DEPARTMENT OF RAILWAYS AND CANALS

CANAL STATISTICS

FOR THE

SEASON OF NAVIGATION

1913

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OTTAWA
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1914

[No. 20*a*—1914.]

To Field Marshal His Royal Highness PRINCE ARTHUR WILLIAM PATRICK ALBERT, *Duke of Connaught and of Strathearn, and Earl of Sussex, (in the Peerage of the United Kingdom), Prince of the United Kingdom of Great Britain and Ireland; Duke of Saxony; Prince of Saxe-Coburg and Gotha; Knight of the Most Noble Order of the Garter; Knight of the Most Ancient and Most Noble Order of the Thistle; Knight of the Most Illustrious Order of Saint Patrick; one of His Majesty's Most Honourable Privy Council; Great Master of the Most Honourable Order of the Bath; Knight Grand Commander of the Most Exalted Order of the Star of India; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George; Knight Grand Commander of the Most Eminent Order of the Indian Empire; Knight Grand Cross of the Royal Victorian Order; Personal Aide-de-Camp to His Majesty the King; Governor General and Commander-in-Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to your Royal Highness Canal Statistics for the year ended December 31, 1913.

All of which is respectfully submitted.

F. COCHRANE,
Minister of Railways and Canals.

To the Honourable F. COCHRANE,
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Comptroller of Statistics in relation to the operations of the Canals of the Dominion for the year ended December 31, 1913.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL,
Deputy Minister of Railways and Canals.

OFFICE OF THE COMPTROLLER OF STATISTICS.
OTTAWA, 20th JAN. 1914.

A. W. CAMPBELL, Esq., C. E.,
Deputy Minister of Railways and Canals.

Sir,—I have the honour to submit herewith Canal Statistics for the year ended December 31, 1913.

The volume of traffic through the canals of Canada during the year 1913 aggregated 52,053,913 tons as compared with 47,587,245 in 1912. The increment of 4,466,668 tons was equal to 9.4 per cent.

The total traffic for 1913 was distributed among the various canals as follows:

——	Tons.	Increase.	Decrease.
Sault Ste. Marie	42,699,324	3,029,669	
Welland	3,570,714	718,799	
St. Lawrence	4,302,427	825,239	
Chambly	555,602	.....	62,813
St. Peters	71,514	.....	3,295
Murray	180,576	10,495	
Ottawa	365,438	.....	26,912
Rideau	171,223	11,090	
Trent	55,800	.....	21,350
St. Andrews	81,295	.....	14,254
Total	52,053,913	4,595.292	128,624

It should be understood, that the foregoing figures do not give the net tonnage. They represent the aggregate of the traffic which passed through all the canals, and it happens that a cargo may pass through two or more canals. From the analysis made in the Department it may be said that the traffic of 1913, after eliminating duplication, involved a net tonnage of 44,901,804, of which 6,654,311 tons were of Canadian origin.

On the basis of gross traffic the following table will show the growth since 1904:—

1904	8,256,236 Tons.
1905	9,371,744 "
1906	10,523,185 "
1907	20,543,639 "
1908	17,502,820 "
1909	33,720,748 "
1910	42,990,608 "
1911	38,030,353 "
1912	47,587,245 "
1913	52,053,913 "

The increase of traffic through the canals of Canada for the decade was equal to 530 per cent.

For purposes of comparison, the following table will show upon what canals the growth has taken place during the past five years:—

	1909.	1910.	1911.	1912.	1913.
Sault Ste. Marie	27,861,245	36,395,687	30,951,709	39,669,655	42,699,324
Welland	2,025,951	2,326,290	2,537,629	2,851,915	3,570,714
St. Lawrence	2,410,629	2,760,752	3,105,708	3,477,188	4,302,427
Chambly	752,117	669,299	599,829	618,415	555,602
St. Peters	79,850	85,951	75,298	74,809	71,514
Murray	102,291	177,941	163,457	170,081	180,576
Ottawa	336,939	385,261	320,071	392,350	365,438
Rideau	91,774	134,881	172,227	160,133	171,223
Trent	59,952	46,263	57,290	77,150	55,800
St. Andrew's	.....	8,283	47,135	95,549	81,295

Details of traffic, showing the tonnage of commodities, will be found in tables constituting the body of this report. Comparing the years 1912 and 1913, following was the tonnage by classes and canals:—

Canals.	Agricultural Products.	Animal Products.	Manufactures.	Products of Forest.	Products of Mines.	Total.
1912.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie	4,530,792	372	975,303	54,114	34,109,074	39,669,655
Welland	1,205,912	678	625,569	227,684	792,072	2,851,915
St. Lawrence	1,119,567	9,375	464,091	578,760	1,305,395	3,477,188
Chambly	19,706	338	11,600	425,313	161,458	618,415
St. Peter's	15,427	2,996	7,583	11,161	37,642	74,809
Murray	448	37	101,511	706	67,379	170,081
Ottawa	5,278	2,880	20,958	226,600	136,634	392,350
Rideau	3,995	3,151	18,814	28,642	105,531	160,133
Trent	2,514	361	3,459	67,489	3,327	77,150
St. Andrew's	37	.....	60	14,153	81,299	95,549
Total	6,903,676	20,188	2,228,948	1,634,622	36,799,811	47,587,245
1913.						
Sault Ste. Marie	5,253,665	198	733,910	62,958	36,648,593	42,699,324
Welland	1,684,967	361	548,373	337,927	999,086	3,570,714
St. Lawrence	1,545,775	8,269	460,161	660,226	1,627,996	4,302,427
Chambly	13,432	490	20,217	337,331	184,132	555,602
St. Peter's	15,935	2,492	8,078	6,301	38,708	71,514
Murray	568	13	75,803	55	104,137	180,576
Ottawa	2,331	3,657	15,901	186,710	156,839	365,438
Rideau	3,437	3,458	15,213	27,331	121,784	171,223
Trent	1,840	298	2,414	50,812	436	55,800
St. Andrew's	377	65	1,629	9,274	69,950	81,295
Total	8,522,327	19,301	1,881,699	1,678,925	39,951,661	52,053,913

The ratio which each of the foregoing classes bore to the total volume of traffic during the past four years is shown in the following statement:—

	1910.	1911.	1912.	1913.
	Per cent.	Per cent.	Per cent.	Per cent.
Agricultural products	10·2	14·2	14·51	16·40
Animal "	1·2	·1	·04	·04
Manufactures	5·2	6·2	4·68	3·61
Products of forests	3·9	4·0	3·43	3·22
" of mines	79·5	75·5	77·34	76·73

It will be at once observed that an overwhelming proportion of the traffic through the canals consists of products of the mine. This significant situation will be dealt with under the next heading. It arises entirely from the use made of the Canals of Canada by vessels belonging to the United States.

CANADIAN AND AMERICAN TRAFFIC.

The public service of Canadian canals must be measured in the light of the nationality of the traffic. The canals are entirely free to the vessels of the United States and Canada. Up to 1909 no record was kept of the origin of cargoes; but since that year it has been possible to separate the business of the United States from that of Canada.

The facts with respect to the tonnage of vessels and of cargoes during the past six years are as follows:—

Year.	Canadian Vessels.		U. S. Vessels.		Freight Tonnage.		
	No.	Tonnage.	No.	Tonnage.	Canadian.	United States.	Total.
1908	29,040	6,780,789	7,489	4,835,320	5,012,147	12,190,673	17,502,820
1909	22,507	7,811,578	9,996	16,459,322	7,378,057	26,342,691	33,720,748
1910	25,337	8,931,790	11,462	21,777,297	7,883,614	35,106,994	42,990,608
1911	25,585	9,172,192	10,370	18,231,622	7,792,907	30,237,446	38,030,353
1912	27,371	10,237,335	11,785	24,636,190	9,376,529	38,210,716	47,587,245
1913	28,654	12,078,041	10,739	24,238,788	11,130,875	40,923,038	52,053,913

Gathering the foregoing facts with respect to freight tonnage into percentage form, the result is as follows:—

Year.	Canadian Per Cent.	American Per Cent.
1908	28·7	71·3
1909	21·8	78·2
1910	18·3	81·7
1911	20·5	79·5
1912	19·7	80·3
1913	21·3	78·7

These totals and percentages relate entirely to freight tonnage which passed through the canals of Canada. They do not include the traffic which

passed through the American canal at Sault Ste. Marie. At that point vessels passing up and down may take either the Canadian or American canal. When they pass through the Canadian canal a record is taken of the origin of the cargo; but when they pass through the American canal no such record is taken. Hence it is always impracticable to ascertain with exactness the volume of traffic which belongs to Canada. Until the United States takes cognizance of the origin of cargoes this unsatisfactory situation will continue.

A record is kept at the office of the Canadian canal at Sault Ste. Marie, and it was found that for 1913 but 6 per cent of all the freight tonnage which passed through both canals at that important gateway was carried in Canadian vessels.

The overwhelming proportion of American traffic which passes through the canals of Canada arises very largely at Sault Ste. Marie. In 1913 freight to the amount of 42,699,324 tons was transported through the Canadian canal. Of this 4,951,867, or 11.6 per cent, was of Canadian origin. The remainder, equalling 88.4 per cent, was American.

The situation is somewhat improved at the Welland canal. The total tonnage of freight which passed up and down at that point in 1913 was 3,570,714 and of this 2,093,406, or 58.7 per cent, belonged to Canada. Through the St. Lawrence canals 4,302,427 tons of freight were carried, and of this volume 2,837,419 tons were of Canadian origin, or 65.9 per cent. There was a marked betterment at the Welland canal in 1913 as compared with 1912, the proportion of distinctly Canadian business having risen from 54 to 59 per cent.

The character of the traffic at Sault Ste. Marie has a great deal to do with the preponderance of American tonnage. Of the 42,699,324 tons of freight which in 1913 passed through the Canadian canal, 32,445,067 tons consisted of ores, chiefly iron. Practically all of this business was American. If ores had been eliminated, the volume of Canadian business through the Canadian canal in 1913 would have been about equal to the American.

On a succeeding page, in the body of this report, will be found a statement showing the volume and character of the traffic which passed through the American canal at Sault Ste. Marie.

TRANSPORTATION OF CANADIAN WHEAT.

The movement of wheat from the head of Lake Superior eastward has become of increasing importance with the rapid development of the Canadian North West. Prior to 1909 the record was not kept in such a way as to separate Canadian wheat from American wheat. Bearing that fact in mind, following is a statement of the volume of wheat which has been brought down through the Canadian canal at Sault Ste. Marie.

	Bushels.
1895	4,518,334
1896	19,314,234
1897	17,925,834
1898	9,746,600
1899	12,759,634
1900	9,292,034
1901	9,639,534
1902	27,912,500
1903	32,233,934
1904	29,794,100
1905	25,983,100
1906	34,389,300
1907	49,399,967
1908	58,574,034
1909	*48,047,833
1910	51,774,833
1911	63,641,000
1912	83,743,034
1913	101,066,133

*For the first time represents Canadian wheat only. The figures of preceding years include American wheat which passed through the Canadian canal.

There also were brought down through the American canal at Sault Ste. Marie 40,660,766 bushels of Canadian wheat in 1913.

A summary of the facts with respect to Canadian wheat for 1913 might be given in the following form:—

	Bushels.
Through Canadian canal	101,066,133
Through American canal	40,660,766
Total	141,726,899

As compared with 1912 this total shows an increase for 1913 of 31,884,868 bushels.

There were also brought down from the West 1,684,170 barrels of Canadian flour, which, at 4½ bushels to the barrel, would represent 7,578,765 bushels of wheat. This would bring the final total up to 149,305,664 bushels of Canadian wheat. The aggregate on this basis in 1912 was 123,986,931; so that the net increase, counting wheat and flour together, for 1913 was 25,318,733 bushels.

A careful analysis has been made of the course which Canadian wheat took in 1913 in its transportation by water. In order to make the statement complete, copies of all the ships' reports filed at the office of the American canal at Sault Ste. Marie were procured, and from these the movement of Canadian wheat through that channel was tabulated.

Taking first the facts in relation to the Canadian wheat which passed through the Canadian canal, the distribution in 1913 was as follows:—

			Bushels.
Port Arthur–Fort William	to	Montreal	11,233,133
" "	"	Georgian Bay	21,532,134
" "	"	Other Canadian Ports	25,580,000
" "	"	Buffalo	39,282,500
Duluth	to	Montreal	437,533
"		Georgian Bay	416,067
"		Other Canadian ports	281,600
"		Buffalo	2,303,166
Total			101,066,133

The volume of Canadian wheat which passed through the American canal at Sault Ste. Marie in 1913 was distributed as follows:—

			Bushels.
Port Arthur—Fort William	to	Montreal	717,300
" "	"	Georgian Bay	2,916,000
" "	"	Other Canadian ports	2,465,733
" "	"	Buffalo	28,419,400
Duluth	to	Montreal	2,798,666
"		Georgian Bay	1,189,800
"		Other Canadian ports	646,000
"		Buffalo	1,507,867
Total			40,660,766

Combining the Canadian wheat which passed through the Canadian canal with the Canadian wheat which passed through the American canal the statement for 1913 would be as follows:—

Canadian Wheat.	Bushels.	Per cent.
Port Arthur-Fort William to Montreal	11,950,433	8·4
" " " Georgian Bay	24,448,134	17·2
" " " Other Canadian ports	28,045,733	19·8
" " " Buffalo	67,701,900	47·8
Duluth to Montreal	3,236,199	2·3
" " Georgian Bay	1,605,867	1·1
" " other Canadian ports	927,600	·7
" " Buffalo	3,811,033	2·7
Total	141,726,899	100·0

The "other Canadian ports" referred to in the foregoing statements are ports between Georgian Bay and Lake Ontario.

Cargoes consigned to Kingston are counted as being to Montreal, since Kingston is a port of transfer. The destiny of such cargoes is Montreal.

It will be observed that 45.4 per cent of the Canadian wheat brought down from the North West by water in 1913 clung to wholly Canadian channels.

In order that a comparison may be made with the facts in preceding years, the following table is brought down to the end of 1913:—

Canadian Wheat.	1909.	1910.	1911.	1912.	1913.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Fort William to Montreal	10,517,266	13,185,370	12,761,666	14,929,099	11,950,433
" " Georgian Bay	13,384,400	12,753,200	9,881,234	19,501,168	24,448,134
" " Other Canadian ports	10,149,633	9,603,400	11,880,666	20,458,700	28,045,733
" " Buffalo	12,841,334	15,693,363	27,945,600	44,228,266	67,701,900
Duluth to Montreal	520,000	315,000	.....	283,500	3,236,199
" " Buffalo	528,200	224,500	710,334	5,714,367	3,811,033
" " Georgian Bay	28,000	.....	461,500	1,418,767	1,605,867
" " other Canadian ports	79,000	.....	.....	230,000	927,600
" " unclassified	.....	.....	.....	3,078,164	.....
Total	48,047,833	51,774,833	63,641,000	109,842,031	141,726,899
Through American canal	9,117,328	5,321,446	1,981,481	.....	.....
Grand total	57,165,161	57,096,279	65,622,481	109,842,031	141,726,899

The following statement of percentages presents the foregoing tables in a convenient form for purposes of comparison:—

Canadian Wheat.	1909.	1910.	1911.	1912.	1913.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Fort William to Montreal	21·9	25·5	20·1	13·6	8·4
" " Georgian Bay	27·9	24·6	15·6	17·8	17·2
" " Other Canadian ports	21·1	18·5	18·7	18·6	19·8
" " Buffalo	26·7	30·3	43·8	40·2	47·8
Duluth to Canadian ports	1·3	·6	·7	1·7	4·1
" " American ports	1·1	·5	1·1	5·2	2·7
" " unclassified				2·9	

The diversion of Canadian wheat to Buffalo-New York, instead of following wholly Canadian channels, is due to several causes. Chief among these is the matter of time. Cargoes are sold for delivery at a foreign port by a specified date, and during the period of pressure in October, November and December, but chiefly in November, the availability of ocean tonnage at New York is a factor rising above freight rates. This question will be dealt with under the next heading.

FREIGHT RATES BY WATER.

Carriers by water are not placed by law on the same reporting basis as are the railways. Hence special and extraordinary measures have had to be taken in order to gather facts from which the freight rates prevailing on the inland waters of Canada might be ascertained. Such steps were taken for the first time in 1912, and were continued in 1913. They have resulted in the assembling of an exceedingly valuable and useful mass of statistical information. That information has been carefully classified and tabulated. With the co-operation of ship owners the system which was inaugurated in 1912 will be continued. It leaves much, however, to be desired. It would, for example, be most instructive to also have definite and authentic reports with respect to the number of vessels operating on inland waters, their tonnage, the capital invested, earnings, operating expenses, tonnage of freight other than that which passes through the canals, employees, the salaries and wages bill, accidents, &c.

The objects of the special inquiry to which allusion has been made were to show the average rate per ton per mile on inland waters, the average freight charges per ton and per bushel between certain points, and to compare these charges with railway rates. Before steps were taken in this direction in 1912 no information whatever was to be had from any source on these important aspects of transportation.

Having ascertained for 1913 the number of tons carried one mile, and the amount of gross earnings thereon, the following results were reached:—

Canadian traffic:—
Average rate per ton ..... 99.37 cents.
Average rate per ton per mile ..... ·184 "

American traffic:—
Average rate per ton ..... 55·19 cents.
Average rate per ton per mile ..... ·074 "

As compared with 1912 the foregoing results show a reduction. Following is a comparative summary:—

	1912 cents	1913 cents
Canadian traffic:—		
Average rate per ton	91·04	99·37
Average rate per ton per mile	0·194	·184
American traffic:—		
Average rate per ton	56·62	55·19
Average rate per ton per mile	·067	·074

The wide disparity between Canadian and American rates is due wholly to the character of American traffic. Of the 37,747,457 tons of American freight which passed through the Canadian canal in 1913, there were 32,445,067 tons of iron and copper ore and 4,153,301 tons of coal. These two commodities made up 97 per cent of the total American traffic. The ore moved downward and the coal upward. An overwhelming proportion of both the ore and the coal is carried in vessels belonging to the iron and steel industries of Pennsylvania, at rates which can hardly be regarded as commercial. They are uniform year after year—55 cents per ton for ore and 33 cents for coal. That these rates are not commercial, nor subject to competition, is demonstrated by the fact that in every month of the season of navigation grain and other commodities have been carried over the same route at as high a rate as $1.17 per ton. In some instances the rate was $2 and over per ton.

The Canadian rates also exhibit a wide difference as between maximum and minimum. Wheat was moved during 1913 at as low a rate as ·067 cent per ton per mile, and at as high a rate as ·172. Package freight, aggregating a considerable volume, earned as high as ·500 per ton per mile.

The facts having been given with regard to the volume of Canadian wheat moved over the various routes in 1913, it will be instructive to observe the rates of freight which applied to this important traffic. A thorough analysis was made of the reports received, and they yielded the following averages:—

Port Arthur—Fort William to Montreal:—
- Per ton per mile ·142 cent.
- Per bushel 5·351 "
- Per ton $1.78

Port Arthur—Fort William to Georgian Bay:—
- Per ton per mile ·148 cent.
- Per bushel 2·279 "
- Per ton 76·00 "

Port Arthur—Fort William to other Canadian ports:—
- Per ton per mile ·104 cent.
- Per bushel 2·436 "
- Per ton 81·21 "

Port Arthur—Fort William to Buffalo:—
- Per ton per mile ·103 cent.
- Per bushel 2·430 "
- Per ton 81·00 "

A comparison of the foregoing rates for 1913 with the rates for 1912 is here given in the following table:—

Port Arthur–Fort William	1912.			1913.		
	Per ton per mile.	Per bushel.	Per ton.	Per ton per mile.	Per bushel.	Per ton.
	cent.	cent.	$	cent.	cent.	$
To Montreal	·157	5·774	1·924	·142	5·351	1·780
" Georgian Bay	·163	2·629	·876	·148	2·279	·760
" other Canadian ports	·115	2·384	·795	·104	2·436	·812
" Buffalo	·104	2·863	·793	·104	2·436	·812

A record was also kept of the movement of Canadian wheat over the several routes during each month of the season of navigation and the results ascertained were as follows:—

Port Arthur–Fort William to Montreal.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	$	Cents.
April	6·015	2·04	·165
May	5·525	1·84	·135
June	4,682	1·54	·127
July	4·080	1·60	·130
August	5·440	1·68	·137
September	5·282	1·76	·144
October	6·313	2·10	·171
November	6·341	2·11	·172

Port Arthur–Fort William to Georgian Bay.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April	2·42	80·63	·157
May	2·16	71·85	·135
June	2·18	73·93	·142
July	1·59	52·73	·102
August	1·43	47·81	·092
September	1·53	51·26	·100
October	2·21	73·95	·146
November	2·46	82·30	·160
December	3·35	$1·12	·220

Port Arthur-Fort William to other Canadian ports.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April	2·599	86·63	·127
May	2·200	73·35	·091
June	1·755	58·53	·072
July	2·371	90·36	·122
August	1·928	64·27	·082
September	1·969	65·63	·083
October	2·767	92·23	·166
November	2·780	92·69	·116
December	3·081	$1·03	·146

Port Arthur-Fort William to Buffalo.	Per bushel.	Per ton.	Per ton per mile.
	Cents.	Cents.	Cent.
April	2·739	91·30	·108
May	2·442	81·40	·094
June	1·954	65·13	·076
July	2·289	76·30	·118
August	1·969	65·63	·090
September	1,739	57,97	·066
October	2·876	95·86	·122
November	2·998	99·97	·114
December	3·296	$1·09	·126

A study of the returns for 1913 showed that the largest volume of wheat was moved through to Montreal during the months of May and June, when the rates were low and there was no apparent pressure for delivery abroad; while the movement to Buffalo was largest in October and November, when dispatch was the prime consideration, and the rates were high.

The all water rate from Port Arthur-Fort William to Montreal in November averaged 6·341 cents per bushel, which must be regarded as a fair rate for the vessels. For the same month the average water rate between Port Arthur-Fort William and Buffalo was 3·296 cents. To this should be added the rail rate between Buffalo and New York, which in November, for export, was 5½ cents per bushel. This fact was officially ascertained from the Buffalo Chamber of Commerce. The combined water and rail rate from Port Arthur-Fort William to Buffalo-New York in November was 8·796 cents, as compared with an average for that month between Port Arthur-Fort William and Montreal of 6·341. With an advantage of 2·455 cents per bushel in favor of the St. Lawrence route, it is still true that more than ten times as many bushels of Canadian wheat went out by way of Buffalo-New York in November than came down to Montreal.

