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Additional comments /
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VOLUME VI.

FOURTH SESSION OF THE FIRST PARLIAMENT

OF THE

DOMINION OF CANADA.

SESSION 1871.



VOLUME IV

OTTAWA : Printed by I. B. TAYLOR, 29, 31, & 33, Rideau Street.

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RETURN

To an Address of the House of Commons, dated 30th March, 1871, for copy of the Report of Mr. S. J. Dawson, upon the Red River Expedition of 1870 ; also copy of any document submitted by him in reference to the strictures published in England by an Officer of the Expeditionary Force.

By Command.

J. C. AIKINS,

Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,

Ottawa, 5th April, 1871.

OTTAWA, 22nd March, 1871.

SIR,—In submitting to your notice the following Report on the Red River Expedition, I beg to express the deep appreciation which I must ever entertain of the cordial and unvarying support which, as being in charge of the arrangements necessary for the transport of the Expeditionary Force through the uninhabited region west of Lake Superior, I experienced from your Department.

I have the honor to be, Sir,

Your most obedient servant,

S. J. DAWSON.

Hon. H. L. Langevin, C.B.,

Minister of Public Works, &c., &c., &c., Ottawa.

R E P O R T
ON THE
RED RIVER EXPEDITION OF 1870,

BY

S. J. DAWSON,

Civil Engineer.

Early in the winter of last year (1869-70), I received instructions from the Government to provide vessels of a class adapted to the navigation of the waters in the unfrequented region intervening between Lake Superior and the Red River Settlement. A military force had to be sent through on the opening of the navigation, and it was a matter of vital importance that these vessels should be of a character to meet the exigencies of such a service.

The route for a distance of two hundred miles, had never been traversed by any vessel larger or stronger than a bark canoe, and the chief officers of the Hudson's Bay Company, who were supposed to be well acquainted with the country, had declared it to be impracticable to their boats.

Among those who gave expression to this opinion was the late Sir George Simpson, Governor of the Company, than whom no one could pretend to greater experience in navigating the inland waters of British North America.

That distinguished gentleman, in a written communication to the Government, which was subsequently published, had expressed his belief that the route was practicable only to bark canoes, and that these (as every one acquainted with such vessels must concede) were not adapted to the conveyance of a military force.

So general was this opinion as to the character of the route, by Lake Superior, and so firmly fixed had it become, that the Imperial Government on two occasions sent troops by way of Hudson's Bay to Fort Garry, once in 1846, when a wing of the 60th foot was led up from that icy sea by Col. Crofton; and again in 1857, when several companies of the Canadian Rifles were sent out.

Having traversed the route by Lake Superior frequently, I was in a position to explain to the Government that the reports as to its impracticability were exaggerated, that it had been for many years the high-way of the North-west Company of Canada, and that, after the mountainous country on the borders of Lake Superior was passed, there would be no difficulty whatever in sending forward a force of considerable numbers, by means of boats.

The suggestions which I had the honor to submit, in this regard, having been approved of, the services of the principal boat-builders throughout the Provinces of Ontario and Quebec were speedily called into requisition. Early in January the first contracts were given out and the work of boat-building went on without interruption until the opening of navigation.

At the same time a number of flat scows were ordered and built for use in shallow rapids, and every article of outfit that could possibly be required, whether in the way of rigging for the boats, tools for repairing them or outfit for the voyageurs, was provided in ample quantity.

I was furthermore directed (in January, 1870), to increase the force on the Thunder Bay Road, in as far as the season and the nature of the locality would permit, so as to have the larger bridges completed and other necessary preparations made, before the opening of navigation. In order the better to ensure these instructions being carried out, an active and experienced officer, Mr. Lindsay Russell, was despatched by way of Superior City, from which place he had to walk two hundred miles on snow shoes to Thunder Bay. A copy of his instructions is annexed, and I may here remark that he executed them with energy and skill.

It was at this time apprehended that the insurgents at Red River might endeavour to tamper with the Saulteux Indians, a tribé which occupies the country about Fort Frances and the Lake of the Woods in formidable numbers, and in order to establish and keep up friendly relations with these Indians, by direction of the Government, I sent instructions to a trusty agent at Fort William, to proceed to Fort Frances where he had long resided, and enter into communication with the chiefs and leading men of the tribe. A copy of these instructions is hereunto annexed.

Before the navigation opened, it became necessary to secure the services of a number of skilled voyageurs to manage and navigate the boats, and agents were accordingly despatched to the various localities throughout the country where the desired class of men was to be found.

Furthermore, in hiring men for the Public Works, in view of the probability of the necessity arising of their being required as voyageurs, such only were engaged as had had some experience in navigating the inland waters of the country, or in driving logs in rapid rivers. The total number of men thus engaged, either as workmen or voyageurs, was eight hundred, and it was kept at that number throughout the season.

Having been in communication with the military authorities, at various times, during the month of April, I was most careful to inform them as to the condition of the Thunder Bay Road, and the character of the country generally, through which the Expedition would have to pass. They were furnished with maps shewing the length, respectively, of the portages and navigable sections; and in order that there might be no misapprehension as to the state of the road, I submitted to them a memorandum of which the following is a copy:—

“MEMORANDUM.

“OTTAWA, 25th April, 1870.

“When the work of road making was brought to a close last fall, a section of 25 miles, reckoning from Thunder Bay, was practicable to waggons, with only one interruption at the Kaministiquia, which was then unbridged, and continuing on the line an additional section of ten miles was cut out in such a way as to be practicable to oxen with sleds or carts.

“The two large rivers—Kaministiquia and Matawin—which cross the line, were bridged last winter, and bridges were also built over the more considerable of the smaller streams, so that, practically, the work of bridging may be considered as completed.

“It may be added that portage roads were laid out and opened, in as far as such work could be done in winter, between Shebandowan Lake and Lac des Mille Lacs.

“At the same time instructions were sent to the officer in charge, to set all the available force to work on the road as soon as the snow should have so far cleared off, as to admit of operations thereon being resumed, so that about eighty men are by this time engaged on the unfinished section of the line.

“An additional force of 120 men will be sent to their aid by the first steamer, and a week later, a further number of about fifty will go on.

“OPENING AND IMPROVEMENT OF THE PORTAGES.

“The voyageurs who go up in charge of the first shipment of boats should, immediately

on their arrival at Thunder Bay, be sent to open and improve the Portages between Shebandowan Lake and Rainy Lake, and for this purpose they can be supplied with canoes at Fort William, and outfit from the Government stores at the works.

“THE WAGGON SERVICE.

“Stables will be required at Thunder Bay, at the half-way Station, and at Shebandowan Lake, together with tents or huts for the accommodation of the teamsters. Intermediate between the half-way station and Thunder Bay, on the one side, and between the first named place and Shebandowan Lake, on the other, there should be camps as resting places where the horses could be fed. These camps would only require one or two men to be stationed at each, to take care of the hay and oats, and have victuals in readiness for the teamsters as they passed.

“Both at Thunder Bay and the half-way Station of the Kanimistiquia, it would be necessary to have a blacksmith with shoeing apparatus and a supply of horse shoes.

“The waggon service would require in all—

Teamsters.....	73
Men at Camps.....	4
Overseers.....	3
Blacksmiths.....	2
Clerk or time keeper.....	1
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“BOATS AND SUPPLIES OVER THUNDER BAY ROAD.

“Operations in this regard may be at once commenced by organizing the waggon service and sending boats, provisions, oats, hay, &c., forward to the Matawin Crossing, 25 miles from Thunder Bay. And at this point a small space should be cleared to guard against fire, and a few huts erected to serve as storehouses.

“THE BOAT SERVICE.

“In providing for this, three voyageurs should be sufficient for each boat, that is, with the aid of the soldiers in rowing and in transporting articles over the Portages.

“With this arrangement it would be necessary, that, in running rapids, the crews of two boats should be put in one, running first one, and then the other. The voyageurs may not be all equally expert, and, perhaps, four to each boat might, in some cases be necessary.

“It is reasonable to believe, however, that after a little practice, many of the soldiers will become almost as skilful in the management of a boat as the voyageurs, and they will have had an opportunity of gaining experience before any of the difficult sections are reached.

“In case of necessity, additional force can be supplied, to some extent, from among the men on the works, most of whom have had more or less experience as boatmen. Each brigade of boats would require an overseer voyageur, for the maintenance of discipline among the crews, calling them to time in the morning, &c.

“There should also be a clerk or two attached to the force, to keep the time and accounts of the voyageurs.

“When the greater part of the boats, and a considerable portion of the supplies, have reached Shebandowan Lake, oxen and horses should be placed on the Kashaboiwe, Height of Land, Baril, Brulé, and French Portages, as follows :

“On Kashaboiwe Portage, 1 span of horses, 2 yoke of oxen.

Height of Land, 1 span of horses, 2 yoke of oxen.

Baril Portage, 2 yoke of oxen.

Brulé Portage, 2 yoke of oxen.

French Portage, 2 yoke of oxen, 2 span of horses.

"It would, at first, barely be possible, to supply provender for horses and oxen at any point beyond the French Portage.

"Assuming that on reaching Fort Frances, the force will require one hundred boats, there will remain forty, besides scows, with which to send forward supplies from the terminus of the Thunder Bay road at Shebandowan Lake to Fort Frances.

"These might be distributed on the different sections as follows :

	Boats.	Scows.
" On Shebandowan Lake.....	4	
Kashaboiwe Lake.....	2	
Summit Pond.....		1
Lac des Mille Lacs.....	3	
Baril Lake.....	2	
Windegoostigoon Lakes.....	4	
Kaogassikok Lake.....	3	
Pond, Deux Rivières Portage.....		1
Sturgeon Lake.....	4	
River between Sturgeon Lake and Island Portage.....		4
Nequaquon Lake.....	3	
Between Nequaquon and Nameukan Lakes, on South Channel.....	4	
Nameukan Lake.....	2	
Rainy Lake.....	5	
Total.....	36	6
Reserve.....	4	
	40	

"By distributing the boats to be employed in the transport of supplies in relays, as above, much labor in portaging will be avoided, and fewer men required to man them, inasmuch as the crews of different sections can join together when necessary.

"To man the boats in the Lake region when distributed in this way, one hundred and thirty men, with three competent overseers, would be sufficient. Of these at least thirty men should be stationed permanently on the rough section between Sturgeon Lake and Island Portage.

"Three boat carpenters should accompany the force with tools and material to make repairs when necessary.

"Provision has already been made by the Government for the construction of the huts and stables referred to in the foregoing, and sawed lumber has been ordered for those to be built at Thunder Bay.

"(Signed,)

S. J. DAWSON."

Fully appreciating the difficulties to be encountered on a road of forty five miles in length, of which a section of twenty five miles, only, was represented as being practicable to waggons, and an additional section of ten miles opened so that oxen with carts or sleds could pass over it, His Excellency the Lieutenant General Commanding the Forces determined on sending forward the regular troops to aid in opening and improving the road and the Colonel in immediate command of the expeditionary Field Force, also, well aware that much work was needed on the road, before the stores could pass over it, recommended certain companies of the troops to be sent forward to aid in its construction.

It had been suggested to the military authorities that the troops might pass by land

from the Lake of the Woods to Fort Garry ; but, in order that they might be in a position to judge for themselves as to whether it would be better to go by that route or by way of the Winnipeg, I sent them a memorandum of which the following is a copy :

“ MEMORANDUM.

“ LAKE OF THE WOODS TO FORT GARRY.

OTTAWA, 18 April, 1870.

“Accompanying this memorandum is a rough plan of the Winnipeg River made from Track Survey, together with a table of distances, showing the length of the Portages and Navigable sections, respectively, between Rat Portage at the outlet of the Lake of the Woods and Lake Winnipeg. From the Lake of the Woods to Fort Garry are two routes, the one by water, being that just referred to, and the other by land from the “North West Angle.”

“Having regard to the passage of a large body of men with outfit and supplies the following facts are submitted with a view of supplying information on which an opinion can be based as to which it would be most advantageous to adopt.

“ THE WATER ROUTE.

“By this route, the distance between Rat Portage, at the outlet of the Lake of the Woods, and Fort Alexander, at the entrance to Lake Winnipeg, is in round numbers 149 miles.

“In this distance the number of Portages is twenty five and their aggregate length as ascertained by actual measurement three miles and six chains.

“The Winnipeg River presents no serious difficulties to the largest class of canoes and it has long been navigated by the Hudson Bay Company's Boats.

“In the navigable sections, the depth of water is sufficient for large boats and there are but few heavy rapids to be run, and these short.

“In several instances the entrances to the carrying places are close to the brow of the falls, and in such cases boats should be brought in with caution, one by one.

“As a general rule, with practised guides and skilful boatmen, the Winnipeg may be considered a safe river, or, if an exception exists, it is at the seven portages, which have always to be passed with great care.

“As canoe men, the Indians who frequent the Winnipeg cannot be excelled, and, as boatmen, many of them have had a good deal of experience.

“The Winnipeg River, in its general character, may be regarded as a series of Lakes separated by short rapids or water-falls. A brief description of the different sections will be found in the printed slips annexed.

“ THE LAND ROUTE.

“The country lying between the Lake of the Woods and Red River is low and swampy and, except on the route adopted as a line of road, quite impracticable, at least it has never yet been passed over in summer, except by a few wandering hunters. Even the Indians traverse it but rarely, and the half-breeds of Red River never attempt to pass, except in winter.

“The distance between the ‘North West Angle’ of the Lake of the Woods and Fort Garry, by the line adopted for a road, is ninety miles—sixty miles being through a wooded country and thirty over open prairie.

“Starting from the North West Angle, and proceeding Westward there is, first, a section of thirty miles quite in a state of nature, and as yet unopened. This section abounds in swamps and marshes but is nevertheless practicable for a road. Then follows a stretch of thirtymiles of line, newly opened through a wooded region, still very swampy, but not so much so as that first referred to. In this section, the road runs for many miles

along a narrow gravelly ridge, with impassable swamps, spreading out to the horizon on either side. The forest country ends at Oak Point settlement, and from thence to Fort Garry the distance is thirty miles over open prairie.

"It should be mentioned that on the Red River, which has to be crossed on approaching Fort Garry from the East, there is no bridge. The channel is 400 feet in width and the water deep—carriages are at present crossed by means of a scow.

"THE TWO ROUTES COMPARED.

"The obstacles to the navigation of the Winnipeg may be briefly summed up as presenting three miles and six chains of land carriage, in twenty five different sections, the longest of which is $\frac{5}{8}$ of a mile in length.

"On the other hand, the land route presents thirty miles of road to be opened, ninety miles of a march, and a broad unbridged river, just in front of a fortress, to cross.

"On the land route, moreover, even after the thirty miles of new road were opened, it is probable that there would be difficulty in obtaining the means of transport; added to which, it would be in the power of the insurgents, if so disposed, to offer serious opposition, on the march, more especially where the road runs on a narrow gravelly ridge, as described, with impassable swamps on either side.

"By the Water Route, the expedition would carry with it its own means of locomotion and crossing rivers. It would be quite out of the power of the insurgents to offer opposition at any place nearer than Fort Alexander, and, even there, they could not do so unless they should be able to provide themselves with boats in the Red River settlement. Neither Lake Winnipeg nor the Winnipeg River can be approached by land, from the direction of Fort Garry, on account of the impracticable character of the country which abounds in bogs and marshes.

"The land route would be fatiguing to the men, and they would be terribly harrassed with insects, such as mosquitoes, black flies, &c., among the marshes.

"By the water route, there would be stiff work on the portages, but it would not last long at a time, and there would be relief on the open and breezy lakes intervening between them.

"In the one case, the men would reach Fort Garry fatigued with a long march and hard work in road making, in the other they would arrive vigorous and fresh.

"(Signed,) S. J. DAWSON."

“LAKE of the Woods to Fort Garry by way of the Winnipeg River.

	Land Yards.	Water Miles and Chains.	REMARKS.
Rat Portage	286	9	Good open portage.
River .....		.20	
Les Dalles		21	Good running.
River .....		.20	Fine navigable section.
Grande Décharge		2.40	Run or portaged, according to height of water.
River			In this section two rapids “Dechargé” and “Steepprock.”
Yellow Mud Portage	110		Approach with care.
River		1	A heavy pitch to run or portage.
Pine Portage	230		
River		17.40	“Cave” rapids just below portage, short run, then fine
Portage de l’Isle	220		Open run. [among islands.]
River		21	Fine navigation, two ripples near “Chute à Jacquot.”
Chute à Jacquot Port	110		
River		7	Fine, after leaving foot of Chute.
1st Point des Bois	286		
River .....		.05	
2nd Point des Bois	110		} No difficulty, but care required with boats, especially at head of 2nd portage.
River		1.16	
3rd Point des Bois	66		
River		4	Quiet water.
Slave Falls Portage	660		Approach this fall with caution.
River		6	No impediment.
La Barriere Portage	66		
River		6	No impediment.
Otter Falls .....		.10	Always run, but requires experienced guides.
River		7	Good, only one little rapid to run.
	Yds. chs.		
The Seven Portages.	1st Portage. 132		} The total distance past the seven portages is under three miles. This is the worst, indeed, the only dangerous part of the Winnipeg. It is avoided except at low water, by going by the “Pinawa” Channel.—See Map.
	River .....	.05	
	2nd Portage 188		
	River .....	.10	
	3rd Portage 176		
	River .....	.40	
	4th Portage. 66	892	
	River .....	.48	
	5th Portage. 88		
	River .....	.05	
6th Portage. 110			
River .....	.60		
7th Portage. 132			
River	16.40		
1st Galais de Bonnet	44		Good to Galais de Bonnet.
River .....		.74	
2nd Galais de Bonnet	88		
River		3.50	
Grand Bonnet Portage	1,122		} This is the longest portage on the route, but it is well opened.
River .....		.50	
Petit Bonnet Portage	100		
River		3	
White Mud Portage	330		
River		3	
1st Silver Falls	154		} The two “Silver” Falls are in close proximity and can be passed in one portage of twenty-five chains.
River .....		.05	
2nd Silver Falls	286		
River		5	Two little rapids to run.
Pine Portage	264		Last portage.
River to Fort Alex- ander		6.50	
	3.06 chs.	145.45	
Fort Alexander to Stone Fort		60	Through Lake Winnipeg and up Red River, no impediment.

Synopsis.

	Mls.	Chs.
"Navigable water in sections as above, between Rat Portage and Fort Alexander	145.45	
Aggregate length of Portages.....		3.06
	<hr/>	
Total.....		148.51

Distances, by Water Route, from Fort Frances to Stone Fort.

	Mls.	Chs.
Fort Frances to Lake of the Woods, no impediment.....	67.	
Lake of the Woods to Rat Portage, no impediment.....	64.	
Rat Portage to Fort Alexander, as per table above.....	148.51	
Fort Alexander to Stone Fort, no impediment.....		60.
	<hr/>	
		339.51

Memorandum.

"The Seven Portages might be much improved by extending the carrying places, as follows :

	Yds.	Chs.
1. Let a portage be cut from the head of the first chute, clear through to the foot of the 3rd chute. Its length would be.....	880	
Then quiet water for.....		40
2. Portage past 4th Chute.....	66	
Then quiet water for		48
3. Cut portage by which 5th and 6th chutes can be passed at once..	308	
Then quiet water to 7th chute		60
4. Portage past 7th chute	132	
	<hr/>	
	1386	148

"The 7th chute can be run, if the water should prove favorable. A few men of the expedition, with Indians sent in advance, could soon prepare the portages in the manner above indicated."

It would be tedious to enumerate all the details of the preliminary arrangements made to facilitate the passage of the Expeditionary Force through a wilderness which afforded nothing in itself. Suffice to say that, as the result proved, there was scarcely an article which could by any possibility be useful omitted, nor a mechanic, whose services were likely to be called into requisition, left behind. Among the civilians sent forward were boat builders with their tools, blacksmiths with portable forges and carpenters with the implements of their trade.

Waggons for the road transport were provided by Col. Wiley of the Militia Department, and by him, also, were purchased the supplies of flour, pork and other provisions for the Expedition. It is due to that careful and energetic officer to say that the supplies were of excellent quality and put in packages of size and weight the best adapted to the means of transport.

In order to establish and keep up regular communication with the Expedition, the Government chartered two steamers—the *Chicora* and *Algoma*—as mail boats, both well fitted up and adapted for the conveyance of passengers and stores. These steamers were to be paid at a fixed rate, and were to run between Collingwood and Thunder Bay, leaving the former place, alternately, at intervals of five days, throughout the season of navigation.

ADVANCE OF THE EXPEDITION TO THUNDER BAY, LAKE SUPERIOR.

The *Algoma* set out on her first trip on the 3rd of May and by her, voyageurs and workmen, to the number of one hundred and forty, were sent forward to Thunder Bay. An agent was at the same time despatched to Sault Ste. Marie for the purpose of organizing a force to improve the Portage road on the British side, and to provide means of embarkation at the head of the rapids.

The *Chicora* left Collingwood on the 7th May, freighted with boats, stores, supplies and outfit. By this steamer an additional force of 120 workmen and voyageurs was sent forward.

On reaching Sault Ste. Marie, however, the canal, which is on the United States side, was found to be shut against Canadian Vessels and the *Chicora* had, in consequence, to discharge her cargo at the foot of the rapids on the British side. The voyageurs and workmen immediately joined the force which had been organized, according to the instructions sent by the *Algoma*, to work on the Portage Road, and by the united exertions of the two parties it was quickly put in good order. At the same time, a small wharf was run out at the head of the rapids, to facilitate embarkation, and a scow, which had been brought from Collingwood in fitted pieces, was put together to serve the purpose of conveying troops and stores from the wharf, where the water was shallow, to vessels which came to anchor in the river, which they had to do at some distance from the shore.

In the mean time, the boats were being sent rapidly forward; those which had been built at Quebec and Toronto were brought by rail to Collingwood to be there shipped in the regular steamers, while a propeller with two schooners in tow, freighted with boats and stores was passing up by the Welland Canal.

The steamer *Algoma* which, as stated, had left Collingwood on the 3rd May, made the trip without interruption to Thunder Bay; but, on returning, according to an arrangement made with her Captain, she did not re-pass the Canal, but remained at the head of the Sault Ste. Marie Rapids.

Thus, although the Canal was shut, the precautions taken ensured a line of communication, the *Algoma* being available for transport on Lake Superior and the *Chicora* on Lake Huron, with an intervening Portage of three miles on the British side, at Sault Ste. Marie.

The Canal being, for the time, closed to British Vessels, the *Chicora* on her next trip took forward a detachment of Volunteers to Sault Ste. Marie, as well as a quantity of Military Stores and returning, was again ready to start on the 21st of May.

By this trip (21st May) there went forward several companies of the regular troops and a number of voyageurs and workmen; on arriving at Sault Ste. Marie, it was found that orders had been sent by the United States Authorities to allow Canadian vessels, having no troops or military stores on board, to pass through the Canal.

In this state of matters, the troops having been disembarked, on the British side, marched over the Portage Road, while the *Chicora* passed through the Canal. The Propeller and schooners already referred to had been in waiting for some days below the locks, and they also were permitted to pass. The troops were soon brought on board at the head of the rapids and the *Chicora* proceeded on her way to Thunder Bay, where she arrived on the 25th of May.

I may here remark that no action on the part of the Canadian Government could have provided for the arrival of the Troops at an earlier date; when the *Algoma* set out from Collingwood, on the 3rd of May, it was not even known that she would get through on account of the ice which generally remains in the straits, above Sault Ste. Marie, till a later time than that at which she would be there, and when the *Chicora* left on the 7th it was well understood that there was at least a probability of her finding the Canal shut. In view of such a contingency, men had been set to work on the Portage Road, on the British side at the earliest possible moment, so that, if delay occurred, it was due to no remissness on the part of those who acted for the Canadian Government.

The route being once fairly open, voyageurs, together with troops, military stores

and boats continued to arrive from time to time, but although the Sault Ste. Marie Canal was now free to vessels with ordinary freight, it was still shut to troops and military stores, and it proved to be a very tedious process to get the large amount of articles landed at that place, in the first instance, over the portage. It was towards the end of June (about the 27th), before the last of the military stores arrived, and a large proportion of the horses and waggons did not reach Thunder Bay until that time. I would invite particular attention to this fact, inasmuch as the state of the Thunder Bay road has been made to answer for the delay which occurred, when, up to the date I have stated, there was a deficiency in the means of transport, even for that portion of the road which was admitted to be in good order.

This deficiency in the means of transport, on the Thunder Bay road, might have been remedied, as I shall shew further on, by bringing additional numbers of horses and waggons from Collingwood. In the meantime, I may remark that no avoidable delay occurred in getting the stores over the Sault Ste. Marie portage road. The work at that place was in charge of a most able and energetic officer, Col. Bolton, and I had placed a strong force of voyageurs at his disposal. When I passed Sault Ste. Marie, on the 23rd May, Col. Bolton, took occasion to speak in the highest terms of the aid which he had received from the voyageurs, and from Mr. Graham, the officer immediately over them. The regard was mutual, and I have much pleasure in saying that Col. Bolton's kind and considerate bearing to the voyageurs and all with whom he came in contact, made him a general favorite with the civilian portion of the Red River expeditionary force.

LAKE SUPERIOR TO SHEBANDOWAN LAKE.

The condition of the road when the first detachment of troops reached Thunder Bay, on the 25th May, was quite as good as it had been represented to be, or anticipated. The larger bridges, embracing two formidable structures crossing the Kaministiquia and Matawin Rivers, respectively, had been completed. A temporary bridge had been thrown over the Sunshine Brook, and material was in readiness for a similar structure at the Oskondagé—a small stream at the further limit to which the road had reached—the distance practicable to horses and waggons, reckoning from Thunder Bay, was twenty-eight miles, and from thence a track, over which oxen with carts or waggons could pass, had been roughly opened as far as the Oskondagé, which latter point is thirty-seven miles distant from Prince Arthur's landing.

The officer commanding the Field Force, accompanied by Mr. Lindsay Russell, rode over the line, to a distance of several miles beyond the Matawin Bridge, soon after his arrival, and expressed himself to the effect that it was as good as he expected to find it, and quite equal to what the country roads in Canada usually are.

At this time the voyageurs and other laborers, who had been sent forward by the *Algoma* were at work on the unfinished sections, and several companies of troops were soon sent to repair such places as had sustained damage from the crib work on side hill cuttings having been partially destroyed by a great fire which had swept over the country, a few days previous to our arrival.

In order the better to understand the measures adopted for the progress of the expedition, it is necessary to have clearly in view the condition and character of the route between Prince Arthur's Landing and Shebandowan Lake, at which latter place it was finally to embark in boats. The distance between these places is forty-five miles by land, but for three miles downwards from Shebandowan Lake, to a point now called "Ward's Landing" the Matawin River, although presenting a series of shallow rapids, is navigable to flat scows, or lightly loaded boats. Ward's Landing was, therefore, the point to be attained with the road, as from thence to Shebandowan Lake material and supplies could be conveyed in scows, which had been provided for the purpose. The precise distance between Prince Arthur's Landing, Thunder Bay, and Ward's Landing, is forty-one miles and seventy chains, of which a section of twenty-eight miles was practicable to horses with waggons, on the arrival of the first detachment of the troops. But, for the sake of lucidity in description, let the waggon road be considered as ending at a place

called the Matawin Bridge, twenty-five miles from Thunder Bay, as that is the point to which the waggons, in the first instance, actually came. This waggon road was succeeded by a stretch of twelve miles, roughly opened, to the Oskondagé, and this, again, by a further section of four miles and seventy chains, ending at Ward's Landing. This latter was being cleared on our arrival.

