This was proved by their high prices, and by the many leading authorities in their favor. If hair was not a benefit to a Clydesdale, what benefit was a topknot to a Cotswold sheep? It was in the nature of the animal. Leading English agriculturists say that the Clydesdales are ahead of both the Shire and the Suffolks. The Suffolk Punch has degenerated. At the York Show you cannot find one now where you could find any number ten years ago. It was as impossible to get a thoroughbred Clydesdale without hair as to get a thoroughbred blood horse with hair. With reference to purity of breeding, the Clydesdale dated back to the 16th century. They were bred from Belgian horses. Shire horses were bred from Clydesdale horses and English mares. The Clydesdale will sell for more money than any other heavy draught horse.

Mr. Ramsay thought it would be a hard job to make two breeds of the Clydes and the Shires. They had been so often crossed that you could not tell which was which. In the Old Country purebred Clydes were registered in the stud book, but ineligible Clydes and Shires made a magnificent class.

Prof. Grenside said Mr. Duff had misunderstood some of his remarks. In the docks of England they are now using English cart horses. They complain that although there are plenty of Clydes they are too small for their use, having too much hair and bone. By crossing the Suffolk Punch with the thoroughbred we get cobs and hunters.

Mr. Clarke wanted to know the best general purpose horse for the Ontario farmer. Also, whether clipping hair off a horse was advisable?

Mr. Grenside did not think clipping was wise, but horses would get accustomed to it. He considered the Suffolk Punch a good general purpose horse for this country. Clydes have a tendency towards weakness in their middlepieces, but they possess endurance and action. In crossing Clydes with Canadian mares he had found the result discouraging. The produce was a horse extra heavy in the quarters, but weak in the middlepiece.

Mr. Long said hair was an index of the Clydesdale breed. The Suffolk Punch has been a good horse, but it is not keeping up; the Shires are now ahead. There are one hundred Clydes imported to one Suffolk. He would not approve of the Clyde in this country, but the majority of general purpose horses here are got from Canadian mares by Clydesdale horses. The Americans want the Clyde cross, and so these horses sell better

and bring the most money. The purest breed of horses in the world are the Clydesdales. Percherons were originally bred from the Arabian horse, but by being crossed with horses imported from England the breed had been spoiled. It was now taking a higher place. The Clydes were an established breed.

Mr. Duff thought the long hair of the Clydesdale was bred in the blood of the breed. When the Clydesdale Stud Book was first started, all the animals in it were not pure bred, but now each animal entered in it has a recognized pedigree.

The last paper of the meeting was read by Prof. Brown, on—

WHAT IS NOT KNOWN IN THE DAIRY.

After referring to the value of milk as an article of human food, and of the growing importance of the cheese and butter-making industries, the paper concluded with some pertinent enquiries for more light. My thoughts in preparing this paper took the form of a catechism, which to some extent only I have been able to answer; but as an unanswered question is usually more suggestive than the other, it will be better to try and cover part of the field, and that briefly. Do we know—

1. How to detect adulteration in milk?
2. What it costs to produce milk?
3. The exact physiological source of milk?
4. That all beefing breeds give rich milk?
5. What "heavy" milk implies?
6. What is meant by "character" in milk?
7. Why so few cows respond to "*milking indications*?
8. What is the *education* of a cow?
9. Why there is no such thing as either quantity and quality in milk?
10. Why milk is not valued and paid for according to its kind?
11. The possibilities of the *Centrifugal Separator*?
12. Why dairying is not prosecuted in winter?
13. That churning is more a matter of "climate" than "temperature?"





BINDING SECT. AUG 23 1967