Such a situation is obviously created by other considerations than the rates of freight. They will be found in (1) the availability of ocean tonnage at New York, (2) the demand for expedition, and (3) lower ocean freight and insurance rates from New York than from Montreal.

A larger volume of wheat was brought down to Georgian Bay ports in 1913 than in 1912. The average water rates to such ports was 2·279 cents per bushel. The rail rate from Georgian Bay to Montreal was 6 cents per bushel; but that rate was probably adjusted so as to make the water and rail rate combined equal to the all water rate.

It was also observed that a much larger volume of grain than in preceding years was brought to Port Colborne, there passed into the elevator and subsequently carried on to Montreal by water.

RAIL AND WATER RATES.

Out of the facts which have been presented with respect to freight rates in 1913 on the inland waters of Canada grows quite naturally the suggestion of a comparison with rail rates. It must be said at once that the water rates were considerably lower than the rail rates. It is easily possible with the information in hand which has been gathered during the past years to put certain water rates side by side with rail rates; but such a measurement could not be made with satisfactory accuracy until carriers by water are placed on the same statistical footing as that now occupied by the railways. There are large and important factors lacking from the data which has been made available with regard to the operations of certain carriers by water on the inland waters of Canada. When all the factors are known it will then be practicable to make an exact comparison. The statistical facts dealt with in this report are satisfactory as far as they go; but in a matter of this nature absolutely complete and comprehensive reports are required before conclusions may be drawn which are sound from every point of view. It is believed that the whole statistical situation with regard to carriers by water will be changed during the current year.

Within the limited scope of Canal Statistics certain facts are definitely known. The rates of freight on a very large proportion of all the cargoes of Canadian origin moved through the canals has been ascertained. From that basic information the average rate per ton per mile has been calculated. The omissions from the account relate to cargoes which did not pass through the canals, and there are good reasons for asserting that such cargoes bore a somewhat higher freight rate than those which applied to the trade of the Great Lakes in particular. The latter is a more or less specialized business, in which competition is active.

It has been shown that the average rate per ton per mile on canal traffic in 1913 was ·184. The corresponding average rate for all the railways of Canada in 1913 was ·758. This comparison is most favourable to carriers by water. But it must not be forgotten that Government makes a substantial contribution toward freight rates by water. The canals have not only been constructed by Government, but Government also maintains and operates them. It is therefore obviously reasonable to ask what the freight rate by water would have been in 1913 if carriers had been obliged to meet the interest on the cost of canals as well as the cost of maintenance. The facts are at hand.

The capital cost of the canals of Canada up to 30th March, 1913, was $105,656,037. Interest at 3½ per cent on this sum would amount to $3,697,612. The cost of maintenance for the fiscal year 1913 was $1,603,080. These two sums combined give a total of $5,301,041. The Canadian tonnage in 1913 was 6,654,311; so the Government contribution was equal to 78·85 cents per ton. Assuming that all this Canadian tonnage was carried at the same freight rates as the tonnage dealt with in the calculations on a preceding page, it will be

seen that 78·85 cents was the precise equivalent to ·146 per ton per mile. Put into tabular form the account would stand as follows:—

	Per ton.	Per ton per mile.
	cents.	cent.
Actual freight rate	99·37	·184
Government contribution	79·66	·147
Total	$1·7903	·331

The rail rate on wheat from Fort William to Montreal is 12 cents per bushel, or $4 per ton. This is equal to ·402 per ton per mile; so that the difference in favor of waterborne wheat in 1913 was ·071 per ton per mile. Put in another way, if shippers had been obliged to meet the amount involved in the public contribution to the water rate, the freight cost to Montreal in 1913 would have been 8 cents per bushel instead of 5·351. It should be added that the cost and maintenance of the canals is not the only Government contribution to the water rate. If the cost and maintenance of harbours, lighting, dredging &c., had been taken into the account there would have been a considerable addition. As it was, however, the rate by water was very much lower than the rate by rail.

INSURANCE RATES.

The insurance rates which prevailed during 1913 on the St. Lawrence and Great Lakes route were as follows:—

4¾ per cent from the head of navigation to the eastern end of Lake Erie, an additional 1 per cent to Ogdensburg and a further 1 per cent to Montreal. This would make the total 6¾ per cent from Port Arthur-Fort William to Montreal, or 2 per cent more than to Buffalo. This difference must be taken into account in comparing freight rates as between Buffalo and Montreal. In December an extension was allowed for the first five days at an additional one per cent.

GENERAL STATISTICS.

The following tables will afford further information with respect to traffic through the canals of Canada:—

STATEMENT of Total Freight passed through the Canals for the following years.

Years.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up and Down.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.			
1887	336,648	1,154,424	138,692	202,563	151,805	192,528	86,374	457,482	713,519	2,006,997	2,720,516
1888	355,165	1,146,260	138,127	174,239	214,407	223,429	81,611	428,357	789,310	1,972,287	2,761,597
1889	384,777	1,156,306	122,295	198,497	267,224	300,193	81,243	603,311	855,529	2,258,367	3,113,896
1890	369,593	1,137,011	144,368	133,188	216,813	320,324	58,709	533,021	789,505	2,123,542	2,913,047
1891	370,120	1,155,247	103,814	123,193	248,188	307,958	50,747	543,259	772,869	2,129,657	2,902,526
1892	327,560	1,322,137	173,538	135,787	241,034	302,983	47,396	481,301	789,528	2,242,208	3,031,736
1893	351,706	1,344,822	214,076	141,602	247,329	385,769	54,912	806,773	868,023	2,678,966	3,546,989
1894	299,155	1,140,606	204,175	89,614	231,172	363,107	46,020	,568,866	780,522	2,162,193	2,942,715
1895	264,824	1,070,046	286,191	91,177	362,637	608,778	62,285	590,140	975,937	2,360,141	*3,336,078
1896	293,353	1,619,668	259,659	100,519	1,197,245	3,536,054	117,535	867,040	1,867,792	6,123,281	7,991,073
1897	275,587	1,713,274	268,700	187,960	669,142	4,369,314	108,787	968,203	1,322,216	7,238,751	8,560,967
1898	263,989	1,819,887	187,253	98,967	829,508	2,425,121	81,615	912,135	1,362,365	5,256,110	6,618,475
1899	296,208	1,833,412	266,364	115,133	732,030	2,129,988	125,678	727,111	1,420,280	4,805,644	6,225,924
1900	312,201	1,632,915	270,033	81,714	568,197	1,339,915	105,155	703,563	1,255,586	3,758,107	5,013,693
1901	340,805	1,686,094	268,449	201,231	507,204	1,801,696	177,715	682,065	1,294,173	4,371,086	5,665,259
1902	529,085	2,064,480	308,212	342,484	515,828	3,000,636	190,243	562,229	1,543,368	5,969,829	7,513,197
1903	648,150	2,391,366	430,174	408,500	863,337	3,130,816	373,456	958,018	2,315,117	6,888,700	9,203,817
1904	606,737	2,047,499	511,887	276,578	699,784	2,778,903	483,795	851,053	2,302,203	5,954,033	8,256,236
1905	736,976	2,252,514	549,365	347,089	607,228	3,183,895	577,528	1,137,146	2,451,097	6,920,647	9,371,744
1906	1,238,929	2,355,855	627,094	234,919	991,508	3,595,256	482,239	997,385	3,339,770	7,183,415	10,523,185
1907	1,034,733	3,162,158	891,692	226,138	1,991,959	11,060,878	819,369	1,356,712	4,737,753	15,805,886	20,543,639
1908	1,028,246	3,292,422	500,736	278,721	1,704,310	8,218,866	972,300	1,447,219	4,265,592	13,237,228	17,502,820
1909	1,608,659	3,504,849	1,060,715	607,894	1,985,522	22,385,226	1,023,829	1,544,054	5,744,349	27,976,399	33,720,748
1910	2,312,740	3,861,272	600,144	661,436	3,323,822	29,530,163	995,749	1,705,282	7,232,455	35,758,153	42,990,608
1911	2,370,516	3,910,558	572,470	995,719	2,546,677	23,458,256	2,086,777	2,089,380	7,576,440	30,453,913	38,030,353
1912	2,340,444	4,973,342	867,250	961,838	2,042,819	32,434,735	1,343,288	2,623,529	6,593,801	40,993,444	47,587,245
1913	2,212,928	6,286,637	967,712	1,478,263	2,694,527	33,630,484	1,906,947	2,876,415	7,782,114	44,271,799	52,053,913

*Sault Ste. Marie canal opened in August, 1895.

STATEMENT of the Tonnage of Canadian and United States Vessels for the following years.

CANADIAN VESSELS.

YEARS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up and Down.	
1887	1,201,529	1,194,665	162,554	36,277	1,071	65	30,778	221,013	1,395,932	1,452,020	2,847,952	18,991
1888	1,113,290	1,120,774	158,209	34,368	1,252	.....	22,553	189,876	1,295,304	1,345,018	2,640,322	17,661
1889	1,285,574	1,207,892	188,131	39,371	976	802	20,271	252,565	1,494,952	1,500,630	2,995,582	19,393
1890	1,314,127	1,250,999	229,478	32,909	929	351	14,003	296,676	1,558,537	1,580,935	3,139,472	20,655
1891	1,356,518	1,287,168	201,758	28,642	550	292	16,350	244,176	1,575,176	1,560,278	3,135,454	19,246
1892	1,517,249	1,460,505	177,136	29,184	1,466	394	14,659	201,374	1,710,510	1,691,455	3,401,965	21,177
1893	1,548,094	1,422,326	170,186	26,787	1,172	10	17,037	248,442	1,736,489	1,697,565	3,434,054	20,757
1894	1,319,792	1,260,907	217,635	19,298	2,177	5	6,394	222,696	1,545,998	1,502,906	3,048,904	19,027
1895	1,258,848	1,165,683	253,693	13,383	.....	.....	5,889	285,553	1,518,440	1,464,619	2,983,059	17,136
1896	1,547,757	1,420,342	200,292	5,234	157	.....	4,115	271,809	1,752,321	1,697,385	3,449,706	20,972
1897	1,629,192	1,482,951	215,785	11,378	.....	.....	3,533	297,898	1,848,510	1,792,227	3,640,737	21,466
1898	1,704,661	1,609,255	215,393	4,927	499	518	6,805	255,927	1,927,358	1,870,627	3,797,985	21,509
1899	1,865,643	1,774,789	242,817	32,436	925	3,691	42,290	345,980	2,151,675	2,156,896	4,308,571	23,579
1900	1,767,293	1,681,340	265,926	14,922	2,909	64	38,015	358,781	2,074,143	2,055,107	4,129,250	21,755
1901	1,615,952	1,587,221	279,007	82,541	3,300	2,908	97,332	312,003	1,995,591	1,984,673	3,980,264	20,860
1902	1,914,167	1,840,787	241,356	97,492	1,874	2,164	101,335	286,520	2,258,732	2,226,963	4,485,695	22,198
1903	2,061,258	2,088,969	340,383	143,614	7,018	3,082	188,896	379,612	2,597,555	2,615,277	5,212,832	23,767
1904	1,838,260	1,907,886	299,245	159,740	5,175	4,223	237,910	319,661	2,380,590	2,391,510	4,772,100	21,851
1905	2,059,097	2,031,766	312,773	188,138	11,820	3,191	262,401	322,005	2,646,091	2,545,100	5,191,191	23,726
1906	2,271,776	2,264,476	292,705	155,595	24,420	5,506	202,276	309,567	2,791,177	2,735,144	5,526,321	25,498
1907	2,561,948	2,661,317	337,822	129,246	9,153	7,331	238,172	383,922	3,147,095	3,181,816	6,328,911	28,833
1908	2,726,776	2,748,139	318,327	227,315	5,057	7,844	348,944	398,387	3,399,104	3,381,685	6,780,789	29,040
1909	3,335,187	2,992,403	300,320	217,989	82,591	111,236	257,945	513,907	3,976,043	3,835,535	7,811,578	22,507
1910	3,891,613	3,504,463	315,656	122,688	95,151	89,618	287,555	627,046	4,587,975	4,343,815	8,931,790	25,337
1911	3,997,073	3,646,516	333,500	176,690	8,499	2,332	393,012	614,570	4,732,084	4,440,108	9,172,192	25,585
1912	4,457,303	4,168,304	617,407	21,176	9,907	1,053	180,735	781,450	5,265,352	4,971,983	10,237,335	27,371
1913	4,964,635	4,827,587	898,249	67,031	3,531	5,231	348,477	963,300	6,214,892	5,863,149	12,078,041	28,654

STATEMENT of the Tonnage of Canadian and United States Vessels for the following years.

UNITED STATES VESSELS.

YEARS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.	Number of Vessels.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up and Down.	
1887.....	16,265	17,925	38,857	56,708	143,730	140,562	52,793	98,840	251,645	315,035	566,680	3,883
1888.....	14,304	26,801	42,425	50,047	177,714	156,095	49,778	114,613	284,221	347,556	631,777	3,921
1889.....	21,125	26,449	55,996	50,732	253,088	206,567	56,249	160,442	386,458	444,190	830,648	4,542
1890.....	10,390	16,345	38,156	36,397	248,418	234,728	39,697	97,266	336,661	384,736	721,397	3,364
1891.....	10,357	29,851	70,665	27,727	283,013	238,818	31,083	146,602	395,118	442,998	838,116	3,602
1892.....	12,023	29,405	88,221	22,763	280,315	229,437	37,037	172,594	417,596	454,199	871,795	3,928
1893.....	10,752	34,303	214,047	33,741	351,994	282,724	50,994	307,740	627,787	658,508	1,286,295	4,585
1894.....	18,528	30,201	139,720	20,830	302,562	269,788	37,406	192,992	498,216	513,811	1,012,027	4,131
1895.....	8,838	24,768	139,554	17,712	262,240	216,542	32,295	185,730	441,927	444,752	886,679	4,427
1896.....	11,496	19,093	195,228	21,953	357,205	292,359	40,416	290,370	604,345	623,775	1,228,120	4,650
1897.....	14,666	18,367	269,430	17,618	338,938	277,345	26,341	347,698	649,375	661,028	1,310,403	4,675
1898.....	12,142	9,541	133,524	32,880	308,878	305,464	32,331	336,004	586,875	683,889	1,270,764	4,264
1899.....	17,217	18,044	172,897	30,002	1,605,887	1,156,503	51,902	231,336	1,846,848	1,438,885	3,285,733	6,101
1900.....	13,316	17,824	157,689	30,443	1,208,725	744,276	45,741	190,971	1,425,471	983,514	2,408,985	5,502
1901.....	11,587	18,706	177,169	28,124	922,464	1,044,707	54,895	224,622	1,166,115	1,316,159	2,482,274	5,634
1902.....	13,622	37,871	187,826	70,641	1,756,948	1,654,672	123,257	241,602	2,081,653	2,004,786	4,086,439	6,433
1903.....	14,014	24,168	265,208	65,247	1,736,187	1,689,414	106,401	335,836	2,121,810	2,114,665	4,236,475	6,695
1904.....	10,122	16,890	275,721	39,993	1,464,316	1,475,085	68,081	305,697	1,818,240	1,837,665	3,655,905	6,253
1905.....	19,743	19,444	364,985	81,876	2,350,494	1,701,704	1101,536	456,459	2,836,758	2,259,483	5,096,241	7,085
1906.....	34,306	15,324	356,259	78,561	2,738,623	1,928,131	115,675	418,436	3,244,863	2,440,452	5,685,315	7,319
1907.....	57,349	72,018	304,591	72,048	4,730,053	5,376,060	205,769	623,911	5,463,767	6,144,067	11,604,834	9,328
1908.....	54,587	32,705	442,773	124,120	2,975,624	4,142,392	218,835	536,103	3,685,819	4,835,320	8,521,139	7,489
1909.....	263,592	109,407	442,176	200,202	4,178,378	10,429,614	213,750	621,903	5,098,196	11,361,126	16,459,322	9,996
1910.....	119,222	50,498	429,702	305,330	5,509,417	14,488,565	299,462	576,101	6,356,803	15,420,494	21,777,297	11,462
1911.....	49,778	12,643	626,897	576,313	3,348,936	12,057,484	709,084	850,487	4,734,695	13,496,927	18,231,622	10,370
1912.....	50,296	15,518	763,426	470,330	5,778,534	16,011,911	614,311	931,864	7,206,567	17,429,623	24,636,190	11,785
1913.....	61,301	29,788	673,382	711,603	5,657,984	15,567,499	703,212	834,019	7,095,879	17,142,909	24,238,788	10,739

Vessel and Freight Tonnage passed through the Sault Ste. Marie Canal.

Years.	Canadian Vessels.		U.S. Vessels.		Total No.	Vessel Tonnage.	Freight Tonnage.			Lockages	Days Open.	Remarks.
	No.	Tonnage.	No.	Tonnage.			Canadian	United States.	Total.	No.	No.	
1895	609	126,534	583	623,092	1,192	749,626	.....	.....	595,837	699	87	Canal first operated Sept. 9, 1895.
1896	2,070	0589,407	3,066	3,805,749	5,136	4,395,156	.....	.....	4,577,399	3,042	218	
1897	1,909	405,546	2,359	3,391,936	4,268	3,797,482	.....	.....	4,947,065	2,604	238	
1898	1,811	403,931	1,864	2,353,699	3,675	2,757,630	.....	.....	3,055,287	2,520	243	
1899	2,000	558,552	1,769	2,389,457	3,769	2,948,009	.....	.....	3,006,664	2,610	239	
1900	1,790	577,310	1,291	1,617,438	2,081	2,194,748	.....	.....	2,035,677	2,205	238	
1901	2,796	775,151	1,408	1,674,597	4,204	2,449,748	.....	.....	2,820,394	2,910	246	
1902	3,080	1,366,930	1,964	3,237,372	5,044	4,604,302	.....	.....	4,729,268	3,418	264	
1903	2,711	1,615,939	1,640	3,146,807	4,351	4,762,746	.....	.....	5,511,868	3,242	256	
1904	2,637	1,555,042	1,325	2,675,663	3,962	4,230,705	.....	.....	5,030,705	3,022	241	
1905	3,970	1,803,299	1,692	2,734,349	5,662	5,537,637	.....	.....	5,473,406	4,031	255	
1906	3,922	1,959,252	1,758	4,399,872	5,680	6,359,124	.....	.....	6,574,039	4,152	253	
1907	3,217	2,154,688	3,132	9,961,281	6,349	12,115,969	.....	.....	15,588,165	4,596	238	
1908	3,289	2,603,232	2,204	7,035,655	5,293	9,638,887	2,092,231	10,666,985	12,759,216	3,667	235	Origin of cargo first shown.
1909	2,597	2,988,936	3,734	14,850,738	6,331	17,839,674	3,366,495	24,494,750	27,861,245	5,046	240	
1910	2,744	3,173,494	5,228	20,187,704	7,972	23,361,198	2,345,619	33,050,068	36,395,687	6,110	248	
1911	2,713	3,108,880	4,068	16,252,340	6,781	19,361,220	3,177,581	27,774,128	30,951,709	6,802	236	
1912	2,643	3,296,229	5,213	22,536,015	7,856	25,832,244	4,090,362	35,579,293	39,669,655	6,200	240	
1913	3,279	3,793,434	5,006	22,181,007	8,285	25,974,441	4,954,734	37,744,590	42,699,324	6,266	246	

SESSIONAL PAPER No. 20a

CAPITAL EXPENDITURE.

The following statement brings the capital expenditure on the canals of the Dominion down to March 31, 1913. It must be understood, however, that the total shown is apart from the outlay by the Imperial Government on the Carillon and Grenville canal, as to which the records were lost in the destruction by the fire of the Ordnance Office, Montreal, in 1852. The details are as follows:—

Canal.		Construction.	Enlargement.	Total.
		$ cts.	$ cts.	$ cts.
Beauharnois		1,636,690 26		1,636,690 26
Carillon and Grenville		63,053 64	4,119,039 32	4,182,092 86
Chambly		637,214 66	91,784 83	728,999 49
Cornwall		1,945,624 73	5,297,179 48	7,242,804 21
Culbute		382,391 46		382,391 46
Lachine		2,589,532 85	10,815,488 11	13,404,970 96
Lake St. Francis			75,906 71	75,906 71
Lake St. Louis			298,176 11	298,176 11
Murray		1,248,946 71		1,248,946 71
Rideau		4,127,454 21		4,987,498 24
Sault Ste. Marie		4,987,498 24		4,987,498 24
Soulanges		7,696,439 46		7,696,439 46
Ste. Anne's		134,456 51	1,035,759 12	1,170,215 63
St. Lawrence River and Canals		18,442 85	3,451,470 56	3,469,913 41
St. Ours		121,537 65	4,306 28	125,843 93
St. Peter's		648,547 14		648,547 14
Tay		489,599 23		489,599 23
Trent		12,464,651 64		12,464,651 64
Welland		7,693,824 03	21,557,126 98	29,250,951 01
Williamsburg	Farran's Point		877,090 57	
	Galops		6,120,300 14	
	Rapide Plat		2,158,242 00	10,490,484 51
	Williamsburg	1,320,655 54	13,896 26	
St. Andrew's Lock		1,533,759 57		1,533,759 57
Total		49,740,320 38	65,915,716 47	105,656,036 85

The cost of maintenance for the fiscal year 1913, was $1,603,080.07.

I have the honor to be, sir,

Your obedient servant,

J. L. PAYNE,
Comptroller of Statistics.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION, 1913

GRAIN PASSED DOWN WELLAND.