There were thus three sections of road, more or less advanced, viz. : 25 miles of waggon road, followed by 12 miles of what is known in such cases as ox-road, and four miles and 70 chains of road under process of being opened, in all, 41 miles and 70 chains.

As the river will be frequently referred to, a sketch, shewing its position, relative to the road, is hereunto annexed. From Thunder Bay to the Matawin Bridge, the distance is, as stated, 25 miles by road. Between the mouth of the Kaministiquia and the same point, it is 45 miles by the river, presenting in this distance, 12 miles of quiet water, and 33 miles of shallow rapids, with falls occurring at intervals. The channel of the river, except in the short navigable sections, is exceedingly rough, paved in some instances with boulders of all dimensions and shapes, and in others with sharp schists set on edge. There is little or no danger to men in ascending these rapids, but every risk to boats. To drag them up is a mere matter of brute force, but to save bottoms and keels from being torn to shreds, requires great care, and the greatest care cannot prevent them from being seriously damaged. Although the risk to life is small, the labour of dragging boats over rocks and stones, which afford but an insecure footing, is excessive and otherwise very disheartening to the men.

From the Matawin bridge to the Oskondagé, the distance by the road, as already shewn, is 12 miles, by the river it is about 22. From the Matawin Bridge upwards, for a distance of about two miles, to a point called Young's Landing, the river is navigable, proceeding upwards from the latter point, a series of rapids is encountered, perhaps the most difficult that boats were ever forced over. These continue for eight miles, and on this section, none but experienced voyageurs can attempt to pass with boats. The rapids last referred to, end at a point called Browne's Lane, or Cauldron's Landing, and from thence to the Oskondagé, a further distance of twelve miles, by its windings, the river is navigable to lightly loaded boats. From the Oskondagé upwards to Wards Landing, four miles and seventy chains, boats and all material were conveyed by waggon. The total distance by land from Thunder Bay to Oskondagé was 37 miles ; by the river between the same points is nearly 70 miles. These descriptions, though tedious, are necessary to the full understanding of the measures adopted for sending forward boats and supplies.

In the memorandum submitted by me to the military authorities, (see page—) I had pointed out the fact that boats and supplies could at once be sent forward as far as the Matawin Bridge, and while this was being done, it was my intention to have set all the available force of workmen and voyageurs to improve and open the unfinished sections of the line, beyond that place, and I may here remark that this was, without any question, as events proved, the proper course to have adopted. It would have saved a vast outlay, and have enabled the Expedition to reach Shebandowan Lake earlier than it did.

A few days after the arrival of the first detachment of troops, the experiment of sending boats forward by waggons was tried, and it succeeded admirably. The waggons were arranged by means of long reaches (that is, poles of sufficient length to admit of the forward and after wheels being put as much as 18 feet apart), the boats were placed bottom upwards on the waggons, the gunwales resting on blocks fitted to receive and support them, and in this way twenty-eight boats were sent forward to the Matawin Bridge, the horses making the round trip, going and returning in three days, and in one instance in two days. Here, then, was proof positive that the boats could easily be sent forward by waggons. But the means of transport were at this time limited, and instead of increasing them, as might easily have been done, the boats were ordered to the river by the Commandant of the Field force. The distance as already shewn between Thunder Bay and the Matawin Bridge is, by land, 25 miles and by the river 45 miles. The road was practicable. The river for a distance of 33 miles, presented a series of stony rapids with frequent portages on rough and rocky ground. In order to ascertain how the boats would stand

the strain to which they must of necessity be exposed, in such circumstances, four flat scows and two strong carvel boats were sent up, manned by 18 of the most experienced of the voyageurs and a company of soldiers. After seven days of unceasing toil they had only reached the Kaministaquia Bridge, some twenty miles by the road from Thunder Bay, and from thence to the Matawin Bridge, it was one continuous pull in flat and stony rapids. On arriving at the latter place, the boats, strong as they were, were found to have been sadly torn and scraped in the rapids, and had to be immediately placed in the hands of the builders for repairs. The scows having been built specially with a view to such work, were, of course, but little damaged.

If all the boats should be exposed to wreck in the channel of a river, for which they were never intended, there was reason to apprehend the most serious consequences as to the future progress of the expedition. We were but at the outset of the journey, and it was of the utmost importance that they should reach Shebandowan Lake, where the final embarkation was to take place, in good order. I therefore urged strongly upon the officer commanding the Field Force, the expediency of sending to Collingwood for waggons, where, as the sowing season was over, any number of farmers could be found ready enough to come forward with their teams. This advice was to a certain extent taken, and a limited number of waggons and horses were brought from that place, but the military teams began to fall off, as their drivers said, from starvation, being allowed but military rations. Some 60 of them were in hospital, and there were neither horses nor waggons to spare for the boats. Seeing therefore that there was nothing for it but the river, I sent voyageurs to improve the portages, and endeavoured to organize some system by which the boats might be in as far as possible saved from damage.

As the chief responsibility of getting forward the Expedition was thus thrown on the voyageurs, at a time when the impression was entertained in some quarters that it must be abandoned, I may be permitted, before proceeding further, to offer some remarks in regard to the men, from whom so much was expected, and by whose exertions a very different turn was soon given to the general prospect.

The men forming the voyageur force, had been engaged in various parts of the country, and comprised among their number, boatmen and canoemen, from the St. Maurice, the Saguenay, and the Ottawa. There were Iroquois from Caughnawaga, and Algonquins from the Lake of Two Mountains, Metis from Penetanguishene and Sault St. Marie, raftsmen from the Trent, and pure Indians from various points on Lake Superior. The following list shews the numbers and the localities whence they came :

Ottawa River.....	150 men.
St. Maurice and Saguenay Rivers.....	121 "
Penetanguishene, Manitoulin, and various points on Lake Huron.....	98 "
River Trent	114 "
St. Lawrence, Caughnawaga, and St. Regis.....	99 "
Lake Superior, Indians, and Half Breeds.....	117 "
Toronto.....	6 "

705 men.

The management and organization of such an assemblage, was, of course, a matter requiring great care and circumspection. I could not at once turn them over to the military. Two classes, utterly unacquainted with each other's habits and mode of life, had to be brought in contact. The one highly disciplined, but utterly inexperienced in the nature of the work to be undertaken ; the other, rough, ready and inured to hardship, but holding all fixed rules and restraints in abhorrence. On the one hand was the soldier, accustomed to obey orders and cheerfully do whatever might be required of him, without troubling himself as to its object ; on the other, the voyageur, generous and obliging, but in the habit of thinking and acting for himself ; he, at least, would have his views about what he was to do, and how he should do it, and would, without meaning it, be very likely to give offence to those accustomed to unquestioning obedience.

Under these circumstances, and after fully weighing the matter in all its bearings, I conceived it better to keep the voyageurs, for a time at least, as much as possible apart from the military, and place them under officers accustomed to their management. I would thus have an opportunity of organizing them, discharging such as should prove inefficient, and replacing them from among the men on the works; and, by the time Shebandowan Lake was reached, would be in a position to man the boats with picked crews of the most skilful voyageurs to be found in the country.

The plan of dragging forward the boats by the rocky channel of the river having been determined on, and notwithstanding my remonstrance, persevered in, it remained for me to aid in carrying it out in the manner which as I have said would afford the greatest chance of safety to the boats; the rocky portages were laid with skids, and careful men were sent with every brigade whether manned by soldiers or voyageurs, or partly by both.

The following table shews the number of boats sent by the river to the Matawin bridge, or rather to Young's Landing, and how manned;

STATEMENT showing number of Boats sent from Thunder Bay by Kaministiquia River, and number of Men engaged in forwarding them.

Date of Departure.	No. of Boats.	No. of Voyageurs.	No. of Soldiers.
1870.			
June 6.....	6	18	50
" 10.....	6	47	40
" 11.....	4	44	.....
" 14.....	9	51	40
" 20.....	6	45	.....
" 21.....	3	20	.....
" 21.....	3	30	.....
" 21.....	1	7	.....
" 22.....	4	44	.....
" 24.....	8	17	70
" 25.....	9	50	40
" 29.....	10	16	60
July 1.....	8	32	35
" 4.....	5	26	36
" 4.....	14	95	50
" 6.....	5	14	50
	101	556	471

From the point called "Young's Landing" for eight miles upwards, the river, as already explained, is exceedingly difficult. Soon after the arrival of the first brigade of boats at that point, the officer commanding the Field Force sent a number of soldiers, *unaccompanied by voyageurs* under the command of a very active and energetic officer to try the passage, but after doing all that could be expected of inexperienced men and straining every nerve to get forward, they were obliged to return having been unable to get their boats up the rapids. Some interest had been excited by this experiment, which it was said was designed to show how much could be effected in the rapids independently of the voyageurs. Before the discouraging effects of this failure could spread far I had sent forward a band of voyageurs who took up the boats and, from that time forward, the boats, in this difficult section were manned wholly by voyageurs. To get them all past the section just referred to, occupied a force of 120 men for upwards of a month and it had become necessary to spread so many people along the River, in this toilsome work of dragging boats up rocky channels that, much to my regret, I was compelled to reduce the force on the road. At this time (about the 20th of June) matters had become exceedingly critical. The Indians brought at great expense from Nipigon and the Grand Portage mostly left. The Fort William Indians, after a trip or two, deserted us. Fond as they are of voyaging, in the usual way, the work of dragging boats had become so distasteful to them that neither the agent of the Hudson Bay Company nor Mr. Choné, the missionary at Fort William, both

of whom used their influence in our favor, could induce them to continue at it, and I became apprehensive that we should be without guides in the interior. Discontent, at the same time, began to manifest itself among a section of the other voyageurs. "Why" they said, do you keep us dragging boats over rocks where there is no water to float them, when a single waggon could accomplish more in a day than eight of us can in ten? By using waggons you would have your boats in good order; whereas, by exposing them to such usage as this, they are being rendered unfit for the long journey yet before us." The majority of them, however, kept cheerfully at their work and when defections took place I had still the force on the works from which to supply the loss. These men knew perfectly well that waggons in sufficient number could easily have been obtained, by simply sending for them. Appreciating this, their patience and endurance, under toil which they believed to be unnecessary and arising from a mistake, cannot be too highly commended.

As may be supposed, the boats suffered terribly, row-locks were lost, and oars in quantity broken, and the tool chests were almost depleted of their contents.

Boat builders were, however, maintained at different points along the route, and as the strained and patched boats were brought forward they managed to repair and fit them for further trials.

Carpenters were set to work to make oars, the blacksmiths produced row-locks as fast as they could, and additional tools were ordered from Toronto.

By struggling on in this way the expedition was saved from disaster and those who were looking for an order to return were doomed to disappointment.

While the boats were being dragged thus tediously over the rocks of the Kamanis-taquia and Matawin Rivers, operations were going forward on the road. The waggons, at first very limited in number, were gradually coming forward and stores were accumulating at the Matawin and Oskondagé. Except on two occasions, after days of heavy rain, the road as far as the Matawin Bridge, was kept in fair condition. From thence to the Oskondagé, it was in a bad state no doubt, but never so utterly bad but that a yoke of oxen, with a waggon, could take from eight to twelve hundred pounds weight over it, and horses with waggons, as well as oxen, passed frequently to that point.

The principal part of the workmen who remained at my disposal, over and above the numbers engaged in the channel of the river, were placed at convenient intervals along the route, west of the Matawin bridge, several companies of the regular troops, were stationed, in the first instance, at various places requiring repair, east of that place, and were afterwards removed to Brownes lane and the section West of the Oskondagé. It must not be supposed, however, that we had the whole army at work on the roads. On the contrary, the main body of the Military Force remained at Thunder Bay, until after General Lindsay's visit, when they were moved forward to the Matawin.

The following statement shows the amount of work furnished by the Military.

STATEMENT of Amounts paid to Regulars and Volunteers for labour performed on the Thunder Bay Road.

1870.		\$	cts.
June 5.	To cash paid Paymaster 60th Rifles, as per account receipt	210	25
" 9.	do Sergt. Curran and men do	3	00
" 10.	do Lieut. Heneage, R. E. do	19	12
" 10.	do Capt. Alleyn, R. A. do	4	96
" 13.	do Paymaster 60th Rifles do	139	62
" 20.	do do do do	170	56
" 24.	do do 1st Ontario Battalion do	23	62
" 30.	do do 60th Rifles do	128	37
July 1.	do do 1st Ontario Rifles do	4	12
" 14.	do do 60th Rifles do	210	88
" 18.	do do do do	206	50
" 23.	do do 1st Ontario Rifles do	440	64
Nov. 16.	do Lieut.-Col. Casault, 2nd Battalion do	268	25
		1,829	88

Of the above amount at least one third was for work about Thunder Bay and Brown's Lane, in sections the opening of which was of no advantage to the Road. Brown's Lane was a mere by-road, leading to the River, made to facilitate movements in connection with the scheme of dragging boats by hand, and at Thunder Bay a stockade was built and a road made between the military encampments—and on these a portion of the work above detailed was expended—While pointing out the limited amount of work, that is, comparatively speaking, furnished by the Military on the roads, I cannot express myself in terms sufficiently appreciative of the valuable aid afforded by the few companies of the regular troops sent forward to our assistance.

The experience they had had on the fortifications at Quebec, rendered them quite expert at the use of the implements required, more especially, in grading, and their officers did what lay in their power to urge on the work.

It would give me pleasure to single out the names of those who were the longest associated with me in so arduous an undertaking; but, where all distinguished themselves and worked with equal earnestness, it might appear invidious. There are young men in Cahada who would have derived a salutary lesson from witnessing the exertions both of officers and men. Young gentlemen, some of them heirs to broad acres and historic titles, did not disdain to lay their shoulders to charred logs or think it unbecoming to look like their work. If, with such aid in that part of the work to which the soldiers were more particularly accustomed, I had had the hundreds of voyageurs absent on the River, as I had anticipated they would be, at my disposal, to send with their axes, along the western sections of the route, the road would quickly have been opened and boats and supplies might have passed by waggon to Shebandowan Lake.

The rains which prevailed throughout the greater part of June proved to be a serious drawback to operations generally. The section of the road more especially, between the Matawin Bridge and the Oskondagé, running as it does through a region of red clay became badly cut up and a great deal of cross-lay (corduroy) became necessary—still the work went on, with but little interruption, until the occurrence of the great, and I believe unprecedented flood of the 30th of June, which fairly stopped the passage of waggons for nearly two whole days—a culvert near the Kaministaquia was displaced and a small temporary bridge, which had been run over the Sunshine Brook, was seriously damaged while a similar temporary structure on the Oskondagé had a narrow escape. These damages were quickly repaired and the work went on as usual.

At this time, 30th of June, when the roads were at the very worst, and boats, broken and leaky were accumulated at Young's Landing or being hauled from thence to the Oskondagé, we had a visit from the Lieut. General commanding the forces. This highly distinguished Officer went forward as far as Shebandowan Lake. The prospect was anything but encouraging, worse, in fact, than it had up to that time been, and I feared as I had heard whispered some days previously, that the Expedition was to be abandoned. Far otherwise was the result. His Excellency saw and judged of everything for himself. In two days from the date of his visit the head-quarters of the Field Force were moved forward to the Matawin Bridge. New energy seemed infused everywhere, additional companies of troops were sent to work on the roads, and among these the Volunteers from whom, up to this time, no aid had been received, except in making a few repairs in the vicinity of Thunder Bay. Bad as the roads were, waggons and artillery found their way over them and stores began to accumulate at Ward's Landing. Shebandowan Lake was at last within reach and though the pelting rains came down at intervals the weather had upon the whole improved.

Ward's Landing is about three miles from Shebandowan Lake, and the River in this distance, presents a series of shallow, but not difficult rapids, so that the stores were easily sent forward in flat scows manned partly by voyageurs and partly by soldiers.

To facilitate the loading of boats and embarkation of troops at Shebandowan Lake a small wharf had been run out at a sandy bay, close to its outlet. At this place stores were rapidly collected and the boats, after their severe bruising in the Kaministaquia, put

in order for the long journey to the West by boat builders who had been brought forward for the purpose.

Before proceeding further I may draw attention to the arrangements which had been made for the journey in boats.

On reference to the memorandum on a proceeding page, it will be seen that it was proposed, in the first instance, to man every boat with three voyageurs besides soldiers, so that with each brigade of five boats there might be fifteen practised men available for running them over rapids. It was found, however, that although the boats would carry quite as much dead weight as had been anticipated they had barely sufficient stowage capacity for the numerous articles to be put into them. I therefore recommended the Commanding Officer of the Field Force to make the number of boats, in each brigade, six instead of five. This was agreed to, and it was furthermore arranged that the number of voyageurs accompanying each brigade should be twelve, besides a pilot, making thirteen in all.

SHEBANDOWAN LAKE TO FORT GARRY.

At sunset, on the evening of the 16th July, the Colonel Commanding the 60th Rifles (Col. Fielden) set out from McNeill's Landing, Shebandowan Lake, with a fleet of seventeen boats, and by ten a. m. on the following morning was at Kashaboiwe Portage.

This being the first detachment of the force which had embarked, I accompanied it for a short distance, in order to ascertain how the arrangements which had been made would meet the test of actual work on the portages. If I had had any apprehension on this head, it was quickly removed, for no sooner had Col. Fielden landed than with his officers, soldiers and voyageurs, he set vigorously to work to get the stores and artillery across. I had placed a force of voyageurs on this portage, a few days previously to lay it with skids, that is logs laid transversely, to facilitate the passage of the boats. Taking some of these voyageurs with me, I proceeded to the Height of Land portage in order to make some necessary arrangements for getting the boats up a little brook which connects Kashaboiwe Lake with the summit pond, and having effected this, I returned on the following morning, to the Kashaboiwe Portage. In the meantime, Col. Fielden had made such good progress that all his stores and most of his boats were across, and in an hour or two he would set out for the Height of Land portage, and be over it on the evening of the following day.

These two portages, the Kashaboiwe and Height of Land, are the longest on the route, being, respectively, three quarters of a mile and a mile in length, equal to one fourth part of the aggregate length of the portages between Shebandowan Lake and Lake Winnipeg. If, therefore, Col. Fielden could, in two or three days, get over a fourth part of the entire distance to be accomplished by land, it was easy to calculate, at least to a few days, the time at which the force would reach the Red River settlement, for the route is remarkable in so far as that between the portages there are no impediments to speak of, or difficult rapids to be encountered. With such a vigorous and active leader as Col. Fielden in advance, there could be, now, no doubt that the Expedition was a success.

As I was proceeding back to McNeill's Landing, I met a messenger with the following note, which will at least serve to shew how difficult it was for me to absent myself for a moment from the scene of principal operations, at this time.

Sunday afternoon, 4.45 P.M.

MCNEILL'S BAY, SHEBANDOWAN LAKE.

DEAR MR. DAWSON,—I have been obliged to start off Capt. Buller's brigade without either voyageurs or guides, the former were ready, with exception of their cooking utensils, which had not turned up. Of the latter, Mr. Graham knew nothing. I enquired of Mr. Hamel, and he told me there were no Mission Indians here. I have to look to you for both voyageurs and guides. This is only the second day of the operation,

and yet neither are ready. I have ordered Capt. Buller to halt on the first portage until I can send him both voyageurs and guides. Please send me word what I am to do. The carts are all here also, waiting for your men to take them on to the portages.

Very truly yours,
(Signed,) G. J. WOLSELEY.

S. J. Dawson, Esq.

I had been barely two days absent, and here matters were already in a mess. I at once furnished the brigade with a guide, from the crew I had with me and soon afterwards met the voyageurs in a boat hurrying after them, so that they had not to "halt on the first portage;" the men excused themselves by saying that as it was a Sunday evening, they did not know they were to be called on. I, however, took measures to prevent any ground arising for such complaints in the future.

At this time, the voyageurs were by hundreds within easy reach of Shebandowan Lake, engaged in dragging boats to the Oskondagé, or in scows carrying stores from Ward's to McNiell's Landing, and had only to get warning to be in readiness at a moment's notice. But I had extreme difficulty in getting guides, the Indians, as already shewn, having had enough of it in the rapids of the Kaministaquia. There could, however, be no difficulty in reaching the Height of Land Portage, with the aid of a map, and at the latter place, I had met some Indians who engaged to pilot the brigades in Lac des Mille Lacs, and soon afterwards a few of the Fort William Indians rejoined us. But, even among the Indians, there were few really well acquainted with the route. It had been long abandoned as a line of traffic, so that with the exception of such as had gone on voyages to Port Frances—and the number was limited—it was known only to a few wandering families of hunters, and fortunately these came to our aid when most wanted.

On returning to the camp at Shebandowan Lake, I found Col. McNeill, V.C., most actively occupied in organizing the Force, arranging stores and sending off the boats. I had stationed at this place Mr. Graham, who displayed great energy in arranging the boat outfit, getting the boats repaired, and organizing and telling off the voyageurs for the different Brigades.

Rapid progress was now being made, Col. Fielden, in advance, was leading the way to the interior, and Col. McNeill, who evinced a most extraordinary faculty for eliminating order out of chaos, was sending off brigades as fast as stores and outfit arrived from Ward's Landing.

At this time waggons were coming through from Thunder Bay to Ward's Landing. The voyageurs were mostly on the river between Young's Landing and the Oskondagé, but were bringing the boats rapidly forward, and a few additional Indians came up from the Mission to act as guides.

Matters being in this favorable position, I again went forward with a light canoe, and overtook Col. Fielden on the evening of the 26th July, at the Deux Rivières Portage; most of his stores and boats were already over, and in eight days more he would be at Fort Frances. He had crossed the following portages:

	Miles.	Chains.
Kashaboiwe.....		60
Height of Land.....	1	
Barril Portage.....		16
Brulé Portage.....		20
French Portage.....		25
Pine Portage.....		30
Deux Rivières, nearly crossed.....		32
	2	43

Col. Fielden, with the advance, was now fairly over the most difficult section of the route. In nine days he had made a hundred miles, and crossed seven portages, the aggre-

gate length of which was considerably over a third part of the total land carriage to be encountered, and he was now about entering on a large river, where the portages were short, and the route more open and frequented.

In order that this gallant officer's merit may be the better understood, it is but fair to explain, that when he set out from Shebandowan Lake, the most skilful of the voyageurs were still engaged with the boats in the channel of the Matawin. I had therefore to supply him with voyageurs, who, although strong and accustomed to roughing it in the woods, driving logs, and so forth, were, nevertheless, not considered equal to many of the others in the management of boats. But they were excellent axmen, and on them fell the work of opening the long abandoned portages between Lac des Mille Lacs and Sturgeon Lake, for the necessity of keeping so many men on the river, combined with the defection of the Indians, had prevented me from sending voyageurs very far in advance to improve the portages. I had, however, sent an additional number with Col. Fielden, over and above those required for his boats, to aid in this work, and on reaching Deux Rivières, I sent forward a crew of picked voyageurs to man the rapids on the Maligne, the next after Deux Rivières Portage, and at these rapids they remained until all the boats were run past.

Having made this arrangement, I again left Col. Fielden with the satisfaction of knowing that the Expedition was being virtually led by an officer fully equal to the task.

On 29th July, I was again at Shebandowan Lake, and there was now further work to be provided for, as will be seen from the following correspondence.

CAMP WARDS LANDING, 19th July, 1870.

SIR,—Referring to a conversation I had with you some days ago at the Matawin Camp, when I told you that upon trial the boats would not hold so much as I had been led to expect, I have the honor to inform you that I acted upon the suggestion you then made of sending an extra boat with each brigade. By doing so and by having only two voyageurs in each boat, I have been able to take 60 days rations for each brigade, with every one embarked in it.

I shall have 21 brigades as far as Fort Frances and 20 from there to Fort Garry; up to the former place, I shall therefore require 126 boats and from thence on, only 120.

As by this arrangement I shall make use of 252 voyageurs. I have to request you will kindly inform me whether you can send forward the supplies noted in the margin to Fort Frances, after the last detachment of troops have embarked at Shebandowan Lake, by means of the boats and voyageurs left behind, and if so, the date when I may depend upon having them at that post.

I have to add that the sooner they can be sent there the better, as it is important that I should have this reserve close behind me when I enter the Province of Manitoba.

I have the honor to be,

&c., &c., &c.,

(Signed,) G. J. WOLSELEY,
Commanding Red River Field Force.

S. J. Dawson, Esq.,
&c., &c., &c.,
Supt. Public Works.

WARD'S LANDING NEAR SHEBANDOWAN LAKE,
20th July, 1871.

SIR,—I have the honor to acknowledge the receipt of your letter of the 19th instant, and, in reply, beg leave to say that, with the boats and voyageurs to be left at my disposal, I can send forward the supplies you mention from this place to Fort Frances by the 15th day of September next.

The following will be required for rations to the voyageurs while engaged in this service.

150 half brls. pork, 150 half brls. flour, 40 bags peas or beans, 7 chests tea. The boats now remaining at Thunder Bay will of course be brought to this place by the military transport. I would also require the use of six yoke of oxen for transport on the portages, with a quantity of hay, oats or ox feed proportioned to the time they should be so used.

I have the honor to be,

&c., &c., &c.,

(Signed,)

S. J. DAWSON.

Col. Wolseley,
Commanding Red River Field Force.

I may here remark that instead of 252 men, the expedition was accompanied by 315 voyageurs, besides 185 engaged with reserve stores.

The arrangement, above detailed, having been agreed to, as soon as the last brigade of boats with soldiers had left McNiell's Landing, the reserve stores began to be sent forward from Thunder Bay. A number of boats which had been left at that place were also brought up by waggon, and it now became evident to all, that much time would have been gained and labour saved, in the first instance, by keeping the whole voyageur force on the road making it at once passable to waggons, getting a sufficient number of these from Collingwood and bringing forward boats and stores to Ward's Landing. To shew how easily this might have been done, I may call attention to the fact that at 2 o'clock on the afternoon of 2nd August, seven boats, placed on waggons, were sent off from Thunder Bay, and, at sunset on the following evening, were at Ward's Landing. How different was this from dragging them over rocks and stones in the bottom of a shallow stream. There was not a boat brought by the river that cost less for transport than \$300, making on a hundred which were so conveyed some \$30,000. while on 53 brought by waggon the cost did not exceed \$20 or \$25 each, and then how very different was the condition of the boats, in the one case fresh and sound as they came from the hand of the builder. In the other torn and broken with many row-locks, oars and rudders lost or smashed, and requiring repairs, in some cases very extensive ones, before they could be used.

The military having all left, arrangements were quickly made for sending forward the reserve supplies. In this work a small steam launch which had been prepared at Toronto, did good service. It was first used on Shebandowan Lake, but as the supplies were moved on, it was taken to Lac des Mille Lacs, and it saved the work of at least twenty men. With three full loaded boats in tow, it made fair speed, and was only on one or two occasions wind bound, for a short time. I may dismiss this subject by saying, that by means of the voyageurs left behind, the stores were taken in good time to Fort Frances. The first reaching that place on the 3rd of September, and the last on the 17th, besides some that were left by order of the military at Deux Rivières Portage, to meet the troops as they returned from Red River.

While the military are on the way to Red River and the reserve stores following, a brief description of the line of the route, as regards its general features, may not be out of place.

Between the terminus of the Thunder Bay road, on Shebandowan Lake, and Lake Winnipeg, by the route followed by the expedition, the distance is, in round numbers, 488 miles. In this distance are three sections differing materially in general character.