The quantity of barley, corn, oats, pease, rye and wheat passed down the Welland canal, from ports west of Port Colborne for a period of thirty-two years is as follows:—

	Quantity passed down to Montreal	To Ports in Ontario.	Quantity from U.S. Ports to U.S. Ports.
	Tons.	Tons.	Tons.
1882	180,694	.....	63,881
1883	186,814	10,650	121,876
1884	142,194	12,153	104,537
1885	96,569	11,909	117,346
1886	203,940	9,881	151,551
1887	185,034	11,838	134,868
1888	160,358	25,599	169,664
1889	267,769	19,075	213,766
1890	288,513	16,899	245,932
1891	295,509	6,805	202,710
1892	261,954	8,942	201,540
1893	501,806	25,555	222,958
1894	273,651	16,699	203,979
1895	231,491	32,096	133,823
1896	461,049	73,386	160,372
1897	560,254	53,257	157,756
1898	519,532	31,279	144,612
1899	332,746	40,197	68,011
1900	244,661	17,525	84,589
1901	151,566	13,732	83,370
1902	208,215	22,787	81,164
1903	351,936	29,062	111,828
1904	198,246	23,711	102,523
1905	341,431	42,061	129,270
1906	404,935	33,351	176,119
1907	635,573	42,032	163,295
1908	756,141	38,142	135,172
1909	652,742	40,238	129,587
1910	789,661	63,657	115,457
1911	836,924	51,560	121,655
1912	961,855	47,866	117,195
1913	1,265,368	63,806	122,069

During the last decade the quantity of agricultural products as above, passed down the Welland and St. Lawrence canals to Montreal, has increased from 198,246 tons in 1904 to 1,265,368 tons in 1913, and the quantity passed down the Welland canal from United States ports to United States, has increased from 102,523 to 122,069 tons the same years.

The quantity of barley, buckwheat, corn, oats, pease, rye and wheat, arrived at Montreal via Grand Trunk and Canadian Pacific Railways for a period of 15 years, is reported as follows:—

Year.	Tons.
1899	209,170
1900	229,624
1901	227,700
1902	263,861
1903	253,959
1904	154,625
1905	148,377
1906	386,963
1907	383,735
1908	285,262
1909	426,163
1910	.....
1911	241,134
1912	462,444
1913	.....

The quantity of the same articles passed down the whole length of the St. Lawrence canals to Montreal for the same period was:—

Year.	Tons.
1899	372,291
1900	295,928
1901	203,316
1901	242,225
1903	400,057
1904	220,076
1905	375,630
1906	449,673
1907	684,697
1908	776,374
1909	652,742
1910	789,661
1911	836,924
1912	964,187
1913	1,265,376

Comparative shipments of grain by the St. Lawrence route, and railways, are as follows:—

QUANTITY OF GRAIN TO SEA BOARD BY COMPETING ROUTES.

The quantity of grain and pease passed down the whole length of the St. Lawrence canal to Montreal, is as follows:—

	Tons.
For 1912	964,'87
1913	1,265,376
Showing an increase of	301,189

The quantity of grain and pease carried to Montreal via Canadian Pacific and Grand Trunk Railways is reported as follows:—

For 1912	462,444
1913	.....
Showing an increase of	.....

The quantity of grain passed down the Welland canal in Canadian and United States vessels to Kingston and Prescott for fifteen years is as follows:—

In Canadian vessels there were in:—

	Tons.
1899, 162 cargoes, with an aggregate quantity of	221,306
1900, 325 " "	183,200
1901, 112 " "	132,558
1902, 131 " "	175,514
1903, 170 " "	218,840
1904, 115 " "	174,121
1905, 167 "	239,418
1906, 205 " "	344,605
1907, 255 " "	427,813
1908, 355 " "	598,941
1909, 308 " "	550,276
1910, 383 " "	679,358
1911, 421 " "	728,223
1912, 504 " "	796,858
1913, 687 " "	1,128,324

In the United States vessels there were in:—

	Tons.
1899, 167 cargoes, with an aggregate quantity of	205,571
1900, 259 " "	163,575
1901, 135 " "	123,229
1902, 135 " "	136,652
1903, 219 " "	273,986
1904, 118 " "	150,359
1905, 235 " "	273,344
1906, 178 " "	269,800
1907, 263 " "	413,087
1908, 271 " "	330,514
1909, 174 " "	272,291
1910, 182 " "	295,714
1911, 173 " "	281,916
1912, 154 " "	330,058
1913, 253 " "	322,919

One hundred and sixty-two Canadian and 49 American vessels took cargoes of 343,733 tons through to Montreal intact in 1908; 87 Canadian and 9 American of 135,582 in 1907; 74 Canadian and 10 American of 108,734 tons in 1906; 96 Canadian and 18 American of 180,206 in 1905; 56 Canadian and 16 American of 116,095 tons in 1904; 56 Canadian and 18 American of 99,582 tons in 1903; 19 Canadian and 17 American of 34,804 tons in 1902; 23 Canadian and 2 American of 17,303 tons in 1901, 15 of 7,924 tons in 1900, 2 of 558 tons in 1899, 7 of 2,426 in 1898, 7 of 2,324 in 1897, 3 of 1,176 in 1896, 4 of 1,344 tons in 1905, 2 cargoes of 810 tons in 1894, none in 1893, 2 in 1892 of 934 tons, and 3 in 1891 of 1,441 tons. Three vessels lightened a portion of their cargoes in 1901, 9 in 1900, 11 in 1899, 25 in 1898, 11 in 1897, 16 in 1896, 6 in 1895, 19 in 1894, 34 in 1893, 25 in 1892, and 44 in 1891; 222 vessels discharged the whole of their cargoes at Kingston in 1901, 540 in 1900, 316 in 1899, 473 in 1898, 359 in 1897, 335 in 1896, 169 in 1895, 188 in 1894, 369 in 1893, 220 in 1892, and 293 in 1891.

The quantity of grain transhipped at Port Colborne in 1909 and the four previous years was as follows:

Articles.	1905.	1906.	1907.	1908.	1909.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Wheat	679,840	1,009,474	1,428,300	1,106,244	2,686,963
Corn	104,027	110,629	112,036	.....	.....
Rye	.....	.....	.....	.....	.....
Oats	.....	29,118	30,824	23,945	.....
Barley	.....	2,103	.....	56,544	22,216
Flaxseed	.....	.....	30,040	49,628	8,202

WELLAND CANAL.

The total quantity of freight passed on the Welland canal during the season of 1913 was 3,570,714 tons; of this quantity 86,030 tons was way or local freight.

There were 2,565,611 tons of freight passed eastward, and 1,005,103 passed westward.

East and West bound Through Freight.

The total quantity of through freight passed through the whole length of the Welland canal during the season of 1913 was 3,484,651 tons.

Of this quantity 2,553,542 tons were west bound and 931,109 west bound freight.

Of the east bound through freight, Canadian vessels carried 1,966,970 tons and United States vessels carried 586,572 tons; and of the west bound through freight Canadian vessels carried 544,241 tons and United States vessels carried 386,868 tons, or a total of 2,511,211 tons for Canadian and 973,440 tons for American vessels.

ST. LAWRENCE CANALS.

The total quantity of freight passed through these canals during 1913 was 4,302,427 tons; of this quantity 3,198,302 tons passed eastward and 1,104,125 passed westward.

East and West bound Through Freight.

The total quantity of through freight was 3,486,882 tons; of this quantity 2,815,410 tons were east bound and 671,472 tons were west bound.

Way Freight.

Of the total quantity of (way) or local freight 382,892 were east bound and 432,653 tons west bound freight.

THROUGH TRAFFIC BETWEEN MONTREAL AND PORTS ON LAKE ERIE, MICHIGAN, ETC.

The total quantity of through freights passed eastward from Lake Erie and westward from Montreal through the Welland and St. Lawrence canals, during fifteen years, was as follows:—

Year.	Eastward to Montreal.	Westward from Montreal.
1899	354,933	5,991
1900	288,251	6,217
1901	184,420	13,714
1902	250,475	25,289
1903	390,786	100,699
1904	278,328	71,512
1905	448,704	72,482
1906	554,231	96,791
1907	789,167	1,281
1908	864,926	3,472
1909	925,005	191,510
1910	1,170,139	172,360
1911	1,291,973	233,335
1912	1,559,963	236,979
1913	1,710,219	333,592

THROUGH FREIGHT FROM UNITED STATES PORTS TO UNITED STATES PORTS.

The total quantity of through freight passed eastward and westward through the Welland canal, from United States ports to United States ports, for a period of fifteen years, was as follows:—

Year.	Eastward.	Westward.	Total.
	Tons.	Tons.	Tons.
1899	225,491	135,038	360,529
1900	218,969	99,560	318,529
1901	190,476	83,543	274,019
1902	224,110	44,919	269,029
1903	221,074	149,151	370,225
1904	165,337	87,144	252,481
1905	190,547	112,549	303,096
1906	237,226	84,205	321,431
1907	218,997	177,660	396,657
1908	209,518	239,136	448,654
1909	196,838	248,581	445,419
1910	197,301	288,198	485,499
1911	175,752	309,603	485,355
1912	180,319	235,437	415,756
1913	204,597	320,736	525,333

The total quantity of freight passed through the Welland canal from United States ports to United States ports shows an increase of 109,577 tons as compared with the previous year; and an increase of 164,804 tons as compared with 1899.

The following statement shows the aggregate number of vessels and the total quantity of freight passed through the Welland canal, and the quantity passed between United States ports during the year 1867 to 1913 inclusive.

Fiscal Year.	Aggregate Number of Trips.	Total quantity transported on the Welland canal.	Quantity passed from United States ports to United States ports.
	Mumber.	Tons.	Tons.
1867	5,405	933,260	458,386
1868	6,157	1,161,821	641,711
1869	6,069	1,231,903	688,700
1870	7,356	1,311,956	747,567
1871	7,729	1,478,122	772,756
Season of Navigation.			
1872	6,063	1,333,104	606,627
1873	6,425	1,506,484	656,208
1874	5,814	1,389,173	748,557
1875	4,242	1,038,050	477,809
1876	4,789	1,099,810	488,815
1877	5,129	1,175,398	493,841
1878	4,429	968,758	373,738
1879	3,960	865,664	284,043
1880	4,104	819,934	179,605
1881	3,332	686,506	194,173
1882	3,334	790,643	282,806
1883	3,267	1,005,156	432,611
1884	3,138	837,811	407,079
1885	2,738	784,928	384,509
1886	3,589	980,135	464,478
1887	2,785	777,918	340,501
1888	2,647	878,800	434,753
1889	2,975	1,085,273	563,584
1890	2,883	1,016,165	233,957
1891	2,594	975,013	553,800
1892	2,615	955,554	541,065
1893	2,843	1,294,823	631,667
1894	2,412	1,008,221	592,267
1895	2,222	869,595	469,779
1896	2,766	1,279,987	653,213
1897	2,725	1,274,292	564,694
1898	2,384	1,140,077	487,539
1899	2,202	789,770	360,529
1900	2,399	719,360	318,529
1901	1,547	620,209	274,019
1902	1,568	665,387	269,029
1903	1,787	1,002,919	370,225
1904	1,433	811,371	252,481
1905	1,595	1,092,050	305,096
1906	1,536	1,201,967	321,431
1907	1,982	1,614,132	396,743
1908	2,351	1,703,453	448,654
1909	2,433	2,025,951	445,419
1910	2,544	2,326,290	487,499
1911	2,480	2,537,629	485,355
1912	2,905	2,851,915	415,756
1913	3,229	3,570,714	525,333

The total quantity of freight passed through the several divisions of the Canadian canal system during the season of 1913 is as follows:

——	Farm Stock.	Forest Produce of Wood.	Manufactures.	Products of Mines.	Agricultural Products.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Sault Ste. Marie	198	62,958	733,910	36,648,593	5,253,665	42,699,324
Welland	361	337,927	548,373	990,086	1,684,967	3,570,714
St. Lawrence	8,269	660,226	460,161	1,627,996	1,545,775	4,302,427
Chambly	490	337,331	20,217	184,132	13,432	555,602
St. Peter's	2,492	6,301	8,078	38,708	15,935	71,514
Murray	13	55	75,803	104,137	568	180,576
Ottawa	3,657	186,710	15,901	156,839	2,331	365,438
Rideau	3,458	27,331	15,213	121,784	3,437	171,223
Trent	298	50,812	2,414	436	1,840	55,800
St. Andrews'	65	9,274	1,629	69,950	377	81,295

The total quantity of freight moved on the Welland canal was 3,570,714 tons, of which 1,684,967 tons were agricultural products.

On the St. Lawrence canals the total quantity of freight moved was 4,302,427 tons, of which 1,545,775 were agricultural products, and 460,161 tons were manufactures.

On the Ottawa canals the total quantity of freight moved was 365,438 tons; of this quantity 186,710 tons were the produce of the forest.

Comparative Statement of Commerce through the United States St. Mary's Falls Canals and the Canadian Sault Ste. Marie Canal, for the seasons of 1912 and 1913.

	Traffic for 1913.		Total Traffic for.		Increase.	Decrease
	United States Canal.	Canadian Canal.	Season of 1913.	Season of 1912.	Amount.	Amount.
Vessels.....number.	15,599	8,285	23,884	22,772	1,112	.....
Lockages..... "	10,601	6,266	16,867	16,088	779	.....
Tonnages registered net tons	32,062,619	25,974,441	58,037,060	56,779,377	1,257,683	.....
Tonnages freight... "	37,022,201	42,699,324	79,721,525	72,494,470	7,227,055	.....
Passengers.....number.	40,096	36,822	76,918	67,144	9,774	.....
Coal hard.....net tons	2,200,954	472,719	2,673,673	2,136,767	536,906	.....
Coal soft..... "	12,271,253	3,680,632	15,951,885	12,801,069	3,150,816	.....
Flour.....barrels.	7,962,622	2,240,840	10,203,462	8,652,431	1,551,031	.....
Wheat.....Bushels	72,619,194	131,827,467	204,446,661	173,934,451	30,512,210	.....
Grain, excluding wheat."	62,757,060	50,875,233	113,632,293	69,224,016	44,408,277	.....
Manft. and pig iron.net tons.	285,754	146,023	431,777	698,247	.....	266,470
Salt.....barrels.	650,858	84,518	735,376	648,616	86,750	.....
Copper.....net tons.	81,139	25,855	106,994	126,854	.....	19,860
Iron ore..... "	15,672,579	32,419,242	48,091,821	46,310,284	1,781,537	.....
Lumber, ft. B.M.....	574,805,000	25,261,000	600,066,000	677,007,500	.....	76,941,500
Silver ore.....net tons.	.....	.....	.....	.....	.....	.....
Building stone..... "	481	.....	481	2,282	.....	1,801
Unclassified freight "	1,095,237	653,249	1,748,486	1,629,524	118,962	.....

The United States canal was open to navigation during the season of—

1889	234 days.	1901	230 days.
1890	228 "	1902	256 "
1891	225 "	1903	249 "
1892	233 "	1904	223 "
1893	219 "	1905	245 "
1894	234 "	1906	249 "
1895	231 "	1907	233 "
1896	232 "	1908	231 "
1897	234 "	1909	236 "
1898	241 "	1910	224 "
1899	231 "	1911	237 "
1900	238 "	1912	237 "
		1913	245 "

The Canadian canal was open to navigation during the season of—

1895	87 days.	1904	241 days.
1896	218 "	1905	255 "
1897	238 "	1906	253 "
1898	243 "	1907	238 "
1899	239 "	1908	235 "
1900	238 "	1909	240 "
1901	246 "	1910	248 "
1902	264 "	1911	236 "
1903	256 "	1912	240 "
		1913	246 "

The average number of vessels passing per day through the two canals for the season of 1913 was ninety-seven.

A—TABLE showing the total tonnage of the undermentioned articles moved Up December

Year.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	45,674	313,825	120,599	20,951	.....	904	1,937
1872	26,651	239,998	254,902	6,035	7,752	64	2,745
1873	30,665	355,847	180,169	8,225	1,194	3	3,777
1874	24,019	413,212	181,151	18,871	5,954	513	8,677
1875	13,964	253,835	103,749	35,751	3,383	917	6,337
1876	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879	10,710	274,570	144,506	4,655	1,239	440	2,444
1880	12,679	242,020	163,738	17,772	477	1,016	1,480
1881	9,959	127,832	101,075	24,509	.....	1,844	2,086
1882	12,261	215,056	54,799	20,126	611	3,226	403
1883	13,471	152,794	182,269	10,436	731	1,642	10,983
1884	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886	19,474	154,169	219,442	1,595	4,911	564	14,657
1887	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888	16,983	160,963	194,886	5,906	26,629	811	13,608
1889	7,931	126,664	353,595	4,272	28,356	2,673	18,552
1890	14,461	118,002	327,394	10,830	27,728	1,549	20,876
1891	13,517	198,658	185,180	8,113	52,959	64,888	28,042
1892	17,046	232,019	192,548	6,433	37,173	9,392	32,815
1893	15,235	258,392	441,092	18,599	31,283	3,671	36,981
1894	33,628	270,993	169,233	28,353	27,962	567	60,673
1895	44,044	203,088	164,894	8,689	18,236	1,007	46,463
1896	42,425	320,563	320,444	11,368	28,178	9,405	56,591
1897	9,065	324,743	390,615	14,173	25,161	8,483	44,674
1898	5,578	207,647	437,861	12,286	17,502	16,127	23,182
1899	11,625	197,732	204,004	2,907	24,037	923	18,460
1900	10,968	137,800	163,509	4,035	41,055	3,538	14,815
1901	18,978	151,586	67,756	7,119	28,485	2,961	14,024
1902	22,282	225,171	67,647	7,418	11,232	4,079	12,963
1903	25,998	259,031	210,758	14,656	7,911	4,904	13,994
1904	35,049	165,138	116,444	27,171	16,582	.....	13,184
1905	38,512	254,458	180,921	55,432	36,072	1,711	9,883
1906	18,294	326,798	211,805	31,446	49,306	1,784	10,739
1907	22,739	488,565	271,693	13,240	73,369	2,270	22,683
1908	23,209	732,131	127,402	31,172	33,423	6,667	21,668
1909	38,763	590,196	140,902	23,151	75,135	33	30,221
1910	41,152	587,493	229,980	21,575	136,233	.....	18,149
1911	57,061	562,282	273,932	15,029	163,333	112	11,360
1912	45,807	795,989	121,333	25,241	185,546	714	14,626
1913	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640

* Fiscal. † Apples, meals of all kinds, pease, potatoes.

and Down. through the Welland canal, during a period of forty-three years, ended 31, 1913.

	Heavy Goods.						
Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Iron & Salt having paid full tolls on St. Lawrence canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	46,806	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	3,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	43,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	81,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789
519,291	.....	753	1,027	28,047	202,384	8,138	240,349
367,177	127	1,610	2,567	7,953	224,644	3,415	240,316
527,426	163	1,567	878	3,666	211,616	355	218,245
805,253	6	2,075	374	8,139	233,096	.....	243,690
591,409	.....	3,072	159	977	203,608	.....	207,816
486,421	185	6,245	54	2,819	158,866	1,140	169,309
788,974	1,192	6,332	82	3,264	223,445	1,158	235,473
816,914	7,206	17,012	227	590	176,226	.....	201,261
720,183	1,444	11,722	799	734	162,336	13,433	190,468
459,688	567	6,361	1,282	1,318	97,732	26,125	133,385
375,720	.....	8,190	533	4,800	47,392	58,400	119,315
290,909	83	6,094	327	8,773	49,480	99,487	164,244
350,792	64	7,488	.....	15,201	64,014	22,480	109,247
537,252	488	5,407	2,554	45,846	147,884	18,323	220,502
373,568	11,381	9,957	1,093	4,164	113,525	39,683	179,803
576,989	2,651	10,912	226	4,221	172,642	22,381	213,033
650,172	3,747	8,493	100	16,204	147,587	5,862	181,993
894,559	961	4,923	246	18,761	267,212	25,040	317,143
975,672	.....	35,726	429	.....	316,921	18,004	371,080
898,401	.....	87,025	.....	.....	377,681	33,301	498,007
1,034,582	.....	57,581	.....	.....	577,491	34,311	669,383
1,083,109	.....	126,956	35,888	.....	619,682	37,480	820,006
1,189,256	.....	139,991	21,630	.....	709,696	82,376	953,693
1,509,616	.....	96,245	28,396	.....	945,790	78,776	1,149,207

B.—TABLE showing the Total Way and Through Tonnage of the undermentioned Articles cleared downward on the Welland canal during a series of forty-three years, ended December 31, 1913.

VEGETABLE FOOD.

Years.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles. †	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872	26,648	231,056	254,534	693	7,594	64	2,300	524,889
1893	30,660	345,720	180,042	643	1,188	3	3,557	563,813
1874	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877	13,588	248,894	169,185	10,216	2,810	2,405	1,833	488,931
1878	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879	10,588	271,545	114,276	803	1,196	.....	2,387	430,795
1880	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883	13,256	146,741	182,143	975	731	518	10,971	355,335
1884	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886	19,418	146,151	218,897	.....	4,891	.....	14,581	403,928
1887	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888	16,973	150,833	194,886	555	26,629	811	13,358	404,015
1889	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759
1890	14,461	114,924	327,394	6,519	27,728	1,121	20,836	512,983
1891	13,517	196,326	185,177	8,113	52,959	65,071	27,895	549,058
1892	17,046	229,569	192,548	6,433	37,173	9,392	32,548	524,709
1893	15,232	257,203	441,092	18,461	31,283	3,671	36,981	803,923
1894	33,628	270,514	169,233	28,353	27,962	.....	60,587	590,277
1895	43,895	202,636	164,894	8,689	18,236	.....	46,435	484,785
1896	42,159	319,388	320,444	11,368	28,178	8,970	54,031	784,538
1897	9,025	322,993	390,615	14,173	25,127	8,483	44,651	815,067
1898	5,578	206,313	437,849	12,286	17,491	16,127	23,170	718,814
1899	11,625	197,732	204,004	2,424	23,541	923	18,440	458,689
1900	10,968	137,800	163,509	3,449	40,256	3,538	14,802	374,322
1901	18,937	151,325	67,757	7,119	28,281	2,961	14,021	290,400
1902	22,282	223,499	67,647	7,418	11,223	4,079	12,912	349,060
1903	25,997	257,370	210,758	14,656	7,911	4,904	13,982	535,578
1904	35,046	164,515	116,444	27,171	16,582	.....	13,157	372,915
1905	38,512	247,599	180,921	55,432	36,072	1,711	9,882	570,129
1906	18,227	326,789	111,243	31,446	49,306	1,411	10,739	549,161
1907	22,689	488,565	271,693	13,240	73,369	2,270	22,683	894,509
1908	23,187	730,751	127,402	31,172	33,422	6,667	21,668	974,270
1909	38,763	590,074	140,902	23,151	75,135	33	30,206	898,264
1910	41,152	587,493	229,980	21,575	136,232	.....	18,149	1,034,582
1911	57,061	562,282	273,932	14,622	163,333	112	11,360	1,082,702
1912	45,807	795,989	121,333	25,241	185,546	714	14,626	1,189,256
1913	45,710	1,005,362	144,354	96,889	199,794	6,867	10,640	1,509,616

*Fiscal. †Apples, meal all kinds, potatoes

C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland canal in transit between Ports in the United States during a series of forty-two years, ended December 31, 1913.

YEARS.	VEGETABLE FOOD.								HEAVY GOODS.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other Articles.	Total.	Railway Iron.	Other Iron.	Sugar and Salt.	Coal.	Ores.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869	30,681	211,085	91,149	2,942	.....	667	1,006	337,530	68,064	14,334	89,086	28,566	35,912	235,962
1872	10,482	124,695	89,761	1,391	7,400	.....	608	234,337	24,040	13,239	49,843	95,741	59,401	224,264
1873	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176
1874	8,230	229,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451
1876	5,187	96,247	58,138	.....	1,905	525	403	162,405	.....	5,531	29,395	167,110	25,808	227,844
1877	3,342	107,396	65,260	1,603	2,314	258	413	180,586	8,976	8,688	8,336	172,868	41,107	239,975
1878	1,316	65,542	60,026	859	277	.....	341	128,361	.....	10,713	3,892	150,583	13,535	178,723
1879	159	53,791	33,401	.....	464	.....	11	87,826	2,405	3,648	6,318	118,572	17,797	148,741
1880	.....	30,611	16,122	1,551	296	.....	.....	48,580	4,743	3,515	371	65,945	18,380	92,954
1881	.....	34,320	30,031	924	.....	.....	10	65,285	1,313	5,570	.....	83,858	6,464	97,205
1882	107	30,227	32,433	537	.....	684	14	64,002	.....	4,076	.....	158,552	14,533	177,161
1883	2,041	54,382	66,128	735	731	.....	8,579	132,496	1,209	6,901	8	196,462	24,891	229,471
1884	1,715	40,956	53,707	.....	9,874	.....	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885	124	53,235	63,229	732	882	.....	1	118,203	.....	1,594	.....	198,416	15,029	215,039
1886	7,531	53,258	91,018	.....	4,799	.....	13,201	172,888	156	5,328	1	189,964	11,364	206,813
1887	11,780	37,678	83,431	1,732	12,050	.....	10,859	157,530	15	4,406	.....	82,780	627	87,828
1888	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	2,309	177,288
1889	5,017	39,229	147,045	.....	27,492	.....	17,225	236,208	.....	1,587	896	227,476	1,204	231,163
1890	9,204	31,527	180,842	6,519	27,030	.....	20,497	275,619	.....	504	208	162,231	1,620	164,563
1891	6,802	32,097	127,494	8,113	52,823	.....	26,115	253,444	.....	292	705	186,572	1,773	189,342
1892	11,018	26,950	131,222	6,433	36,935	.....	31,992	244,550	.....	576	2	183,895	.....	184,473
1893	6,588	28,187	198,777	16,751	23,870	864	36,352	311,389	.....	344	.....	206,827	.....	207,171
1894	17,795	53,846	105,329	28,095	27,621	.....	60,462	198,358	.....	297	.....	188,521	.....	188,818
1895	10,169	27,881	100,512	7,904	17,020	.....	46,316	209,802	181	246	.....	149,490	.....	149,917
1896	16,224	34,878	175,094	11,128	16,137	490	46,456	300,407	.....	146	.....	207,348	.....	207,494
1897	7,237	28,919	169,057	14,173	14,969	.....	41,887	276,242	965	15	.....	165,143	.....	166,123
1898	4,212	11,268	150,667	6,909	12,732	1,197	22,671	209,656	770	339	4	156,814	.....	157,927
1899	6,118	12,926	81,777	2,424	19,526	923	18,198	141,892	351	1,646	553	88,931	.....	91,481
1900	07,966	18,771	60,545	2,402	39,706	2,149	14,248	145,787	.....	953	.....	46,024	.....	46,977
1901	7,165	23,557	55,531	7,119	26,344	.....	14,016	143,732	83	80	105	46,702	.....	46,970
1902	13,785	32,639	66,111	7,418	10,006	.....	12,675	142,634	.....	214	.....	12,911	.....	13,125

*Apples, meal of all kinds, peas, potatoes.

C.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland canal in transit between Ports in the United States during a series of forty-three years, ended December 31, 1913—*Concluded.*

YEARS.	VEGETABLE FOOD.								HEAVY GOODS.					
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	*Other	Total. Articles.	Railway Iron.	Other Iron.	Sugar and Salt.	Coal.	Ores.	Total
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1903	6,082	15,439	108,917	11,433	6,112	4,174	13,568	165,725	459			113,072		113,535
1904	8,556	14,269	60,964	16,621	16,497		13,079	129,986				63,882		63,882
1905	24,054	15,483	93,622	9,197	10,892		9,682	162,930		1		73,464		73,465
1906	15,215	13,410	135,410	9,266	11,323		10,678	195,132		169		33,523		33,692
1907	18,898	21,892	124,474	2,812	4,741	2	22,001	194,820		30		110,347	4,050	114,420
1908	17,694	24,651	99,830	7,418	2,070	2	21,393	172,788				158,351	1,400	159,751
1909	15,452	17,940	100,967	4,224			22,683	161,266		5		131,131	1,531	132,667
1910	11,859	10,717	126,938	3,840			8,751	161,925				201,893		201,893
1911	2,852	4,950	116,705				7,565	132,072		1,863	26,303	223,942	4,483	256,491
1912	9,878	15,911	91,254	2,160	1,400		12,714	133,317		300	11,078	166,419	4,979	182,776
1913	11,967	20,258	114,662		7,407		8,685	162,979		505	18,387	237,230	5,202	261,324

*Apples, meal all kinds, pease, potatoes.

D.—STATEMENT showing the Quantity of Through freight passed Down the Welland canal in Canadian and United States Vessels entering the canal at Port Colborne, during the season of Navigation in 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912 and 1913.

Articles.	Canadian Vessels.				United States Vessels.				Total.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	196	90,791	122	73,958	191	201,339	52	22,097	561	388.185
1902.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		82,954		85,973		52,889				221,816
Corn		148		1,388		66,111				67,647
Barley						7,418				7,418
Oats		1,200		43		9,963				11,206
Pease										
Rye		3,808				271				4,079
Coal		3,977		25,732		13,497		8,332		51,538
Miscellaneous merchandise		33,111		8,723		38,351		1,594		81,779
Shingles, woodenware, &c.		47		28		4				79
Sawed lumber.....Ft. B.M.		13,218,960		3,256 187		25,437,287		19,540,426		61,452,860
Square timber.....Cub. ft.		370,718		557,689				115,000		1,043,407
Firewood.....Cords		56		40						96
Staves.....No.				14,000						14,000
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	329	151,850	76	45,918	243	252,094	69	27,854	627	477,716
1903.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		149,378		38,473		60,514		6,305		254,670
Corn		21,356		4,682		174,588		10,132		210,758
Barley		2,580		667		11,409				14,656
Oats		306		1,335		6,112				7,753
Pease		63				22				85
Rye						4,904				4,904
Coal		389		12,991		8,133		8,496		30,009
Miscellaneous merchandise		39,563		3,367		41,584		2,000		86,514
Shingles, woodenware, &c.				54						54
Sawed lumber.....Ft. B.M.		12,841,552		1,625,855		17,871,652		14,733,677		47,072,736
Square lumber.....Cub. ft.		572,000		660,000				84,200		1,316,200
Firewood.....Cords				210		9				219
Staves.....No.				641,000						641,000
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	228	157,539	55	39,375	205	187,748	42	15,918	530	400,580
1904.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat		116,794		33,302		14,269				164,365
Corn		12,768		7,814		95,862				116,444
Barley		2,619		824		23,728				27,171
Oats						16,261				16,261
Pease						3				3
Rye		1,925		7,187		17,133		7,668		33,913
Coal		34,907				1,925				36,832
Miscellaneous merchandise		29,567				60,548				90,115
Shingles, woodenware, &c.										
Sawed lumber.....Ft. B.M.		15,077,382		854,811		32,754,541		9,572,655		58,259,389
Square timber.....Cub. ft.		944,508		744,000				149,000		1,837,508
Firewood.....Cords						717				717
Staves.....No.		634,000								634,000

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	252	182,373	91	48,692	319	286,656	64	29,120	726	546,841
1905.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	188,706		18,575		28,757		2,512		238,550	
Corn	6,385		6,636		163,374		4,526		180,921	
Barley	6,870		1,451		47,111		.....		55,432	
Oats	8,225		2,570		21,535		3,742		36,072	
Pease	.....		.....		76		.....		76	
Rye	.....		.....		1,171		.....		1,711	
Coal	18,756		35,324		28,330		8,678		91,088	
Iron Ore	14,358		8,023		.....		.....		22,381	
Merchandise	29,375		7,485		74,975		3,126		114,961	
Shingles, woodenware, &c	.....		2,748,941		2,325		.....		2,325	
Sawed lumber.....Ft. B.M.	2,867,147		.....		38,290,831		12,479,689		54,589,200	
Square timber.....Cub. ft.	355,000		951,524		.....		.....		538,000	
Firewood .....Cords	.....		183,000		900		.....		900	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	328	238,690	121	66,355	305	310,622	43	15,758	797	631,425
1906.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	250,493		34,355		35,578		.....		320,436	
Corn	8,177		.....		202,250		1,378		49,306	
Barley	8,546		5,046		17,854		.....		31,446	
Oats	21,900		16,083		11,323		.....		49,306	
Pease	.....		.....		11		.....		11	
Rye	.....		5		1,406		.....		1,411	
Coal	30,455		47,242		24,190		9,356		111,243	
Iron Ore	5,862		.....		.....		.....		5,862	
Merchandise	35,383		7,009		110,263		50		152,705	
Shingles, woodenware, &c	16		37		851		.....		904	
Sawed lumber.....Ft. B.M.	3,471,514		235,624		25,711,196		10,789,755		40,188,089	
Square timber.....Cub.ft.	375,000		200,000		.....		.....		575,000	
Firewood.....Cords	110		18		1,093		.....		1,221	
Staves.....No.	.....		.....		300,000		.....		300,000	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	375	290,509	148	81,070	408	397,616	76	36,921	1007	806,116
1907.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	294,298		50,808		130,818		4,429		480,303	
Corn	6,713		514		259,895		4,571		271,693	
Barley	8,726		468		4,046		.....		13,240	
Oats	49,689		16,647		7,033		.....		73,369	
Pease	.....		.....		25		.....		25	
Rye	.....		.....		2,270		.....		2,270	
Coal	31,506		57,373		50,183		14,493		143,555	
Iron Ore	12,040		8,950		.....		.....		20,990	
Merchandise	21,545		9,436		5,231		6,235		42,447	
Shingles, woodenware, &c	.....		.....		2,222		.....		2,222	
Sawed lumber.....Ft. B.M.	.....		.....		14,395,124		11,201,446		25,596,570	
Square timber.....Cub. ft.	558,090		323,000		.....		.....		881,090	
Firewood..... Cords	.....		.....		660		.....		660	

D.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				AMERICAN VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage
	567	432,623	149	64,034	428	319,030	36	19,866	1180	835,553
1908.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	505,151		39,001		183,011		3,498		730,751	
Corn	2,405				124,997				127,402	
Barley	19,775		1,133		10,264				31,172	
Oats	30,091		643		2,689				33,423	
Pease					40				40	
Rye	742				5,925				6,667	
Coal	33,733		42,656		57,448		8,344		148,181	
Merchandise	26,815		14,783		14,410		13,686		69,694	
Firewood.....Cords			70		1,173				1,243	
Sawed lumber.....Ft. B.M.					17,572,070		6,578,545		24,150,615	
Square timber.....Cub.ft	221,300		313,000						534,300	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No	Tonnage.	No.	Tonnage.
	555	486,406	136	71,034	323	324,576	26	17,317	1040	899,333
1909.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	415,208		34,903		133,172				583,283	
Corn	6,694				134,208				140,902	
Barley	17,943		360		4,848				23,151	
Oats	70,392		4,743						75,135	
Pease					63				63	
Rye	33								33	
Coal	160,475		53,681		21,097		630		235,883	
Merchandise	52,994		14,732		12,232		16,498		96,506	
Sawed lumber					31,643		10,214		41,857	
Square timber	3,450		7,840		125		1,475		12,890	
	No.	Tonnage	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	596	599,416	142	88,963	249	285,704	14	13,563	1001	987,646
1910.	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat	481,624		22,200		77,040				580,864	
Corn	15,759				214,221				229,980	
Barley	17,159		576		3,840				21,575	
Oats	135,743				490				136,233	
Pease					123				123	
Rye										
Coal	216,679		114,671		29,646		894		361,990	
Merchandise	39,149		15,231		21,818		20,466		96,664	
Sawed lumber	3,630		800		16,932				21,362	
Square timber	1,930		5,000		800				7,730	
Shingles					525				525	
Unenumerated	74,434		1,772		24,031				100,237	
Total	986,207		160,250		389,466		31,360		1,557,283	

D.—STATEMENT showing the Quantity of Through Freight passed Down the Welland canal in Canadian and United States Vessels, &c.—*Concluded.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	640	670,037	122	83,755	270	304,171	48	42,830	1080	1,100,793
1911.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat		483,984		24,826		49,330				558,140
Corn		29,978		11,368		232,586				273,932
Barley		14,382		240						14,622
Oats		162,455		878						163,333
Pease										
Rye		112								112
Coal		230,809		79,311		40,109		22,489		372,718
Merchandise		45,838		19,325		45,881		34,449		145,493
Sawed lumber		300				25,361		9,020		34,781
Square timber		3,260		4,500		2,277				10,037
Shingles						60				60
Unenumerated		95,017				14,386				109,403
Total		1,066,135		140,448		409,990		65,958		1,682,513
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	774	790,044	152	95,202	450	427,226	52	33,102	1428	1,345,574
1912.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat		603,854		78,794		111,284				793,932
Corn		536		2,181		118,616				121,333
Barley		22,022		353		2,866				25,241
Oats		170,446		3,269		11,831				185,546
Pease						150				150
Rye						714				714
Coal		331,536		44,212		154,653		3,800		534,201
Merchandise		48,659		17,602		47,836		32,340		146,437
Sawed lumber						22,689		15,361		38,050
Square timber		9,000		8,660		1,409				19,069
Shingles						250				250
Unenumerated		73,387		1,186		69,367				143,940
Total		1,259,440		156,257		541,665		51,501		2,008,863
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	1,043	1,081,973	148	104,194	375	386,284	28	18,908	1,594	1,590,459
1913.		Tons.		Tons.		Tons.		Tons.		Tons.
Wheat		761,418		87,153		154,768				1,003,339
Corn		1,549				142,805				144,354
Barley		82,241		2,448		12,200				96,889
Oats		188,442		1,937		9,415				199,794
Pease										
Rye		3,136				3,731				6,867
Coal		498,269		59,145		107,946		1,735		667,095
Merchandise		59,375		18,701		28,825		21,008		127,909
Sawed lumber		1,500				19,200		3,736		24,436
Square timber		4,636		4,004		1,040				9,680
Shingles										
Unenumerated		183,957		9,059		76,613		3,550		273,179
Total		1,784,523		182,447		556,543		30,029		2,553,542

SESSIONAL PAPER No. 20a

WELLAND CANAL THROUGH FREIGHT—RECAPITULATION.

Welland Canal—West Bound Freight.

The total quantity of Through Freight passed Up the Welland canal in Canadian and United States Vessels during the Season of Navigation in 1913 is as follows:—

Summary.	Tons.	Tons.
In Canadian steam vessels	537,755	
" sail vessels	6,486	
Total quantity in Canadian vessels		544,241
In United States steam vessels	384,110	
" sail vessels	2,758	
Total in United States vessels		386,868
Grand total freight passed Up the Welland canal in Canadian and United States vessels		931,109

Statement of the Quantity of Through Freight passing Up and Down the Welland canal during the Season of Navigation in 1913.

Summary.	Tons.	Tons.
In Canadian steam vessels up	537,755	
" " down	1,784,523	
Total in Canadian steam vessels		2,322,278
In Canadian sail vessels up	6,486	
" " down	182,447	
Total in Canadian sail vessels		188,933
Total quantity in Canadian vessels		2,511,211
In United States steam vessels up	384,110	
" " down	560,093	
Total in United States steam vessels		944,203
In United States sail vessels up	2,758	
" " down	26,479	
Total in United States sail vessels		29,237
Total quantity in United States vessels		973,440
Total in Canadian and United States vessels		3,484,651
	Down or east bound.	Up or west bound.
In Canadian vessels	1,966,970	544,241
In United States vessels	586,572	386,868
Total	2,553,542	931,109

F.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence canals, to Montreal, during the Seasons of Navigation 1901 to 1913.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.													
Cement and water lime				35					5,652	484			270
Clay, lime and sand					22								
Iron, railway		50		8,170	10								
" pig											1,901		93
" all other	1,178	5,785	2,542	1,651	384	269	124	553	12,689	7,154	34,540	28,996	5,402
Steel				16	48								
Stone, for cutting													
Apples				1			9,936						
Barley			2,206	9,697	43,607	21,196	105,984	24,318	19,143	20,000	14,853	20,572	60,854
Corn	14,319	1,719	123,864	55,021	84,204	55,559		10,454	17,137	77,612	134,239	7,345	9,344
Flaxseed	4,065		3,643	212	15,694	80,570	49,159	27,500	19,634	6,607	11,696	15,413	117,548
Flour	1,400	6,755	16,151	24,662	14,571	9,174	3,730	5,028	21,905	27,081	44,588	38,026	34,152
Meal, all kinds	35		348	57	270	60		156		10,323	3,967		
Oats	1,584	1,442	2,438		21,404	37,164	66,941	28,081	65,624	129,900	147,180	164,581	72,733
Oil cake	1,083		462	7,846	9,229								
Pease			63						30		20	10	
Rye	2,561	4,079	4,260		1,711	1,405	2,266	6,662	120			714	4,567
Salt	50		132	615	168	75	143	419				931	686
Seed, all kinds							20						
Hay, pressed	246												
Tobacco, raw	23												
Wheat	132,702	200,975	226,746	133,528	190,505	289,611	450,446	686,626	550,775	562,149	541,174	768,633	763,851
All other agricultural products, vegetables									5,876				
Hides, skins, horns and hoofs				10		2							
Horses													
Lard and lard oil	1,155				2,847	4,810							
Meats, all kinds	114											41	
Pork	34							524					
Tallow			3		53								
All other agricultural products, animal				1					366				
Total, class 3	161,849	220,805	382,858	241,522	384,727	499,895	688,749	790,321	718,951	841,310	934,158	1,045,262	1,069,500

Class 4.													
Agricultural implement	1,785	13	58	17									
Ashes	3		2	16									
Bricks								1,548					
Crockery					93								
Furniture	5		3	6		6				2			36
Glass, all kinds	1		15	3	21	11	4						
Molasses		54	240		820								
Nails			19		64			3					
Oil	14,987	12,091	14,619	12,848	20,700	19,995	22,111	30,002	31,149	26,932	45,930	52,871	67,576
Paint	17		5										
Pitch and tar					53		101						
Rags			4										
Resin			20										
Soda ash	4				72	72	15						
Sugar	112				2,019				173	345	1,177	3,475	898
Tin				87	53								
Tobacco					204								
White lead													
Whisky, beer and other spirits	32		2	766	635	614	1,224	1,056	525	959	581	1,739	1,298
Merchandise not enumerated	2,420	419	582	713	851	466	2,294	2,126	10,418	9,224	11,254	13,601	4,270
Total, class 4	19,366	12,577	15,569	14,456	25,572	21,164	25,749	34,730	42,265	37,462	58,942	71,686	74,078
Class 5.													
Barrels, empty	66	15											
Hoops													
Sawed lumber	2,635	1,085			3,957	100					300		
Staves, pipe and barrel				394		2,400							
Staves, West India and pipe													
Timber, square, in vessels				1,544	1,260	1,500	4,180						
Timber, sq., in rafts									900	1,800	1,360	5,560	3,444
Woodenware		17											
Total, class 5	3,205	1,117		1,938	5,217	4,000	4,180		900	1,800	1,660	5,560	3,444
Special class.													
Coal					29,351	29,172	70,489	42,075	175,115	289,567	298,873	424,988	563,197
Iron ore		15,976		17,362	3,837				1,824			12,467	
Stones, all kinds								1,272					
Totals, special class		15,976		17,362	33,188	29,172	70,489	43,367	176,939	289,567	298,873	437,455	363,197
Grand total	184,420	250,475	398,427	275,278	448,704	554,231	789,167	869,398	939,055	1,170,139	1,293,633	1,559,963	1,710,219

G.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St. Lawrence and Welland canals to Lake Erie, during the Seasons of Navigation in 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1909, 1910, 1911, 1912 and 1913.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1909.	1910.	1911.	1912.	1913.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Class 3.												
Bricks	196	22	80	115	132	.....	556	.....	.....	.....	.....	.....
Brimstone	5	20	23	12	.....	.....	.....	.....	.....	.....	.....	.....
Cement and water lime	2,916	178	3,924	39	181	88	13	400	17,565	8,625	40,074	36,890
Clay, lime and sand	2	1	181	.....	.....	.....	100	.....	.....	.....	.....	.....
Cotton, raw	.....	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fish	8	.....	8	4	.....	.....	39	.....	.....	.....	.....	.....
Gypsum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron, railway	748	11,735	39,641	283	126	7,289	4,119	.....	.....	.....	.....	.....
" pig	.....	558	273	.....	312	680	7,655	7,231	2,060	2,300	2,598	675
" all other	4,950	2,904	5,845	3,782	3,633	8,235	6,987	.....	540	.....	.....	.....
Salt	75	4	87	99	150	17	.....	.....	.....	.....	.....	.....
Steel	3	11	332	58	192	111	2,561	35,153	.....	22,352	66,544	49,692
Stone for cutting	.....	.....	.....	41	.....	.....	.....	.....	.....	.....	.....	.....
Flour	16	.....	.....	.....	18	.....	.....	.....	.....	.....	.....	.....
Hay	.....	.....	.....	.....	.....	.....	30	255	.....	.....	.....	.....
Meals	.....	.....	17	25	.....	.....	.....	.....	1,113	.....	.....	.....
Oats	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Potatoes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seeds, all kinds	302	58	325	164	35	17	.....	.....	.....	.....	.....	.....
Tobacco, raw	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agricultural products, not enumerated, vegetable	1	1	.....	.....	127	.....	.....	.....	.....	.....	.....	.....
Hides and skins	.....	16	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horses	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lard and lard oil	.....	11	.....	.....	28	20	1	.....	.....	.....	.....	.....
Meats, other than pork	.....	.....	[illegible] 1	25	.....	.....	15	.....	.....	.....	.....	.....
Pork	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wool	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	150	25
All other articles not enumerated	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, class 3	9,222	15,520	50,768	4,647	4,934	16,457	22,076	43,039	21,278	34,427	109,366	87,282

Class 4.												
Agricultural implements						5						
Ashes, pot and pearl			2									
Crockery and earthenware			32	291	155	294	456					
Dye woods, &c				2			2					
Furniture			1	5	2	1	35		90			
Glass, all kinds	612	1,384	1,207	1,671	1,641	2,519	3,634					
Manilla				24	93	37	15					
Marble						35						
Molasses	1		6		1		50					
Nails	675	1,292	2,878	1,009	3,061	4,011	3,331					
Oil, in barrels	83	14	16	1,418	120	148	155	1	80	667	15	100
Paint	69	97	158	202	367	412	295					
Pitch and tar	27	27	58	198	5	239						
Rags		1	29		15		50					
Resin			1				25					
Soda ash	169	201	264	387	28	310	37					
Stone, wrought					1		5					
Sugar	810	1,514	204	52	1,168	1,153	6,046	40	3,024		1,275	510
Tin	338	506	209	362	928	1,365	1,173					
Turpentine	1	2	1				1					
White lead	11	37	80	82	80	304	283					
Whiting	49	61	22	33	158	93	18					
Whisky, beer, &c	131	182	452	432	384	483	1,040	220	1,187	163	867	1,492
Merchandise not enumerated	1,516	1,049	3,674	6,200	15,360	11,707	16,498	21,359	15,129	12,090	12,352	17,878
Total, classs 4	4,492	6,169	9,234	13,379	23,566	23,116	33,049	21,620	19,510	12,920	14,509	19,980
Class 5												
Barrels, empty						54,906						
Firewood in vessels		3,600	40,026	40,425	43,982	2,307	2,337					
Pulpwood							101,989	122,867	121,572	182,682	113,104	225,928
Lumber, sawn, in vessels								3,984		3,306		402
Railway ties in vessels			611									
Woodenware						5						
Total, class 5		3,600	40,637	40,425	43,982	57,218	104,326	126,851	121,572	185,988	113,104	226,330
Special Class.												
Coal				10,200								
Iron ore				2,861								
Total, special class				13,961								
Grand Total	13,714	25,289	100,699	71,512	72,482	96,791	159,451	191,510	172,360	233,335	236,729	333,592

H.—STATEMENT showing the Quantity of Freight passed Eastward and Westward through the Welland canal, from United States Ports to United States Ports, during the Seasons of Navigation from 1901 to 1913, inclusive.