The first, known as the Lake Region, commences at the end of the Thunder Bay road and ends at Fort Frances. The distance between these points by the route followed by the expedition, which went round by Loon Lake to avoid the rapids of Sturgeon River, is 208 miles, and by the more direct route usually travelled, about 190 miles. This section presents a continuous succession of lakes separated by short portages, except in one instance where there is a stretch of eleven miles of river, sometimes called the

Maligne. It was to the rapids in this stretch that I had sent a picked crew of voyageurs to be in attendance while the boats were passing, and run them down. In all other places, the work to be done consisted merely in carrying baggage and supplies, and hauling boats from one quiet sheet of water to another. The aggregate length of the portages between Shebandowan Lake and Fort Frances is precisely three miles and 76 chains; the two first are the longest namely, Kashaboie and Height of Land portages, and these are respectively three-quarters of a mile and one mile in length. The other portages are very short, only three exceeding a quarter of a mile, and none extending to half a mile. Here then is the labour the voyageurs and soldiers had to encounter in getting to Fort Frances, that is to say—they had to get boats, ammunition, and 60 days' rations, the latter gradually getting less, over three miles and 76 chains of land, and row or sail through some two hundred miles of water, where countless islands rendered the shelter so perfect that the highest winds could not stop them, while the breeze would often fill their sails and relieve them from the toil of the oar. The weight of the boats varied somewhat, those of the clinker construction being from 650 lbs., to 750 lbs., and the carvel from 850 to 950 lbs. With each brigade of six boats were from sixty-five to seventy-five strong men, soldiers and voyageurs, ten men were quite equal to drawing a boat across a portage, but the crews joined together and hauled them across with great ease. The baggage and stores gave the most irksome work to the inexperienced soldiers, but it did not last long at a time, and after the toil involved in getting across a portage, they were soon again afloat and winding their way among labyrinths of islands.

Sometimes mistakes occurred on the lakes, more especially when the sails were hoisted.

The boats in tacking, would leave the usual track and, as new lakes opened up and unknown islands came in view, the guides would get bewildered and scarcely know which way to turn. A case of this kind occurred in the Lac des Mille Lacs, and I mention it to show how easy it is for the best guides to get astray in these island-studded lakes. A half Indian voyageur who had been for many years in the service of the Hudson's Bay Company, and was supposed to know every rock between Lake Superior and the Arctic Seas, came with a brigade of boats to the lake just named. The wind was up, the sails were set at once, and off went the boats dashing at great speed through the water, and leaving island after island behind them. The wind was nearly but not quite fair, and it would be a pity to change them from their track while they were making such speed, almost in the direction they should go. At last they were put about, but the guide looked in vain for some point or island he could recognize. All was new to him. Time and again, the islands bounding the prospect were made for, but only to open up new vistas and lakes more bewildering than the last. This lake is well named Lac des Mille Lacs. It is, however, the only one on the upper part of the route which from its dimensions could admit of the boats going far astray, and in order to guard against the recurrence of such blunders, I stationed some Indians who have their hunting grounds in the neighborhood, at the Height of Land, so that they might be in readiness to act as pilots in this perplexing lake.

Much has been said about the barrenness and forbidding aspect of the Lake region, and no doubt it is in many places somewhat rocky, but not more so than the regions of the Upper Ottawa, or the country intermediate between the Ottawa and the Georgian Bay. Timber, both red and white pine, of fair dimensions, is in unlimited abundance, and in many places, more especially on Rainy Lake, there are indications of valuable minerals.

Arrived at Fort Frances, the Expedition had before it 131 miles of unbroken navigation, ending at Rat Portage. First, Rainy River, winding for 67 miles with a gentle current through forests of the most luxuriant growth, broken here and there by slopes of green sward, where the Indians of former times had practised the art of cultivation, so long forgotten to their descendants, and then the Lake of the Woods, where the course lay for 64 miles farther, through islands which, although the lake is large, afford sheltered channels where the stiffest breeze is hardly felt. There is, however, a traverse of seven miles at the entrance of the lake where boats are sometimes wind bound.

THE WINNIPEG.

On reference to the memorandum on a preceding page, it will be seen that this river presents a series of lake-like reaches with short intervals of rapid water between them. It is in volume not inferior to the Ottawa—perhaps greater, after it receives its chief tributary the English River which joins it just above Portage de L'Île from the east. Some of the navigable sections are like the Chats and Duchene Lakes on the Ottawa, differing only in the circumstance of being full of islands. This river had long been used as a highway for the boats of the Hudson's Bay Company, and the carrying places were found to be well opened and in good order. At certain stages of the water some of the portages are difficult of approach, but when the expedition passed the water was low, and the worst places had quite lost their terrors. The distance from Rat Portage at the outlet of the Lake of the Woods to Fort Alexander on Lake Winnipeg is one hundred and forty-nine miles. The portages are numerous but short; their aggregate length at high water amounting only to three miles and six chains. The water, however, was so low when the Expedition passed that at several places, such as the Cave, the Seven Sortages and Silver Falls, much of the land carriage was avoided by keeping in the bed of the river and lifting the boats over rocky points. Upon the whole, the Expedition experienced no difficulty whatever on the Winnipeg. Guides had been obtained at Fort Frances and Rat Portage, where the Indians are numerous, and some few of the voyageurs, who had not distinguished themselves, were sent back from the former station and their places supplied with Indians well acquainted with the route. I should mention that Mr. Boyd, a merchant in the Red River Settlement, and now a member of the Government of Manitoba, together with some other settlers, sent six Hudson's Bay boats to meet the Expedition. This afforded an opportunity of comparing these boats with those which had been provided in Ontario and Quebec, and I have some satisfaction in saying that the latter proved to be the fastest sailers, the most easily managed in the portages and rapids and in every way the best adapted to the purposes of the Expedition.

From Fort Alexander to Lower Fort Garry (Stone Fort) the distance is 60 miles, and in this section there is no impediment whatever to the navigation.

The route, generally, between the terminus of the Thunder Bay road, Shebandowan Lake and Lake Winnipeg, will compare very favorably with any other canoe or boat route of equal length in British North America. The entire distance is four hundred and eighty-eight miles, with some forty portages (more or less according to the stage of water) having an aggregate length of seven miles. Between these portages, the navigation, excepting for a few miles in a narrow brook at French Portage, is the easiest conceivable. There are no difficult rapids to run. In fact, except on the the Maligne already referred to, and at a few places on the Winnipeg, as regards the facility of getting over them with boats or canoes, the rapids are the merest ripples.

The force, in getting through, had just seven miles of land carriage to get over with light boats, 60 days rations gradually diminishing, and their ammunition, and this in short sections, so far separated as to make the fatigue less than it would have been had the portages been longer and fewer in number.

The labor on the portages was, no doubt, trying to men unaccustomed to such work, but it did not last long at a time, and all besides was the smoothest sailing conceivable.

Let, now, the route which could afford such easy transport be compared with other known routes of similar character, on which many Canadians are engaged in occupations involving the constant practice of work of the same nature as that which the Expeditionary Force had to perform, and first, as regards the Ottawa, it is not necessary to refer to the time when articles had to be carted from Carillon to Grenville, when voyageurs had to portage their canoes past the Chaudiere and Duchene, struggle up the Chats Rapids and toil for weeks in powerful whirlpools or on the long portages between the Chineux and the Calumet. The labor involved in getting from the Joachim, the upper limit of steam navigation, to Lake Temiscamisque a distance of a hundred and twenty miles, is vastly greater than on the whole route to Red River,—a greater length of land carriage, and rapids more powerful and difficult to overcome. But if the difficulties on the

broad Ottawa are greater, how much more are they not so on its tributaries the Gatineau, Madawaska, Coulonge or Petewawe. Hundreds, I may say thousands of adventurous lumbermen yearly find their way to the high regions drained by these rivers with boats and half a year's supplies besides.

The St. Maurice is, perhaps, one of the most difficult rivers on the continent, running down, as it does, directly across the strike of rock from a plateau fifteen hundred feet above the level of the St. Lawrence, and it forms a case in point as regards comparison for by this route a French Military Expedition passed, in former years, to the Moose and down that River to Hudson's Bay, with artillery and munitions of war. Two of their field pieces still remain on a portage at the sources of the St. Maurice and history tells of their doings at Hudson's Bay, where they took and held forts, one of which was well mounted with artillery. Although no doubt greater things have been done in other ways, still this is of its kind a feat as yet unparalleled in military annals.

The Chevalier de Troyes had no boats such as were supplied to the Red River River Expeditionary Force and in his day the birchen skiff was alone used on the inland waters, between the St. Lawrence and Hudson's Bay.

As compared with the route by York Factory, the line followed by the Expedition has many evident advantages, and, in this regard, I may refer to a journey made from York Factory to Fort Garry by Col. Crofton in 1846. That gallant soldier whose clear and comprehensive evidence given before a Committee of the House of Commons (England), in 1857, did so much to remove the veil in which an exclusive monopoly had shrouded the regions of the North-West, came by York Factory to Red River, with 347 soldiers, 17 women and 19 children, in all 383 persons. Among his munitions of war were three 6-pounders and one 9-pounder field pieces. In his evidence, speaking of the Fort William route, he says:—"I would undertake to take my regiment by it;" and, on being further questioned, replied as follows:—

"I did worse than that, for I took artillery from Fort York, in Hudson's Bay, to Red River, 700 miles, by the compass, over lakes and rivers, and that is a *much worse route than the other.*"

"Do you mean to say that under present circumstances (this was 13 years ago,) the route from Fort William to Fort Garry is a better route for military to go than from Fort York?—I am quite sure of it for I have gone both."

"Question by Sir John Packington—Did you say you took artillery from Fort York to Red River?—I did."

"What distance is that?—It is about 736 miles."

"How did you convey it?—We carried the guns in canvas, we took the guns off their carriages, we had rope handles and carrying straps, and between them so carried the guns."

At the time the gallant Crofton formed the opinions to which he has given such forcible expression, steam had not reached Lake Superior, and the Thunder Bay road had not been dreamt of; still, with experience of both routes, he considered it (the Fort William road,) vastly better than the route by Hudson's Bay.

One cannot but be struck with the marked difference in the circumstance, under which he made his journey by the one route, and those attending the advance of the Expeditionary force by the other. In the one case were the ever frozen shores of Hudson's Bay, and soldiers, with artillery, and women with children to bring forward to an unknown land by a route till then untried by a military force. In the other, light boats, fitted with everything that could be conceived to be useful, and manned with active men in the very prime of life.

Women and children had to be protected from the chill blasts of autumn, as Col. Crofton's band came upwards from the sea.

The soldiers of the Expeditionary force had to work hard enough at times, no doubt, on the portages, as they came to the successive falls of the Winnipeg, but they were soon again on open lakes with the soft winds of summer in their sails.

A quarter of a century ago, Col. Crofton's soldiers could have had nothing to cheer them save a consciousness of doing their duty, as they advanced, The land before them

had been represented as sterile and shrouded for more than half the year in the gloom of a Siberian winter.

As the Expeditionary force went on, the soldiers knew that they were taking part in a movement to become historical, that they were, in fact, carrying the sceptre of their Queen to a land of sunshine and fertility, and of proportions so vast that it might hold the half of Europe in its lap.

The Red River Settlement.

To understand proceedings at this place it may be well to explain that before leaving Thunder Bay, the Col. commanding the Expeditionary field force had written as I also did to the officer representing the Hudson Bay Company at Fort Garry, requesting him to place a force of workmen on the Lake of the Woods road, so that it might be available for the return, if not for the advance of the troops.

The following are copies of the letters so addressed, from Thunder Bay, General Lindsay being there at the time.

(Copy)

PRINCE ARTHUR'S LANDING,
THUNDER BAY, 30th June, 1870.

SIR,—With reference to the proclamation I have forwarded to you in a letter of this date, I have the honor to inform you that I am most anxious that steps should be immediately taken for opening out a cart road from the end of Mr. Snow's road to the north-west corner of the Lake of the Woods.

It is not necessary that the road should be of a permanent character, as it will only be required this year for military purposes, hereafter it could be enlarged and made fit for commercial traffic, but now a corduroyed track over the swamps, wide enough and strong enough for the passage of Red River carts (lightly loaded), would answer our purposes.

Mr. Dawson who represents the Public Works Department here, will forward more fully detailed instructions regarding the construction of the road required, and will authorize you to appoint a surveyor to superintend and direct the work and to make the necessary disbursements.

I have to request that you will kindly render the gentlemen you employ upon this service every possible assistance while so engaged.

I have the honor to be, Sir,
Your most obedient servant,
(Signed,) G. J. WOLSELEY,
Commanding Red River Expeditionary Force.

To the officer representing
The Hudson Bay Company,
Fort Garry.

(Copy.)

GOVERNMENT DEPOT,
THUNDER BAY, 30th June, 1870.

SIR,—Under existing circumstances, it is desirable that the road to the north-west angle of the Lake of the Woods should be opened in such a way as to be practicable to carts without delay, and it has occurred to me that you might find some reliable and energetic person in your section who would be willing to undertake the work.

What is required is a track over which carts can be driven from the end of the road, already opened, to the north-west angle of the Lake of the Woods.

Before a complete road can be made, it is always necessary to open a cart track or ox road, over which supplies can be drawn while the work progresses, and it is a preliminary cart track of this kind which is at present required.

The total distance remaining to be opened is about thirty miles. In the dry sections it would only be necessary to clear off the wood and grub out the roots. In swampy places cross laying (corduroy) or fascining would be required. The person you employ would of course understand the amount of work necessary to form a track over which a cart could pass.

Should you find anyone willing to undertake this work and able to perform it, the Department of Public Works of Canada will pay for the labor and necessary supplies.

The Commander of the Military Force, now on the way to the Red River settlement, has also written you on this subject.

I have the honor to be,
&c., &c., &c.,
(Signed,) S. J. DAWSON.

J. H. McTavish, Esq.,
The Hudson Bay Co.,
Fort Garry.

Mr. McTavish describes his action in this matter as follows :

" Enclosed herewith you will find copy of Colonel Wolseley's letter to me.

" On its receipt, I issued notices in the Colonel's name, calling for men to commence the work, and went myself through the English portion of the settlement, but failed in getting a single English half-breed or Swampy. None but French half-breeds offered, though it was given out and well understood, that the road was to be pushed through in order to hurry in Her Majesty's troops.

" (Signed,) J. H. MCTAVISH."

The reluctance of the English half-breeds to join in the work, is explained by the fact that the road starts from the French settlement, and there was some feeling of distrust still existing between the two parties. If, however, the French were the first to run to open the roads, which they believed necessary to the advance of the troops, the English had at the same time sent boats to meet the Expedition. All parties were thus doing their best to facilitate its approach, and when it came its appearance was hailed by all with equal pleasure.

The policy of the Government, and the action of the Dominion Parliament, had disarmed the malcontents, and many of those who had taken part in the insurrection, were out, with no more formidable weapons than hatchet and shovel, making a road for Her Majesty's troops.

The Expeditionary Force on its arrival, was received everywhere with open arms. The people were quietly following their usual occupations, and the insurgent leader who had remained in Fort Garry, with some thirty men, went leisurely out as the troops marched in.

Peace reigned everywhere, and the Colonel commanding the Expeditionary Force was in a position to address the troops in the following strain :

" From Prince Arthur's Landing to Fort Garry, is over 600 miles though a wilderness of forest and water, where no supplies of any description are obtainable. You had to carry on your backs a vast amount of supplies, over no less than 47 portages, making a total distance of seven miles, a feat unparalleled in our military annals. You have descended a great river, esteemed so dangerous from its rapids, falls and whirlpools, that none but experienced voyageurs attempt its navigation. Your cheerful obedience to orders has enabled you, under the blessing of Divine Providence, to accomplish your task without any accident.

" Although the banditti who had been oppressing this people, fled at your approach, without giving you an opportunity of proving how men capable of such labor could fight, you have deserved as well of your country as if you had won a battle."

This is no doubt very eloquent, and the soldiers deserved all that could be said in their

praise, but as it occurs in a document, which will doubtless be placed on record, I must protest against its being accepted as a correct representation of the state of matters existing in the Red River Settlement, when the troops arrived.

The people to whom he alludes instead of flying at his approach, like banditti, were quietly following their usual occupations, except those who were out, at his particular request, making a road to facilitate the movements of Her Majesty's troops, and the soldiers had had experienced guides on the Winnipeg, although the contrary is implied.

A little latitude should, no doubt, be allowed under the circumstances; but, with all due allowances, I may be permitted to enter a mild protest against a river which has formed the highway of the white man since he first made his appearance in these regions, being called so difficult from its falls, whirlpools and rapids that none but experienced voyageurs attempt its navigation. Why! men, women and children have passed by hundreds up and down the Winnipeg, and the boats of the Hudson's Bay Company, some of them the most unwieldy tubs imaginable, are constantly used on its waters.

In former times, the whole trade of the northern parts of the continent passed by the Winnipeg. The French first used it as a highway; succeeding them came the great north west company of Canada, who also followed it, and, at a later day, when the Hudson Bay Company had its Head Quarters on the Albany, the route to the Saskatchewan was by way of LacSeul and the Winnipeg. Whatever may be said of other parts of the route, the Winnipeg was at least a well known and long travelled highway, presenting remarkable facilities for boats.

As a case in point, I may draw attention to the fact, that, at the very time the Expeditionary Force was passing, two frail and poorly manned canoes, the one occupied by a very fat newspaper editor, and the other by a gentleman who had his wife with him, passed over all the rapids, portages and whirlpools of the Winnipeg without its occurring to their occupants that they were doing anything extraordinary.

THE BARRACKS AND BUILDINGS AT FORT GARRY.

Being quite inadequate to the accommodation of so large a number, it became necessary to provide other buildings, a matter which the scarcity of material, arising from the disturbed state of affairs for some time previously existing in the Settlement, rendered difficult.

The following correspondence will serve to explain the action taken.

(Copy.)

FORT GARRY, August 31st, 1870.

SIR,—I have been instructed by the Lieutenant-General commanding in British North America, to make arrangements for housing the two Battalions of Militia in this Settlement.

7 Captains.
14 Subalterns.
5 Staff Serjeants.
28 Serjeants.
7 Buglers.
315 Rank and File.

1 Commanding Officer.
1 Field Officer.
1 Chaplain.
4 Staff Officers.
—(Regimental.)
2 Control do.

In the lower Fort there will not be any Control Officers.

Mr. Donald Smith has placed all the buildings that can be spared by the Hudson Bay Company in the Upper and Lower Forts at my disposal for that purpose. Some alterations are required to fit them up as barracks, and a few small buildings have to be erected to serve as cook and wash-houses, &c.

The strength of each battalion is as per margin. One will be quartered at the upper, the other at the lower Fort.

The scarcity of labor, which has always been hitherto the chief difficulty in carrying out any works here, will not be felt in providing these buildings, as the services of all the officers and men of these two battalions are available, and from their ranks numerous skilled mechanics can be obtained.

As all the expenses incurred are to be defrayed by the Dominion Government, I conceive it to be very essential that an officer representing the Public Works Department

of Canada, should carry out all the works required, or, having arranged with the Hudson Bay Company for their execution, should exercise a supervision over them whilst in progress.

As you are an officer of high position in that department, I have therefore the honor to request your assistance, and that, should your views coincide with mine upon this subject, you will have the goodness to act on the part of the Public Works Department, and appoint some efficient officer to take charge of fitting up the barracks required.

Enclosed is a rough outline of the various services required in both Forts.

I have the honor to be, Sir,

Your obedient servant,

(Signed,) G. J. WOLSELEY, Colonel,

Commanding Red River Expedition.

To S. J. Dawson, Esquire,
Public Works Department,
Fort Garry.

FORT GARRY, 5th September, 1870.

SIR,—In continuation of my letter to you of the 31st ultimo. I have now the honor to forward you rough specifications of the work required at both forts to fit them for the occupation of troops.

Of course, as the work progresses, many details not given in these papers, will have to be attended to. These will be pointed out by the Lieut.-Colonels commanding the two battalions, to whatever officer you place in charge of the work.

I should feel much obliged if you could give me a statement as to what may be the prospect of getting these services carried out before the severe weather sets in, before say the 1st November or thereabouts.

It is perhaps superfluous to inform you, that housing of the Militia here is of a public importance that should take precedence of every other public work.

The Lieut. Governor authorises me to add that he concurs in this opinion.

I have the honor to be, Sir,

Your obedient servant,

(Signed,) G. J. WOLSELEY, Colonel,

Commanding Red River Expeditionary Force.

S. J. Dawson, Esq.,
Public Works Department,
Fort Garry.

(Copy.)

WINNIPEG, RED RIVER SETTLEMENT, 5th September, 1870.

SIR,—In reference to your letters of the 31st ultimo and 5th instant, I beg to say that all that it is possible to do will be done towards carrying out the work you mention.

I have already ordered the purchase of all the lumber to be procured in the settlement, and have entered into communication with the manager of a small saw mill at Pembina, in the hope of obtaining an additional quantity.

Other necessary material, such as nails, glass, &c., have been ordered from St. Cloud, and the carpenters, now on the line of route between Fort Frances and Lake Superior, have been sent for.

The difficulty of finding skilled labor and the scarcity of material in this remote section must occasion delay, but I trust, nevertheless, to have the work well on before the severe weather sets in.

I have the honor to be, Sir,

Your most obedient servant,
(Signed,) S. J. DAWSON.

Colonel Wolseley,
Commanding Red River Expeditionary Force,
Fort Garry.

The Carpenters who had proved themselves so useful at putting up store houses and stables along the route between Thunder Bay and Shebandowan Lake soon arrived in the settlement and set actively to work. By the 5th day of October the troops were all in shelter, and before the severe weather set in, the recreation rooms, specified by Col. Wolseley, were in readiness, besides various other buildings.

The boats, as will be seen from the following correspondence, were turned over to me and I had them put in safety for the winter. Sixty-five boats, most of them in fair order, remain at Fort Garry:—

(Copy.)

FORT GARRY, 7th September, 1870.

SIR,—I have the honor, by direction of the Colonel commanding, to request you will be good enough to inform him whether you are prepared at once to take over the boats and equipments, no longer required for the purposes of the Expedition, and now lying at the lower Fort and in the Assiniboine River here.

Should you wish to leave them in the vicinity of the troops, Colonel Wolseley will order that the necessary guards be placed over them for their protection, and would request in that case that you will allow the officers commanding the regiments the use of such boats as they may wish for recreation of the officers and men.

I have the honor to be, Sir,

Your obedient servant,
(Signed,) W. B. IRVINE,
Assistant Controller.

S. J. Dawson, Esq.,
etc., etc., etc.
Fort Garry.

(Copy.)

WINNIPEG, RED RIVER SETTLEMENT, 7th September, 1870.

SIR,—I have the honor to acknowledge the receipt of your letter of this date and, in reply thereto, beg leave to say that I shall within a few days be prepared to take over the boats and boat equipment no longer required for the purposes of the Expedition, and now lying at the lower Fort and in the Assiniboine River.

The boats will be hauled up in the vicinity of the force and put in safety from floods and weather, and when thus secured, it would certainly be advisable that they should be placed in charge of the troops.

The officers commanding regiments can, of course, have the use of such boats as they wish for the recreation of the officers and men.

I have the honor to be, Sir,

Your most obedient servant,
(Signed,) S. J. DAWSON.

Col. Irvine,
Assistant Controller, &c.,
Fort Garry.

LAKE OF THE WOODS ROAD.

As already explained, Mr. McTavish, the resident Factor of the Hudson's Bay Company, at the request both of the Commandant of the Field Force and the Manager of the Public Works conveyed to him by letters (copies of which are on a preceding page) from Thunder Bay, had set a force to work on the Lake of the Woods road.

The distance remaining to be opened was found to be somewhat greater than the confused reports, received up to that time, had led us to anticipate. The party sent out with Mr. Snow, in the fall of 1868 had not even penetrated to the Lake of the Woods, with their Exploratory lines, and much of the road they had opened was a mere preliminary track, on which nothing more had been done than cutting down and rolling off the trees. On this Section, the people employed by Mr. McTavish were making bridges over the Swamps; they had also opened a road from the point at which Mr. Snow's road terminates East of White Mouth River to Birch River, and from thence had cut a bridle path to the Lake of the Woods, but it was mostly through Swamp, and horses could with difficulty be taken over it with pack saddles. By this route, a company of the Regular troops, on their return, went from Fort Garry to the North West angle of the Lake of the Woods, where they embarked in boats and a company of Volunteers which had been stationed at Fort Frances, took the same road from the North West angle to Fort Garry.

The Commandant of the Field Force left Fort Garry on the 10th September and passed by land to the Lake of the Woods, where his canoe, with a crew of active voyageurs, was in waiting to carry him to Lake Superior.

THE RETURN OF THE REGULAR TROOPS AND VOYAGEURS.

Was marked by the same good fortune as had attended the advance of the Force from Shebandowan Lake to Fort Garry. The voyageurs who had accompanied the Volunteers were now disengaged, so that there was no lack of skilful boatmen and the journey to Lake Superior was rapidly accomplished, under the able management of Colonel Fielden. The weather was delightful and the flies had vanished. In fact, throughout the Summer, to whatever cause it may have been owing, there was a remarkable absence of troublesome insects.

To the soldiers the homeward journey must have been pleasant. The boats were light and better manned than they had been on the advance, and it would be difficult to imagine anything more beautiful than the Rivers, Falls and Island studded Lakes, by which they passed. Autumn had just begun to tinge the forests and the weather was all that could be desired. The Expedition had been entirely successful and they were returning to receive the well merited thanks of the Country and their Sovereign.

The average rate per day, notwithstanding all impediments in the way of portages, or rapids, was about 25 miles, some days much more and some less. Waggon were in waiting for the luggage at Shebandowan Lake and the terrible Thunder Bay Road, which had been greatly improved during the absence of the troops, was but two days easy march. This shows how readily it might have been passed at first, if the Voyageurs, instead of being set to dragging boats by the River, had been kept for a time at work on it.

Many of the voyageurs, at their own request, were paid off at Fort Garry. They had been struck with the beauty of the country and the fertility of the soil, and I have no doubt will prove a valuable addition to the population.

I was detained for some time in making necessary arrangements for the construction of barracks, and the progress of the work on the Lake of the Woods road, and only left the north-west angle on the 23rd of September. I reached Thunder Bay on the 1st October, and in a few days saw the last of the regular troops embark on the steamers; officers and men had alike distinguished themselves by unflinching perseverance, perfect sobriety, and all the good qualities which mark the British soldier. A feeling of regard had grown up between them and the voyageurs, and for the latter I can say that they parted with the tried friends who had shared their toils, with regret, and with a heartfelt wish for their future prosperity and happiness.

The steamers having been fully freighted with military stores, &c., the voyageurs could only leave Thunder Bay on the succeeding trips. They reached their homes in safety, and it is satisfactory to know that not a single serious accident occurred, and not a life was lost, from the outset of the Expedition until its return.

The Expedition having been attended with success, I would gladly close this report without referring to blunders which might have led, and very nearly did lead, to an opposite result ; but so much has been said and written of a character to produce an impression, the reverse of the truth, that justice to the men by whose perseverance and toil it was mainly saved from disaster, compels me to draw attention to certain circumstances which I should otherwise have left unnoticed.

I have already shewn that, on the arrival of the first detachment of the military force at Thunder Bay, the road for twenty-five miles was in such a condition that boats and military stores might at once have been sent forward, as far as Matawin Bridge. I have also pointed out that any deficiency in the means of transport, occasioned by the detention of a portion of that which had been provided (drawing stores over the portage road), at Sault St. Marie, might easily have been remedied by sending to Collingwood or the settlements in its vicinity for additional horses and waggons.

Soon after the arrival of the first of the troops, twenty-eight boats were taken by waggon over the road to the Matawin Bridge, thus proving that it was not only practicable but quite easy to send them in that way.