Articles.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Class 3.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Bricks													
Cement and water lime										2,000			11,060
Fish							20				91		
Iron, railway													
" all other		30			1	27	30				1,863	300	505
Salt	105												238
Steel						2	509	9,086					
Stone for cutting													
Apples													
Barley	7,119	7,418	11,433	16,621	9,197	9,266	2,812	7,148	4,224	3,840		2,160	
Corn	55,531	66,111	108,917	60,964	93,622	135,240	124,474	99,830	100,967	126,938	116,705	91,254	114,662
Flour	17,168	13,785	6,082	8,556	24,054	15,215	18,898	17,694		11,859	2,852	9,878	11,967
Hay, pressed					200								
Meal, all kinds	14,016	12,675	13,546	13,076	9,606	10,668	21,976	21,353		8,621	7,565	12,569	8,685
Marble					87								
Nails					1								
Oil cake	1,302	110	740	16,497	228		114						
Oats	26,344	10,006	6,112	3	10,892	11,323	4,741	2,070				1,400	7,407
Pease			22		76	11	25	40	63	123		150	
Potatoes													
Rye			4,174				2	2					
Flax seed			1,594			756			15,452				
Seeds, all kinds		10	27		43	3	17						
Tobacco	23												
Wheat	23,557	32,639	15,436	14,269	15,483	13,410	21,802	24,651	17,940	10,717	4,950	15,911	20,258
Agricultural products, vegetable	10		1			1	7		22,620		19	37	
Hides and skins, &c								21	315	233			
Horses			2										
Lard and lard oil, &c	1,680	2,413				22	86						
Meats, other than pork													m
Pork	970	632	152	379	273	268	429						
Sheep								190					
Tallow	119												
Wool	3	752	482	134	21	89	30		157	233	9		
Total, class 3	147,947	146,581	168,720	130,301	163,301	196,301	196,061	182,085	161,738	164,564	134,054	133,659	184,782

Class 4.													
Agricultural implements		399		396	552	494		2	254				
Crockery and earthenware							5						
Furniture	3	17				1							
Marble	4										2		
Molasses													
Nails							3						
Oil, in barrel	22	1,594	2,000	1			8	15	8	45	2	1,119	
Paint				17	42	1	1	1					
Rags			4		4								
Soda ash													
Stone, wrought													
Sugar	448	280		53	53	840	26,075		1,196	26,303	11,078	18,419	
White lead					7		4						
Whiting							21						
Whisky, beer and all other spirits	1		3				30		122	230	137	109	
Merchandise	3,327	1,928	2,010	1,554	2,008	2,324	41,621	1,839	5,866	67,860	64,059	67,481	70,255
Total, class 4	3,805	4,218	4,017	2,021	2,666	3,660	67,768	1,857	7,316	67,890	90,639	78,698	89,632
Class 5.													
Empty barrels	282				3	2	1						
Firewood, in vessels		4		717	2,700	3,609	1,980	3,509		1,531	2,046	2,394	
Lumber, sawn, in vessels	38,085	72,806	48,337	30,194	15,726	27,701	14,314	21,571	24,327	11,738	30,191	26,614	14,937
Masts and spars, in vessels													
Hop poles				154									
Railway ties, in vessels				652	2,248		2,151	478					
Shingles					62	53	70						
Split posts					12					25			
Staves, salt barrels						1,500							
Timber, square, in vessels									125			723	
Woodenware, &c									2,932	1,583		2,270	3,550
Total, class 5	38,367	72,810	48,337	31,717	20,751	32,865	18,516	25,558	27,384	14,877	32,237	32,001	18,487
Special class.													
Coal	357	501		1,100	3,346	4,400	110,347		400	201,893	223,942	166,419	237,230
Stone, not suitable for cutting													
Kryolite							2,734						
Iron ore							1,316			1,552	4,483	4,979	5,202
Total, special class	357	501		1,100	3,346	4,400	114,397		400	203,445	228,425	171,398	242,432
Grand total	190,476	224,110	221,074	165,337	190,547	237,226	396,743	209,518	193,838	450,776	485,355	415,756	525,333

L.—STATEMENT of the quantity of Grain Transhipped to the following Ports for the season of 1913.

Ports.	Wheat.	Oats.	Barley.	Corn.	Other grain.	Total.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Kingston	5,943,567	1,942,590	1,633,418	78,465	77,858	9,675,898	255,010
Prescott	232,367	167,589	51,417	58,715	.....	510,088	12,698
Ogdensburg	.....	.....	.....	75,000	.....	75,000	2,100
Total bushels	6,175,934	2,110,179	1,684,835	212,180	77,858	10,260,986	.....
Total tons	185,278	35,873	40,536	5,941	2,180	.....	269,808

M.—The quantity of Coal passed through the Welland canal during a series of years from 1885 to 1913 inclusive, as follows:—

Years.	From Canadian Ports to Canadian Ports.	From Canadian Ports to Canadian Ports.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports		Total.
	Up.	Down.	Up.	Down.	Up.	Down.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1885			193,442	4,974	10,321	31,350	240,087
1886			184,564	5,400	22,187	49,724	261,875
1887			81,617	1,163	26,775	25,968	135,523
1888			172,381	878	17,365	27,183	217,807
1889			226,352	1,124	12,036	25,931	265,443
1890	80		116,616	615	17,280	22,781	202,372
1891			185,190	1,382	17,374	20,698	224,644
1892			183,244	651	12,391	15,330	211,616
1893			204,704	2,123	8,325	17,944	233,096
1894			187,794	727	1,269	13,947	203,737
1895	4		148,887	603	1,565	7,807	158,866
1896	20	210	206,093	1,255	4,127	11,740	223,443
1897		4	165,143		1,277	9,799	176,225
1898			156,055	759	986	4,536	162,336
1899			86,638	2,293	525	8,276	97,732
1900	8		45,032	992		1,360	47,392
1901			46,345	357	456	2,322	49,480
1902			12,410	501	65	51,037	64,013
1903	3		113,076		4,796	30,009	147,884
1904	2,919		62,782	1,100	3,711	32,813	103,325
1905			70,118	3,346	11,436	37,742	172,642
1906	60		29,123	4,400	7,161	106,843	147,587
1907	2,857		110,347		10,453	143,555	267,212
1908	4,401		158,351		5,988	148,181	316,921
1909			130,731	400	11,067	235,483	377,681
1910	2,045		197,482	4,411	15,974	357,579	577,491
1911	731		221,752	2,160	24,451	370,558	619,682
1912			163,461	2,958	12,034	531,243	709,696
1913			235,730	1,500	42,965	665,595	945,790

N.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence canals during the season of 1885 to 1913, inclusive.

Years.	Quantity passed up.	Quantity passed down to Montreal.	Total Quantity passed up and down.
	Tons.	Tons.	Tons.
1885	5,035	122,829	127,864
1886	3,301	118,802	122,103
1887	7,579	121,618	129,197
1888	8,341	123,050	131,391
1889	5,360	124,290	129,650
1890	6,538	135,168	141,706
1891	7,951	141,701	149,652
1892	7,543	157,134	164,677
1893	2,285	147,139	149,424
1894	16,213	169,552	185,765
1895	.....	165,151	165,151
1896	689	161,551	162,240
1897	40	164,963	165,003
1898	400	175,609	176,009
1899	448	201,546	201,994
1900	10	280,169	280,179
1901	2,765	298,245	301,010
1902	9,231	95,702	104,933
1903	30	290,548	290,578
1904	9,670	320,973	330,643
1905	8,518	345,589	354,107
1906	6,989	313,080	320,069
1907	1,281	406,978	408,259
1908	23,939	448,140	472,079
1909	13,543	469,695	483,238
1910	7,351	746,926	754,277
1911	6,230	756,474	762,704
1912	9,300	903,237	912,537
1913	3,500	1,225,288	1,228,788

O.—STATEMENT showing the quantity of Through Freight passed down the Welland canal, &c.

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1902.	Tons.	Tons.	Tons.
Barley			7,418
Corn	1,719	10,335	55,583
Oats	1,412		9,764
Pease			
Rye	4,079		
Wheat	200,075	12,452	8,389
Total, grain	‡208,215	22,787	81,165
Other articles	42,260	32,946	179,914
Total	250,475	55,733	261,078
1903.			
Barley	2,206	1,017	11,433
Corn	116,223	13,846	80,689
Oats	2,438		5,315
Pease	63		22
Rye	4,200		644
Wheat	226,746	14,199	13,725
Total, grain	†351,936	29,062	111,828
Other articles	38,850	82,298	101,621
Total	390,786	111,360	213,449
1904.			
Barley	9,697	853	16,621
Corn	55,021	3,950	57,473
Oats			16,497
Pease			
Rye			3
Wheat	*133,528	18,908	11,929
Total, grain	198,246	23,711	102,523
Other articles	77,031	80,092	138,475
Total	375,277	103,803	240,998
1905.			
Barley	43,607	2,628	9,197
Corn	84,204	3,095	93,622
Oats	21,404	3,776	10,892
Pease			76
Rye	1,711		
Wheat	190,505	32,562	15,483
Total, grain	**341,431	42,061	129,270
Other articles	107,273	123,225	104,747
Total	448,704	165,286	234,017

O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &c.—*Continued.*

RECAPITULATION—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1906.	Tons.	Tons.	Tons.
Barley	21,196	984	9,266
Corn	55,559	15,688	140,558
Oats	37,164	819	11,323
Pease	.....	11	.....
Rye	1,405	6	.....
Wheat	***289,611	15,843	14,972
Total grain	404,935	33,351	176,119
Other articles	118,224	176,277	59,884
Total	523,159	209,628	236,003
1907.			
Barley	9,936	492	2,812
Corn	106,299	31,901	133,493
Oats	67,063	1,565	4,741
Pease	.....	.....	25
Rye	2,266	2	2
Wheat	450,009	8,072	22,222
Total grain	635,573	42,032	163,295
Other articles	153,594	126,423	93,127
Total	789,167	168,455	256,422
1908.			
Barley	24,318	3,546	3,308
Corn	10,454	11,489	105,459
Oats	28,081	3,272	2,070
Pease	.....	.....	40
Rye	6,662	3	2
Wheat	†686,626	19,832	24,293
Total grain	756,141	38,142	135,172
Other articles	108,785	162,378	91,875
Total	864,926	200,520	227,047
1909.			
Barley	19,143	.....	4,008
Corn	17,137	22,798	100,967
Oats	65,624	2,872	6,639
Pease	30	.....	33
Rye	33	.....	.....
Wheat	550,775	14,568	17,940
Total grain	652,742	40,238	129,587
Other articles	272,263	113,970	126,223
Total	925,005	154,208	255,810

O.—STATEMENT showing the Quantity of Through Freight passed down the Welland canal, &c.—*Concluded.*

RECAPITULATION—*Concluded.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on Lake Ontario.
1910.	Tons.	Tons.	Tons.
Barley	20,000	.....	1,575
Corn	77,612	49,326	103,042
Oats	129,900	6,333	.....
Pease	.....	.....	123
Rye	.....	.....	.....
Wheat	562,149	7,998	10,717
Total grain	789,661	63,657	115 457
Other articles	380,500	152,325	55,683
Total	1,170,161	215,982	171,140
1911.			
Barley	14,331	291	.....
Corn	134,239	22,988	116,705
Oats	147,180	16,153	.....
Pease	.....	.....	.....
Rye	.....	112	.....
Wheat	541,174	12,016	4,950
Total grain	836,924	51,560	121,655
Other articles	500,881	115,721	55,790
Total	1,337,805	167,281	177,445
1912.			
Barley	20,572	218	4,451
Corn	7,345	1,372	112,616
Oats	164,581	20,965	.....
Pease	10	12	128
Rye	714	.....	.....
Wheat	768,633	25,299	.....
Total grain	961,855	47,866	117,195
Other articles	598,108	214,395	69,444
Total	1,559,963	262,261	186,639
1913.			
Barley	91,856	5,033	.....
Corn	9,344	20,348	114,662
Oats	173,827	18,560	7,407
Pease	.....	.....	.....
Rye	4,567	2,300	.....
Wheat	985,774	17,565	.....
Total, grain	1,265,368	63,806	122,069
Other articles	916,254	135,742	50,303
Total	2,181,622	199,548	172,372

TABLE 1.—COMPARATIVE STATEMENT of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation 1912 and 1913.

	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States. Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
1912.													
Sault Ste. Marie	770,976	2,162,521	16,883	857,777	1,807,181	32,253,916	1,326,457	473,944	3,921,497	35,748,158	38,669,655	4,090,362	35,579,293
Welland	440,946	975,826	137,305	3,699	235,437	180,319	12,034	866,349	825,722	2,026,193	2,851,915	1,553,116	1,298,799
St. Lawrence	678,046	1,371,077	280,438	48,306	201	500	196	1,098,424	958,881	2,518,307	3,477,188	2,340,143	1,137,045
Chambly	5,939	9,378	432,324					170,774	438,263	180,152	618,415	447,702	170,713
St. Peter's	33,575	40,934						300	33,575	41,234	74,809	74,509	300
Murray	162,155	5,429	300				866	1,331	163,321	6,760	170,081	167,520	2,561
Ottawa	53,092	283,637		51,886			3,735		56,827	535,523	392,350	383,515	8,835
Rideau	78,570	68,986		170				12,407	78,570	81,563	160,133	146,963	13,170
Trent	29,101	48,049							29,101	48,049	77,150	77,150	
St. Andrews	88,044	7,505							88,044	7,505	95,549	95,549	
Grand total	2,340,444	4,973,342	867,250	961,838	2,042,819	32,434,735	1,343,288	2,623,529	6,593,801	40,993,444	47,587,245	9,376,529	38,210,716
1913.													
Sault Ste. Marie	634,118	2,752,099	27,372	1,403,129	2,373,665	33,425,887	1,859,116	223,938	4,894,271	37,805,053	42,699,324	4,954,734	37,744,590
Welland	395,667	1,335,059	245,735	3,215	320,736	204,597	42,965	1,022,740	1,005,103	2,565,611	3,570,714	2,093,406	1,477,308
St. Lawrence	749,035	1,750,553	354,532	34,303	126		432	1,413,446	1,104,125	3,198,302	4,302,427	2,837,019	1,465,408
Chambly	8,354	10,096	339,113					198,039	347,467	208,135	555,602	358,801	196,801
St. Peters	29,486	42,028							29,486	42,028	71,514	71,514	
Murray	168,614	4,670					1,692	5,600	170,306	10,270	180,576	162,095	18,481
Ottawa	51,428	273,652		37,616			2,742		54,170	311,268	365,438	358,465	6,973
Rideau	80,147	77,464	960					12,652	81,107	90,116	171,223	157,746	13,477
Trent	17,541	38,259							17,541	38,259	55,800	55,800	
St. Andrew's	78,538	2,757							78,538	2,757	81,295	81,295	
Grant total	2,212,928	6,286,637	967,712	1,478,263	2,694,527	33,630,484	1,906,947	2,876,415	7,782,114	44,271,799	52,053,913	11,130,875	40,923,038

TABLE 2.—STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through the several Canals during the Season of Navigation in 1913.

VESSELS.	TOTAL NUMBER OF TRIPS.	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.		FROM UNITED STATES TO UNITED STATES PORTS.		FROM UNITED STATES TO CANADIAN PORTS.		TONS.		TOTAL TONS.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
CANADIAN VESSELS.												
Steam and Sail.												
Sault Ste. Marie	3,279	1,582,432	1,584,759	93,623	64,171	973	4,641	329,263	133,572	2,006,291	1,787,143	3,793,434
Welland	2,411	786,785	798,430	373,524	830	2,558	.....	17,660	396,991	1,180,527	1,196,251	2,376,778
St. Lawrence	9,845	1,754,359	1,686,746	389,290	168	.....	590	.....	409,246	2,143,649	2,096,750	4,240,399
Chambly	472	27,988	28,074	4,292	.....	.....	.....	.....	1,786	32,280	29,860	62,140
St. Peters	1,324	50,581	44,309	.....	.....	.....	.....	.....	.....	50,581	44,309	94,890
Murray	1,224	220,172	127,266	31,535	38	.....	.....	1,252	15,231	252,959	142,535	395,494
Ottawa	2,647	238,891	256,738	.....	1,718	.....	.....	302	.....	239,193	258,456	497,649
Rideau	2,798	93,223	95,110	5,985	106	.....	.....	.....	6,474	99,208	101,690	200,898
Trent Valley	3,666	110,224	106,857	.....	.....	.....	.....	.....	.....	110,224	106,857	217,081
St. Andrews	988	99,980	99,298	.....	.....	.....	.....	.....	.....	99,980	99,298	199,278
Total Canadian	28,654	4,964,635	4,827,587	898,249	67,031	3,531	5,231	348,477	963,300	6,214,892	5,863,149	12,078,041
UNITED STATES VESSELS.												
Sault Ste. Marie	5,006	12,041	8,349	39,054	681,549	5,345,574	15,371,416	689,357	33,667	6,086,026	16,094,981	22,181,007
Welland	818	4,000	911	77,804	1,545	289,480	195,782	9,269	208,961	380,553	407,199	787,752
St. Lawrence	1,811	32,096	15,786	421,813	13,886	22,728	268	441	454,353	477,078	484,293	961,371
Chambly	2,725	111	2,820	133,852	.....	.....	.....	.....	136,888	133,963	139,708	273,671
St. Peters	13	88	383	.....	267	.....	.....	310	.....	398	650	1,048
Murray	53	293	53	859	242	202	33	301	150	1,655	478	2,133
Ottawa	291	11,628	442	.....	14,114	.....	.....	3,534	.....	15,162	14,556	29,718
Rideau	22	1,044	1,044	.....	.....	.....	.....	.....	.....	1,044	1,044	2,088
Trent Valley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Andrews	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total United States	10,739	61,301	29,788	673,382	711,603	5,657,984	15,567,499	703,212	834,019	7,095,879	17,142,909	24,238,788
Grand total Canadian and United States	39,393	5,025,936	4,857,375	1,571,631	778,634	5,661,515	15,572,730	1,051,689	1,797,319	13,310,771	23,006,058	36,316,829

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Numb'r	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
SAULT STE. MARIE CANAL.					
Canadian vessels, steam	3,003	1,553,789	1,556,456	93,623	64,171
" " sail	276	28,643	28,303	.....	.....
Total Canadian	3,279	1,582,432	1,584,759	93,623	64,171
United States vessels, steam	4,996	11,891	8,286	39,054	681,549
" " sail	10	150	63	.....	.....
Total United States	5,006	12,041	8,349	39,054	681,549
Grand total, Sault Ste. Marie canal	8,285	1,594,473	1,593,108	132,677	745,720
WELLAND CANAL.					
Canadian vessels, steam	2,111	723,613	735,097	330,557	830
" sail	300	63,172	63,333	42,967	.....
Total Canadian	2,411	786,785	798,430	373,524	830
United States vessels, steam	756	4,000	425	73,181	1,075
" " sail	62	.....	486	4,623	470
Total United States	818	4,000	911	77,804	1,545
Grand total, Welland canal	3,229	790,785	799,341	451,328	2,375
ST. LAWRENCE CANALS.					
Canadian vessels, steam	4,997	1,065,517	1,026,880	374,659	168
" " sail	4,848	688,842	659,866	14,631	.....
Total Canadian	9,845	1,754,359	1,686,746	389,290	168
United States vessels, steam	1,208	8,713	5,993	397,206	39
" " sail	603	23,383	9,793	24,607	13,847
Total United States	1,811	32,096	15,796	421,813	13,886
Grand total, St. Lawrence canals	11,656	1,786,455	1,702,542	811,103	14,054
CHAMBLY CANAL.					
Canadian vessels, steam	290	22,806	23,228	.....	.....
" " sail	182	5,182	4,846	4,292	.....
Total Canadian	472	27,988	28,074	4,292	.....
United States vessels, steam	.....	.....	.....	.....	.....
" " sail	2,725	111	2,280	133,852	.....
Total United States	2,725	111	2,820	133,852	.....
Grand total, Chambly canal	3,197	28,099	30,894	138,144	.....

passed through the several canals, during the Season of Navigation in 1913.