In this position, the true plan would have been to set all the available force, both soldiers and voyageurs, to work on the unfinished section of the road, so as to have it completed by the time the stores should reach the Matawin Bridge. But instead of adopting a line of action, so obvious and judicious, the boats, on the advice of inexperienced persons, who, although living in the vicinity, had never been over the country through which the road passes, or had ever so much as seen Shebandowan Lake, were ordered to the rough and rocky channel of the river, while at the same time, with exception of a few companies of the regular troops, sent forward to aid in repairing the damage occasioned by the fire, the main body of the military force was maintained in inactivity at Thunder Bay, and there it in great part remained, until General Lindsay made his appearance and ordered a general movement forward.

I have already described the operation of dragging the boats over the rocks of the Kaministaquia and Matawin, and the damage to which they were thereby subjected.

The voyageurs knew the work and privations to which they were thus exposed, to be unnecessary. They saw that a few additional waggons, only, were required to relieve them from the toil, and save the boats on which the success of the Expedition depended. They were, indeed, accompanied some times by the soldiers, who did a portion of the dragging, as far as the Matawin Bridge, but the soldiers never returned on a second excursion of the same nature, while the voyageurs had to tramp back again to Thunder Bay, and renew the work ; and, in the difficult sections between Young's Landing and Brown's Lane, the soldiers could not aid at all. Most of the native Indian voyageurs, brought at great expense to the ground, and whose services would have been invaluable as guides, became, as I have already explained, disheartened and left. The Nipigon Indians deserted in a body. Those from Fort William and the Grand Portage could not endure the toil, and their places had to be filled with men from among the workmen on the road ; under these circumstances, I think I am justified in claiming some little credit for the voyageurs, who, in storm and sunshine, stood manfully to their posts, and compelled success against blunders, which would otherwise have resulted in disaster.

If, under the great trials to which they were so unnecessarily exposed, any considerable number of them had left, the Expedition could not have proceeded, the route would have been proclaimed impracticable, and the North-West Territories might possibly have been lost to Canada. That so great a national calamity was averted, and that the first considerable Expedition which the Dominion sent forth, has been crowned with success, is in no small measure due to the perseverance, the skill and unwavering constancy of

the voyageurs. They were of that class which has, perhaps, done more than any other to advance the prosperity of the country.

Of such as they were are the men who are yearly engaged in the adventurous work of carrying the produce of the forests, or rather the forests themselves, along the rivers of the country. Their calling may perhaps be considered a humble one, but that is no reason why, when they perform important public services, and do great things, they should be utterly ignored and their hard won laurels snatched from them and placed on the brows of others.

In giving credit to the voyageurs for their services, I am very far from wishing to disparage the work of the soldiers. On the contrary, I can most cheerfully bear testimony to their aptitude in acquiring a knowledge of the voyageurs art, their unvarying perseverance and orderly behaviour. The soldiers are far more likely to suffer from the indiscreet remarks of those who assume to speak for them than from anything I have said.

The tendency of exaggerated statements is to produce an impression the opposite of that which they are intended to convey, and whatever may be said to the contrary, no one having experience of such matters, will believe that it needed four hundred regular troops who, whatever their good qualities might be, were strangers to the country and the manner of travelling in it, to carry treble their number of Canadians, voyageurs, and volunteers, through the forests of their native country.

And, after all, what has been done? With every appliance which the country could command, magnificent steamers on Lakes Huron and Superior, good horses and waggons for the land roads, boats in every way adapted to the navigation of inland waters, and so light as to be easily transported on portages, with voyageurs to man them, well skilled and accustomed to their work, the Expedition made its way to the Red River Settlement.

The road by which it travelled had been much used in former years. It was a link in the route by which the French, nearly two hundred years ago, carried the flag of their country to the plains of the Saskatchewan, and it was for many years the highway of the North-West Company of Canada, in carrying on a very extensive trade with the interior.

It has been estimated that two thousand people passed over it, yearly, when that company was in the hey day of its prosperity, and although it had been long abandoned, it will readily be believed that it presented no serious difficulty.

Respectfully submitted,
S. J. DAWSON.

[In accordance with the recommendation of the Joint Committee on Printing, that portion of Mr. Dawson's Report having reference to the strictures published in England by an officer of the Expeditionary Force, is not printed.]

RETURN

To an Address of the HOUSE OF COMMONS, dated 6th March, 1871; For a Statement shewing the Names of all Vessels Chartered by or in behalf of the Imperial Government and the Canadian Government, for the transportation of men and material in the Expedition to the North-West in 1870; together with the tonnage, nationality and capacity; length of time employed, and amount paid each per day.

By Command.

J. C. AIKINS,

Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,

OTTAWA, 30th March, 1871.

RETURN of Vessels hired by the Imperial Government for Transportation of

Name and Description of Vessel.	Tonnage.	Nationality.	Capacity.	From whom hired.
Steamer "Clematis"	296	American	not known	H. C. Winslow & Co., of Buffalo
Steam Tug "Rescue"	275	do	do	Andrew Port
Tug & Scow, names not given	not known	not known	do	P. S. Church
Steamer "Algoma"	415	British	do	Thro' Northern Railway of Canada
Schooner "Snow Bird"	110	do	do	C. M. Smith & Co., of Toronto
Steamer "Arctic"	618	American	do	J. E. Turner, on behalf of the owners
Steam Tug "Rescue"	275	do	do	A. Port
Steam Tug "Pioneer"	not known	not known	do	P. S. Church
Steam Tug "M. T. Mills"	232	American	do	Trompe Brothers
Steam Tug "Pioneer"	not known	not known	do	P. S. Church
Scow, name not given	do	do	do	Maitland & Co.
Tug, name not given	do	do	do	M. T. Mills
Steamer "Union"	434	American	do	J. Hallaran
Steam Tug "Okorora"	57	British	do	E. & W. Dunn
Schooner "Nemesis"	131	do	do	John Spence
Schooner "Pandora"	325	do	do	James Hardison
Steamer "Wambuno"	180	do	do	Thro' Northern Railway of Canada
Steam Tug, name not given.	not known	not known	do	A. Port

Troops, Stores, &c., during the Expedition to the North-West Territory, in 1870.

Service.	Length of time employed.	Amount per day, &c.	Total paid.	Remarks.
Sault St. Marie to Fort William.....	7 days, viz. from 28th May to 3rd June.....	\$250 a day.....	8 cts. 1,750 00 13 50	Contract. Also, for 27 meals to Officers at 50 cts. each.
Sault St. Marie.....	2½ days, viz. 22nd to 25th May.....	\$40 a day.....	100 00	By verbal agreement.
do.....	1 day 31st May.....	do.....	40 00	do do
Collingwood to Thunder Bay and vice versa.....	28th May to 8th July, 1870.....	Tariff rates for Officers, men, and stores....	2,430 20	Contract.
Collingwood to Thunder Bay and back to Georgian Bay.....	13 days, from 25th May to 6th June.....	\$35 a day.....	455 00	do do
Sault St. Marie.....	25 days, 6th to 30th June.....	\$400 a day.....	10,000 00 146 00	Also, for 232 meals to Officers and others, at 50 cents each.
do.....	4½ hours, 2nd June.....	\$15.00.....	15 00	By verbal agreement.
do.....	¼ of a day, 12th June.....	\$30.00.....	30 00	do do
do.....	2 days, 28th and 29th May, 2 half days, 7th and 12th June.....	\$40 a day.....	120 00	do do
do.....	1 day, 14th of June.....	\$40 a day.....	40 00	do do
do.....	Between 16th May and 19th June, 25½ days.....	\$2 a day.....	51 00	do do
do.....	1 day, 19th June.....	\$35 a day.....	35 00	do do
Between Sault St. Marie and Thunder Bay.....	7 days, 29th May to 4th June, 1870.....	\$400 a day.....	2,800 00 28 50	Contract. Also, paid for 57 meals to Officers at 50 cents each.
Sault St. Marie.....	5 weeks, 23rd May to 26th June.....	\$200 a week.....	1,000 00	By Contract.
Collingwood to Thunder Bay do do.....	In June, 2 trips certain 22 days, 7th to 28th June.....	\$20 a day..... \$50 a day.....	280 00 1,100 00	do This vessel was originally employed at this rate by Dominion Government, and was continued on the same terms by Imperial Government.
Sault St. Marie to Collingwood and vice versa.....	26th May, to 1st June.....	Tariff rates for men and stores.	30 00 54 00 1,005 93	Also paid to the vessel for Canal Tolls; and For hire of a tug towing her through Canal. Contract.
Sault St. Marie.....	Sept. 20th and 26th and 1st October, towing Scow.....	\$65.00.....	185 00	Verbal Agreement.
	September 30th and 6th to 12th October, use of Tug 5 half days.....	\$120.....		

Quebec, 21st March, 1871.

(Signed,) B. H. MARTINDALE,
Deputy Comptroller.

RETURN of Vessels hired by the Dominion Government of Canada, for ^{trans} ~~trans~~ ^{portation}

Name and Description of Vessel.	Tonnage.	Nationality.	Capacity.	From whom hired.
Propeller "Shickluna"	450	British	not known	The North Shore Transportation Company ...
Schooner "Pandora"	326	do	do	James Hardison
Schooner "Orion"	240	do	do	E. Zealand
Propeller "Brooklyn"	339	American	do	L. Millis
Steamer "Chicora"	550	British	do	Milloy & Co
Steamer "Algoma"	416	do	do	E. M. Carruthers & Co..
Steamer "Algoma"	416	do	do	do do ..
Gun Boat "Rescue"	275	do	do	Dominion Government ..
Gun Boat "Prince Alfred".	456	do	do	do do ..

The above Statement of Expenditure embraces that for both Imperial and Do-
 DEPARTMENT of MILITIA and DEFENCE.

of Troops, Stores, &c., during the Expedition to the North-West Territory in 1870.

Service.	Length of time employed.	Amount per day, &c.	Total paid.	Remarks.
			\$ cts.	
Toronto to Thunder Bay, and vice versa	42 days, viz. from 30th April to 10th June inclusive	\$150	6,300 00	Charter.
do do	44 days, viz. from 20th April to 3rd June inclusive	\$50	50 00	Meals to Officers and Sault Ste. Marie Canal Tolls.
do do	41 days, viz. from 22nd April to 2nd June.	\$50	2,200 00	Charter.
Ogdensburgh to Detroit, thence between Collingwood and Lake Superior and vice versa	4 days, viz. from 14th to 18th May	\$150 } American	224 31	Canal Tolls and towing on Welland and Sault Ste. Marie Canals, &c.
Collingwood to Thunder Bay and vice versa, also Sault St. Marie	16 days, viz. from 18th May to 3rd June ..	\$300 } currency	2,050 00	Charter.
Collingwood to Sault St. Marie and Thunder Bay and vice versa	Tariff rates for Officers, men, stores and voyagers, from May to end of season ...	Tariff rates as per contract	143 60	Towing on Welland Canal and Sault Ste. Marie Canal Tolls, &c.
do do	10th May to 4th June ..	\$2,250 per week.	600 00	Charter.
do do	3 weeks and 3 days ..	\$7,714	4,800 00	do
do do	Less abatement	\$450	116 30	Meals to Officers and men.
Between Sault Ste. Marie and Collingwood and vice versa	During the season of Navigation	Tariff rates for Officers, men, stores and voyagers	19,094 62	Contract.
do do	27th May to 22nd June, (27 days) ..	\$80	7,264 00	As per agreement
do do	23rd May to 17th July, (56 days) ..	\$100	11,001 44	As per Contract.
			2,160 00	} Amounts charged to the General Account of the Expedition.
			5,600 00	

minion Troops and Stores chargeable to the General Account of the Expedition.

OTTAWA, 28th March, 1871.

GEO. FUTVOYE,
Deputy of Minister of Militia and Defence.

RETURN

To an Order of the House of Commons, dated 16th March, 1871; For a tabular Statement of the quantity and value of the various kinds of articles imported into British Columbia for the last fiscal year, of which there are available returns; the amount of duties collected upon each, and the amount which would have been collected had the present Canadian Tariff been in force.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
OTTAWA, 20th March, 1871.

(No. 8.)

OTTAWA, March 20th, 1871.

SIR,—I have the honor to transmit to you, herewith, the Return of Imports into the Colony of British Columbia, in the year 1870, called for by an Order of the House of Commons, bearing date 16th March, instant.

I have the honor to be, Sir,

Your obedient servant,

R. S. M. BOUCHETTE.

E. Parent, Esq.,
Under Secretary of State of Canada,
Ottawa.

IMPORTS into the Colony of British Columbia, in the Year 1870, at the Ports of
Victoria, New Westminster, Burrard Inlet, and Nanaimo.

Articles.	Total Quantities Imported.		Quantities entered for Home Consumption.		Value of Total Imports.	Duty.
Ale and Porter, in wood . . .	8529	galls.	4447	galls.	\$ 4021 20	\$ 667 05
do in bottle . . .	11254½	doz.	8662½	doz.	19400 16	2598 75
Agricultural Implements . . .	442	pkgs.	416	pkgs.	13651 81	
Axes . . .	199	"	227	"	3355 50	565 92
Bacon and Hams . . .	46441	lbs.	45062	lbs.	7164 67	1795 49
Barley . . .	311717	"	554700	"	3790 66	1664 05
Beans . . .	39742	"	36789	"	1005 35	367 88
Beef, Salt . . .	100	tierces.	100	tierces	1456 48	82 64
	96¼	bbls.	23¼	bbls.		
Bitters . . .	369	galls.	421	galls.	1939 48	628 50
Blankets . . .	880	pkgs.	557	pkgs.	64392 91	9448 49
Boots and Shoes . . .	987	"	975	"	59452 06	11349 35
Books, printed and MSS. . .	139	"	139	"	6447 84	
Bread . . .	242	"	164	"	1118 50	169 49
Bran and Shorts . . .	937939	lbs.	952405	lbs.	11370 66	2386 43
Bricks . . .	16	pkgs.	16	pkgs.		
	30	m.	30	m.	672 97	
Butter . . .	41877½	lbs.	27853½	lbs.	10352 55	2785 37
Candles . . .	18847	"	69441	"	3278 76	3472 05
Cards . . .	11	pkgs.	20	pkgs.	571 32	370 55
Canvas, Cotton . . .	32	"	32	"	2088 06	104 38
do Hemp . . .	9	"	6	"	727 96	11 46
Cement and Plaster . . .	155	bbls.	245	bbls.	336 09	73 99
Cheese . . .	53086	lbs.	45060	lbs.	9472 80	2253 04
Chocolate . . .	62	pkgs.	32	pkgs.	852 82	124 35
Cider . . .	525	galls.	509	galls.	407 00	76 67
Cigars . . .	435250	No.	442250	No.	22033 40	8885 00
Clothing . . .	936	pkgs.	830	pkgs.	162349 81	19978 60
Coal . . .	116.41	tons	16.41	tons	465 64	145 52
do Blacksmiths' . . .	32	casks	32	casks		
	50	tons	50	tons	968 36	
Coffee, raw . . .	65712	lbs.	61975	lbs.	10030 63	1859 25
do manufactured . . .	576	"	960	"	149 76	57 60
Coin . . .	2	pkgs.	2	pkgs.	270 00	
Cordials . . .	1	"	14	"	142 75	7 75
Confectionery . . .	161	"	153	"	1891 70	533 30
Cornmeal . . .	16220	lbs.	15220	lbs.	576 90	76 10
Drugs . . .	246	pkgs.	246	pkgs.	9117 64	1833 63
Dry Goods . . .	1024	"	917	"	191864 31	21552 45
Earthenware . . .	223	"	225	"	5348 93	718 40
Eggs . . .	1122½	doz.	1122½	doz.	213 54	140 32
Firearms . . .	91	pkgs.	53	pkgs.	7458 06	591 69
Fish, preserved . . .	1030	"	997	"	6847 56	947 63
do fresh . . .	25	"	25	"	48 00	
Flour . . .	15543.41	bbls.	13740.88	bbls.	80465 72	20611 33
Fruits, preserved . . .	1882	pkgs.	1954	pkgs.	9957 15	1308 87
do fresh . . .	88471	lbs.	88471	lbs.	2834 11	884 71
do free . . .	629	pkgs.	629	pkgs.	2800 00	
Furniture . . .	359	"	359	"	5884 51	882 62
Furs . . .	36	"	36	"	6126 42	
Glass and Glassware . . .	650	"	625	"	6220 34	909 43
Groceries . . .	3179	"	2922	"	15659 60	1824 90
Gunpowder, sporting . . .	9500	lbs.	11783	lbs.	2407 71	707 00
do blasting . . .	36350	"	36375	"	3866 00	1051 25
Gunny Bags . . .	7	pkgs.	7	pkgs.	177 83	
Hardware, &c. . .	1161	"	1140	"	28448 05	3423 17
Hay . . .	44.57	tons	44.57	tons	822 70	178 29
Harness and Saddlery . . .	59	pkgs.	58	pkgs.	2272 37	402 95
Hides . . .	30	"	30	"	455 00	
Hops . . .	3077	lbs.	3977	lbs.	1101 46	397 70
Iron and Steel . . .					12218 18	
Jewellery . . .	19	pkgs.	20	pkgs.	1262 40	261 13
Lard . . .	39256	lbs.	38739	lbs.	5486 58	1936 96

IMPORTS, 1870.—Continued.

Articles.	Total Quantities Imported.		Quantities entered for Home Consumption.		Value of Total Imports.	Duty.
Leather	74	pkgs.	73	pkgs.	\$6757 43	\$1015 01
Lime Juice	35	"	35	"	693 90	
Live Stock:—						
Horses	131	head	131	head	14405 00	262 00
Bulls	3	"	3	"	205 00	9 00
Cows	133	"	133	"	5430 00	266 00
Calves	111	"	111	"	1096 00	
Beef Cattle.....	805	"	805	"	53625 00	2415 00
Sheep	5513	"	5513	"	22633 00	4135 00
Hogs	973	"	973	"	14432 58	1946 00
Lumber, miscellaneous	24	pkgs.	24	pkgs.	478 36	
do laths	9	m.	9	m.	22 50	9 00
Machinery	511	pkgs.	276	pkgs.	20460 33	850 68
Matches	276	"	270	"	5176 09	569 57
Malt	98444	lbs.	98444	lbs.	2649 42	295 28
Meat, preserved	70	pkgs.	55	pkgs.	417 10	37 33
do fresh	484	"	484	"	1941 37	388 33
Miscellaneous Mdze.....	3271	"	3165	"	61820 41	7151 19
Molasses	2359	"	1752	"	8696 77	840 98
Nails	1358	"	1570	"	7702 41	1066 14
Nuts and Almonds.....	326	"	297	"	1959 48	197 97
Oils, sweet	149	"	127	"	1084 89	121 26
do various.....	3771	"	3929	"	19722 14	2858 32
Oatmeal	28434	lbs.	42846	lbs.	1514 63	428 46
Oats	41184	"	41184	"	637 07	123 51
Opium	62000	taels	64500	taels	55800 00	14512 50
Paints	349	pkgs.	444	pkgs.	3166 84	235 75
Peas, split.....	5828	lbs.	4538	lbs.	218 60	45 88
Potatoes	10936	"	10936	"	118 59	54 67
do sweet	9099	"	9099	"	132 78	45 49
Personal effects	72	pkgs.	72	pkgs.	2282 50	
Pork, salt	26	tierces	26	tierces	815 00	61 70
	28	bbls.	19	bbls.		
Plants	21	pkgs.	21	pkgs.	541 75	67 43
Poultry	19	coops	19	coops	108 50	26 52
Quicksilver	11	flasks	11	flasks	527 49	53 98
Rice	544458	lbs.	669688	lbs.	21974 45	10045 30
Rope and Cordage	516	coils.	588	coils.	7922 09	405 88
Salt					14124 09	
Seeds	299	pkgs.	252	pkgs.	2128 25	
Shot	16240	lbs.	23456	lbs.	795 85	478 08
Soap	6734	pkgs.	7822	pkgs.	20381 21	2875 28
Stationery	456	"	515	"	10377 67	1333 63
Sugar, raw	1091520½	lbs.	955034½	lbs.	66528 15	19100 69
do refined	179585½	"	154230	"	17225 31	3856 36
Spirits	37632.07	galls.	23564.74	galls.	51414 55	54760 23
Tar and Pitch	41	bbls.	41	bbls.	189 11	
Tin, Lead, &c	647	pkgs.	647	pkgs.	7240 28	
Tinware	34	"	11	"	1254 85	227 25
Tea	96268	lbs.	78099	lbs.	30489 18	9762 28
Tobacco	67391	"	75302	"	29930 08	18825 54
Vegetables, fresh.....	33	pkgs.	33	pkgs.	91 65	20 65
do preserved	278	"	318	"	1175 54	126 29
do Onions	3881½	lbs.	3881½	lbs.	62 21	77 63
Waggons and Carriages	15	No.	15	No.	3597 30	719 45
Wagon Material	534	pkgs.	532	pkgs.	3178 29	
Watches and Clocks	70	"	70	"	2597 91	324 67
Window Sashes and Doors	37	"	37	"	182 00	36 40
Wines, Champagne	414½	cases	195½	cases	5531 60	585 75
do Claret	6148	galls.	8216	galls.	5138 76	1643 20
do China Med.....	1177½	"	864½	"	788 50	1266 75
do California	237	"	389	"	509 25	97 25
do Various	10078	"	4691	"	22510 63	3517 78
Wheat	257360	lbs.	266667	lbs.	3781 44	932 98

IMPORTS, 1870.—Continued.

Articles.	Total Quantities Imported.		Quantities entered for Home Consumption.		Value of Total Imports.	Duty.
Wood and Willow-ware	642	pkgs.	642	pkgs.	\$ 2060 60	\$ 257 44
Yeast Powders	239	"	273	"	5334 70	759 91
Ship Building materials	420	"	408	"	7636 35	
Telegraph Stores.....	2	"	2	"	9 00	
Government Stores.....					4023 89	
Miscellaneous merchandise } from San Juan..... }					18864 25	
					\$1,521,893 75	\$305,279 06

IMPORTS AT THE SOUTHERN BOUNDARY DURING THE YEAR 1870.

Axes	4	cases			76 00	11 40
Bacon and Hams	10897	lbs.			2341 52	434 88
Beans	1657	"			121 35	16 57
Bitters	3 1/2	galls.			25 25	4 65
Blankets	2	pkgs.			74 60	14 92
Boots and Shoes	16	"			824 30	164 86
Butter	2859 1/2	lbs.			887 05	285 05
Candles	1645	"			343 65	82 25
Cards	4	pkgs.			11 25	5 63
Canvas, cotton	3	"			142 15	7 35
Cheese	355	lbs.			82 20	17 75
Cigars	3000	"			100 00	60 00
Clothing.....	35	pkgs.			1235 64	185 28
Coffee, raw.....	921	lbs.			197 46	27 43
do manufactured	240	"			67 56	14 40
Confectionery	1	pkg.			9 94	2 99
Drugs	8	"			107 31	21 46
Dry Goods	22	"			389 46	48 74
Eggs	107	dozen			46 75	13 38
Fish, preserved	18	pkgs.			194 73	27 97
Flour	580	bbls.			3899 75	870 50
Fruits, preserved.....	28	pkgs.			312 01	39 09
Groceries	17	"			84 93	10 38
Gunpowder, sporting.....	100	lbs.			73 75	6 00
Hardware	18	pkgs.			235 27	29 51
Harness and Saddlery.....	1	"			97 38	19 48
Iron and Steel	3	"			103 50	
Lard	1820	lbs.			406 00	91 00
Live Stock—						
Horses and Mules.....	878	head			47305 00	1756 00
Cows.....	49	"			2205 00	98 00
Calves	25	"			250 00	
Beef Cattle	256	"			14889 00	768 00
Matches	10	pkgs.			116 00	14 51
Miscellaneous merchandise	21	"			416 71	51 90
Molasses	1	"			6 00	0 75
Nails	36	kegs			228 50	28 57
Oils, sweet.....	3	cases			19 00	2 85
Oatmeal	1570	lbs.			108 90	15 70
Oats	525	"			10 50	1 57
Paints	2	pkgs.			5 12 1/2	0 52
Potatoes.....	1660	lbs.			49 80	8 30
Pork, salt.....	2	bbls.			25 00	2 50
Poultry.....	1	pkg.			9 60	2 40
Rice	6850	lbs.			512 00	102 75
Rope, &c.....	5	coils.			38 70	1 94
Salt.....	12	pkgs.			148 66	

IMPORTS, 1870.—Continued.

Articles.	Total Quantities Imported.	Quantities entered for Home Consumption.	Value of Total Imports.	Duty.
Sugar, raw	9646	lbs.	\$ 1249 72	\$ 192 92
do refined	393	"	70 47	9 83
Soap	40	pkgs.	100 28	15 04
Stationery	6	"	40 67	5 03
Spirits	415	galls.	1064 12	1037 50
Stoneware	1	pkg.	9 00	2 25
Tea	831	lbs.	628 05	106 36
Tobacco	1558	"	1449 50	289 50
Vegetables, fresh	6	pkgs.	66 50	6 65
do preserved	1	"	9 00	0 90
do Onions	1200	lbs.	120 00	24 00
Window Sashes, &c.	1	pkgs.	4 00	0 80
Wines, Claret	8	galls.	12 00	1 60
do California	4	"	8 00	1 00
do Various	42	"	110 00	31 50
Yeast Powders	5	pkgs.	131 00	16 36
Unspecified merchandise				10 00
			\$ 83,916 06	\$ 7,221 32

In the above Return the Kootenay Imports of November and December are not included, that also having been the case in former years.

W. HAMLEY.

Custom House, Victoria, January 20th, 1870.

The above imports, if entered under the present tariff of the Dominion, not including the five per cent. on amount of duty, lately repealed, would yield a revenue of \$258,478 14.

Customs Department, Ottawa, 18th March, 1871.

RETURN

Statement of all Allowances and Gratuities granted under the Act 33 Vic., cap. 4, intituled, "An Act for better ensuring the efficiency of the Civil Service of Canada, by providing for the Superannuation of persons employed therein in certain cases."

STATEMENT of all allowances and gratuities granted under the Act 33 Vic., cap 4, intituled, "An Act for better ensuring the efficiency of the Civil Service of "Canada, by providing for the superannuation of persons employed therein "in certain cases."

Date of Orders in Council.	To whom granted.	Annual Allowance.	Gratuities.	Amount Paid.
		\$ cts.	\$ cts.	\$ cts.
May, 31st, 1870.	John Sewell.	1,260 00		735 00
October 26th, 1870 ..	W. H. Meudell.	1,134 00		283 50
do do	George Henderson.	469 07		117 27
do do	E. Mann.	180 00		45 00
do do	C. Cazeau.	360 00		90 00
do do	C. E. Allen.	561 60		140 40
do do	J. Sealy.	396 00		99 00
do do	F. X. Frenette.	342 00		85 50
do do	W. McCrae.	630 00		157 50
do do	A. Patton.	236 25		59 04
do do	E. Duckett.	378 00		94 50
do do	E. Boyd.	459 90		114 97
do do	B. Robinson.	\$1,386 00		231 00
February 13th, 1871.	do.	504 00		
		1,890 00		
November 24th, 1870	David Luck.	506 88		294 68
December 21st, 1870.	E. B. Lindsay.	907 20		75 60
do do	B. S. Laifur.	472 50		39 37
do do	Angele Martel.	151 20		12 60
do do	R. B. Johnson.	626 40		52 20
do do	George Fisher.	219 16		18 26
do do	James S. Thomson.		425 83	425 83
January 28th, 1871.	John F. Taylor.	1,809 50		
February 4th 1870	J. Strachan.		466 66	
do do	Erastus Young.		183 33	133 33
do do	J. Sanders.	64 80		
do do	John Goudge.	108 00		
do do	W. M. Dunham.	132 30		
do do	J. W. Taylor.	576 00		
do do	P. B. Clement.	256 50		
do do	Joseph S. Lee.	324 00		
do do	J. Thomson.	583 20		
do do	A. Levesque.	356 40		
do do	J. Palmer.	285 12		
do do	H. Popham.	127 52		
do do	J. Goodbody.	315 52		
do do	R. Brock.	327 60		
do do	H. B. Jamieson.	135 60		
do do	B. McEvenue.	655 20		
do do	J. Henderson.	313 20		
do do	R. McGee.	81 00		
do do	J. C. Tuck.	97 20		
do do	F. G. Scott.	380 80		
do do	S. S. Finden.	482 37		
February 13th, 1871.	Samuel J. Murray.	497 00		
do do	M. Harbeson.	673 92		
do do	J. Richie.		133 33	
February 14th, 1870.	H. E. Morgan.		240 00	
		\$19,763 31	\$1,399 15	\$3,304 55

February 15th, 1871.