From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
Up.	Down.	Up.	Down.	Up.	Down.	
973	4,641	329,163	133,572	1,977,548	1,758,840	3,736,388
.....	.....	100	.....	28,743	28,303	57,046
973	4,641	329,263	133,572	2,006,291	1,787,143	3,793,434
5,344,768	15,370,402	685,744	33,667	6,081,457	16,093,904	22,175,361
806	1,014	3,613	.....	4,569	1,077	5,646
5,345,574	15,371,416	689,357	33,667	6,086,026	16,094,981	22,181,007
5,346,547	15,376,057	1,018,620	167,239	8,092,317	17,882,124	25,974,441
2,367	.....	17,660	356,004	1,074,197	1,091,931	2,166,128
191	.....	.....	40,987	106,330	104,320	210,650
2,558	.....	17,660	396,991	1,180,527	1,196,251	2,376,778
283,204	192,225	8,429	193,336	368,814	387,061	755,875
6,276	3,557	840	15,625	11,739	20,138	31,877
289,480	195,782	9,269	208,961	380,553	407,199	787,752
292,038	195,782	26,929	605,952	1,561,080	1,603,450	3,164,530
.....	590	.....	381,518	1,440,176	1,409,156	2,849,332
.....	.....	.....	27,728	703,473	687,594	1,391,067
.....	590	.....	409,246	2,143,649	2,096,750	4,240,399
22,728	18	.....	420,307	428,647	426,357	855,004
.....	250	441	34,046	48,431	57,936	106,367
22,728	268	441	454,353	477,078	484,293	961,371
22,728	858	441	863,599	2,620,727	2,581,043	5,201,770
.....	.....	.....	.....	22,806	23,228	46,034
.....	.....	.....	1,786	9,474	6,632	16,106
.....	.....	.....	1,786	32,280	29,860	62,140
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	136,888	133,963	139,708	273,671
.....	.....	.....	136,888	133,963	139,708	273,671
.....	.....	.....	138,674	166,243	169,568	335,811

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Numb'r	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
ST. PETER'S CANAL.					
Canadian vessels, steam	382	24,761	16,481	.....	.....
" " sail	942	25,820	27,828	.....	.....
Total Canadian	1,324	50,581	44,309	.....	.....
United States vessels, steam	6	88	157	.....	88
" " sail	7	.....	226	.....	179
Total United States	13	88	383	.....	267
Grand total, St. Peter's canal	1,337	50,669	44,692	.....	267
MURRAY CANAL.					
Canadian vessels, steam	887	173,463	85,034	24,535	38
" " sail	337	46,709	42,232	7,000	.....
Total Canadian	1,224	220,172	127,266	31,535	38
United States vessels, steam	51	293	53	451	242
" " sail	2	.....	.....	408	.....
Total United States	53	293	53	859	242
Grand total, Murray canal	1,277	220,465	127,319	32,394	280
OTTAWA CANALS.					
Canadian vessels, steam	1,007	102,339	109,138	.....	1,121
" " sail	1,640	136,552	147,600	.....	597
Total Canadian	2,647	238,891	256,738	.....	1,718
United States vessels, steam	.....	.....	.....	.....	.....
" " sail	291	11,628	442	.....	14,114
Total United States	291	11,628	442	.....	14,114
Grand total, Ottawa Canals	2,938	250,519	257,180	.....	15,832
RIDEAU CANAL.					
Canadian vessels, steam	2,185	56,702	59,320	5,985	106
" " sail	613	36,521	35,790	.....	.....
Total Canadian	2,798	93,223	95,110	5,985	106
United States vessels, steam	.....	.....	.....	.....	.....
" " sail	22	1,044	1,044	.....	.....
Total United States	22	1,044	1,044	.....	.....
Grand total, Rideau canal	2,820	94,267	96,154	5,985	106

passed through the several canals, during the Season of Navigation in 1913—*Con.*

From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
Up.	Down.	Up.	Down.	Up.	Down.	
				24,761	16,481	41,242
				25,820	27,828	53,648
				50,581	44,309	94,890
		157		245	245	490
		153		153	405	558
		310		398	650	1,048
		310		50,979	44,959	95,938
		962	13,951	198,960	99,023	297,983
		290	1,280	53,999	43,512	97,511
		1,252	15,231	252,959	142,535	395,494
202	33	301	150	1,247	478	1,725
				408		408
202	33	301	150	1,655	478	2,133
202	33	1,553	15,381	254,614	143,013	397,627
				102,339	110,259	212,598
		302		136,854	148,197	285,051
		302		239,193	258,456	497,649
		3,534		15,162	14,556	29,718
		3,534		15,162	14,556	29,718
		3,836		254,355	273,012	527,367
			6,474	62,687	65,900	128,587
				36,521	35,790	72,311
			6,474	99,208	101,690	200,898
				1,044	1,044	2,088
				1,044	1,044	2,088
			6,474	100,252	102,734	202,986

TABLE 3.—STATEMENT showing the Number, Tonnage and Nationality of Vessels

VESSELS.	Total Number	FROM CANADIAN TO CANADIAN PORTS.		FROM CANADIAN TO UNITED STATES PORTS.	
		Up.	Down.	Up.	Down.
TRENT VALLEY CANALS.					
Canadian vessels, steam	3,021	83,250	80,525		
" " sail	645	26,974	26,332		
Total Canadian	3,666	110,224	106,857		
United States vessels, steam					
" " sail					
Total United States					
Grand total, Trent Valley canals	3,666	110,224	106,857		
ST. ANDREW'S CANAL.					
Canadian vessels, steam	616	45,322	42,513		
" " sail	372	54,658	56,785		
Total Canadian	988	99,980	99,298		
United States vessels, steam					
" " sail					
Total United States					
Grand total, St. Andrew's canal	988	99,980	99,298		

passed through the several canals, during the Season of Navigation in 1913—*Con.*

From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.
Up.	Down.	Up.	Down.	Up.	Down.	
.....	.....	.....	.....	83,250	80,525	163,775
.....	.....	.....	.....	26,974	26,332	53,306
.....	.....	.....	.....	110,224	106,857	217,081
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	110,224	106,857	217,081
.....	.....	.....	.....	45,322	42,513	87,835
.....	.....	.....	.....	54,658	56,785	111,443
.....	.....	.....	.....	99,980	99,298	199,278
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	99,980	99,298	199,278

TABLE 4.—Comparative Statement of all the Canals, for the year ending December 31st, 1912 and 1913.

ARTICLES.	1912.	1913.	Increase.	Decrease.
Class No. 1.	Tons.	Tons.	Tons.	Tons.
Canadian vessels, steam	8,062,842	9,730,702	1,667,860	
" sail	2,174,493	2,347,360	172,867	
United States vessels, steam	24,069,124	23,788,434		280,690
" sail	567,066	450,333		116,733
Total, Class No. 1	34,873,525	36,316,829	1,840,727	397,423
Class No. 2.	No.	No.	No.	No.
Passengers	292,267	335,799	43,512	
Class No. 3.	Tons.	Tons.	Tons.	Tons.
Barley	206,789	423,728	216,939	
Buckwheat	253	5		248
Corn	148,218	176,490	28,272	
Oats	762,302	842,737	80,435	
Rye	13,263	13,620	357	
Flax	224,848	711,921	487,073	
Peas	228	375	147	
Wheat	5,122,696	5,956,153	833,457	
Flour	342,636	334,602		8,034
Hay	35,420	18,283		17,137
Other mill products	27,894	26,542		1,352
Fruit and vegetables	10,836	9,958		878
Potatoes	8,293	7,915		378
Live stock	1,692	2,826	1,134	
Poultry, game and fish	2,710	2,237		473
Dressed meats	346	168		178
Other packing house products	2,403	1,996		407
Hides and leather	493	70		423
Wool	1,075	228		847
All other animal products	11,469	11,774	305	
Total, Class No. 3	6,923,864	8,541,628	1,648,119	30,355
Class No. 4.				
Agricultural implements	42,116	28,299		13,817
Cement, bricks, lime	537,093	413,041		124,052
Household goods and furniture	2,958	3,948	990	
Iron, pig and bloom	99,251	67,646		31,605
" and steel, all other	458,762	311,955		146,807
Petroleum and other oils	144,205	169,765	25,560	
Sugar	41,338	54,445	13,107	
Salt	23,071	20,775		2,296
Wines, liquors and beers	31,632	27,847		3,785
Merchandise not enumerated	848,522	783,978		64,544
Total, Class No. 4	2,228,948	1,881,699	39,657	386,906
Class No. 5.				
Pulpwood	762,156	980,726	218,570	
Sawed lumber	723,935	596,722		127,213
Squared timber	58,484	41,032		17,452
Shingles	6,851	7,296	445	
Other woods	83,196	53,149		30,047
Total, Class No. 5	1,634,622	1,678,925	219,015	174,712

TABLE 4.—Comparative Statement of all the Canals, for the year ending December 31st, 1912 and 1913—*Concluded.*

Articles.	1912.	1913.	Increase.	Decrease.
Class No. 6.	Tons.	Tons.	Tons.	Tons.
Hard coal	1,178,917	1,503,412	324,495	.....
Soft coal	2,786,969	5,241,567	1,454,598	.....
Coke	12	2	.....	10
Copper ore	40,322	25,855	.....	14,467
Iron ore	31,219,646	32,498,724	1,279,078	.....
Other ore	57,951	32,192	.....	25,759
Sand, &c	515,994	649,909	133,915	.....
Total, Class No. 6	36,799,811	39,951,661	3,192,086	40,236
Grand total	47,587,245	52,053,913	5,098,877	632,209

Net increase, 4,466,668 tons.

TABLE 5.—Statement of Traffic on the undermentioned Canals during the Season of Navigation in 1913.

Articles.	Sault Ste. Marie.	Welland.	St. Lawrence.	Chambly.	St. Peters.	Murray.	Ottawa.	Rideau.	Trent Valley.	St. Andrews
Class No. 1.—Vessels.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Canadian Vessels.....Steam.	3,736,388	2,166,128	2,894,332	46,034	41,242	297,983	212,598	128,587	163,775	88,635
" " .....Sail.	57,046	210,671	1,391,067	16,106	53,648	97,511	285,051	72,311	53,306	110,643
United States Vessels.....Steam.	22,175,361	755,854	855,004	.....	490	1,725	.....	.....	.....	.....
" " .....Sail.	5,646	31,877	106,367	273,671	558	408	29,718	2,088	.....	.....
Total, Class No. 1.....	25,974 441	3,164,530	5,201,770	335,811	95,938	397,627	527,367	202,986	217,081	199,278
Class No. 2.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Passengers.....	36,872	1,620	127,638	2,507	1,582	20,210	24,759	19,653	9[illegible],162	1,796
Class No. 3.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Barley.....	234,245	96,889	92,264	13	4	267	18	17	11	.....
Buckwheat.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....
Corn.....	.....	144,354	31,914	89	1	.....	13	119	.....	.....
Oats.....	461,635	199,794	176,279	868	3,856	.....	31	134	98	42
Rye.....	2,184	6,867	4,568	1	.....	.....	.....	.....	.....	.....
Flax.....	370,378	175,351	166,192	.....	.....	.....	.....	.....	.....	.....
Peas.....	100	100	114	26	13	.....	.....	7	15	.....
Wheat.....	3,954,824	1,005,362	994,312	32	2	.....	34	459	1,128	.....
Flour.....	224,084	45,710	60,767	1,389	1,587	.....	430	487	116	32
Hay.....	1,535	.....	5,339	8,547	945	.....	389	1,026	207	295
Other mill products.....	4,680	10,540	8,252	494	1,038	.....	704	654	180	.....
Fruit and vegetables.....	.....	.....	5,128	1,859	1,995	301	248	424	3	.....
Potatoes.....	.....	.....	641	114	6,494	2	464	110	82	8
Live stock.....	7	.....	1,308	344	21	.....	962	28	156	.....
Poultry, game and fish.....	61	266	42	29	1,772	.....	38	29	.....	.....
Dressed meats.....	.....	.....	54	5	20	.....	6	80	3	.....
Other packing house products.....	40	.....	475	83	656	.....	350	392	.....	.....
Hides and leather.....	.....	.....	12	24	.....	.....	.....	32	2	.....
Wool.....	90	95	35	.....	1	.....	.....	7	.....	.....
All other animal products.....	.....	.....	6,343	5	22	11	2,301	2,890	137	65
Total, Class No. 3.....	5,253,863	1,685,328	1,554,044	13,922	18,427	581	5,988	6,895	2,138	442

Class No. 4.										
Agricultural implements	13,443	13,443	118	140	23	.....	95	987	50	.....
Cement, bricks, lime	148,001	117,751	78,509	1,063	379	64,259	1,980	337	739	23
Household goods and furniture	37	237	2,757	188	37	13	275	320	81	3
Iron, pig and bloom	32,227	15,343	17,386	112	127	.....	1,475	966	10	.....
Iron and steel, all other	113,796	80,902	104,904	9,066	227	45	658	2,043	13	301
Petroleum and other oils	5,195	90,799	70,498	187	1,035	104	823	1,079	44	1
Sugar	9,994	26,814	15,256	186	425	192	727	834	17	.....
Salt	12,074	1,582	3,256	582	1,016	.....	910	1,322	33	.....
Wines, liquors and beers	4,866	9,158	11,503	77	297	.....	844	1,086	16	.....
Merchandise not enumerated	394,277	192,344	155,974	8,616	4,512	11,190	8,114	6,239	1,411	1,301
Total, Class No. 4	733,910	548,373	460,161	20,217	8,078	75,803	15,901	15,213	2,414	1,629
Class No. 5.										
Pulpwood	19,518	299,669	408,632	208,218	.....	.....	.....	6,496	29,639	8,554
Sawed lumber	32,461	25,028	220,876	126,296	5,018	55	164,993	19,277	2,202	516
Squared timber	3,450	9,680	23,707	1,443	2	.....	1,557	30	1,144	19
Shingles	6 169	.....	218	28	379	.....	247	126	129	.....
Other woods	1,360	3,550	6,793	1,346	902	.....	19,913	1,402	17,698	185
Total, Class No. 5	62,958	337,927	660,226	337,331	6,301	55	186,710	27,331	50,812	9,274
Class No. 6.										
Hard coal	472,719	278,695	616,949	120,035	257	2,100	2,424	9,630	129	474
Soft coal	3,680,632	667,095	812,560	.....	36,551	5,192	34,145	5,154	238	.....
Coke	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Copper ore	25,855	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron ore	32,419,242	36,220	2	43,260	.....	.....	.....	.....	.....	.....
Other ore	6,800	16,926	2,650	965	274	.....	3,550	960	67	.....
Sand, &c	43,345	150	195,835	19,872	1,626	96,845	116,720	106,040	.....	69,476
Total, Class No. 6	36,648,593	999,086	1,627,996	184,132	38,708	104,137	156,839	121,784	436	69,950
Grand total	42,699,324	3,570,714	4,302,427	555,602	71,514	180,576	365,438	171,223	55,800	81,295

TABLE 6.—SUMMARY STATEMENT of Traffic on the undermentioned Canals, during the Season of Navigation ended 31st December, 1913, showing the total quantity of each description of property passed through.

Articles.	Sault Ste. Marie.	Welland.	St. Lawrence.	Chambly.	St. Peters.	Murray.	Ottawa.	Rideau.	Trent Valley.	St. Andrews
Class No. 1.—Vessels.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Vessels of all kinds	25,974,441	3,164,530	5,201,770	335,811	95,938	397,627	527,367	202,986	217,081	199,278
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Passengers	36,872	1,620	127,638	2,507	1,582	20,210	24,759	19,653	99,162	1,796
Forest Produce of Wood.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Pulpwood	19,518	299,669	408,632	208,218				6,496	29,639	8,554
Sawed lumber	32,461	25,028	220,876	126,296	5,018	55	164,993	19,277	2,202	516
Squared timber	3,450	9,680	23,707	1,443	2		1,557	30	1,144	19
Shingles	6,169		218	28	379		247	126	129	
Other woods	1,360	3,550	6,793	1,346	902		19,913	1,402	17,698	185
Total	62,958	337,927	660,226	337,331	6,301	55	186,710	27,331	50,812	9,274
Animals and Produce of Animals										
Live stock	7		1,308	344	21	2	962	28	156	
Poultry, game and fish	61	266	42	29	1,772		38	29		
Dressed meats			54	5	20		6	80	3	
Other packing house products	40		475	83	656		350	392		
Hides and leather			12	24				32	2	
Wool	90	95	35		1			7		
All other animal products			6,343	5	22	11	2,301	2,890	137	65
Total	198	361	8,269	490	2,492	13	3,657	3,458	298	65
Agricultural Products.										
Barley	234,245	96,889	92,264	13	4	267	18	17	11	
Buckwheat			5							
Corn		144,354	31,914	89	1		13	119		
Oats	461,635	199,794	176,279	868	3,856		31	134	98	42

Rye	2,184	6,867	4,568	1						
Flax	370,378	175,351	166,192							
Peas	100	100	114	26	13			7	15	
Wheat	3,954,824	1,005,362	994,312	32	2		34	459	1,128	
Flour	224,084	45,710	60,767	1,389	1,587		430	487	116	32
Hay	1,535		5,339	8,547	945		389	1,026	207	295
Other mill products	4,680	10,540	8,252	494	1,038		704	654	180	
Fruit and vegetables			5,128	1,859	1,995	301	248	424	3	
Potatoes			641	114	6,494		464	110	82	8
Total	5,253,665	1,684,967	1,545,775	13,432	15,935	568	2,331	3,437	1,840	377
Manufactures.										
Agricultural implements	13,443	13,443	118	140	23		95	987	50	
Cement, bricks and lime	148,001	117,751	78,509	1,063	379	64,259	1,980	337	739	23
Household goods and furniture	37	237	2,757	188	37	13	275	320	81	3
Iron, pig and bloom	32,227	15,343	17,386	112	127		1,475	966	10	
Iron, steel, all other	113,796	80,902	104,904	9,066	227	45	658	2,043	13	301
Petroleum and other oils	5,195	90,799	70,498	187	1,035	104	823	1,079	44	1
Sugar	9,994	26,814	15,256	186	425	192	727	834	17	
Salt	12,074	1,582	3,256	582	1,016		910	1,322	13	
Wines, liquors and beers	4,866	9,158	11,503	77	297		844	1,086	16	
Merchandise not enumerated	394,277	192,344	155,974	8,616	4,512	11,190	8,114	6,239	1,411	1,301
Total	733,910	548,373	460,161	20,217	8,078	75,803	15,901	15,213	2,414	1,629
Products of Mines.										
Hard coal	472,719	278,695	616,949	120,035	257	2,100	2,424	9,630	129	474
Soft coal	3,680,632	667,095	812,560		36,551	5,192	34,145	5,154	238	
Coke									2	
Copper ore	25,855									
Iron ore	32,419,242	36,220	2	43,260						
Other ore	6,800	16,926	2,650	965	274		3,550	960	67	
Sand, &c	43,345	150	195,835	19,872	1,626	96,845	116,720	106,040		69,476
Total	36,648,593	999,086	1,627,996	184,132	38,708	104,137	156,839	121,784	436	69,950
Grand totals (passengers and tonnage of vessels not included)	42,699,324	3,570,714	4,302,427	555,602	71,514	180,576	365,438	171,223	55,800	81,295

TABLE 7, NO. 1.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Sault Ste. Marie Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural impleme'ts		13,443								13,443	13,443	13,443	
All other animal													
Barley		143,913		28,617		58,274		3,441		234,245	234,245	175,971	58,274
Buckwheat													
Cement, bricks, &c	143,888		1,928		2,185				148,001		148,001	145,511	2,490
Coal, hard					327,184		145,535		472,719		472,719		472,719
" soft	2,701				1,995,701		1,682,230		3,680,632		3,680,632	50	3,680,582
Coke													
Corn													
Dressed meats													
Flax		220,166		81 678		61,201		7,333		370,378	370,378	323,163	47,215
Flour	140	153,798				55,527		14,619	140	223,944	224,084	168,557	55,527
Fruits and vegetables													
Hay	1,535								1,535		1,535	1,535	
Hides and leather													
Household goods	23	14							23	14	37	37	
Iron, pig and bloom	31,914				313				32,227		32,227	31,229	998
Iron and steel, all other	84,895	75			18,573	6,073	4,180		107,648	6,148	113,796	86,474	27,322
Live stock	7								7		7	7	
Merchandise	318,356	9,398	25,444	11,730	28,059	1,275	15		371,874	22,403	394,277	354,278	39,999
Oats		375,101		69,986		7,261		9,287		461,635	461,635	450,493	11,142
Other mill products		2,063				2,617				4,680	4,680	2,063	2,617
" packing house products		40								40	40	40	
" woods	232	452		500				176	232	1,128	1,360	1,184	176
Ore, all other				6,800						6,800	6,800	6,800	
" copper						25,855				25,855	25,855		25,855
" iron		33,926		6,900		32,221,056	32,376	124,984	32,376	32,386,866	32,419,242	40,826	32,378,416
Peas	100								100		100	100	
Petroleum	5,195								5,195		5,195	5,195	
Poultry, game and fish		61								61	61	61	
Potatoes													
Pulpwood	18,414	1,050					54		18,468	1,050	19,518	19,464	54

Rye								2,184		2,184	2,184		2,184
Sand	95	43,250							95	43,250	43,345	43,345	
Sawed lumber	1,339	4,991		18,443		5,520	668	1,500	2,007	30,454	32,461	24,773	7,688
Shingles						6,063	106		106	6,063	6,169		6,169
Square timber								3,450		3,450	3,450		3,450
Sugar	9,934				60				9,994		9,994	9,934	60
Salt	10,484				1,590				12,074		12,074	10,484	1,590
Wheat		1,750,358		1,178,475		975,075		50,916		3,954,824	3,954,824	3,031,984	922,840
Wines, liquors and beers	4,866								4,866		4,866	4,866	
Wool						90				90	90		90
Total freight	634,118	2,752,099	27,372	1,403,129	2,373,665	33,425,887	1,865,164	217,890	4,900,319	37,799,005	42,699,324	4,951,867	37,747,457