JOHN LANGTON,
Auditor.

No further superannuation allowances have been granted since the above dates, but in some cases another month's payment has been made.

JOHN LANGTON.

March 30th, 1871.

RETURN

To an Address of THE HOUSE OF COMMONS, dated 27th February, 1871;—For Copies of all Correspondence that has taken place between the Dominion and Local Government of New Brunswick since 1st July, 1867, relating to unadjusted claims of the Province of New Brunswick, with a statement of such claims; also a statement of the Public Account between the Dominion and the Province of New Brunswick, on the 1st January, 1871.

By command,

J. C. AIKINS,

Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
OTTAWA, 22nd March, 1871.

SCHEDULE.

- Letter from Lieut.-Governor of New Brunswick to Secretary of State, Provinces.
- Letter from Provincial Secretary of New Brunswick to Secretary of State, Provinces.
- Letter from Auditor to Under Secretary of State, Provinces.
- Letter from Under Secretary of State, Provinces, to Lieut.-Governor of New Brunswick.
- Letter from Lieut.-Governor of New Brunswick to Secretary of State, Provinces.
- Letter from Provincial Secretary of New Brunswick to Lieut.-Governor.
- Letter from Under Secretary of State, Provinces, to Lieut.-Governor of New Brunswick.
- Letter from Acting Under Secretary of State, Provinces, to Auditor General.
- Letter from Provincial Secretary of New Brunswick to Secretary of State, Provinces.
- Letter from Provincial Secretary of New Brunswick to Minister of Finance.

(No. 43.)

GOVERNMENT HOUSE,

NEW BRUNSWICK, July 13th, 1870.

SIR,—I have the honor to forward herewith a communication from the Provincial Secretary, in answer to a communication to him from Mr. Langton of the 29th ultimo. The case as presented on behalf of this Province is one which certainly requires, and I am certain will receive, the early attention of the Dominion Government.

It is very embarrassing to my Government to have an *undoubted balance* (as they consider) of \$92,340 due to this Province under the 107th section of the "British North America Act" entirely ignored, and at the same time have \$19,228 of interest on an alleged excess of debt, and \$12,000, pending settlement of Railway accounts, deducted from the half yearly subsidy. It must be admitted that such a state of things ought not to exist, and I have, therefore, the honor to request that you will press upon the Dominion Government the great importance, at the present time, for an early and final adjustment of all outstanding accounts between the Dominion and the Provincial Governments.

I have, &c.,

(Signed,)

L. A. WILMOT,
Lieutenant Governor.

The Honorable

The Secretary of State for the Provinces, &c., &c., &c.

PROVINCIAL SECRETARY'S OFFICE,
FREDERICTON, N. B., July 12th, 1870.

SIR,—I have the honor to acknowledge the receipt of a letter, under date of the 29th ultimo, from Mr. Auditor Langton, informing me that Paymaster Robinson was instructed to deduct \$19,228.83, from the half year's subsidy due New Brunswick from the Dominion of Canada, under the North American Act, as interest on excess of debt over the stipulated seven million dollars.

I further received a telegram from Mr. Robinson, dated the 4th instant, stating that he was also instructed to deduct an additional sum of twelve thousand dollars from the paid subsidy, "pending settlement of Railway accounts."

On the 29th of January, 1869, I addressed a letter to the Hon. Mr. Langevin, Secretary of State for the Dominion, calling his attention to the 107th section of the Act of Union, and requesting that certain items amounting to the sum of \$92,340.01, being an undoubted balance due the Province under that section, might be placed to our credit in account with the Dominion, and proposing that certain further claims should stand over until the several items would be mutually discussed and decided upon. To this communication I have received no other answer than a mere acknowledgement of its receipt, and I awaited some further action on the part of the Dominion Government before *proposing a meeting* to adjust the accounts between the Dominion and the Province.

The Provincial Government has not up to this date received from the Dominion Government, or its Auditor, any account current or statement of Provincial indebtedness from a Dominion stand point, but we observe from the published accounts of the Dominion for the fiscal year ended 30th June, 1869, that the indebtedness of the Province is assumed to be very heavily in excess of what it actually is under the conditions of the North America Act, and the fiscal statement of Mr. Treasurer Robinson, of the 30th June, 1867.

It is, therefore, with feelings of surprise and regret that I observe the very unusual course adopted by the Dominion Government toward this Province, in stopping a portion of our subsidy without previous notice without furnishing accounts, without action upon my letter of the 29th January, 1869, and without proposing a Conference for the adjustment of our respective accounts and claims; and whilst I cannot believe that the Dominion Government is really disposed to exercise the power it possesses, by holding the purse string in an arbitrary manner, still I must again express my regret at the course which it has thought proper to pursue in its dealings with this Province.

New Brunswick is willing to abide by the conditions of the Act of Confederation, but she expects to have those conditions carried out in a fair and liberal spirit; and before stoppage is made of any portion of her very moderate stipend she wishes, and expects, to have her claims under the Act of Union fully investigated, and an equitable

adjustment arrived at, in order to which she is ready and desirous to join in the appointment of a Commission furnished with power to adjudicate upon all financial questions at issue between the Dominion and the Province under the North America Act.

Whilst pressing upon the Dominion Government a desire for its concurrence in this proposal, I must at the same time request that Mr. Robinson be forthwith instructed to pay over the balance of subsidy kept back under orders from Ottawa, and amounting to the sum of \$31,228 83.

I have &c.,

(Signed,)

JOHN A. BECKWITH.

The Hon. Joseph Howe,
Secretary of State, Ottawa.

AUDIT OFFICE,

OTTAWA, July, 20th, 1870.

SIR,—I have the honor to acknowledge receipt of a letter from the Lieut-Governor of New Brunswick enclosing one from the Provincial Secretary. They will be laid before the Minister of Finance on his return to Ottawa, and I will take his instructions in the matter.

I may mention in the meantime, that the claim of New Brunswick to be allowed for certain Railway and other stores, was laid before the Minister of Finance of the day, and as no similar allowance had been allowed or claimed by the other Provinces it was decided that it could not be entertained, and that decision was communicated by me personally to Mr. Beckwith.

As to the interest in the excess of debt there can be no doubt that it must be deducted from the subsidy, assuming our statement of the debt to be correct. A statement will be furnished to the Province of our several charges against debt account.

As to the third items complained of, it is a manifest error. The Department of Public Works has an unsettled claim against the Woodstock branch, and the Eastern Extension audit applied to me, pending the settlement, to deduct it from the next *subsidy*, my certificate having been sent to the Paymaster to pay the subsidy to the Province, I telegraphed to him, if not already paid, to deduct this amount. But it was evidently not from the subsidy to the Province, but from the next subsidy to the Railway, that the deduction ought to have been made. I have corrected the error and authorized the Paymaster to pay the sum deducted.

Yours &c.,

(Signed,)

J. LANGTON,

Auditor.

E. A. Meredith, Esq., Under Secretary of State.

(355.)

O. S. S. P., 22nd July, 1870.

SIR,—Adverting to your Despatch of the 13th instant, covering a communication No. 330. from the Provincial Secretary of the Province of New Brunswick on the subject of the unsettled accounts between the Governments of that Province and the Dominion, I have the honor to transmit to you herewith a copy of a letter from the Auditor of Public Accounts in reference to the several matters alluded to by the Provincial Secretary.

I have, &c.,

(Signed,)

E. A. MEREDITH,

U. S. S. P.

The Honorable L. A. Wilmot,
Lieutenant Governor, Fredericton.

GOVERNMENT HOUSE,

NEW BRUNSWICK, August 2nd, 1870.

No. 46. SIR,—I have the honor to enclose a communication from the Provincial No. 330. Secretary, in reference to the letter from the Auditor of Public Accounts enclosed in your Despatch of the 22nd ultimo.

I have, &c.,

(Signed,)

L. A. WILMOT,
Lieut. Governor.

The Honorable

The Secretary of State for the Provinces.

PROVINCIAL SECRETARY'S OFFICE,

FREDERICTON, N. B., 1st August. 1870.

SIR,—I have the honor to acknowledge the receipt of your letter of the 29th July last, covering a copy of a letter from the Dominion Auditor, Mr. Langton, dated the 20th July, and referring to my letter to the Secretary for the Provinces, the Honorable Mr. Howe.

More than *five* months after the date of my letter of the 29th January, 1869, public business connected with the Eastern Extension Railway took me to Ottawa; whilst there, I had an interview with Mr. Langton, and as that gentleman states that he informed me that it was decided by the Minister of Finance that the claims of New Brunswick be allowed for certain railway and other stores could not be entertained, as no similar allowance had been allowed or claimed by the other provinces, I must take it for granted that I was so informed, but I certainly did not understand any thing that fell from Mr. Langton in the conversation that took place between us as bearing that construction, otherwise I would have requested to be furnished with an official answer to my official communication, a mode of procedure which official etiquette entitled us to expect, even if a feeling of courtesy to a Province of the Dominion had not induced the Secretary for the Provinces to furnish it.

I cannot for a moment concur in the reason assigned by the Minister of Finance of the day for disposing of our just and legal claims in so autocratic a manner. We do not ask to be guided by the manner in which the other Provinces are dealt with. We do not even ask concessions similar to those yielded to Nova Scotia, but we ask our rights under the Act of Union. We will not cease asking until we obtain them, and we regret that the Federal Government should seriously intend to deprive us of them in contravention of the plain reading of the said Act and especially the 107th section thereof.

Mr. Langton promises that a statement will be furnished to the Province of the several charges against the Debt Account. I trust it will be a full account of all claims against the Province under the Act of Union, on receipt thereof the Province will be prepared to furnish the Dominion with all claims of offset under the said Act, but until the respective claims be adjusted either by mutual agreement or otherwise, the Province will expect payment of the subsidy without any deduction, and will feel that every day in which any portion of it continues to be withheld, increases the just cause for complaint.

I am happy to acknowledge the receipt of the \$12,000 kept back, as Mr. Langton states, in error.

Requesting that you will cause this letter to be transmitted to the Federal Government.

I have, &c.,

(Signed,)

JOHN A. BECKWITH.

The Honorable L. A. Wilmot, D. C. L.,
Lieutenant Governor, &c., &c., &c.

(395.)

O. S. S. P., 13th August, 1870.

SIR,—I have the honor to acknowledge the receipt this day of your Despatch of the (No. 330.) 2nd instant, covering a communication from the Provincial Secretary in reference to the letter of Mr. Auditor General Langton, enclosed in my communication of the 22nd ultimo.

I shall at once communicate to the Auditor General a copy of Mr. Beckwith's letter.

I have, &c.
(Signed,)

E. A. MEREDITH, U.S.S.P.

The Honorable
L. A. Wilmot, Lieut. Governor, Fredericton.

(396.)

O. S. S. P., 15th August, 1870.

SIR,—I have the honor to communicate a copy of a letter from the Provincial Secretary of New Brunswick, received on the 13th instant, from the Lieutenant Governor of that Province, in reply to your letter of the 20th July last therein referred to.

I have, &c.,
(Signed,)

G. POWELL,
Acting U. S. S. P.

To the Auditor General.

PROVINCIAL SECRETARY'S OFFICE,

FREDERICTON, N.B., 3rd September, 1870.

SIR,—I have the honor to acknowledge the receipt of your communication of 24th ultimo, stating that a certificate for \$19,228 83 has been forwarded to the Paymaster at St. John, being amount retained from subsidy due New Brunswick on 1st July last.

I have, &c.,
(Signed,) JOHN A. BECKWITH.

Honorable Joseph Howe,
Secretary of State, Ottawa.

OTTAWA, 26th October, 1870.

SIR,—Referring to our conversation of yesterday, I beg to submit, for the action of the Dominion Government, the principal items of account which the Province of New Brunswick claims credit for in reduction of its liabilities to the Dominion, viz. :—

Balance due the Province on the 30th June, 1867, for advances from the Province Treasury beyond the cost of road and equipments of the European and North American Railway, as per Manager Carvell's account herewith No. 1.....	\$119,495.51
Balance due on Penitentiary account, after deducting the sum of \$10,646.49 paid by the Dominion to John Ferris, for stock for manufacturing purposes, per Secretary Crookshanks, account No. 2.....	5,349.96

Cost of oil delivered to the Light House Department, on the 30th June, 1867, for the use of the Dominion light houses (No. 3), paid for by New Brunswick.	1,195 00
Balance of Post Office account with New Brunswick on the 30th June, 1867, per Provincial audit; no statement has been received from Inspector McMillan, although repeatedly asked for.	5,505.66
Balance due on Indian Fund account, Auditor's report No. 4.	2,464.21
Short credit given to New Brunswick on six per cent. debentures purchased with Savings' Bank Fund, per Auditor Langton's account.	735.20
	\$134,745.54

New Brunswick also claims credit for the amount of stock she held in the Saint Andrew's and Canada Railway, which was transferred to Canada under the 107th section of the Act of Union, amounting to \$240,000.00.

It is considered that pending the closing of the Savings' Bank accounts ten per cent. on the amount of deposits at the time of union should be placed to the credit of the Provincial account as in the case of Nova Scotia, subject to correction when those accounts are closed. Deposits \$777,359.85; per centage \$77,735.98.

New Brunswick further deems herself entitled to a return of \$150,000.00, part of \$400,000.00 which she paid as subsidy, and land damages on the Eastern Extension Railway from Cook's Brook to the Nova Scotia boundary, the same having been adopted as part of the Intercolonial Railway, whilst only \$250,000.00 have been placed to her credit in account with the Dominion Government.

I beg to refer to my letter to Mr. Secretary Langevin of the 29th January, 1869, and to Mr. Secretary Howe, of the 12th July, 1870, also to sections 107 and 108, and schedule three of the British North America Act, and I have to request that I may be favored with an early answer to this communication.

I have, &c.,
(Signed,) JOHN A. BECKWITH,
Provincial Secretary of New Brunswick.

The Honorable Sir Francis Hincks,
Minister of Finance, &c., &c., &c.

(Copy.)

AUDIT OFFICE,
OTTAWA, Jan. 5th, 1871.

SIR,—I have instructed the Auditor to pay you the subsidy due Jan. 1st, without any deduction for interest on the excess of debt.

As long as the claims which the Province has made for a revision of this debt account have not finally been determined upon, it appears useless to make the deduction; but it must be understood that the present payment in full of the subsidy due January 1st, as well as that due in July last, is without prejudice to the claims of the Dominion whenever the points in dispute have been decided.

I have the honor to be,
Your obedient servant,
(Signed,) JOHN LANGTON,
Auditor.

To Honorable
J. A. Beckwith, Provincial Secretary.

No. 51.

RETURN

To Address of the HOUSE OF COMMONS, dated the 2nd March, 1871; For copies of all regulations made by the Governor in Council relating to the Fisheries; also a statement of the means adopted by the Minister of Marine and Fisheries to prevent sawdust and mill rubbish being thrown into any stream frequented by fish and for the enforcement of the penalties of the Fisheries Act against mill-owners and others for injury to the River Fisheries; also a statement of the streams exempted by the Minister of Marine and Fisheries from the penal provisions of the Fisheries Act; and the evidence by which it is shewn that those exemptions are in the public interest; also a Return shewing how far the Law has been complied with with regard to the construction of fishways.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 24th March, 1871.

No. 52.

RETURN

In obedience to the order of the HOUSE OF COMMONS, of the 8th March, 1871, shewing the actual hours of arrival and departure of all mails at the Post Offices of Montreal, Kingston, Ottawa, Toronto, and Sarnia, and the regulation time for the arrival and departure of such mails, since the 1st October last.

[In accordance with the recommendation of the Joint Committee on Printing, the above Returns are not printed.]

No. 53.

RETURN

To an Address of the SENATE, dated 6th March, 1871; For copy of the Letter of Resignation of Louis Frenette, Esquire, Postmaster at Rivière Ouelle, with copies of correspondence on the subject; and also copies of all papers and recommendations touching the remuneration of his successor.

By Command.

J. C. AIKINS,

Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,

Ottawa, 10th March, 1871.

[In accordance with the recommendation of the Joint Committee on Printing, the above Return is not printed.]

RETURN

To an Address of the House of Commons, dated 20th March, 1871, for a copy of the Commission, and of all instructions given to the Commissioners lately appointed to inquire into the subject of Canal enlargement, and for the improvement of our inland water communication, and for all correspondence that may have taken place between the Government and said Commission upon those subjects; also the Report of the Commissioners.

By Command.

J. C. AIKINS,

Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
OTTAWA, 23rd March, 1871.

SCHEDULE.

Copy of Order in Council, 16th November, 1870.

Copy of draught of Commission.

Copy of Order in Council, 6th December, 1870.

Letter to Honorable Samuel L. Shannon.

Letter to Samuel Keefer, Esq., Secretary to Canal Commission.

Copy of a Report of a Committee of The Honorable the Privy Council, approved by His Excellency the Governor General, on the 16th November, 1870.

The Committee of Council believing that the improvements required for the development of the trade of the Great West, and the affording such means of access to the sea-board as will attract a large and yearly increasing share of that trade through Canadian waters, as well as a thorough and comprehensive improvement of the Canal System of the Dominion on such a scale, and of such a character as to afford ample facilities for the expansion and due development of its growing trade and commerce, are objects of the highest importance to Canada, concur in the annexed report of the Minister of Public Works, and recommend that the following gentlemen, viz: C. S. Gzowski, of Toronto, Delino D. Calvin, of Kingston, George Laidlaw, of Toronto, Province of Ontario; Hugh Allan, of Montreal, Pierre Garneau, of Quebec, Province of Quebec; the Honorable William J.

Stairs, of Halifax, Province of Nova Scotia; and Alexander Jardine, of St. John, Province of New Brunswick; with such other persons as may from time to time be added thereto by Order in Council, be appointed a Commission, with instructions to institute a thorough enquiry into the whole subject in all its bearings, both in a commercial and engineering point of view, with the object of obtaining such reliable information as may furnish the data on which to base a plan for the improvement of the Canal System of the Dominion, of a comprehensive character, and such as will enable Canada to compete with success for the transit trade of the Great West; and further, with instructions to enquire with regard to the works and improvements hereafter enumerated, that is to say:—

- 1st. The enlargement of the Welland Canal.
- 2nd. The enlargement of the St. Lawrence Canals.
- 3rd. The deepening of the St. Lawrence rapids.
- 4th. The deepening of the St. Lawrence river, between Montreal and Quebec.
- 5th. The improvement of the Rideau Canal, and the development of the trade through it.
- 6th. The construction of Sault Ste. Marie Canal between Lake Superior and Lake Huron.
- 7th. The construction of the Caughnawaga Canal, between the St. Lawrence and Lake Champlain.
- 8th. The improvement of the Richelieu and Lake Champlain line of Canals.
- 9th. The completion of the Montreal and Lake Huron system of navigation *via* Ottawa and French rivers.
- 10th. The construction of Georgian Bay Canal, connecting Georgian Bay with Lake Ontario.
- 11th. The construction of the Murray Canal, crossing the neck of land between Bay of Quinté and Lake Ontario.
- 12th. The construction of the Bay Verte Canal across the isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence, and thereafter to report, as to which of them ought, in their judgment, to be constructed, in what order they ought to be proceeded with, of what dimensions they ought to be constructed, and what the cost of the construction of such works would probably be, together with such information and recommendations on the whole subject, as may appear to the Commission likely to contribute to the better accomplishment of the object in view, and the Committee recommend that Samuel Keefer, Esq., of Brockville, be appointed Secretary of the said Commission.

Certified.

(Signed), W. H. LEE,
Clerk, Privy Council.

(Memorandum.)

DEPARTMENT OF PUBLIC WORKS,

OTTAWA, July 4th, 1870.

The undersigned has the honor to solicit Your Excellency's attention to the present condition of the Canal System of the Dominion.

The principal line of these Canals is on the St. Lawrence river, and connects the navigable waters which lie between the sea and the Upper Lakes.

On this main line of navigation there are two sizes of locks, viz: those on the St. Lawrence Canals, which are 200 feet long by 45 in breadth, with a depth of 9 feet—and those on the Welland Canal, 150 feet long by 26½ in breadth, with a depth of 10¼ feet.

Other important lines, such as the Ottawa and the Rideau, are provided with Canals and locks, varying respectively in depth and dimension.

Commercial men, interested in the carrying trade from the West to the New England States *via* Lake Champlain, urge that the route by the Richelieu river and Canals is circuitous, and, to remedy this, propose that a direct line be cut from Caughnawaga, on Lake St. Louis, to Lake Champlain.

In the West our Canal System is incomplete so long as we are compelled to have resort to the United States' Government for permission to enter into Lake Superior.

Various schemes for the improvement of our Canal System are favored by mercantile men, and others interested, and are kept with great persistency before the Legislature.

One class, with a view of adding to the advantages offered by the Welland Canal, advocates the enlargement of that work by increasing its breadth at bottom, and by widening and lengthening its locks; or the construction of an additional line from the summit level to the outlet of the Niagara river into Lake Ontario.

Another class urges that, in addition to the enlargement of the Welland, the whole line of Canals connected with the River St. Lawrence should be widened and deepened.

A third class not only proclaims the necessity of having enlarged Canals, but demands that shorter routes be selected; and this class is again subdivided into two parties, the one pressing for the opening of a line of Canals through the Ottawa Valley, connecting Montreal with Lake Huron, and the other for the cutting of a Canal from Lake Ontario, at Toronto, across the Peninsula to Georgian Bay.

In the Maritime Provinces the subject of a Canal to unite Bay Verte, in the Gulf of St. Lawrence, with the Bay of Fundy, is brought forward, and its claims are again urged upon the Government.

It may be remarked that the most important of the Canals of Canada were designed, not only with a view of affording an unobstructed passage for the staple products of its soil to the ocean, but of attracting, through the same channel, a portion of the freight passing from the West to the Atlantic, and that, notwithstanding all the advantages offered by the St. Lawrence route, the bulk of the traffic referred to continues to find its way to the sea-board over the railways and Canals of the United States.

The undersigned, having given this important matter his earnest consideration, is of opinion that a thorough enquiry into the subject, in all its bearing, both from a commercial and engineering stand-point, should be instituted, with a view of probing to the utmost the causes which have given rise to the state of things just alluded to, and of obtaining such reliable information as may furnish the data on which to base a scheme for the improvement of the Canal System of the Dominion, at once comprehensive and uniform, and one that shall put this country in a position to compete more successfully than heretofore with the Canals and railroads of the neighboring Republic.

He would, accordingly, recommend that Your Excellency appoint a Commission forthwith, to be composed of such duly qualified persons as Your Excellency may select, with instructions to give the whole subject an impartial investigation, and to embody all the particulars it may obtain in regard thereto, in a report to be laid before the Government, and that the attention of the Commission should be directed more especially to an enquiry into the expediency of carrying out the works and improvements mentioned hereunder, viz:—

1. The enlargement of the Welland Canal.
2. The enlargement of the St. Lawrence Canals.
3. The deepening of the St. Lawrence rapids.
4. The deepening of the St. Lawrence river between Montreal and Quebec.
5. The construction of the Sault Ste. Marie Canal, between Lake Superior and Lake Huron.
6. The construction of the Caughnawaga Canals, between the St. Lawrence and Lake Champlain.
7. The improvement of the Richelieu and Lake Champlain line of Canals.
8. The completion of the Montreal and Lake Huron system of navigation *via* Ottawa and French rivers.
9. The construction of the Georgian Bay Canal, connecting Georgian Bay with Lake Ontario.
10. The construction of the Murray Canal, crossing the neck of land between the Bay of Quinté and Lake Ontario.

11. The construction of the Bay Verte Canal across the isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence.

The undersigned would remark, in conclusion, that the Commission should be instructed to furnish the dimensions of any works it may recommend to be executed, their approximate cost, and (as it may not be possible for the whole of the works they may suggest to be undertaken, at one and the same time), it should give its opinion as to the order in which they should severally be proceeded with.

Respectfully submitted,

(Signed),

HECTOR L. LANGEVIN,
Minister, Public Works.

CANADA.

VICTORIA, by the Grace of God, &c.

To Casimir Stanislas Gzowski, of the City of Toronto, in the Province of Ontario, Civil Engineer, Esquire; Delino Dexter Calvin, of the Township of Wolfe Island, in the County of Frontenac, in the Province aforesaid, Esquire; George Laidlaw, of the said City of Toronto, Esquire; Hugh Allan, of the City of Montreal, in the Province of Quebec, Esquire; Pierre Garneau, of the City of Quebec, in the said Province of Quebec, Esquire, Merchant; The Honorable William J. Stairs, of the City of Halifax, in the Province of Nova Scotia; and Alexander Jardine, of the City of St. John, in the Province of New Brunswick, Esquire; Commissioners for the purposes hereunder set forth; and to Samuel Keefer, of the Town of Brockville, in the County of Leeds, in the said Province of Ontario, Esquire, Civil Engineer, Secretary of this Our Royal Commission, and to all others to whom these presents may come, or whom the same may in any wise concern.

GREETING:—

Whereas it appears to Us that the improvements required for the development of the trade of the Great Western Country, and the affording of such means of access to the sea-board as may best be calculated to attract a large and yearly increasing share of that trade through Canadian waters, as well as a thorough and comprehensive improvement of the Canal System of Our Dominion of Canada on such a scale, and of such a character, as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce, are objects of the highest importance to Our said Dominion.

Now, therefore, know ye, that, reposing especial trust and confidence in the loyalty, integrity, and ability of you the said Casimir Stanislas Gzowski, Delino Dexter Calvin, George Laidlaw, Hugh Allan, Pierre Garneau, William J. Stairs, Alexander Jardine, and Samuel Keefer, We of Our especial grace, certain knowledge and mere motion, and of Our Royal Will and Pleasure do by these presents under and in pursuance of the Act of Parliament of Canada, made and passed in the thirty-first year of Our Reign, chaptered number thirty-eight, and intituled "An Act respecting inquiries concerning public matters," nominate, constitute and appoint you, the said Casimir Stanislas Gzowski, Delino Dexter Calvin, George Laidlaw, Hugh Allan, Pierre Garneau, William J. Stairs and Alexander Jardine, and such other person and persons as We may think fit by order of Our Governor General in Council to add to this Our Commission, to be Our Commissioners for the purposes following, that is to say: to institute and make a thorough inquiry as to the best means of affording such access to the sea-board as may best be calculated to attract a large and yearly increasing share of the trade of the north western portion of North America through

Canadian waters as well as a thorough and comprehensive improvement of the Canal System of Our said Dominion, on such a scale and of such a character as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce; and in such enquiry, to consider the whole subject, in all its bearings as well in a Commercial as in an Engineering point of view, with the object of obtaining such reliable information thereupon, as may furnish the necessary data on which to base a plan for the improvement of the Canal System of Our said Dominion, of a comprehensive character, and such as will enable Canada to compete successfully for the transit trade of the Great Western Country, and especially to enquire into the Public Works and improvements hereinafter enumerated, that is to say:—

- 1st. The Welland Canal, and the enlargement thereof.
- 2nd. The St. Lawrence Canals, and the enlargement thereof.
- 3rd. The deepening of the channels through the rapids of the River St. Lawrence.
- 4th. The deepening of the said river in its most shallow parts between the cities of Montreal and Quebec.
- 5th. The Rideau Canal and its improvement, and the development of trade through the same.
- 6th. The construction of a Canal at the Sault Ste. Marie between Lakes Superior and Huron.
- 7th. The construction of a Canal between the St. Lawrence, at Caughnawaga, and Lake Champlain.
- 8th. The improvement of the River Richelieu and Lake Champlain line of Canals.
- 9th. The completion of the Montreal and Lake Huron system of navigation *via* the Ottawa and French rivers.
- 10th. The construction of the Georgian Bay Canal to connect the Georgian Bay with Lake Ontario.
- 11th. The construction of a Canal in the Township of Murray through the neck of land lying between Lake Ontario and the Bay of Quinté; and
- 12th. The construction of a Canal through the isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence at Bay Verte.

And also to enquire as to which of the said several works and improvements hereinbefore mentioned and referred to, ought, in the judgment of Our said Commissioners, to be made and constructed for the purposes aforesaid; and in what order they, respectively, should be proceeded with; and of what dimensions and depths they should be constructed; and the probable cost of the construction of such several works and improvements, respectively; and, generally, to inquire into and ascertain and to report fully on the whole subject, in all its bearings, making such recommendations as may appear to you, Our said Commissioners, hereby appointed, and to such other person and persons as we may think fit, by order of Our Governor General in Council, to add to this Our Royal Commission, to be likely to contribute to the better accomplishment of the said object so in view.

To have and to hold the said office of Commissioner as aforesaid, unto each and every of you, Our said Commissioners above named and to such other person and persons as We may think fit to add to this Commission as aforesaid, during Our Royal pleasure.

And We do further hereby require you Our said Commissioners to associate with you as Commissioners under this Our Royal Commission all such person or persons as We may think fit by Order of Our Governor General in Council to add to this Commission as Commissioners thereunder.

And We do further nominate, constitute, and appoint you the said Samuel Keefer, to be the Secretary of, and to, the said Commissioners.

And it is Our further Will and Pleasure and We do, in pursuance of the Statute in that behalf, confer upon you and each of you, Our said Commissioners, above named and such other person and persons as We may think fit to add to this Our Royal Commission as aforesaid, the power of summoning before you any party or witnesses, and of requiring them to give evidence on oath (or on solemn affirmation if they be parties entitled to affirm civil cases) orally or in writing, and to produce such documents and things as you

Our said Commissioners may deem requisite to the full investigation of the respective matters into which you are hereby appointed to examine and enquire.

And We do hereby enjoin and require that a majority of you Our said Commissioners, hereby appointed and such other person and persons as We may think fit to add to this Our Royal Commission as aforesaid shall be held to be, and be, a quorum for the transaction of business and for the carrying out of the purposes of this Our Royal Commission. Of all which Our loving subjects, and all others, whom these presents may concern, are hereby required to take notice, and to govern themselves accordingly.

In Testimony whereof, &c.

(Great Seal.)

(To bear date of 16th Nov. 1870.)

This is my Draft.

(Signed),

H. BERNARD,
Deputy Minister of Justice.

Copy of a Report of a Committee of the Honorable The Privy Council, approved by His Excellency the Governor General in Council, on the 6th December, 1870.

On the recommendation of the Hon. the Minister of Justice, the Committee advise that the Hon. Samuel Leonard Shannon, of Halifax, be appointed a Member of the Canal Commission *vice* Hon. W. J. Stairs, resigned.

Certified.

(Signed),

WM. H. LEE,
Clerk, Privy Council.

To the Honorable

The Secretary of State for Canada, &c., &c., &c.

DEPARTMENT OF THE SECRETARY OF STATE OF CANADA,

OTTAWA, 9th Dec., 1870.

SIR,—I am directed to enclose a certified copy of an Order in Council, appointing you a Member of the Canal Commission, *vice* Hon. W. J. Stairs, resigned.

I have, &c.,

(Signed),

E. PARENT.

Hon. Samuel L. Shannon,

Halifax, Nova Scotia.

DEPARTMENT OF THE SECRETARY OF STATE OF CANADA

OTTAWA 9th Dec. 1870.

SIR—I am directed to enclose a certified copy of an Order in Council, appointing the Hon. Samuel L. Shannon, a Member of the Canal Commission, *vice* Hon. W. J. Stairs, resigned. Copy of the Order in Council is sent to Mr. Shannon.

I have, &c.,

(Signed),

E. PARENT.

Samuel Keefer, Esq., Civil Engineer,

Secretary, Canal Commission, Ottawa.

CANAL COMMISSION.

LETTER

To the Honorable the Secretary of State from the Canal Commissioners, respecting the Improvement of the Inland Navigation of the Dominion of Canada.

OTTAWA, 24th February, 1871.

Honorable J. C. Aikins, &c.
Secretary of State of Canada.

SIR,—We have the honor to lay the following information before His Excellency the Governor General in the performance of the duties imposed on us under the Royal Commission, dated 16th November, 1870, viz :—

“To institute and make a thorough enquiry as to the best means of affording such access to the Sea-board as may best be calculated to attract a large and yearly increasing share of the trade of the North Western portion of North America through Canadian waters, as well as a thorough and comprehensive improvement of the Canal System of our said Dominion, on such a scale and of such a character as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce ; and in such enquiry to consider the whole subject, in all its bearings, as well in a commercial as in an engineering point of view, with the object of obtaining such reliable information thereupon as may furnish the necessary *data* on which to base a plan for the improvement of the Canal System of our said Dominion, of a comprehensive character, and such as will enable Canada to compete successfully for the transit trade of the great Western Country, and especially to enquire into the public works and improvements hereinafter enumerated, that is to say ;

- “1st. *The Welland Canal* and the enlargement thereof.
- “2nd. *The St. Lawrence Canals* and the enlargement thereof.
- “3rd. *The deepening of the Channels through the Rapids of the River St. Lawrence.*
- “4th. *The deepening of the said River in its most shallow parts, between the Cities of Montreal and Quebec.*
- “5th. *The Rideau Canal* and its improvement and the development of trade through the same.
- “6th. *The construction of a Canal at the Sault de Ste Marie, between Lakes Superior and Huron.*
- “7th. *The construction of a Canal between the St. Lawrence at Caughnawaga and Lake Champlain.*
- “8th. *The improvement of the River Richelieu and Lake Champlain line of Canals.*
- “9th. *The completion of the Montreal and Lake Huron system of navigation via the Ottawa and French Rivers.*
- “10th. *The construction of the Georgian Bay Canal to connect the Georgian Bay with Lake Ontario.*
- “11th. *The construction of a Canal in the Township of Murray through the neck of land lying between Lake Ontario and the Bay of Quinté and—*

"12. *The construction of a Canal through the Isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence at Bay Verte,*
 " And also to enquire as to which of the said several works and improvements hereinbefore mentioned and referred to ought, in the judgement of our said Commissioners, to be made and constructed for the purpose aforesaid; and in what order they respectively should be proceeded with; and of what dimensions and depths they should be constructed; and the probable costs of the construction of such several works and improvements respectively."

We met at Ottawa on the 25th of the same month, and organized by electing Hugh Allan, Esquire, as our Chairman, and proceeded forthwith to the earnest consideration of the various important subjects to which our attention was directed.

Having learned that surveys were in progress under the direction of the Public Works' Department for the enlargement of the Welland Canal, as well as for the proposed Bay Verte Canal, across the Isthmus separating the Northumberland Straits from the Bay of Fundy, we called upon the Chief Engineer of the Department to state when his reports on these two works would be completed, and were distinctly informed by that officer that it would not be possible for him to have them ready until near the close of the ensuing session of Parliament, and the same statement was repeated to us at our second meeting on the 19th January last.

We regret having to state that, under the circumstances, the necessary information upon all the engineering points of the enquiry respecting these two very important works cannot be laid before us in sufficient time to enable us fully to comply with our instructions, and it therefore becomes necessary to defer making a report until the results of these surveys are available.

At this stage of the inquiry, however, certain information of an important character, bearing both on the engineering and commercial aspects of the inquiry, has been obtained, sufficient to enable us to arrive at satisfactory conclusions as to the actual requirements of the trade, and to warrant us in recommending the course of action to be taken respecting the several proposed works and enlargements enumerated in our instructions, as well as to suggest the order in which they should be proceeded with. All this we think it proper thus early to lay before the Government.

In order to elicit information from all parts of the Dominion, as well as from parties in the United States, directly interested in our trade, a circular letter and list of questions relating to our Canal System was prepared, and upwards of 2,400 copies were despatched without loss of time. Copies were sent to every Board of Trade and Chamber of Commerce in Canada, to the Boards of Trade in the principal Cities of the neighboring States, to every Senator and Member of Parliament, to the Mayor of every city and town, to every newspaper published throughout the Dominion, to every leading newspaper in the neighboring States, and to all the principal merchants and other individuals throughout the Dominion, who were supposed to possess any special knowledge of this subject.

Circular letters were also addressed to the Collectors of Customs at all the principal ports on the inland lakes, both in Canada and the United States, for returns of the available draught of water in their respective ports.

The appeal thus made was very generally responded to. A great deal of practical knowledge was brought to bear upon the subject; and many of the replies evince an extended acquaintance with the operation and requirements of that great and annually increasing trade of which the St. Lawrence is the natural outlet.

In the interval between our first and second meetings, replies were received from the Boards of Trade at Halifax, N. S., St. John, N. B., Quebec, Ottawa, Kingston, Belleville, Toronto, Hamilton, London, Stratford, Guelph, Windsor, in Canada; and Chicago, Milwaukee, Detroit, Toledo, and Oswego, in the United States,—from Corn Associations at Montreal and Toronto— from Corporate Towns and Public Meetings, and from sixty-four individuals—in all eighty-seven. The reply from the Montreal Board of Trade did not come in until the 3rd Feb. inst.

These replies, when categorically given, were all condensed and arranged by our

Secretary's directions under their several appropriate heads, so as to show at a glance, both for purposes of contrast and comparison, the facts, opinions and recommendations, contained in the numerous and lengthy communications laid before us. Where not so given, the remarks, if deemed important, are added at the end of the questions relating to each work. These abstracts contain such a mass of valuable information relating to the commercial aspect of the enquiry, that we consider it proper to submit them with this letter for the information of the Government. (Appendix A.)

Tables showing the actual depth of water in the principal Harbors on the Inland Lakes, compiled from official returns, are also appended. (Appendix B.)

Tables of distances by water, on ten different routes between Inland Lake ports and Atlantic sea ports, compiled by the Secretary from the best and latest authorities, are likewise appended. (Appendix C.)

These abstracts and tables, together with the various Surveys, Maps, Plans, Reports, Estimates and documents, relating to the Canal System of the Dominion, and to the projected works and enlargements enumerated in the accompanying list, were laid before us at our second meeting in Ottawa on the 18th January last. (Appendix D.)

We now propose to give a very brief historical sketch of the several canals to which our attention has been directed, describing their inception, and the progress and changes in them from time to time to adapt them to the ever-increasing demands of the trade. Then will follow a statement of our views upon the commercial aspect of the question, and the decision and recommendation respecting the works required for the further enlargement and extension of the Canal System of the Dominion, and the order in which they should be undertaken and proceeded with ; and finally, the engineering features, showing the effect of the proposed improvements upon existing works, and their probable cost.

 HISTORICAL SKETCH OF THE CANALS OF CANADA.

Of the great arteries of this Continent none surpasses the St. Lawrence in the length of its navigation, the volume of its waters, or the fertility of the vast area of country of which it forms the highway of communication with the Atlantic Ocean. Following it, not from its remote sources, but from Fond du Lac, at the head of Lake Superior, to the Straits of Belle Isle, the entire distance is 2,392 statute miles. In its course from Lake Superior to the sea, its volume is swelled by the waters of the great Lakes, and smaller expansions, as well as by numerous tributaries of no insignificant size or importance. Between Lakes Superior and Huron, it is known as the Ste. Marie, between Huron and St. Clair, as the St. Clair; between St. Clair and Erie as the Detroit; between Erie and Ontario as the Niagara.

Below Quebec, the breadth of this magnificent river increases until it is about one hundred miles at its junction with the waters of the Gulf.

The importance of the St. Lawrence navigation has always been fully appreciated by the people of Canada, and large sums of public money have been wisely devoted toward the improvement of its facilities, not merely for internal and local, but for the ever increasing commerce of the Basin of the Great Lakes. Not only has the channel of the river been deepened and otherwise improved, but an expensive system of canals constructed to overcome the natural obstructions, and connect the Lakes with tide water. Steamers and ships of large tonnage can now proceed directly from the Ocean to Quebec and Montreal, a distance of 986 miles. From Montreal, however, to Lake Erie, the capacity of the vessels is limited to the size of the canals, of which we propose now to give a brief historical and statistical sketch, before proceeding to state the conclusions at which we have arrived from the facts before us, and to shew the immense interests connected with the important question which has been submitted to the consideration of the Commissioners.

The Canals of Canada, now in operation, have been constructed for the purpose of improving the following routes of navigation:—

First—The St. Lawrence navigation;

Second—The Montreal and Kingston, by way of the Ottawa and Rideau Canals;

Third—The Richelieu and Lake Champlain;

Fourth—The Bras D'Or Lake (in Cape Breton) and the Ocean.

THE ST. LAWRENCE ROUTE.

First in importance is the St. Lawrence system of Canals, which commences at Montreal, and ends at the foot of Lake Erie. On this route the works are known as the Lachine, the Beauharnois, the Cornwall, the Farren's Point, the Rapide Plat, the Galops, and the Welland, and have a total length of 71 miles, with a total lockage of 553 feet, through 54 locks.

Lachine Canal.

Above the city of Montreal, now the head of the Ocean navigation of the St. Lawrence, are the rapids of St. Louis, perhaps better known as the Lachine Rapids; and in order to surmount this natural obstacle the present Lachine Canal was suggested soon after the conquest of Canada, and in fact its necessity was earnestly urged before the passage of the Constitutional Act, in 1791. No practical steps, however, were taken toward the construction of the Canal till the year 1815, when the Legislature passed a Bill appropriating £25,000 in aid of its construction, at the recommendation of the then Governor General, Sir George Prevost. At that time its necessity in a military point of view was obvious to the military authorities; and, no doubt, the work would have been immediately commenced after the passage of the Act, had not peace ensued. Not until the year 1819 did the project again come before the public, and then the Act of 1815 was repealed and another passed for the incorporation of a Joint Stock Company, with a capital of

year 1833, the question became of such pressing importance that the Government of Lower Canada appointed Commissioners to consider all matters relating to the navigation of the St. Lawrence, between Lachine and Cornwall. Mr. Mills, the Engineer of the Commissioners, submitted several plans, based on the dimensions adopted for the Cornwall Canal, and his report was referred to a special Committee of the House, who approved of it, and recommended a grant of \$960,000 towards carrying out its recommendations, which proposed, as the best plan, short Canals at the three rapids, and using the river between them.

This Report, however, fell still-born, and was followed by others, from Mr. A. Stevenson, in 1834, and Messrs. Stevenson & Baird in 1835, to equally little purpose. In 1839, Colonel Phillips, before referred to, recommended a Canal on the north side of the river, for military reasons, though he acknowledged at the same time that it was probable one on the south side would cost less.

The first decisive action on the part of the Legislature, subsequent to the foregoing reports, we find recorded in the memorandum submitted by the Board of Works in 1841, after the Union of the two Provinces, and this was the recommendation that the sum of \$1,023,600 be devoted to the construction of a Canal to avoid the three rapids, after the design made by Mr. Mills, in 1834, for three short Sections of Canal on the north side of the river.

In the winter of February, 1842, the Chief Engineer of the Board of Works reported in favor of a Canal on the south shore, chiefly on the grounds that it would be shorter, above and independent of all water courses, uninfluenced by the Ottawa waters, and consequently navigated two or three weeks longer every season than the one proposed on the north shore. The question, as to the best route for the Canal, then became a matter of earnest discussion before a Committee of Parliament, but it was not until the summer of 1842, that the contracts were entered into for construction, nearly on the route proposed by Mr. Stevenson in 1834.

By the close of navigation in 1845, the Canal was opened, but it was then found that its upper entrance was imperfect, its channel crooked, and not sufficiently deep in dry weather and impeded by cross currents; other difficulties also presented themselves, and in the course of years, up to a very recent date, dams, regulating weirs and dykes have been erected at large expense to the country in order to give the requisite facilities to the trade passing through the Canal. Much difference of opinion existed at the time of the inception of the Work, and has continued down to the present day with respect to the best route of the Canal—many persons contending that for Military reasons it should have been located on the north side—others arguing that its natural position is where it is now situated,—but the Commissioners have no intention of going into this question. (Appendix A.)

The following are the dimensions of this work at the present time:—

Length.....	11½ miles
No. of Locks.....	9
Dimensions of Locks..	200 feet x 45
Total rise of Lockage.....	82½ "
Depth of Water on Sills.....	9 "
Breadth of Canal at bottom.....	80 "
" " Water surface.....	120 "
Total cost to 1st July 1867, \$1,611,424 11	

Cornwall Canal.

The next Canal which comes in natural order is that which extends from the town of Cornwall to the Village of Dickinson's Landing, on the North shore of the river, to overcome the obstructions known as the Long Sault Rapids. (App. A.) From the sketches already given of the other Canals, it will be seen that this work was actually the first in the series constructed on the present scale, and that its dimensions was the standard for the

others. As far back as the year 1817, the Governor of Upper Canada, in his speech at the opening of the Legislature, called the serious attention of Parliament to the important question of the navigation below Prescott. In 1818, a Joint Commission was appointed by the Government of Lower and Upper Canada, and reported in favor of improvement between Montreal and Lachine, between the head of Lake St Louis and Lake St. Francis, and also at the rapids above Lake St. Francis. They recommended the construction of Canals, of a limited capacity—not more than four feet deep—but no definite legislative action took place on the subject until December 1826, when a Report was laid before Parliament by the Governor, shewing the length of the proposed Canals between Lakes Ontario and St. Francis, and their probable cost. The question, however, remained in abeyance until 1832, when the House of Assembly of Upper Canada passed measures appropriating the sum of \$280,000 for the improvement of the navigation of the St. Lawrence, so as to admit vessels drawing 9 feet water, and recommending the immediate commencement of such improvements between Cornwall and the head of the Long Sault Rapids. One of the stipulations of the Act was the completion of the Cornwall Canal before any of the other proposed works, leading to Lake Ontario, should be undertaken. In 1833, a Commission was appointed for the purpose of carrying out the provisions of the Act, and Mr. Benjamin Wright was employed as engineer with authority from the Government of Lower Canada to make the survey of the lower Canals, on a scale commensurate in all respects with those of the Upper Province.

Without going into unnecessary details, it will be sufficient to mention that the *Engineering Report 1867*, page 18.

to admit the passage of steam boats; these would allow the passage of vessels 175 to 180 feet long. That, for the improvement proposed at the four several places above the Long Sault, where vessels would only use the Canals when going up, and run the rapids when going down, the breadth of the Canals should be only 50 feet at bottom.

The suggestions of the Engineers were adopted by the Legislature, and Commissioners were subsequently appointed to superintend the works. The services of Messrs. Wright and Mills were engaged as Engineers, as well as those of Captain Cole, R. E. and Messrs. Geddes and Fleming. In 1834 the work was put under contract, and the first sod cut with considerable ceremony by the late Sir John Beverly Robinson.

The rebellion, as well as financial causes, retarded the completion of the work for some years. The passage of the first steamer, in December, 1842, through the locks, was the occasion of some ceremony, but it was not until the month of June, 1843, that the work was formally opened.

Since the completion of the Works, several improvements have been authorized for the purpose of increasing the depth of water, and giving other facilities to vessels passing through the Canal. At the present time, the Canal is of the following dimensions:—

Length.....	11½ Statute Miles
No. of Locks.....	7
Dimensions.....	200 feet x 55 feet
Total rise of Lockage.....	48 "
Depth of water on Sills.....	9 "
Breadth of Canal at bottom.....	100 "
" " water surface.....	150 "
" " Cost to July 1st, 1867, \$1,932,152	69 "

The Williamsburg Canals

We have now come to that series of Canals known as the Williamsburg, viz:—The Farran's Point, Rapide Plat, and Galops Canals. Appendix A.

The Farran's Point Canal extends from the foot to the head of the rapids in that

locality, on the north side of the River, and is only used, as a rule, by vessels coming up the river.

Before the question of the Cornwall Canal was mooted, the construction of the work had been discussed, and some surveys made of the place; but it was not until four years after the Union between Upper and Lower Canada, that the work was actually commenced. The Canal was completed for traffic by October, 1847.

The Rapide Plat Canal, the second of the series, extends on the North shore from Morrisburg to the head of the swift current, and has been rendered necessary by the Rapids from which it takes its name. Several Reports were made respecting this work previous to the Union, but it was not until 1843 that the necessary surveys were made.

The works were commenced in the Spring of the ensuing year.

The Galops Canal was constructed to avoid the Rapids at Point aux Iroquois, Point Cardinal, and the Galops, and is also on the North side of the St. Lawrence. Mr. Benjamin Wright, as early as 1833, recommended the construction of Canals to avoid these obstructions, and Colonel Phillipotts subsequently approved of his plan which was not, however, carried out. In 1843, the Board of Works of the United Provinces prepared a design which was adopted and carried immediately into effect. This design was the construction of a Canal three miles long to avoid the Iroquois Rapids, the use of the waters of the St. Lawrence for a distance of $2\frac{3}{4}$ miles, and then the construction of another Canal from the foot of the Galops Canal Rapids, $2\frac{1}{4}$ miles long. Both these Canals were opened to the public in September of 1847; but it was soon seen that the Iroquois Canal had not a sufficient depth of water for vessels ascending, and it was therefore found necessary to connect that work with the Galops.

The Junction Canal, the name of the central section for a time, was finally completed in 1856, and the three works are now known under the one designation of the Galops Canal.

The following are the dimensions of the Williamsburgh series:—

Farran's Point.

Length of Canal.....	$\frac{3}{4}$ mile.
No. of Locks.....	1
Dimensions.....	200 feet \times 45 feet.
Total rise of Lockage.....	4 "
Depth of water on Sills.....	9 "
Breadth of Canal at bottom.....	50 "
" water surface.....	90 "

The Rapide Flat.

Length of Canal.....	4 miles.
Number of Locks:.....	2
Dimensions.....	200 \times 45 feet
Total rise of Lockage.....	$11\frac{1}{2}$ feet
Depth of water on Sills.....	9 "
Breadth of Canal at bottom.....	50 "
Breadth at surface of water.....	90 "

The Galops.

Length of Canal.....	$7\frac{5}{8}$ miles.
Number of Locks.....	3
Dimensions of locks.....	200 \times 45 feet.
Total rise of lockage.....	$15\frac{3}{4}$ "
Depth of water on sills.....	9 "
Breadth of Canal at bottom.....	50 "
" " at surface of water.....	90 "

Total cost of these works to July 1st, 1867, was \$1,320,655 54.

The Welland Canal.

After leaving the "Galops" we have to travel a distance of 226 miles, partly by the river, but chiefly by Lake Ontario, and then we come to, perhaps, the most important part of our Canal System—the Welland Canal, which connects Lake Ontario with Lake Erie, by carrying the navigation around the famous rapids and falls of the Niagara River. (Appendix A.) The early history of this work shows what difficulties attended its commencement, and it is obvious that, had not the public men of Canada become in time fully alive to the importance of the interests involved in its construction, the Welland would not have been built as soon as it was. It would be impossible within the limits proposed for this sketch to give anything like a full history of the obstacles that impeded for years the successful accomplishment of this all-important outlet for the trade of the Western Country.

As early as the month of February, 1816, a joint Committee of both Houses of the Parliament of Upper Canada reported on this and other works connected with inland navigation, and Colonel Nichol subsequently introduced a bill to appropriate money for a complete survey of the best route of water communication between Lakes Erie and Ontario as well as between Lake Ontario and Montreal. No decisive action, however, resulted from this step, and we do not again hear of the project until two years later, when a Committee of the House reported favorably on a petition from the people of Niagara (old Newark), and suggested the formation of a Committee to carry out the work. In 1821 a Commission was appointed to consider the subject of Inland Navigation, and it reported in 1823 in favor of constructing the Welland of such dimensions as would accommodate the class of vessels then navigating the lakes. The result of this report was the incorporation of a private company, on the petition of W. H. Merritt and others, in 1824, under the title of the Welland Canal Company, who proposed to establish the necessary communication by means of a Canal and Railway. They intended running up the natural waters of the Welland River, and to pass across the township of Thorold, tunnelling through the high ridge of land about a mile and a half, and then proceeding directly by a Canal to the brow of the high land; then a railway was to descend the high land, and connect by means of another Canal with the navigable waters of Twelve Mile Creek, so as to afford the required egress to Lake Ontario. The Canal portion was to be of capacity sufficient to accommodate boats of not less than 40 tons burden.

Public meetings were called, surveys made, and other steps taken to excite public opinion in favor of the undertaking; but it will show how little interest was taken, when we mention the fact, stated in an official document, that at the ceremony of breaking the ground, on the 30th November 1824, not half a dozen gentlemen of capital or influence in the district attended. By 1825, the former scheme was considered objectionable, and a new one adopted for the admission of schooners and sloops. It was determined to have the entrance at the mouth of the twelve mile creek or Port Dalhousie, and the upper terminus at the Welland River, from whence the supply of water for the Canal was to be drawn. It was also contemplated, at an early day, to establish a communication between the Welland River and Lake Erie, so as to avoid the impediments to navigation below Fort Erie. It was proposed to have wooden locks 110 feet in length by 22 feet in breadth, the cross section with 26 feet at bottom and 58 feet at the surface of the water, except through the deep cut, which was to be only 15 feet wide at bottom, for two miles the depth of water was to be 8 feet.

In the Summer of 1825, the Company set to work to carry out their project, with an ostensible capital of \$800,000, and their history henceforth was one of financial embarrassment.

In 1826 they obtained a loan of \$100,000 for three years from the Upper Canadian Government, and a promise of a contribution of one-ninth of the estimated cost from the Imperial Government, on certain conditions—the locks to be 22 feet wide, and all property of that Government to pass free. In 1827, the Government of Upper Canada took stock in the undertaking, to the amount of \$200,000, and the Government of Lower Canada to

the extent of \$100,000. The Imperial authorities gave a grant of 13,000 acres of land, in the vicinity of the Canal, and subsequently gave a loan of \$200,000 for ten years, at 4 per cent. interest. In 1828, a slide of earth occurred in the excavation of the Deep Cut, and added greatly to the embarrassments of the Company, for it obliged them to abandon the Welland River as a feeder. The Company finally adopted the Grand River as a new feeder, and carried on the works with considerable energy, for water was let into the Canal in the fall of 1829, and in the month of November, exactly five years after the time the works had been commenced, two Schooners, one of 85 tons burden, the other of smaller size, ascended the Canal from Lake Ontario, to the Welland River. Then the Company, having accomplished so much, thought it an opportune time to seek further aid from the Government, for the purpose of carrying out the work to completion. They prayed the Legislature to grant \$100,000, and to allow them to increase the Capital Stock to \$1,200,000; and after considerable discussion, the vote in favor of the project was carried by very narrow majorities. Subsequently, the Company proposed to extend the main line of Canal over the Welland River to Port Colborne (Gravelly Bay), by enlarging about five miles of the feeder, and excavating a new Canal for the remaining distance to the Bay.