TABLE 7, No. 2.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Welland Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian	United States.
Agricultural implements	13,443								13,443		13,443	13,489	
All other animal													
Barley		84,689						12,200		96,889	96,889	93,992	2,897
Buckwheat													
Cement, bricks, &c	102,743		3,428			11,060		520	106,171	11,580	117,751	106,171	11,580
Coal, hard					235,730		42,965		278,695		278,695		278,695
" soft						1,500		665,595		667,095	667,095		667,095
Coke													
Corn						114,662		29,692		144,354	144,354		144,354
Dressed meats													
Flax		153,672						21,679		175,351	175,351	171,641	3,710
Flour		33,299				11,967		444		45,710	45,710	33,299	12,411
Fruits and vegetables													
Hay													
Hides and leather													
Household goods	193	4						40	193	44	237	232	5
Iron, pig and bloom	14,663	58	287					335	14,950	393	15,343	15,008	335
Iron and steel, all other	73,048	38	130			505		7,181	73,178	7,724	80,902	73,216	7,686
Live stock													
Merchandise	105,497	422	13,849		60,934	9,055		2,587	180,280	12,064	192,344	119,311	73,033
Oats		185,183				7,407		7,204		199,794	199,794	192,068	7,726
Other mill products		1,555				8,685		300		10,540	10,540	1,555	8,985
" packing house products													
Other woods						3,550				3,550	3,550		3,550
Ore, all other	20	11,704			5,202				5,222	11,704	16,926	11,724	5,202
" copper													
" iron								36,220		36,220	36,220		36,220
Peas	100								100		100	100	
Petroleum	405	35,375	15		108	1,011		53,885	528	90,271	90,799	37,799	53,000
Poultry, game and fish					266				266		266		266
Potatoes													

Pulpwood	73,741		225,928						299,669		299,669	299,669	
Rye		560						6,307		6,867	6,867	4,683	2,184
Sand		150								150	150	150	
Sawed lumber	592			3,215		14,937		6,284	592	24,436	25,028	3,807	21,221
Shingles													
Square timber		800						8,880		9,680	9,680	800	8,880
Sugar	5,923	2,373	60		18,149			309	24,132	2,682	26,814	8,665	18,149
Salt	267	153			238			924	505	1,077	1,582	1,393	189
Wheat		824,714				20,258		160,390		1,005,362	1,005,362	895,621	109,741
Wines, liquors and beers	5,032	310	1,943		109			1,764	7,084	2,074	9,158	8,964	194
Wool			95						95		95	95	
Total freight	395,667	1,335,059	245,735	3,215	320,736	204,597	42,965	1,022,740	1,005,103	2,565,611	3,570,714	2,093,406	1,477,308

TABLE 7, No. 3.—GENERAL STATEMENT showing the Quantity of each Through Article Transported on the Welland Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	13,443								13,443		13,443	13,443	
All other animal													
Barley		84,689						12,200		96,889	96,889	93,992	2,897
Buckwheat													
Cement, bricks, &c	102,743		3,428			11,060		520	106,171	11,580	117,751	106,171	11,580
Coal, hard					235,730		42,965		278,695		278,695		278,695
" soft						1,500		665,595		667,095	667,095		667,095
Coke													
Corn						114,662		29,692		144,354	144,354		144,354
Dressed meats													
Flax		153,672						21,679		175,351	175,351	171,641	3,710
Flour		33,299				11,967		444		45,710	45,710	33,299	12,411
Fruits and vegetables													
Hay													
Hides and leather													
Household goods	193	4						40	193	44	237	232	5
Iron, pig and bloom	14,663	58	287					335	14,950	393	15,343	15,008	335
Iron and steel, all other	73,048	38	130			505		7,181	73,178	7,724	80,902	73,216	7,686
Live stock													
Merchandise	105,244	422	13,849		60,934	9,055		2,587	180,027	12,064	192,091	119,058	73,033
Oats		185,183				7,407		7,204		199,794	199,794	192,068	7,726
Other mill products		1,555				8,685		300		10,540	10,540	1,555	8,985
" packing house products													
" woods						3,550				3,550	3,550		3,550
Ore, all other	20	1,808			5·202				5,222	1,808	7,030	1,828	5,202
" copper													
" iron								36,220		36,220	36,220		36,220
Peas	100								100		100	100	
Petroleum	405	35,375	15		108	1,011		53,885	528	90,271	90,799	37,799	53,000
Poultry, game and fish					266				266		266		266
Potatoes													

Pulpwood			225,928						225,928		225,928	225,928	
Rye		560						6,307		6,867	6,867	4,683	2,184
Sand													
Sawed lumber	592			3,215		14,937		6,284	592	24,436	25,028	3,807	21,221
Shingles													
Square timber		800						8,880		9,680	9,680	800	8,880
Sugar	5,923	2,373	60		18,149			309	24,132	2,682	26,814	8,665	18,149
Salt	267	153			238			924	505	1,077	1,582	1,393	189
Wheat		822,691				20,258		160,390		1,003,339	1,003,339	893,598	109,741
Wines, liquors and beers	5,032	310	1,943		109			1,764	7,084	2,074	9,158	8,964	194
Wool			95						95		95	95	
Total freight	321,673	1,322,990	245,735	3,215	320,736	204,597	42,965	1,022,740	931,109	2,553,542	3 484,651	2,007,343	1,477,308

TABLE 7, No. 4.—GENERAL STATEMENT showing Quantity of each Way Article Transported on the Welland Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements													
All other animal													
Barley													
Buckwheat													
Cement, bricks, &c													
Coal, hard													
" soft													
Coke													
Corn													
Dressed meats													
Flax													
Flour													
Fruits and vegetables													
Hay													
Hides and leather													
Household goods													
Iron, pig and bloom													
Iron and steel, all other													
Live stock													
Merchandise	253								253		253	253	
Oats													
Other mill products													
" packing house products													
" woods													
Ore, all other		9,896								9,896	9,896	9,896	
" copper													
" iron													
Peas													
Petroleum													
Poultry, game and fish													

Potatoes													
Pulpwood	73,741								73,741		73,741	73,741	
Rye													
Sand		150								150	150	150	
Sawed lumber													
Shingles													
Square timber													
Sugar													
Salt													
Wheat		2,023								2,203	2,023	2,023	
Wines, liquors and beers													
Wood													
Total freight	73,994	12,069							73,994	12,069	86,063	86,063	

TABLE 7, No. 5.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	110	8							110	8	118	118	
All other animal	1,092	5,185			6			60	1,098	5,245	6,343	6,278	65
Barley	408	87,454						4,402	408	91,856	92,264	89,367	2,897
Buckwheat		3			2				2	3	5	3	2
Cement, bricks, &c	73,453	3,304	1,500		2			250	74,955	3,554	78,509	77,081	1,428
Coal, hard	592	3,943					258	612,156	850	616,099	616,949	996	615,953
" soft	170,895	3,442						638,223	170,895	641,665	812,560	170,682	641,878
Coke													
Corn	5,146	18,600						8,168	5,146	26,768	31,914	5,164	26,750
Dressed meats	22	32							22	32	54	54	
Flax	392	162,090						3,710	392	165,800	166,192	162,482	3,710
Flour	1,281	59,486							1,281	59,486	60,767	60,767	
Fruits and vegatables	367	4,744			2			15	369	4,759	5,128	5,111	17
Hay	3,970	1,364			5				3,975	1,364	5,339	5,339	
Hides and leather			7		5				12		12	10	2
Household goods	835	1,872			14			36	849	1,908	2,757	2,751	6
Iron, pig and bloom	15,123	1,889	345					29	15,468	1,918	17,386	11,256	6,130
Iron and steel, all other	93,123	6,081	50				174	5,476	93,347	11,557	104,904	97,130	7,774
Live stock	111	1,197							111	1,197	1,308	1,300	8
Merchandise	116,600	29,182	9,093		70			1,029	125,763	30,211	155,974	151,968	4,006
Oats	423	175,856							423	175,856	176,279	176,279	
Other mill products	4,995	3,256			1				4,996	3,256	8,252	8,251	1
" packing house products	339	136							339	136	475	475	
" woods	1,159	5,634							1,159	5,634	6,793	6,793	
Ore, all other	2,650								2,650		2,650		2,650
" copper													
" iron	1	1							1	1	2	1	1
Peas	106	7			1				107	7	114	114	
Petroleum	1,648	23,401	47					45,402	1,695	68,803	70,498	25,125	45,373
Poultry, game and fish	3	38			1				4	38	42	41	1
Potatoes	100	532			9				109	532	641	639	2

Pulpwood	69,022	465	339,145						408,167	465	408,632	408,632	
Rye	1	4,567							1	4,567	4,568	3,452	1,116
Sand	90,674	104,959						202	90,674	105,161	195,835	186,731	9,104
Sawed lumber	59,946	122,743	3,879	34,303	5				63,830	157,046	220,876	220,571	305
Shingles	85	131			2				87	131	218	218	
Square timber	277	15,413						8,017	277	23,430	23,707	15,520	8,187
Sugar	14,278	791	30					157	14,308	948	15,256	15,256	
Salt	2,020	1,147						89	2,020	1,236	3,256	2,999	257
Wheat	8,237	900,433						85,642	8,237	986,075	994,312	906,608	87,704
Wines, liquors and beers	9,531	1,167	421		1			383	9,953	1,550	11,503	11,422	81
Wool	20		15						35		35	35	
Total freight	749,035	1,750,553	354,532	34,303	126		432	1,413,446	1,104,125	3,198,302	4,302,427	2,837,019	1,465,408

TABLE 7, No. 6.—GENERAL STATEMENT showing the Quantity of each Through Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	1								1		1	1	
All other animal	175	2,819						60	175	2,879	3,054	2,994	60
Barley		87,454						4,402		91,856	91,856	88,959	2,897
Buckwheat		3								3	3	3	
Cement, bricks, &c	42,694	230	1,500					250	44,194	480	44,674	44,424	250
Coal, hard		3,099						600,112		603,211	603,211		603,211
" soft	3,500	622,077							3,500	622,077	625,577	2,900	622,677
Coke													
Corn	1,814	1,176						8,168	1,814	9,344	11,158	1,814	9,344
Dressed meats	20								20		20	20	
Flax	392	161,530						3,710	392	165,240	165,632	161,922	3,710
Flour	16	37,243							16	37,243	37,259	37,259	
Fruits and vegetables	62	4,384						15	62	4,399	4,461	4,446	15
Hay		4								4	4	4	
Hides and leather													
Household goods	463	1,605						36	463	1,641	2,104	2,104	
Iron, pig and bloom	5,303	88	345					29	5,648	117	5,765	5,736	29
Iron and steel, all other	68,106	831	50					5,476	68,156	6,307	74,463	68,492	5,971
Live stock	1	24							1	24	25	25	
Merchandise	103,264	21,157	9,093					1,029	112,357	22,166	134,523	133,834	689
Oats		173,827								173,827	173,827	173,827	
Other mill products	234	748							234	748	982	982	
" packing house products	33	37							33	37	70	70	
" woods													
Ore, all other													
" copper													
" iron													
Peas	100	5							100	5	105	105	
Petroleum	651	23,025	47					45,402	698	68,427	69,125	23,752	45,373
Poultry, game and fish													
Potatoes	6								6		6	6	

Pulpwood	68,329	165	339,145						407,474	165	407,639	407,639		
Rye		4,567								4,567	4,567	3,451	1,116	
Sand														
Sawed lumber	190		3,879						4,069		4,069	4,069		
Shingles														
Square timber		3,970							8,017	11,987	11,987	3,970	8,017	
Sugar	13,014	638	30						157	13,044	795	13,839	13,839	
Salt	338	700							89	338	789	1,127	1,038	89
Wheat	75	900,132							85,642	75	985,774	985,849	898.145	87,704
Wines, liquors and beers	8,146	91	421						383	8,567	1,298	9,865	9,785	80
Wool	20		15							35		35	35	
Total freight	316,947	2,052,433	354,525						762,977	671,472	2,815,410	3,486,882	2,095,650	1,391232

TABLE 7, No. 7.—GENERAL STATEMENT showing the Quantity of each Way Article Transported on the St. Lawrence Canals during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	109	8							109	8	117	117	
All other animal	917	2,366			6				923	2,366	3,289	3,284	5
Barley	408								408		408	408	
Buckwheat					2				2		2		2
Cement, bricks, &c	30,759	3,074			2				30,761	3,074	33,835	32,657	1,178
Coal, hard	592	844					258	12,044	850	12,888	13,738	996	12,742
" soft	167,395	3,442						16,146	167,395	19,588	186,983	167,782	19,201
Coke													
Corn	3,332	17,424							3,332	17,424	20,756	3,350	17,406
Dressed meats	2	32							2	32	34	34	
Flax		560								560	560	560	
Flour	1,265	22,243							1,265	22,243	23,508	23,508	
Fruits and vegetables	305	360			2				307	360	667	665	2
Hay	3,970	1,360			5				3,975	1,360	5,335	5,335	
Hides and leather				7	5				12		12	10	2
Household goods	372	267			14				386	267	653	647	6
Iron, pig and bloom	9,820	1,801							9,820	1,801	11,621	5,520	6,101
Iron and steel, all other	25,017	5,250					174		25,191	5,250	30,441	28,638	1,803
Live stock	110	1,173							110	1,173	1,283	1,275	8
Merchandise	13,336	8,045			70				13,406	8,045	21,451	18,134	3,317
Oats	423	2,029							423	2,029	2,452	2,452	
Other mill products	4,761	2,508			1				4,762	2,508	7,270	7,269	1
" packing house products	306	99							306	99	405	405	
" woods	1,159	5,634							1,159	5,634	6,793	6,793	
Ore, all other	2,650								2,650		2,650		2,650
" copper													
" iron	1	1							1	1	2	1	1
Peas	6	2			1				7	2	9	9	
Petroleum	997	376							997	376	1,373	1,373	
Poultry, game and fish	3	38			1				4	38	42	41	1

Potatoes	94	532			9				103	532	635	633	2
Pulpwood	693	300							693	300	993	993	
Rye	1								1		1	1	
Sand	90,674	104,959						202	90,674	105,161	195,835	186,731	9,104
Sawed lumber	59,756	122,743		34,303	5				59,761	157,046	216,807	216,502	305
Shingles	85	131			2				87	131	218	218	
Square timber	277	11,443							277	11,443	11,720	11,550	170
Sugar	1,264	153							1,264	153	1,417	1,417	
Salt	1,682	447							1,682	447	2,129	1,961	168
Wheat	8,162	301							8,162	301	8,463	8,463	
Wines, liquors and beers	1,385	252			1				1,386	252	1,638	1,637	1
Wool													
Total freight	432,088	320,197	7	34,303	126		432	28,392	432,653	382,892	815,545	741,369	74,176

TABLE 7, No. 8.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Chambly Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	131	9							131	9	140	140	
All other animal		5								5	5	5	
Barley	5	8							5	8	13	13	
Buckwheat													
Cement, bricks, &c	672	22						369	672	391	1,063	694	369
Coal, hard	86							119,949	86	119,949	120,035	81	119,954
" soft													
Coke													
Corn	87	2							87	2	89	89	
Dressed meats	3	2							3	2	5	5	
Flax													
Flour	1,355	34							1,355	34	1,389	1,389	
Fruits and vegetables	712	1,147							712	1,147	1,859	1,859	
Hay		4,993	3,554						3,554	4,993	8,547	8,547	
Hides and leather		24								24	24	24	
Household goods	89	99							89	99	188	188	
Iron, pig and bloom	111	1							111	1	112	112	
Iron and steel, all other	799	73						8,194	799	8,267	9,066	1,945	7,121
Live stock	16	328							16	328	344	344	
Merchandise	1,590	911	1,426					4,689	3,016	5,600	8,616	3,927	4,689
Oats	8	860							8	860	868	868	
Other mill products	447	47							447	47	494	494	
" packing house products	82	1							82	1	83	83	
" woods	974	372							974	372	1,346	1,346	
Ore, all other	150	815							150	815	965	965	
" copper													
" iron								43,260		43,260	43,260		43,260
Peas	13	13							13	13	26	26	
Petroleum	181	6							181	6	187	187	
Poultry, game and fish	1	28							1	28	29	29	

Potatoes	11	103							11	103	114	114		
Pulpwood		10	208,208						208,208	10	208,218	208,218		
Rye	1								1		1	1		
Sand	15	60						19,797	15	19,857	19,872	75	19,797	
Sawed lumber	114	87	125,925					170	126,039	257	126,296	126,296		
Shingles	28								28		28	28		
Square timber								1,443		1,443	1,443		1,443	
Sugar	180	6							180	6	186	186		
Salt	408	6						168	408	174	582	414	168	
Wheat	12	20							12	20	32	32		
Wines, liquors and beers	73	4							73	4	77	77		
Wool														
Total freight	8,354	10,096	339,113					198,039	347,467	208,135	555,602	358,801	196,801	

TABLE 7, No. 9.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Peters Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	18	5							18	5	23		
All other animal	19	3							19	3	22		
Barley	4								4		4		
Buckwheat													
Cement, bricks, &c	346	33							346	33	379		
Coal, hard	255	2							255	2	257		
" soft		36,551								36,551	36,551		
Coke													
Corn	1								1		1		
Dressed meats	19	1							19	1	20		
Flax													
Flour	1,555	32							1,555	32	1,587		
Fruits and vegetables	1,968	27							1,968	27	1,995		
Hay	935	10							935	10	945		
Hides and leather													
Household goods	27	10							27	10	37		
Iron, pig and bloom		127								127	127		
Iron and steel, all other	154	73							154	73	227		
Live stock	21								21		21		
Merchandise	3,522	990							3,522	990	4,512		
Oats	3,856								3,856		3,856		
Other mill products	954	84							954	84	1,038		
" packing house products	633	23							633	23	656		
" woods	645	257							645	257	902		
Ore, all other		274								274	274		
" copper													
" iron													
Peas	13								13		13		
Petroleum	994	41							994	41	1,035		
Poultry, game and fish	321	1,451							321	1,451	1,772		
Potatoes	6,487	7							6,487	7	6,494		

Pulpwood														
Rye														
Sand		1,626									1,626	1,626		
Sawed lumber	4,701	317								4,701	317	5,018		
Shingles	372	7								372	7	379		
Square timber	2									2		2		
Sugar	382	43								382	43	425		
Salt	988	28								988	28	1,016		
Wheat	1									1		1		
Wines, liquors and beers	292	5								292	5	297		
Wool	1	1								1	1	2		
Total freight	29,486	42,028								29,486	42,028	71,514	71,514	

TABLE 7, No. 10.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Murray Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements													
All other animal	1	10							1	10	11	11	
Barley		267								267	267	267	
Buckwheat													
Cement, bricks, &c	64,259								64,259		64,259	64,259	
Coal, hard								2,100		2,100	2,100		2,100
" soft							1,692	3,500	1,692	3,500	5,192		5,192
Coke													
Corn													
Dressed meats													
Flax													
Flour													
Fruits and vegetables	108	193							108	193	301	301	
Hay													
Hides and leather													
Household	6	7							6	7	13	4	9
Iron, pig and bloom													
Iron and steel, all other	45								45		45	45	
Live stock	1	1							1	1	2	1	1
Merchandise	7,089	4,101							7,089	4,101	11,190	11	11,179
Oats													
Other mill products													
" packing house products													
" woods													
Ore, all other													
" copper													
" iron													
Peas													
Petroleum	63	41							63	41	104	104	
Poultry, game and fish													
Potatoes													

Pulpwood													
Rye													
Sand	96,845								96,845		96,845	96,845	
Sawed lumber	5	50							5	50	55	55	
Shingles													
Square timber													
Sugar	192								192		192	192	
Salt													
Wheat													
Wines, liquors and beers													
Wool													
Total freight	168,614	4,670					1,692	5,600	170,306	10,270	180,576	162,095	18,481

TABLE 7, No. 11.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Ottawa Canals during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implem'ts.	92	3							92	3	95	95	
All other animals	71	2,230							71	2,230	2,301	2,301	
Barley	18								18		18	18	
Buckwheat													
Cement, bricks, etc.	1,873	107							1,873	107	1,980	1,980	
Coal, hard							2,424		2,424		2,424		2,424
" soft	33,890	115					140		34,030	115	34,145	33,702	443
Coke													
Corn	13								13		13	13	
Dressed meats		6								6	6	6	
Flax													
Flour	389	41							389	41	430	430	
Fruits and vegetables	121	127							121	127	248	248	
Hay	12	377							12	377	389	389	
Hides and leather													
Household goods	225	50							225	50	275	275	
Iron, pig and bloom	1,449	26							1,449	26	1,475	1,475	
Iron and steel, all other	633	25							633	25	658	658	
Live stock	60	902							60	902	962	962	
Merchandise	5,357	2,579					178		5,535	2,579	8,114	7,558	556
Oats	3	28							3	28	31	31	
Other mill products	230	474							230	474	704	704	
Other packing house products	261	89							216	9	350	350	
Other woods	25	19,888							25	19,888	19,913	19,913	
Ore, all other	3,550								3,550		3,550		3,550
" copper													
" iron													
Peas													
Petroleum	624	199							624	199	823	823	
Poultry, game and fish		38								38	38	38	
Potatoes	21	443							21	443	464	464	
Pulpwood													

Rye													
Sand		116,720								116,720	116,720	116,720	
Sawed lumber	71	127,306		37,616					71	164,922	164,993	164,993	
Shingles		247								247	247	247	
Square itmber	2	1,555							2	1,555	1,557	1,557	
Sugar	693	34							693	34	727	727	
Salt	881	29							881	29	910	910	
Wheat	34								34		34	34	
Wines, liquors and beers	830	14							830	14	844	844	
Wool													
Total freight	51,428	273,562		37,616			2,742		54,170	311,268	365,438	358,465	6,973