In 1851, the Government approved of this project, and granted a loan of \$200,000 for the completion of the work, which was immediately commenced, and completed in 1833. At this time, the Canal occupied nearly the same site as the present one, but the locks were of small dimensions, and exclusively of wood.

No works of importance were constructed on this Canal until after the union of the two Provinces. In 1837, the Government took the step of converting all its loans up to that time, into stock, and was authorized to subscribe \$980,000 new. The capital stock of the Company was declared to be \$1,195,200, and the Directors were limited to an expenditure of \$400,000 during the year. In 1839, an Act was passed in Parliament by a vote of 26 against 9, to authorize the Government to purchase all the private stock, so that the work should become public property, but no steps were taken, in consequence of financial difficulties, to carry out that design, until 1841, when the works were placed under the control of the Board of Works. The total expenditure by the Government on the Canal amounted at that time to \$1,851,427 77, but as the work was inadequate to the requirements of the trade, it was decided to enlarge the Canal, but not to the full extent proposed by Colonel Phillpotts in 1839, viz. : Locks, 200 feet long by 55 feet broad. It was, however, determined to rebuild all the locks with stone, 120 x 24 feet, with 8½ feet of water on the sills, that the aqueduct should also be rebuilt with stone, that the feeder should be converted into a navigable Canal; that the harbors of Port Dalhousie and Port Colborne should be improved; that the first two locks at Port Dalhousie, and the one at Port Colborne should be 200 x 45 feet, with 9 feet of water on the sills; and finally, that the Port Maitland branch should be undertaken and completed, with an entrance Lock from Lake Erie, 200 x 45 feet, with 9 feet depth. Henceforth, the progress in the improvement of the works was systematically and successfully conducted, until the Canal reached its present condition, of which the following statistics will afford a general idea :—

	Main line from Lake Ontario to Lake Erie	Welland River Branches.	Grand River Feeder.	Port Maitland Branch.
Length of Canal	27 miles and 1,099 feet	Port Robinson Cut to Welland R., 2,622 feet. Welland Canal to Welland River—no Lock at Aqueduct, 300 feet. Chippewa Cut to Niagara R., 1,020 feet.	21 miles	1½ miles.
Pairs of Guard Gates	3			
Number of Locks	27 lift locks ..	1 at Aqueduct and 1 at Port Robinson, 2	2	1.
Dimensions of Locks	{ 2 of 200 × 45 feet 24 of 150 × 26½ ,, 1 of 230 × 45 ,, }	150 × 26½ feet	{ 1 of 150 × 26½ feet 1 of 200 × 45 ,, }	185 × 45 feet.
Total Rise of Lockage	330 feet		7 to 8 feet	8½ feet.
	2 × 8 = 16 Grand R. level.			
Total Lockage	346	From Welland Canal down to Welland River, 17 feet		
Depth of Water on Sills	10½	9 feet 10 in.	10½ feet	11 feet.
Total Cost to 1st July, 1867 ..	\$7,638,239 83.			

Burlington Bay Canal.

Another work which may be considered to form a part of the St. Lawrence navigation, is the Burlington Bay Canal, which enables vessels to reach the City of Hamilton from the Lake. It is simply an open cut across a sand bar at the entrance of Burlington Bay; it is half a mile long, with an average breadth of 138 feet between piers, and is navigable for vessels drawing 12 feet of water. On the 19th March, 1823, a Bill was passed in the Legislature of Upper Canada, authorizing the construction of this work, which was completed by 1832. After the Union, the work was enlarged and otherwise improved. The amount expended on it altogether, was \$432,684 40.

The Canadian system of Canals connecting the Lakes with the St. Lawrence, ends with the Welland. At Sault Ste. Marie, however, the Americans have constructed a Canal a mile and one-seventeenth in length, with locks capable of allowing the passage of vessels of 2,000 tons. In this way the trade of Lake Superior finds its outlet to Buffalo and other ports on Lake Erie. The Americans have also improved the navigation through Lake George and over the St. Clair Flats. To this subject, however, we shall refer at greater length elsewhere.

THE OTTAWA AND RIDEAU ROUTE.

We shall next refer to the second part of the Canal System of Canada, viz., the works between Ottawa and Montreal, and between Ottawa and Kingston, which may now be considered as feeders to the trade of the St. Lawrence.

In the Annual Reports of the Department of Public Works the line of navigation which these Canals facilitate is given as the "Montreal and Kingston via Ottawa and Rideau Canals." The Canals are called the "Ste. Anne," or rather the "Ste. Anne Lock," the "Carillon," the "Chûte à Blondeau," the "Grenville," and the "Rideau," and have a united length of 142¾ miles, inclusive of the Lachine.

The Ste. Anne Lock was constructed for the purpose of enabling vessels to pass the rapids of the same name, situated at the junction of the Ottawa with the St. Lawrence. The work was recommended by the Legislature of Lower Canada, as far back as 1831, and reported upon by Colonel Duverniet, R.E., but various causes contributed to prevent the commencement of the work until the 18th May, 1840, by the Board of Works. By the end of June, 1843, boats were able to pass through the Canal, and the work was completed finally in the Autumn of the same year. Since that year, various improvements have been made in the work, and now the Canal has the following dimensions:—

Length.....	$\frac{1}{8}$ mile.
Number of Locks	1
Dimensions.....	190 x 54 feet.
Total rise of Lockage	3
Depth of Water on sills.....	{ 6 at low water. 7 at ordinary high water.
Cost to July 1st, 1867.....	\$134,456 51

Next in order come the Ordnance or Military Canals, known as the Carillon, the Chûte à Blondeau, the Grenville, and the Rideau. The Carillon is distant 27 miles from Ste. Anne, and was constructed on the north side of the Ottawa River, to avoid the "Carillon" rapids. It was projected in 1819, and subsequently completed under the direction of the "Royal Staff Corps," and at the expense of the British Government. Its dimensions are now:—

Length.....	$2\frac{1}{8}$ miles
Number of Locks	3 { two rising. one falling.
Dimensions Lift Lock No. 1	128 x $32\frac{1}{2}$ feet.
No. 2.....	$126\frac{1}{2}$ x $32\frac{1}{2}$ "
Guard Lock No. 3.....	$126\frac{1}{2}$ x $32\frac{3}{4}$ "
Total Lockage	$34\frac{3}{4}$ { $21\frac{3}{4}$ upwards. 13 downwards.
Depth of Water on the Sills	$6\frac{1}{2}$ feet.
Breadth of Canal at Bottom.....	30 "
at Surface	50 "
Cost to July 1st, 1867, of "Carillon," "Grenville" and "Chûte à Blondeau"	\$63,053 64

The Chûte à Blondeau lies on the north side of the river, four miles above Carillon, and is constructed through solid rock to avoid the rapids from which it takes its name. It was also designed at the same time as the Carillon, by the Royal Staff Corps, and may be described as follows:—

Length of Canal.....	$\frac{1}{8}$ Mile.
Number of Locks	1
Dimensions.....	$130\frac{5}{8}$ x $32\frac{5}{8}$ feet at upper end.
"	$36\frac{1}{3}$ " , at lower end.
Total rise of Lockage	$3\frac{3}{4}$ feet.
Depth of water on Sills.....	6 "
Breadth of Canal at Bottom ..	30 "
Breadth of Canal at Surface ..	30 "

The Grenville follows the Chûte à Blondeau, $1\frac{3}{8}$ miles further up, and lies also on the north side of the river, with the object of surmounting the rapids known as the Long Sault. Its history is that of the two previously mentioned works. So far as the records

go to show, the Grenville was the last work completed; but the first passage through all of them was not made until the latter part of April 1834, when the steamer *St. Andrew's* passed through them.

The proportions of the Grenville Canal are as follows:—

Length of Canal.....	5 $\frac{1}{4}$ miles.
Number of Locks	7
Dimensions of Locks—	
Lift Lock No. 5 } Combined {	130 $\frac{2}{3}$ × 32 $\frac{1}{8}$ feet.
" " 6 } {	128 $\frac{1}{3}$ × 32 $\frac{1}{8}$ "
" " 7 } {	128 $\frac{1}{3}$ × 31 $\frac{5}{8}$ "
" " 8 } {	128 × 32 $\frac{1}{8}$ "
" " 9.....	107 $\frac{2}{3}$ × 19 "
" " 10.....	106 $\frac{5}{8}$ × 19 $\frac{1}{4}$ "
Guard Lock No. 11	107 $\frac{6}{12}$ × 19 $\frac{1}{12}$ "
Total rise of Lockage.....	45 $\frac{3}{4}$ "
Depth of water on sills	6 $\frac{1}{2}$ "
Breadth of Canal at bottom	20 to 30 feet.
" " surface of water	25 to 60 "

The Rideau Canal extends from Ottawa City to Kingston, and makes the Rideau and Cataraqui navigation available for craft of a certain depth of water, for a distance of 126 $\frac{1}{4}$ miles.

The necessity for the construction of such works was seen during the war of 1812, and in the year 1815, Captain Jebb, of the Royal Engineers, was sent by the military authorities to examine into the practicability of finding a satisfactory route. This gentleman reported favorably on the project, but no decisive action was then taken in reference to it by the Imperial Government. In 1824 they offered a loan of \$340,666 67 towards the construction of the Canal, and Mr. Clowes was thereupon instructed by the Upper Canadian Commissioners, appointed previously on the question of Inland Navigation, to make a survey of the proposed work.

He submitted three plans, and in 1825, the Committee to whom his Report was submitted, recommended the adoption of the one with 5 feet of water. The Government of Upper Canada, however, on full consideration, declined to construct the work, as they believed that the improvement of the St. Lawrence navigation was best calculated to promote the commercial interests of the country, and that the accomplishment of the work should devolve on the Imperial Government, if it was necessary chiefly for military reasons.

Accordingly the Imperial Government sent out a Commission of Royal Engineers to report on the work, and subsequently determined to construct it. In the autumn of 1826, Colonel By, R.E., arrived from England, and immediately commenced the construction of the works, Sir John Franklin laying the foundation stone. The works were completed in the spring of 1832, and the steamer *Pumper* passed through from Bytown to Kingston.

Length of Canal.....	126 $\frac{1}{4}$ miles.
Number of Locks 47 {	From Ottawa to Kingston 33 ascend, 14 descend.
Total Lockage, 446 $\frac{1}{4}$ feet {	282 $\frac{1}{4}$ rise } at high water. 164 fall }
Dimensions of Locks	13 $\frac{1}{2}$ × 33 feet.
Depth of water on Sills.....	{ 5 feet navigable depth. 4 $\frac{1}{2}$ " through Canal.
Breadth of Canal at bottom.....	{ 60 feet in earth. 54 " rock.
" " at surface of water.....	80 " earth.
Cost to 1st July, 1867	\$4,064,764 47.

RICHELIEU CANALS.

The third series in the Canal System of Canada is that which has been constructed to connect the St. Lawrence with Hudson River *via* the Richelieu and Lake Champlain. (App. A). The Richelieu river is situated 46 miles below Montreal, and 114 miles above Quebec. The obstructions to its navigation are removed by a Canal at St. Ours, 14 miles from its mouth, and by another, 32 miles further up, known as the Chambly Canal. The route is thence free from difficulties for the remainder of the river Richelieu and Lake Champlain, at the head of which the Americans have a Canal properly called the Whitehall Canal; by means of this and a small portion of the Erie Canal, boats are enabled to reach the Hudson at Albany, 311 miles from Montreal.

The Chambly Canal was suggested, like most of the Canadian Canals, after the experiences of the American war of 1812.

In 1818, the Parliament of Lower Canada passed a Bill, granting to a Company the right of constructing a Canal to avoid the Chambly Rapids, and otherwise improve the navigation of the Richelieu. The Company made the necessary surveys and published a report in reference to the best plan of constructing the works, but several years passed away and nothing was done to carry out the provisions of the Act. Accordingly the Legislature passed another Act appropriating \$200,000 for the construction of the works, and providing for the appointment of Commissioners to commence the undertaking after the completion of the Lachine Canal. Still the project made no progress until 1830, when the Commissioners ordered the dredging of the bed of the river; this work was continued throughout that and the following year, and finally in March, 1835, Mr. Hopkins was appointed Engineer of the Chambly Canal. He altered the original design, with the approval of the Commissioners, who entered into contracts for the construction of the works, and also applied to Parliament for additional assistance. The Legislature thereupon made an appropriation of \$38,000, but the Bill did not receive the Royal assent.

The Chambly Canal lies on the west side of the Richelieu, extending from Chambly Basin up to St. John, twelve miles. On the appointment of the Commissioners just referred to, in 1829, they ordered the necessary surveys to be made, and two years later the work was regularly placed under contract for the gross sum of \$184,872, but the contractors were obliged to suspend on account of having taken the work at too low a rate. Considerable progress, however, had been made in the construction of the Canal, and when the state of affairs had been reported to the Legislature, a Bill was passed through the Houses, in 1835-'36, granting the requisite funds, but it also failed to receive the Royal assent. During the ensuing year the want of funds continued to be the difficulty, and it was not until 1841 that the work was taken energetically in hand by the Board of Works.

The Canal was opened two years later, but the work was found to be in a very unsatisfactory condition, and at last, in 1858, it had to be renewed to a large extent.

At present the Chambly Canal may be summarized as follows:—

Length of Canal.....	12 miles.
Number of Locks	9
Guard Lock No. 1, at St. John.....	122 × 23½ feet.
Lift " " 2, "	124 × 23½ " "
" " " 3, 4, 5, 6	118 × 23 to 23 ⁷ / ₁₂ feet.
Total rise of Lockage	74 feet.
Depth of water on Sills	7 "
Breadth of Canal at bottom	36 "
" " " surface	60 "
Cost to July 1st, 1867	\$634,711 76.

The Saint Ours Lock and Dam was commenced in 1844 under the Board of Works, and was completed in 1849. The dimensions are as follows:—

Length of Canal	$\frac{1}{8}$ mile.
Number of Locks	1
Dimensions of Lock	200 × 45 feet.
Total rise of Lockage	5 feet.
Depth of water on Sills	7 „ at low water.
Cost to 1st July, 1867.....	\$121,537 65.

ST. PETER'S CANAL.

The only Canal in actual operation in the Maritime Provinces is that which connects the Bras D'Or Lake of Cape Breton with the ocean. (App. A.) The width of the Isthmus separating the sea from the lake, which is a noble sheet of water, abounding in fish, and surrounded by a country rich in mineral and agricultural resources, is only half a mile. The project of canalling it was mooted at an early date by the representatives of Cape Breton in the Legislature of Nova Scotia. In 1821, a survey was made by Mr. Francis Hall, and other surveys by Mr. C. W. Fairbanks, and Captain Barry in subsequent years. The design of the latter, for a Canal 22 feet wide at bottom, and 13 feet deep, was adopted, and the work commenced on September 7th, 1854, and continued until 1858, when Mr. Laurie, then Chief Engineer of the Province, made an unfavorable report as to the probable remunerative results of the work, and suggested a marine railway as the best means of accommodating the trade of the locality. The works were then suspended for some time, but the Cape Breton representatives continued urging the necessity of the undertaking, and the construction of the Canal was resumed in 1864. The St. Peter's Canal was among the public works handed over to the Dominion, in 1867, since when the work has been completed, and is now 2,400 feet long, with a breadth of 26 feet at bottom, with one tidal lock, 26 × 122 feet, and four pairs of gates. The depth of water in sills, at lowest water, is 13 feet—the extreme rise and fall of tide in St. Peter's Bay, being about 9 feet. Cost previous to Union was \$160,811 95, and up to 30th June, 1870—\$142,225 78, or a total of \$302,037 53 to that date in N. S. currency.

Projected Canals.

Besides Canals in operation, several others have been projected of recent years, with the avowed object of affording greater facilities for the trade of Canada. (App. A.)

Prominent among these schemes is what is generally known as the Toronto and Georgian Bay Canal. The distance between its southern terminus, in Humber Bay, of Lake Ontario, and its northern terminus, in Georgian Bay, of Lake Huron, is 100 miles, of which 24 are deep water navigation, through Lake Simcoe, which is to be the summit level and feeder. Nearly twenty years ago Mr. Kivas Tully made the first exploration of the line of the proposed Canal, and of late years the project has been energetically advocated by gentlemen in Toronto and elsewhere, incorporated as the "Huron and Ontario Ship Canal Company."

Another scheme is that for the construction of a branch Canal from the town of Niagara to connect with the Welland at Thorold. Mr. Walter Shanly reported favorably on the project in 1854, and during the last Session of the Legislature, a Bill was passed for the incorporation of the Ontario and Erie Ship Canal Company, from the waters of Niagara River, at or near Fort George, in Niagara, thence to Thorold, and thence to the waters of Lake Erie, at or near Port Colborne, or the Niagara, at or near Chippewa; locks to be the size of the Cornwall Canal. The capital, \$8,000,000, in shares of \$100, with power to borrow to the extent of unpaid capital. The work to be commenced within two years, and finished within five.

The Murray Canal was advocated as far back as 1797, when a resolution was formally adopted by the Lt.-Governor in Council for the reservation of 3,000 acres of land in favor of the construction of the work. The necessity of the work has, since then, been frequently brought before the Legislature, and surveys of the route were made. As

late as July, 1866, a Committee of the House of Assembly of Canada authorized another survey, which was made.

The Caughnawaga Canal is another scheme which has been earnestly advocated for some time past. It was first prominently brought before the public by Messrs. John Young, L. H. Holton, and other merchants of Montreal, in 1847, and in answer to their petition, the then Governor General, Lord Elgin instructed Mr. J. B. Mills, C. E., to make a survey. In 1848, this gentleman reported in favor of a Canal having the upper terminus at St. John, and the St. Lawrence terminus near the village of Caughnawaga, immediately opposite Lachine, about 8 miles above Montreal. In 1852, the Commissioner of Public Works strongly urged the construction of this Canal, and subsequently other surveys were made and reported upon, but no Government action was ever taken on the subject. Other gentlemen, especially the Hon. John Young, however, kept the scheme prominently before the public, and in the last Session of Parliament a Bill was passed, incorporating a number of gentlemen into a Company to build the Caughnawaga Ship Canal, from Lake St. Louis in the St. Lawrence, to Lake Champlain on the Richelieu, with power to use and enlarge the Chambly Canal, with consent of the Government, who may, however, at any time assume the whole work—the locks not to be of less size than those on the Beauharnois Canal. The Capital Stock \$3,000,000, with power to increase to \$4,000,000, in shares of \$100. The Canal to be completed within five years, or Charter forfeited.

One of the most important schemes, which have been brought before the public of late years, is undoubtedly the Ottawa Canal, to connect Montreal with Lake Huron, *via* the Ottawa River, Lake Nipissing, and French River. The route was examined by two Engineers, first in 1857, and afterwards in 1859, and their reports are found in full in the reports of the Department of Public Works. The subject has been frequently before Parliament, but no definite steps ever taken to carry out the project.

Another Canal, which has come prominently before the public of late years, is what is generally called the Bay Verte Canal, to connect the waters of the Gulf of St. Lawrence, at Bay Verte, with those of the Bay of Fundy, at Cumberland Basin, by cutting across the Isthmus of Chignecto, uniting Nova Scotia with New Brunswick. In 1825, a survey of the route was made by Mr. F. Hall, at the instance of the Lieutenant-Governor of New Brunswick. At a later date, Mr. Thomas Telford, C. E., revised the report of Mr. Hall, and suggested a Canal with a depth of 14 feet, with a view of accommodating the large trade that must accrue especially with Quebec, Montreal, and the Upper Lakes. In 1843, Captain Crawley made another survey—Canada paying a portion of the expense. A survey of the line is now in progress at the instance of the Dominion Government.

 COMMERCIAL ASPECT OF THE QUESTION.

In order to appreciate to the fullest extent the importance of the question of Canal enlargement and extension, it is necessary to consider the natural position of the St. Lawrence and its relations to the vast area of country, which extends from the Appalachian or Alleghany Range on the East, to the Rocky Mountains, on the Western or Pacific side of this continent. The resources of that section of Territory to which the St. Lawrence and the Great Lakes are tributary, and form the natural communication with the Ocean, are most varied and have been developed of late years to an extent without parallel in the history of commercial enterprise. On the plains and slopes, and in the valleys lying contiguous to the great artery, of which the Canals form the connecting links, are raised corn, wheat and other agricultural products in such abundance, that it is frequently found impossible to dispose of them to advantage.

Timber and minerals abound to an unlimited extent, either in the immediate vicinity of the River and Lakes, or that of the streams which pay them tribute. The climate of this fertile region is not like that of the South, enervating and sometimes fraught with pestilent vapours, but is bracing and healthy to the highest degree. It is a region eminently adapted for the use of man, and the development of his best enterprise and industry.

It is in what is generally called "The Basin of the Lakes" that we see the most remarkable material progress.

Within the past thirty years cities and towns have arisen with striking rapidity—new States have been marked out and taken their place among the most prosperous of the oldest communities of the continent.

The history of the Province of Ontario and of the States of Illinois, Michigan, Minnesota and other sections of the North Western Country, illustrates the spirit of the commercial enterprise of the present day.

A few facts, derived from official and authentic sources, will shew very clearly the progress of the country to which the St. Lawrence forms the outlet.

In the year 1841, just thirty years ago, the gross value of the trade of the lakes was estimated at \$65,000,000; ten years later it had more than quadrupled, for it was put down in 1851 at \$300,000,000, employing 74,000 tons of steam, and 138,000 tons of sailing vessels, whilst at the present time the aggregate value of this same commerce cannot be less than \$700,000,000. The tonnage of the lakes in 1851 was, as already stated, not above 212,000, whereas in 1862, it had risen to 450,000 tons, of which about 80,000 tons was Canadian—so far as can be gathered from the imperfect available statistics of lake trade. In 1866 the tonnage was put at 547,267, valued at \$17,537,440 in American currency. We have no returns for 1870 at hand, but we find that the City of Buffalo alone in 1869, owned 131 steam vessels and 127 sail, with a grand tonnage of 91,328 tons.

To illustrate the growth of the country watered by the St. Lawrence and the Lakes, we refer to the rise of its principal commercial emporiums. Chief among these is Chicago; its population twenty years ago was not 30,000, whereas in 1860, it had risen to 110,000, and in 1870 to 299,000 souls. Milwaukee had a population of 20,000 in 1850, and of 72,000 in 1870. Cleveland increased in a still greater ratio, for its population rose from 17,000 in 1850, to 92,000 in 1870. Buffalo and Oswego also exemplify very forcibly the influence of the great commerce of the West.

The total population of the grain-growing States, viz: Ohio, Michigan, Indiana, Illinois, Missouri, Iowa, Wisconsin, Minnesota and Kansas, in the year 1840, was not

above 3,000,000 of souls, whereas the last Census of the United States, taken in 1870, shews that it had increased to over 12,000,000. The aggregate production of the same States in grain, was as follows:—

	1850.	1860.	1869.
Wheat..... Bush.	43,842,038	89,293,603	166,100,000
Corn..... "	222,208,502	392,289,631	556,050,000
Oats..... "	42,328,731	62,738,901	146,200,000
Rye..... "	739,567	3,997,001	4,802,000
Barley..... "	831,517	4,865,761	8,755,000
Swine..... No.	8,536,182	11,039,332	19,100,000

Nor has the commercial progress of the Province of Ontario, lying contiguous to the lakes, been less striking than that of the American States. Forty years ago it held a very humble position in the list of the industrial communities of this Continent. In 1811 the population of Upper Canada, or Ontario, was only 77,000, whereas it had risen to 952,000 in 1851, and to 1,396,091 in 1861, whilst assuming that the same rate of increase has continued as between 1851 and 1861, it cannot be less than 2,137,000, at the present time. Its agricultural progress has not been surpassed by the rival communities on the opposite side of the lakes. Those who may have the time or inclination to investigate the subject, will find that it is not an exaggeration to say that the increase of Ontario in the chief staples of food, especially wheat, has been equal to that of the majority of the grain growing States, and greater than that of some—the State of Ohio for instance. In 1851 Ontario raised over 12,000,000 bushels of wheat; in 1861 the production had increased to nearly 25,000,000. The only State of the Union that exceeded this percentage of increase in wheat was Iowa, whose production increased seven times within the same period.

The average yield of wheat per acre, for the past twenty years, has been greater than that of any of the North Western States. The yield of barley is also greater, the soil and climate being admirably adapted for the growth of this article, for which there is a large demand in the United States,—that Country having imported from Ontario 5,295,131 bushels in 1869, against 3,691,608 in 1868.

The progress of the capital of Ontario is another illustration of the wealth of the country, on which its prosperity depends. Between 1840 and 1850, its population increased ninety-five per cent.—a greater ratio than that of St. Louis or Cincinnati, and other older Western cities. Montreal also affords another striking example of progress and prosperity, as the commercial entrepot on the St. Lawrence between the lakes and the sea. Its population in 1852 was only 62,000, whereas in 1861 it had risen to 101,602, and is probably 125,000 at the present time. But the statistics of its trade best exemplify its rapid growth. We find that in 1861, the number of ocean steamers carrying its commerce was only 40, of an aggregate tonnage of 51,298 tons, whilst in 1869 they had increased to 117, with a tonnage of 117,965 tons. In 1860 the number of ocean sailing vessels entering the port was 222, with an aggregate tonnage of 76,174, while they had increased in 1869 to 440, with a total tonnage of 141,898. The figures of its lake craft engaged in the inland trade are equally satisfactory. In 1862 the number of these vessels was 4,875, with a tonnage of 523,991, and in 1869, 5,866, with 721,324 tons.

The commerce of this fertile and progressive country (illustrated at Appendix E et seq. some length in the appendices) depends on several routes of communication. Nature has intended the St. Lawrence to be the great commercial highway of the

West, and if it has not fulfilled its destiny to the extent it should have done, it is because the enterprise of man has endeavored to divert its trade into other and artificial channels. The St. Lawrence runs through British Territory, whereas the great bulk of population and commerce is on the American side of the River and Lakes.

To control the entire traffic of the Great West has been the great object of the State of New York for many years past, and certainly its enterprising people have succeeded to a considerable extent in achieving their purpose, and thereby adding to the prosperity of New York and other Atlantic cities. The Erie Canal, with which must be ever associated the name of De Witt Clinton, is a monument of the liberality and enterprise of the Americans, though it is confidently asserted that it has great difficulty in keeping pace with the progress of the commerce of the West.

The Mississippi, it is true, is another natural artery for the commerce of the West, but it runs into regions unsuitable for the carriage of the chief products of that section, and it is out of the line of direct communication with Europe, and may, therefore, not be considered so formidable a competitor as the Erie Canal for the Commerce which we are chiefly considering.

If it were possible to put a stop to the commerce of the West, and for its people to have no desire to increase their wealth, or add to their comforts, then would the Erie Canal suffice, even at its present dimensions. But when we consider the actual facts before us, we see the commerce of a splendid region, yet in the infancy of its development, retarded only because the inevitable march of progress has been more rapid than human enterprise.

If we take the figures of the Eastward movement by the Erie Canal *via* Buffalo, for nine years, we find the following results:—

	Total Tonnage.
1862	1,980,982
1863	1,692,651
1864	1,402,859
1865	1,307,507
1866	1,600,300
1867	1,418,451
1868	1,476,298
1869	1,281,706

Or if we take the figures of the Eastward movement of flour and grain for the past five years, we find that there has been a considerable reduction, the decrease being steady ever since 1865, amounting to 71 per cent. since 1854. It is true that a considerable tonnage has passed, *via* Oswego, through the Welland Canal, during the same period. Nevertheless, the fact remains that the Erie Canal would seem to have reached its full capacity for the business which it was intended to do. For instance, the total tonnage, *via* Buffalo and Oswego, during the years already given, was as follows:—

	Total Tonnage.
1862	5,598,783
1863	5,557,692
1864	4,852,941
1865	4,729,654
1866	5,775,220
1867	5,688,325
1868	6,442,225
1869	5,862,080

The Railways, it is true, have relieved the Canal of a very considerable traffic; and

it appears that from 1860 to 1869, the whole amount carried on the two chief railroads of the State was, in round numbers,

7,780,000,000 tons, moved one mile.