TABLE 7, No. 12.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Rideau Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implem'ts.	597	390							597	390	987	987	
All other animal	1,159	1,731							1,159	1,731	2,890	2,890	
Barley		17								17	17	17	
Buckwheat													
Cement, bricks, etc.	109	228							109	228	337	337	
Coal, hard	753	57						8,820	753	8,877	9,630	42	9,588
" soft	1,218	104						3,832	1,218	3,936	5,154	1,265	3,889
Coke													
Corn	27	92							27	92	119	119	
Dressed meats	44	36							44	36	80	80	
Flax													
Flour	223	264							223	264	487	487	
Fruits and vegetables	203	221							203	221	424	424	
Hay	966	60							966	60	1,026	1,026	
Hides and leather	29	3							29	3	32	32	
Household goods	222	98							222	98	320	320	
Iron, pig and bloom	914	52							914	52	966	966	
Iron and steel, all other	1,902	141							1,902	141	2,043	2,043	
Live stock	14	14							14	14	28	28	
Merchandise	4,093	2,146							4,093	2,146	6,239	6,239	
Oats	23	111							23	111	134	134	W
Other mill products	236	418							236	418	654	654	
" packing house products	286	106							286	106	392	392	
" Woods	1,236	166							1,236	166	1,402	1,402	
Ore, all other			960						960		960	960	
" copper													
" Iron													
Peas	6	1							6	1	7	7	
Petroleum	607	472							607	472	1,079	1,079	
Poultry, game and fish	27	2							27	2	29	29	
Potatoes	95	15							95	15	110	110	
Pulpwood	450	6,046							450	6,046	6,496	6,496	

Rye													
Sand	57,716	48,324						57,716	48,324	106,040	106,040		
Sawed lumber	4,327	14,950						4,327	14,950	19,277	19,277		
Shingles	101	25						101	25	126	126		
Square timber	6	24						6	24	30	30		
Sugar	613	221						613	221	834	834		
Salt	1,044	278						1,044	278	1,322	1,322		
Wheat	4	455						4	455	459	459		
Wines, liquors and beers	895	191						895	191	1,086	1,086		
Wool	2	5						2	5	7	7		
Total freight	80,147	77,464	960				12,652	81,107	90,116	171,223	157,746	13,477	

TABLE 7, No. 13.—GENERAL STATEMENT showing the Quantity of each Article Transported on the Trent Valley Canals during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements	30	20							30	20	50		
All other animal	106	31							106	31	137		
Barley	11								11		11		
Buckwheat													
Cement, bricks, &c	219	520							219	520	739		
Coal, hard	92	37							92	37	129		
" soft	208	30							208	30	238		
Coke		2								2	2		
Corn													
Dressed meats	1	2							1	2	3		
Flax													
Flour	56	60							56	60	116		
Fruits and vegetables	3								3		3		
Hay	180	27							180	27	207		
Hides and leather	2								2		2		
Household goods	74	7							74	7	81		
Iron, pig and bloom	10								10		10		
Iron and steel, all other	13								13		13		
Live stock	136	20							136	20	156		
Merchandise	902	509							902	509	1,411		
Oats	94	4							94	4	98		
Other mill products	103	77							103	77	180		
" packing house products													
Other woods	10,443	7,255							10,443	7,255	17,698		
Ore, all other		67								67	67		
" copper													
" iron													
Peas	15								15		15		
Petroleum	41	3							41	3	44		
Poultry, game and fish													
Potatoes	82								82		82		

Pulpwood	2,040	27,599							2,040	27,599	29,639			
Rye														
Sand														
Sawed lumber	1,087	1,115							1,087	1,115	2,202			
Shingles	89	40							89	40	129			
Square timber	329	815							329	815	1,144			
Sugar	16	1							17	1	17			
Salt	29	4							29	4	33			
Wheat	1,118	10							1,118	10	1,128			
Wines, liquors and beers	12	4							12	4	16			
Wool														
Total freight	17,541	38,259							17,541	38,259	55,800	55,800		

TABLE 7, No. 14.—GENERAL STATEMENT showing the Quantity of each Article Transported on the St. Andrews Canal during the Season of Navigation in 1913.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Origin of Cargo.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Canadian.	United States.
Agricultural implements													
All other animal		65							65		65	65	
Barley													
Buckwheat													
Cement, bricks &c.		23								23	23	23	
Coal, hard	448	26							448	26	474	474	
" soft													
Coke													
Corn													
Dressed meats													
Flax													
Flour		32								32	32	32	
Fruits and vegetables													
Hay	295									295	295	295	
Hides and leather													
Household goods	1	2							1	2	3	3	
Iron, pig and bloom													
Iron and steel, all other		301								301	301	301	
Live stock													
Merchandise	13	1,288							13	1,288	1,301	1,301	
Oats		42								42	42	42	
Other mill products													
" packing house products													
" woods	185								185		185	185	
Ore, all other													
" copper													
" iron													
Peas													
Petroleum		1								1	1	1	
Poultry, game and fish													
Potatoes	8								8		8	8	

Pulpwood	8,505	49							8,505	49	8,554	8,544	
Rye													
Sand	69,378	98							69,378	98	69,476	69,476	
Sawed lumber		516								516	516	516	
Shingles													
Square timber		19								19	19	19	
Sugar													
Salt													
Wheat													
Wines, liquors and beers													
Wool													
Total freight	78,538	2,757							78,538	2,757	81,295	81,295	

TABLE 8.—Statement showing the Classified Tonnage of all kinds of Vessels

SAULT STE.

CANADIAN.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,506 tons	1	6,506	1	5,000 to —— tons		
2	4,000 " 5,005 "	3	13,550	2	4,000 " 5,000 "		
3	3,000 " 4,000 "	2	6,800	3	3,000 " 4,000 "		
4	2,000 " 3,000 "	16	36,400	4	2,000 " 3,000 "		
5	1,000 " 2,000 "	66	86,350	5	1,000 " 2,000 "		
6	Under 1,000	47	15,580	6	Under 1,000	23	5,725
	Total	137	165,186		Total	23	5,725

WELLAND

1	250 to 1,905 tons	97	100,950	1	250 to 1,225 tons	28	19,200
2	200 " 249 "	2	400	2	200 " 249 "		
3	150 " 199 "	2	350	3	150 " 199 "	3	475
4	100 " 149 "	2	250	4	100 " 149 "	1	125
5	50 " 99 "	8	600	5	50 " 99 "	3	190
6	Under 50 "	23	510	6	Under 50 "	4	35
	Total	134	103,060		Total	39	20,025

ST. LAWRENCE

1	250 to 1,905 tons	103	100,985	1	250 to 1,226 tons	82	41,009
2	200 " 249 "	5	1,110	2	200 " 249 "	13	3,000
3	150 " 199 "	7	1,250	3	150 " 199 "	33	5,860
4	100 " 149 "	12	1,560	4	100 " 149 "	53	6,720
5	50 " 99 "	30	2,240	5	50 " 99 "	50	4,110
6	Under 50 "	61	1,575	6	Under 50 "	11	395
	Total	218	108,720		Total	242	61,094

RIDEAU, OTTAWA

1	250 to 370 tons	6	1,830	1	250 to 320 tons	7	1,700
2	200 " 249 "			2	200 " 249 "	3	600
3	150 " 199 "	5	860	3	150 " 199 "	43	7,110
4	100 " 149 "	6	650	4	100 " 149 "	29	3,460
5	50 " 99 "	9	525	5	50 " 99 "	15	1,055
6	Under 50 "	35	560	6	Under 50 "	15	275
	Total	61	4,425		Total	112	14,200

passed through the following Canals during the Season of Navigation in 1913.

MARIE CANAL.

UNITED STATES.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	5,000 to 6,498 tons	73	397,798	1	5,000 to —— tons	....	.....
2	4,000 " 5,000 " ——	86	396,500	2	4,000 " 5,000 "	1	4,650
3	3,000 " 4,000 "	131	451,600	3	3,000 " 4,000 "	....	.....
4	2,000 " 3,000 "	37	98,350	4	2,000 " 3,000 "	1	2,200
5	1,000 " 2,000 "	30	47,050	5	1,000 " 2,000 "	1	1,000
6	Under 1,000 "	20	7,975	6	Under 1,000 "	4	2,200
	Total	377	1,399,273		Total	7	10,050

CANAL.

1	250 to 1,750 tons	57	58,125	1	250 ton 2,040 tons	13	11,125
2	200 " 249 "	4	825	2	200 " 249 "	2	400
3	150 " 199 "	3	525	3	150 " 199 "	1	150
4	100 " 149 "	1	100	4	100 " 149 "	1	100
5	50 " 99 "	10	670	5	50 " 991 "	2	130
6	Under 50 "	30	565	6	Under 50 "	2	30
	Total	105	60,810		Total	21	11,935

CANAL.

1	250 to 1,611 tons	36	35,289	1	250 to 700 tons	7	3,440
2	200 " 249 "	1	240	2	200 " 249 "	....	.....
3	150 " 199 "	2	350	3	150 " 199 "	1	190
4	100 " 149 "	....	.....	4	100 " 149 "	28	3,270
5	50 " 99 "	5	360	5	50 " 99 "	106	10,040
6	Under 50 "	10	240	6	Under 50 "	....	.....
	Total	54	36,479		Total	142	16,940

AND CHAMBLY CANALS.

1	250 to —— tons	....	.....	1	250 to —— tons	....	.....
2	200 " 249 "	....	.....	2	200 " 249 "	....	.....
3	150 " 199 "	....	.....	3	150 " 199 "	6	960
4	100 " 149 "	....	.....	4	100 " 149 "	145	16,210
5	50 " 99 "	....	.....	5	50 " 99 "	331	31,115
6	Under 50 "	1	15	6	Under 50 "	....	.....
	Total	1	15		Total	482	47,285

APPENDIX

DOMINION CANALS

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

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

	Miles.
1. Lachine canal	$8\frac{1}{2}$
Lake St. Louis and River St. Lawrence	16
2. Soulanges canal	14
Lake St. Francis and River St. Lawrence	31
3. Cornwall canal	$11\frac{1}{4}$
River St. Lawrence	5
4. Farran's Point canal	$1\frac{1}{2}$
River St. Lawrence	$9\frac{1}{2}$
5. Rapide Plat canal	$3\frac{3}{8}$
River St. Lawrence	4
6. Galops canal	$7\frac{1}{3}$
River St. Lawrence and Lake Ontario	228
7. Welland canal	$26\frac{3}{4}$
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c	574
8. Sault Ste. Marie canal	$1\frac{1}{4}$
Lake Superior to Port Arthur	272
Total	1,214
To Duluth	1,336
Chicago	1,240

Second.—Ottawa to Lake Champlain.

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

Third.—Ottawa to Kingston and Perth.

1. Rideau canal.

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

1. Trent canal (not completed).

Fifth.—Ocean to Bras d'Or lakes.

1. St. Peter's canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,217 statute miles. The distance to Duluth is 2,339 statute miles. The distance to Chicago, 2,243 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 miles. From Quebec to Montreal, the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826, the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869, this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5, of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

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

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

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

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553¼ feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

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

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

LACHINE CANAL.

First construction commenced	1821
" completed	1825
First enlargement commenced	1843
" completed	1848
Second enlargement commenced	1873
" completed	1901
Length of canal	8½ statute miles.
Number of locks	5
Dimensions of locks	270 feet by 45 feet.
Total rise of lockage	45 feet.
Depth of water on sills at two locks	18 "
" " at three locks	14 "
Average width of new canal	150 "

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

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

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bars the ascent to the River St. Lawrence. They are 1,006 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Construction commenced	1892
Open for traffic	1899
Length of canal	14 statute miles.
Number of locks, lift	4
" " guard	1
Dimensions of locks	280 feet by 45 feet.
Total rise of lockage	84 feet.
Depth of water on sills	15 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "
Number of arc lights	219 of 2,000 c.p. each.

The canal extends from Cascade point to Coteau Landing, overcoming the Cascade, Rapids, Cedar rapid and Coteau rapids.

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

CORNWALL CANAL.

Fisrt commenced, 9 feet	1844
" opened	1847
Enlargement commenced	1897
" completed	1900
Length of canal	11 statute miles.
Number of locks	6
Dimensions of Locks	270 feet by 75 feet.
Total rise of lockage	48 feet.
Depth of water on sills	14 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface	154 "

The old lift locks, 200 feet by 55 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis, of 31 miles, which is being made navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's landing.

WILLIAMSBURG CANALS.

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

FARRAN'S POINT CANAL.

First commenced, 9 feet	1844
Opened	1847
Enlargement commenced	1897
" completed	1900
Length of canal	1½ miles.
Number of locks	1 "
New lock	800 feet by 45 feet.
Old lock	200 "
Total rise of lockage	3½ feet.
Depth of water on sills of new lock	14 "
Depth of water on sills of old lock	9 "
Breadth of canal at bottom	90 "
Breadth of canal at water surface	154 "

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

RAPIDE PLAT CANAL.

First commenced, 9 feet	1844
" opened	1847
Enlargement commenced	1884
" completed	1897
Length of canal	3⅔ miles.
Number of locks	2 "
Dimensions of locks	270 feet by 45 feet.
Total rise in lockage	11½ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	152 "

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

From the head of Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of 9½ miles. This canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

GALOPS CANAL.

First commenced, 9 feet	1844
Opened	1846
Enlargement commenced	1888
" completed	1903
Length of canal	$7\frac{3}{4}$ miles.
Number of locks	3
Dimensions of locks (one of which is a guard lock)	800 by 50. 270 by 45. 303 by 45.
Total rise of lockage	$15\frac{1}{2}$ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable $4\frac{1}{2}$ miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

MURRAY CANAL.

Construction begun	1882
Completed	1890
Length between eastern and western pier heads	5 1-6 miles.
Breadth at bottom	80 feet
Breadth at water surface	124
Depth below lowest known lake level	11
No locks.	

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

WELLAND CANAL.

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

	Old Line.	Enlarged or New Line.
Length of canal	$27\frac{1}{2}$ miles.	$26\frac{3}{4}$ miles.
Pairs of guard-gates (formerly 3)	2	1
Number of locks — lift	26	25
Number of locks — guard	1	1
Dimensions	1 lock 270 x 45 1 lock 200 x 45 1 (tidal) 230 x 45 24 locks 150 x 26 ft. 6 in.	270 feet x 45 feet.
Total rise of lockage	$326\frac{3}{4}$ feet	$326\frac{3}{4}$ feet.
Depth of water on sills	$10\frac{1}{4}$ "	14 "
Construction commenced, 8 feet		1824
" completed		1833
Enlargement commenced, 14 feet		1872
" completed		1887

WELLAND RIVER BRANCHES.

Length of canal—	
Port Robinson cut to River Welland	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct	300 "
Chippewa cut to River Niagara	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles.
Number of locks	2
Dimensions of locks	1 of 150 by 26½ feet. 1 of 300 by 45 " 28 "
Total rise of lockage	10 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Total rise of lockage	7 feet.
Depth of water on sills	7½ "

The Welland canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburg, 11¾ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

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

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

SAULT STE. MARIE CANAL.

Construction commenced	1888
Opened for traffic	1895
Length of canal, between the extreme ends of the entrance piers	7,472 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	18 feet 3 inches.
Total rise of lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth at surface of water	150 feet.

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

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245⅝ miles.

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

Ottawa River Canals.

The Ste. Anne's lock.	Grenville canal.
Carillon canal.	Rideau canal.

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

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

Sections of Navigation.	Intermediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine canal	8½	
From Lachine to Ste. Anne's lock	15	23½
Ste. Anne's lock and piers	⅛	23⅝
Ste. Anne's lock to Carillon canal	27	50⅝
The Carillon canal	¾	51⅜
The Carillon to Grenville canal	6¼	57⅝
The Grenville canal	5¾	63⅜
From the Grenville canal to entrance of Rideau navigation	56	119⅜
Rideau navigation ending at Kingston	126¼	245⅝

STE. ANNE'S LOCK.

Construction commenced	1814
" completed	1816
Rebuilt of wood	1833
" in masonry	1843

	Old Lock.	New Lock
Length of canal	⅛ mile.	⅛ mile.
Number of locks	1	1
Dimensions of locks	190 x 45 feet.	200 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of water on sills	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

THE CARILLON CANAL.

Construction commenced	1819
" completed	1833
Enlargement commenced	1871
" completed	1887
Length of canal	$\frac{3}{4}$ mile.
Number of locks	2
Dimensions of locks	200 x 45 feet.
Total rise or lockage	16 feet.
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Construction commenced	1819
" completed	1833
Enlargement commenced	1871
" completed	1887
Length of canal	$5\frac{3}{4}$ miles.
Number of locks	5
Dimensions of locks	200 x 45 feet.
Total rise or lockage	$43\frac{3}{4}$ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet.
Breadth of canal at surface of water	50 to 80 "

This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

Construction commenced	1826
" completed	1832

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters			$126\frac{1}{4}$ miles.
Number of locks going from Ottawa to Kingston			35 ascending. 14 descending.
Total lockage	$457\frac{1}{2}$ feet	$292\frac{1}{2}$ rise and $165\frac{1}{4}$ fall	at low water.
Dimensions of locks			134 x 33 feet
Depth of water on sills			5 feet.
Navigation depth through the several reaches			5 "
Breadth of canal reaches at bottom			60 ft. in earth. 54 feet in rock.
Breadth of canal at surface of water			80 feet in earth

PERTH BRANCH.

Construction commenced	1883	
" completed	1892	
Length of canal	7	Miles.
Number of locks	2	
Dimensions of locks	134 feet x 33 feet.	
Total rise or lockage	26 "	
Depth of water on sills	5 "	6 inches.
Length of dam	200 "	
Breadth of canal at botton	40 "	in rock.
	60 "	in clay.
Breath of canal at surface of water	80 "	

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

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

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

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

1. The summit level, supplied by the Wolfe lake system.

2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.

3. The southwest descending level to Kingston, supplied by the Mud lake system formerly known as the Devil lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin of Chambly; thence by the Chambly canal, to St. Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York:—

Section of Navigation.	Intermediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours lock	14	14
St. Ours lock to Chambly canal	32	46
Chambly canal	12	58
Chambly canal to boundary line	23	81
Boundary line to Champlain canal	111	192
Champlain canal to junction with Erie canal	66	258
Erie canal, from junction to Albany	7	265
Albany to New York	146	411

ST. OURS LOCK DAM.

Construction commenced	1844	
" completed	1849	
Length	$\frac{1}{8}$ mile.	
Number of locks	1	
Dimensions of lock	200 feet by 45 feet.	
Total rise of lockage	5 feet.	
Depth of water on sills	7 feet at low water.	
Length of dam in eastern channel	300	"
Length of dam in western channel	690	"

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

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

CHAMBLY CANAL.

Construction commenced	1831	
" completed	1843	
Length of canal	12 miles.	
Number of locks	9	
Dimensions of locks:—		
Guard lock, No. 1, at St. Johns	122 feet.	
Lift " 2	124 "	From $22\frac{1}{2}$ to 24 feet wide.
" " 3, 4, 5, 6	118 "	
" " 7, 8, 9 combined	125 "	
Total rise or lockage	74 "	
Depth of water on sills	$6\frac{1}{2}$ "	
Breadth of canal at bottom	36 "	
Breadth of canal at surface of water	60 "	

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

TRENT CANAL.

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

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

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

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

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 155 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence by the River Severn to Georgian bay, Lake Huron; the total distance being about 200 miles of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial Government in 1837, was deferred. By certain works, however, below specified, sections

of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog to Port Perry, a distance of 174 miles from Trenton.

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

From Trenton, Bay of Quinte to Nine Mile rapids	—	9
Nine Mile rapids to Percy Landing	19½	—
Percy landing to Heeley's Falls dam	—	14½
Heeley's Falls dam to Peterborough	51¾	—
Peterborough to Lakefield	—	9½
Lakefield to a point across Balsam lake	61	—
	132¼	33

Total distance, Bay of Quinté to a point across Balsam lake 165¼

From Sturgeon point on Sturgeon lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog 27

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

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

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

At Burleigh rapids, 10 miles from Young's point, a canal, about 2¼ miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

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

At Bobcaygeon, 15¾ miles from Buckhorn rapids, a dam, 553 feet long, controls the water level to Fenelon falls.

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

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

1 Lock at Rosedale (maintained by the Ontario government), 100′ x 30′ x 4′ 6′ to 6′ 6″ depth water on mitre sill.

2	Locks	at Fenelon	134′x33′x5′ 0″	to 7′ 6″	deep water on mitre sill	
1	"	Lindsay	134′x33′x5′ 0″	to 7′ 6″	"	"
1	"	Bobcaygeon	134′x33′x5′ 8″	to 7′ 0″	"	"
1	"	Buckhorn	134′x33′x5′ 0″	to 9′ 0″	"	"
1	"	Lovesick	134′x33′x5′ 0″	to 9′ 4″	"	"
2	"	Burleigh	134′x33′x6′ 0″	to 8′ 0″	"	"
1	"	Young's point	134′x33′x5′ 0″	to 14′ 0″	"	"
1	"	Peterborough	134′x33′x5′ 0″	to 10′ 0″	"	"
1	"	Hastings	134′x33′x7′ 0″	to 10′ 6″	"	"
1	"	Chisholms	134′x33′x5′ 0″	to 8′ 6″	"	"

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ST. PETER'S CANAL, CAPE BRETON.

Construction commenced	1854
" completed	1869
Enlargement begun	1875
" completed	1881
Length of canal about 2,600 feet.	
Breadth at water line	50 feet.
Lock	One tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills	18 feet at lowest water.
Depth through canal	19 "
Extreme rise and fall of tide in St. Peter's bay	7 "

This canal connects St. Peter's bay on the northern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

BEAUHARNOIS CANAL.

Construction begun	1842
" completed	1845
Length of canal	12 statute miles.
Number of locks	9
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82½ "
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

As the new Soulanges canal is now opened for navigation, the Beauharnois canal is abandoned for navigation purposes.

EARLIER CANALS.

A system of three canals preceded the Beauharnois. These were:—

COTEAU DU LAC CANAL.

Construction commenced	1779
" completed	1780

SPLIT ROCK CANAL.

Construction commenced	1779
" completed	1780

CASCADE POINT CANAL.

Construction commenced	1782
" completed	1783

The locks were 20 x 6 feet, and provided for a draft of 2 feet. In 1814 the work of widening them to 12 feet was begun, and finished in 1817.

Two canals were also constructed off Burlington Bay, Ontario. They were:

BURLINGTON BAY CANAL.

Construction	commenced	1825
"	completed	1832

DESJARDINS CANAL.

Construction	commenced	1826
"	completed	1837

Neither of these canals required locks. They have for many years been abandoned. The depth of water provided in the first instance was 7½ feet.

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