While that of the Canals was

9,470,000,000 tons, moved one mile.

In other words, the aggregate freight moved since 1860, on the Canals, during average seasons of 7½ months, has been about 24 per cent. more than that moved on the New York Central and Erie Railways during seasons of twelve months.

On the other hand, the statistics of the production of the grain-growing States, since 1860, shew a large and steady increase. The shipments from Chicago of flour and grain, reduced to bushels, amounted to only 1,830,968 in 1850; the quantity in 1860 had risen to 31,108,759; and in 1869 to 56,759,515. The same rapid increase is shewn by reference to the trade statistics of Milwaukee and Toledo, which come next in order after Chicago, as receiving ports of the produce of grain-growing States.

Or we may illustrate the cereal crop movement at the principal lake ports, by reference to the receipts of flour and grain, at Chicago, Milwaukee, Toledo, Detroit, and Cleveland, from August 1st, 1868, to July 31st, 1869, inclusive, and for the corresponding periods of 1866-7 and 1867-8:—

	1866-7.	1867-8.	1868-9.
Flour reduced to Wheat, bushels.....	18,344,285	20,177,435	26,881,705
Total Grain.....	69,814,055	85,883,572	94,933,545
Grand Totals—bushels.....	88,158,340	106,061,007	121,815,250

The inadequacy of the facilities afforded by American enterprize and energy for the transit of the products of the West has been asserted for some time by those who are especially interested in having cheap routes of communication with the principal markets of the world. On the 14th of February, 1863, Commissioners were appointed by the State of Illinois, to confer with the Canadian authorities on the question of transit, and in their memorial they used these emphatic words:—"For several years past, a lamentable waste of crops already harvested has occurred, in consequence of the inability of the Railways and Canals leading to the seaboard to take off the excess. The North-West seems already to have arrived at a point of production beyond any possible capacity for transportation which can be provided, *except by the great natural outlets*. It has, for two successive years, crowded the Canals and Railways with more than one hundred millions of bushels of grain, besides immense quantities of other provisions and vast numbers of cattle and hogs. This increasing volume of business cannot be maintained without recourse to the natural outlet of the lakes * * * * The St. Lawrence furnishes for the country bordering upon the lakes a natural outlet to the sea." These words illustrate the natural aspirations of the West, and might be supplemented by other extracts, equally forcible.

The question now arises, how far the people of Canada, who are the possessors of the St. Lawrence, have shown their estimation of the priceless heritage entrusted to them? The history of the improvement of the navigation of the St. Lawrence is one which Canadians need not be ashamed to read. The Canal system, even in its present condition, is an illustration of bold design and liberal execution. The question of defence, no doubt, was an all important element in the inception of these enterprizes, whilst the British

Government controlled all our affairs ; but in the course of time, as the country became older, and commerce increased—very slowly, it is true, for some time—the necessity of stimulating the growth of the country west of Montreal, by improving the route of communications became more evident to the public men and merchants of Canada. We have already seen that when the Imperial authorities, as far back as 1825, endeavored to induce the Upper Canadian Government to undertake the construction of the Rideau Canal, they declined, under the conviction that the true policy, in a commercial point of view, was to improve the direct route of the St. Lawrence navigation. Immediately after the Union, when the population of the two Provinces was not much more than a million of souls altogether, and the total amount of the revenue was only about \$1,488,000, the Legislature of Canada appropriated no less a sum than two millions of dollars for the improvement of the Canals, and formally adopted the policy of improving the navigation of the St. Lawrence, in accordance with the then commercial requirements of the country. The results of this wise policy have been eminently satisfactory, measured by direct and indirect advantages to the growing resources of the country.

Of the Canals of Canada, none has been so successful, in a commercial sense, as the Welland. Forming, as it does, the connecting link between the Upper Lakes and Lake Ontario, it has necessarily drawn to it a considerable share of the Western trade, seeking the cheapest and most expeditious means of transit to its destination. By this Canal, the productions of Canadian Territory on Lakes Superior, Huron and Erie, must find their way to the larger cities of Canada by Lake Ontario, or by the side of the St. Lawrence. It affords the shippers of Chicago, Milwaukee, Toledo, and other Western cities, the means of sending their surplus produce to New York, *via* Oswego, or to Montreal, for transshipment to Europe, *via* the St. Lawrence. No Canal is more advantageously situated to control Western trade, and if its success in the future is not equal to what it has been in the past, it will be because the people of the Dominion are indifferent to the interests involved in its improvement.

Within twenty years the trade of the Welland Canal has nearly doubled ; for, while the total tonnage of vessels and property (up and down), was only 820,000 in 1849, it had risen to nearly 2,500,000 in 1869, or some 400,000 tons more than the aggregate tonnage of the St. Lawrence Canals during the same year. The revenue from tolls was only \$113,968 in 1849, but it was nearly \$230,000 in 1869. When these returns are analysed, we find that the great proportion of tolls is collected on American tonnage. Take the three last years for instance:—

	1868.	1869.	1870.
American Vessels.....	\$16,954 24	\$17,386 90	\$18,937 10
Canadian Vessels	10,664 63	11,044 02	11,828 33
Difference.....	\$6,290 61	\$6,342 88	\$7,108 77

Another striking fact in these returns is the superiority in size of the American tonnage, though the greater number of vessels is Canadian.

		1868.	1869.	1870.
American Vessels..	{ No...	2,932	2,791	2,884
	{ Ton..	692,169	719,432	765,543
Canadian Vessels.....	{ No...	3,225	3,278	3,856
	{ Ton..	548,197	548,019	591,574

It is also equally noteworthy that the American steamers passing through the Welland, though less in number than the Canadian steamers, are of a larger class—in fact, of the largest capacity of the Canal. For instance, the number of American steamers going through in 1870 was only 878, whilst those belonging to Canada amounted to 1,199 ; but the tonnage of the former was, in the aggregate, more

than double that of the latter. These facts will be more striking when the tonnage of the vessels in the trade of the Upper Lakes is considered.

But is the Welland itself equal to the present requirements of commerce? No one, who considers its career for the past twenty years, can doubt that it has played an important part in the commerce of the West, and that its usefulness has not been at any time exaggerated by its promoters and advocates. At the same time, there can be no doubt that, as in the case of the Erie Canal, it has not equalled the requirements of the growing commerce dependent on the facilities it affords for speedy and cheap transit. In 1857, the tonnage of vessels passing through it was 1,148,771, and, in 1869, only 118,680 tons more, while, in 1867, the amount was actually less. The greatest number of vessels ever passing through it was eight years ago, in 1862, when the total amount of tonnage was 1,476,842. Last year, the tonnage of the vessels amounted to 1,357,117 tons, which was above that of the two previous years. But taking the following statistics of the total tonnage of vessels and property (up and down) for a number of years, it will be seen that the business of the Canal has comparatively stood still, although it certainly affords the best and most convenient avenue of communication:—

1860.....	2,182,593	tons.
1861.....	2,348,155	”
1862.....	2,495,774	”
1863.....	2,637,479	”
1864.....	2,479,559	”
1865.....	2,003,883	”
1866.....	2,057,532	”
1867.....	1,927,198	”
1868.....	2,402,187	”
1869.....	2,462,201	”

The fact is, that whilst the Welland has held its own, and is still the most profitable of the Canadian Canals, the trade of the Upper Lakes, or rather the character of the tonnage conveying that trade, has been undergoing a marked change. Of course, the energetic efforts of the Buffalo interest to concentrate the great bulk of the Western business at that city, for shipment *via* Erie Canal, have much to do with the stationary business of the Welland. Last season the lowering of the tolls on the Erie 50 per cent. gave Buffalo the advantage over Oswego of over one cent per bushel, as compared with the rate of previous years, and necessarily brought more business to the former entrepot of Western commerce. Still the Welland, shortening as it does the Canal route to New York, could, even with the present tolls of the Erie, satisfactorily compete for the transit of Western produce *via* Kingston or Oswego, were it equal in size to the demands of the shipping interest. During the past thirty years the vessels engaged in the lake trade have not merely increased in number to a very great extent, but have also altered as to their style. In 1839, the twenty-five largest steamers on the lakes had an average of 449 tons burden, the largest being 800 tons. In 1851, the average of the twenty-five largest fell short of 1,000 tons, and the average of the whole steam fleet, consisting of 157 steamers and propellers, was 437 tons. Of late years paddle steamers have gone comparatively into disuse, propellers and tugs taking their place. Taking the years of which we have reliable statistics we find that the total tonnage of paddle steamers fell from 69,150 to 41,870, while the tonnage of the propellers increased from 61,550 to 75,287 between 1860 and 1866. Tugs are also enumerated, for the first time, in the same year, the number being 234, and the total tonnage, 23,678. If we analyse the shipping statistics of Buffalo, we notice that in 1869 she owned 11 screw steamers of about 1,100 tons and four over 1,400, the largest being 1,470; 20 between 800 and 1,000; 19 between 600 and 800; or 54 out of the whole number of 58 screw steamers beyond the capacity of the Welland. The total number of steam vessels was 131, divided as follows:—

Screw Steamers.....	58
Tugs.....	59
Steam Yachts.....	11
Side Wheel Steamers.....	3

It is also noteworthy that out of the 33 barks 29 have a tonnage ranging between 420 and 830. Reference to the shipping statistics of other Upper Lake ports, will also establish the fact that the propellers are not only increasing in number, but in size; and whilst that is the case, Buffalo has virtually the control of the bulk of the Western traffic.

Experience proves that the largest class of vessels, especially steam, now plying on the lakes, carry property at the cheapest rates. The larger class of vessels, both sail and steam, carrying from 20 to 35,000 bushels of grain, are increasing year by year, and must entirely obtain, according as the artificial channels of communication are improved. A very general opinion prevails that steam, that is the screw vessel, must prevail in the end over sail on the lakes, for it has all the advantage in respect to rates of Insurance, expedition, safety and competition with railways, all important elements in the transportation of the bulky produce of the West. As respects the changing character of the lake vessels, the Sault St. Marie Canal of itself would give us a sufficient illustration, if we had no other facts before us. It has been constructed and enlarged with regard to the increasing requirements of the lake trade, and points out to us the necessity of improving our own communication with the Upper Lakes so as to divert the trade, as far as possible, from Buffalo, and bring it by the cheapest and most expeditious route to the sea-board, namely the St. Lawrence. At present, according to the Oswego Board of Trade, three-fourths of the tonnage of the lakes cannot pass the Welland Canal—a fact of itself quite sufficient to show why its traffic does not increase.

Other merchandize besides wheat would find its way by the Welland, were it enlarged and deepened with a view to the commerce above it. For instance, a large amount of lumber, probably 15,000,000 feet on the average, is manufactured now every year on Georgian Bay by Americans and shipped *via* Collingwood, Northern R. R. to Toronto, and thence by lake to Oswego, for transportation by the Erie Canal. The Copper and Iron Trade of Lake Superior is also worth competing for. The total amount of Iron produced in the Lake Superior District having risen to 672,241 tons in 1869, against 7,000 in 1856, while the copper product increased to 15,288 tons in 1869, as compared with 3,500 tons in 1858. Hitherto this branch of industry has been crippled on account of the want of cheap transit. Is it not more than probable that the improvement of the Welland will attract this business to Oswego rather than to Buffalo?

The first step, therefore, in the improvement of the Inland Navigation of the Dominion is the enlargement of the Welland Canal, the great link of commercial intercourse, not only with the prosperous Western Country of the United States—whose progress we have seen, is already so great; but with that vast territory belonging to the Dominion, which must ere long be peopled by thousands, and teem like the Western States, with the evidence of an irrepressible industry and activity. On improving the Welland, we take the step pointed out to us by the unerring finger of Progress. The commercial interests of Canada demand it, if our country is to keep pace with the enterprise and energy of the communities to which the St. Lawrence is tributary.

The Welland Canal must be considered as that link which is indispensable to the complete development of the St. Lawrence navigation. Our great object should be to seek the control, as much as possible, of the Western traffic and take it to tide water.

In the nature of things, this commerce must always find its way to market by the following routes—leaving the Mississippi out of the calculation altogether for the reasons before given—First by the several lines of Railway connecting the lakes with the sea-board—Secondly by the following water communications, *via* Buffalo and the Erie Canal, *via* the Welland and Oswego, or *via* the Welland and the St. Lawrence. Even

under existing circumstances, a considerable share of business is enjoyed by Kingston, as much as could be expected in view of the facilities afforded there, in comparison with those given at Oswego. At present there is very little difference between the average cost of carrying grain from Chicago to Kingston or Oswego.

The Board of Trade of Kingston admit that, when freights are brisk, the rate to Oswego is quoted often $\frac{1}{2}$ per cent. less in consequence of vessels going thither being sure of despatch, and return freights, but as a rule the rates are about the same. Both Kingston and Oswego must be benefitted the moment the Welland is enlarged, so as to admit propellers and sailing craft of the size that are obtaining on the lakes; for then it is admitted on all sides that there would be an immediate reduction of freight, ranging from 2 to 4 cents a bushel on grain on account of the larger, and consequently cheaper class of vessel that can engage in the trade. In the year 1858, the receipts of wheat and corn at Kingston, during the season of navigation, were:—

58 cargoes in British vessels.....	839,948 bushels.
46 „ „ American „	641,011 „
Total.....	<u>1,480,959 „</u>

A single Forwarding Company gives the receipts from the United States during 1870, as follows:—

79 cargoes in British vessels..	1,127,987 bushels.
111 „ „ American „	1,892,875 „
Total.....	<u>3,020,862 „</u>

So far as can be ascertained the total quantity of grain received at Kingston from United States' ports last year, amounted to a little over 6,000,000 bushels; of which the largest proportion was carried in American vessels.

These figures are significant, inasmuch as they show the growth of the grain forwarding business of Kingston during twelve years, and especially the disproportionate increase in Canadian bottoms. Who can doubt that the latter fact is owing in a large measure to the state of the Commercial relations between Canada and the United States.

The Welland is inestimably valuable to Canada, because it forms a part of the great route of water communication between the sea-board and the lakes.

At present this route has its only water rival in the Erie Canal, and all the efforts of the State of New York have long been directed to make the latter equal to the requirements of Western trade. Enterprise can do a great deal, but it cannot divert trade from its natural channels. Artificial routes like the Erie Canal may compete for a time with a natural line of communication like the St. Lawrence, but sooner or later they must fail. On this point the Western people have time and again spoken, but for the present let us see what an organ of the mercantile community of New York State says on a subject all important to it:—

“It would be folly to ignore the fact,” says the report of the Buffalo Board of Trade for 1869, “that a great increase has taken place in the trade of Canada with Europe in breadstuffs.”

“The route *via* the St. Lawrence leads almost in a direct line from the grain-growing regions of the West to those nations of Europe, whose people are and will be the chief consumers of the grain exported from this country. By a liberal Canal policy we may arrest this diversion of Trade, and restore the traffic of very many important articles which seek other channels through lower rates of transportation. The observer of last year's statistics has doubtless noticed that *the trade of Chicago with the Dominion*

"has largely increased both in imports and exports. The Canadians hope to establish a large direct foreign trade by way of the St. Lawrence, to and from the West, exporting wheat by the vessels used in the trade, returning with iron, salt, hardware, glass, crockery, carpets, drugs, dyes, &c., and the estimated value of such imports alone foot up to \$40,000,000. Would not a reduction of tolls on the Canal somewhat disarrange this programme? Two plans are proposed for receiving the trade of the great West by the Canadians. The one is, to enlarge the Canals around the rapids of the St. Lawrence, and to increase the capacity of the Welland Canal to a degree whereby vessels of large tonnage can pass direct to and from the Upper Lakes; the other contemplates a Northern route, by improving the navigation of the Ottawa River, which flows into the St. Lawrence at Montreal. The first route mentioned is the most *feasible, least expensive, easier maintained, and can be made available longer during the year.*"

Coming from such a source, these words are very significant; they lead us to infer that the New York interest is fully alive to the inferiority of the Erie route as compared with the St. Lawrence, and determined to make an energetic effort, sooner or later, to bring back to the artificial route that trade which is gradually being diverted from it. Canadians need not, however, have any fears of the future of their great natural line of navigation, whilst they are themselves fully awake to its importance and resolved upon availing themselves of the superior advantages given them by Nature.

Though the St. Lawrence route has never yet received anything like the amount of traffic which it should by virtue of its superior facilities; yet it is surprizing that it has even done as much as it has, when we consider the formidable nature of the opposition it has had to contend against. The trade that should naturally have sought it, just as the river seeks the sea, has been wooed away from it by the enterprising communities, deeply interested in the prosperity of American Canals and Railways. The very want of a uniform system in its Canals, no doubt, has also operated to retard the development of the St. Lawrence navigation to a very large extent. Appendix C—sketch of locks. Yet despite all the disadvantages under which it has labored, it has done an amount of business, which is of itself a guarantee of what might be accomplished under more auspicious circumstances.

By referring to the statistics of the commercial progress of Montreal, we can obtain a very accurate idea of the influence which the improvement of our Inland Navigation has already exercised on the commerce of Canada. We have already seen that the increase of ocean steam tonnage at that port was 51 per cent. in four years; the increase of sailing vessels, 38 per cent.; and the increase of river craft 16 per cent. during the same period.

In 1845 the quantity of flour and wheat (reduced to bushels of grain) received at Montreal was 2,786,315 bushels.

In 1855 the quantity was 2,799,372 bushels.

In 1865, the quantity had increased to the large figure, 6,558,754 bushels.

In 1869, the last year of which we have official figures, the quantity was still greater, 12,333,458 bushels.

The increase in shipments was equally as large in proportion, viz. :—

In 1855, 495,440 bushels.

In 1865, the quantity reached 3,972,943 bushels.

In 1869, the quantity was 11,425,667 bushels.

The increase in total receipts of 1869 over 1868 was 192,567 barrels of flour, and 4,903,985 bushels of wheat, or reducing flour to wheat, of 5,366,820 bushels. The shipments of 1869 over 1868 increased 283,845 bushels of flour, and 4,460,109 bushels of wheat, or, reducing flour to wheat, of 5,877,534 bushels. The Buffalo Board of Trade might well say that "this was a remarkable diversion of commerce from our Canals."

Elsewhere we give various tabular statistics (Appendix G.) which clearly show the progress of this flour and grain trade to which we especially refer throughout, because it is that branch of trade which the improvement of our Inland Navigation particularly affects, and from which the Canals must always derive the principal part of their revenue.

Looking at the proportions carried by Canal and rail, we find that the Grand Trunk Railway has proved a very important competitor for the trade of the St. Lawrence. Flour appears to have found its way very largely by rail, but the corn and wheat and bulky products go by Canal. The competition between the Canal and railway appears, in fact, to have produced the same results as in the case of the New York Canals and Railways, viz : that the Canal business of 7 months in excess of the 12 months' business of the railway. It must also be remembered in this case that the charges of a railway running alongside a perfect water communication must be lowered during the summer months to an extent which is probably not profitable.

Even under existing circumstances the freights from the West to Montreal are remarkably low compared with those from Chicago and other Western ports to New York, *via* Buffalo and Oswego. The Secretary of the Montreal Board of Trade gives figures which are incontrovertible on this point, and are verified by all the evidence gathered.

According to this statement, the average rate of freight per bushel of wheat from Chicago to New York was as follows (American currency) during the following years :—

	<i>Via Buffalo.</i>	<i>Via Oswego.</i>
	cents.	cents.
1865.....	26 $\frac{1}{2}$	27 $\frac{1}{2}$
1866.....	30 $\frac{1}{2}$	31 $\frac{1}{2}$
1867.....	22 $\frac{1}{2}$	22 $\frac{1}{2}$
1868.....	23	23
1869.....	23	23 $\frac{1}{2}$

In 1868 the average rate paid per bushel by propeller from Chicago to Montreal was 13c. in gold ; in 1869, the rate was still less, or about 12c.

The difference in time is so greatly in favor of the St. Lawrence (some ten or eleven days) that the trade is actually forced into its natural channel despite the obstructions arising from the want of an enlarged and uniform system of Canal communication, and the desperate attempt of the Erie Canal Managers to divert it to New York. Even last year we have it recorded that the aggregate receipts of wheat at Montreal were actually one-third of the quantity carried from the West to New York city, another illustration of the superiority of a natural over a purely artificial route.

It only requires an energetic effort on the part of the Dominion to make the St. Lawrence the great highway between the Sea and the West to the very base of the Rocky Mountains.

Into our hands must come, sooner or later, the carriage of the great bulk of the produce required by Great Britain, who now chiefly receives her supply from Russia, Germany, the United States, Turkey, and the Danubian Principalities, Chili, and Egypt.

The following statement of the respective proportions brought into Great Britain since 1859, from Canada and the United States, will be interesting.

YEARS.	Flour and Wheat Reduced to Bushels.	Quantity and Proportion from the United States.	Ditto from British North America.
1860	59,438,262	17,388,233 or 29.03 per ct.	2,446,550 or 4.03 per ct.
1861	70,273,849	29,139,548 " 41.05 " "	6,324,005 " 9.00 " "
1862	93,412,469	40,628,161 " 43.05 " "	9,554,903 " 10.02 " "
1863	57,657,398	22,155,801 " 38.04 " "	5,969,949 " 10.64 " "
1864	53,829,446	18,811,205 " 34.09 " "	3,419,541 " 7.00 " "
1865	48,241,297	2,797,347 " 5.08 " "	986,451 " 2.00 " "
1866	54,827,134	1,840,961 " 3.04 " "	111,255 " 0.02 " "
1867	73,055,323	9,504,568 " 13.00 " "	1,558,677 " 2.13 " "
1868	68,144,617	12,792,993 " 18.77 " "	1,490,543 " 2.19 " "
1869	82,969,174	28,504,479 " 34.35 " "	6,340,153 " 7.64 " "

In case of enlargement, and the larger class of vessels, that will be able to go directly to Montreal, the difference in favor of the St. Lawrence navigation must be increased just in proportion to the facilities afforded and the ability to get return freights.

To understand the extent of decrease in freight that the improvement in navigation and in the craft employed on the Lakes and River has brought about, we should refer back to the Commercial statistics for the past forty or fifty years. In 1826, the cost of transportation from Montreal to Prescott, 119 miles was \$16 per ton; thence to Niagara, \$8 per ton, in 1854, the cost of taking a ton of iron from Quebec to Chicago was just \$6.50, now it can be taken for \$3.50 by water.

It must be admitted at once that, by enlarging the capacity of the St. Lawrence Canals, including the Welland, we must increase the proportion of Western produce shipped directly by the St. Lawrence.

When the propellers mostly in use in Western Waters can come directly to Montreal or Quebec, and there transfer their cargoes to the larger class of vessels, necessary for European traffic, or go on to Boston through the Gulf of St. Lawrence and the "Bay Verte Canal" (which must shorten the route to Portland and Boston about five hundred miles) then freights of Western produce will be reduced to a minimum, and New York will acknowledge what it now fears, that the success of the Erie Canal is a thing of the past, and that the Western trade has followed the universal law which must obtain sooner or later everywhere—which no legislation can alter, no enterprize balk, that commerce always seeks the cheapest, safest, and most expeditious channels of communications with its markets.

It is an axiom in trade that the nearer you can bring the produce to its market without breaking bulk, the greater will be the saving in freight. As respects the competition of the rival routes between Chicago and New York *via* the Erie Canal, and Chicago and Montreal *via* the Welland and St. Lawrence Canals, there can be no question as to which route must always be the superior. The one now gives 352 miles of Canal, with a lockage of 675 feet, whilst the other, with all its imperfections, has only 71 miles of Canal, with a total lockage of 553 feet, the remaining distance being river and lake.

We have already seen how much the producer saves on freight by the St. Lawrence route, with its imperfect system of Canals. By improving the Canals to Montreal, freight must be reduced at least 15 per cent., and the consumer of Western breadstuffs in Great Britain will secure his supply cheaper, and necessarily come to obtain the greater part of it from this continent rather than from the Eastern parts of Europe, on which he now mainly depends in seasons of scarcity for making up the deficiency in the home production.

One important element in the consideration of the question of transportation between East and West is that of return freights. New York, being the great centre of the import trade for the West, has hitherto naturally drawn to it the commercial marine of all nations, and vessels carrying wheat, corn and other products of the grain-growing States, have never wanted return freights. Hitherto, however, the direct foreign trade with the West, *via* the St. Lawrence, has been insignificant (although on the increase), compared with the dimensions it might assume under a more favorable condition of things.

It is clearly our interest to try and satisfy the natural aspirations of the West in this particular.

The report of the Chicago Board of Trade for 1869 refers to this subject, and shows the difficulties to which it, in common with other Western Towns, is now subject: "Efforts hitherto made to induce Congress to make Chicago and other Western cities ports of entry for foreign goods received *via* the sea-board cities have failed thus far, but will not be abandoned until their full accomplishment is realized. Goods to a limited extent are now received in Bond, but they are subjected to examination, more or less damage, detention, and expense, at the point of delivery by ship which Western Merchants believe can be avoided by proper regulations for their prompt delivery in bond from the Vessel to responsible transportation lines, subject to examination and appraisal at this or other prominent cities in the West."

The whole question hinges on the transportation charges, and whether the foreign goods reach Chicago by a propeller running directly from Boston, or by the transference into the propeller at Montreal, the West will be equally benefitted. Everything, however, will depend on the facilities it may be the policy and interest of Canada to afford. What should be the policy of Canada has been foreshadowed frequently by far-seeing men interested in the Erie Canal route to New York.

In 1869 Hon. Israel T. Hatch, formerly in Congress, and prominent for his zeal in promoting New York commercial interests, held out this warning to the Produce Exchange of that city: "If the ambitious views of our people in the North West, originating in Chicago, its commercial centre, and in New England with Boston, its commercial centre, could be realized, the signal flags of your line of splendid ships would be floating in the ports of your rivals, Montreal and Boston, for you would have to send them there to get freights. The North West aims at direct trade with Europe, and Boston believes that if the St. Lawrence Canals can be enlarged, they can bring their largest class of propellers upon the lakes now engaged in carrying from Chicago to Ogdensburg, and then by rail to Boston, through the St. Lawrence to Boston and so become respectable rivals to you in the inland commerce of this country. Schemes to accomplish these objects are now pending, and I do not hesitate to say that I believe as certainly as that the waters of the St. Lawrence will continue to flow to the Ocean, that this commercial experiment will be tried to change the channels and outlets of the inland commerce of this country.

Shall it be said that the people, outside of Canada, alone appreciate the natural advantages which the Dominion enjoys by virtue of its geographical position, and its possession of the finest system of water inter-communication on this continent? So far, it can be truly urged, that our public men, irrespective of political parties, together with the great mass of intelligent people from one end of the country to the other, have ever been alive to the intimate connection that exists between the commercial prosperity of Canada and the improvement of the noble artery of communication afforded by the St. Lawrence. Even if we had not the public records, or the history of our Canal System, or the expressions of opinion in Parliament, or the utterances of the public press, to guide us in determining our policy, we have now in the abstracts given elsewhere a large amount of valuable evidence to show us the direction which an intelligent public sentiment has taken on this important question. All agree that the Welland and St. Lawrence Canals should form part of a uniform system of Canal navigation, that the enlargement and extension of one should be simultaneous with the enlargement and extension of the other.

In this connection we cannot refrain from referring especially to the carefully prepared replies of the Board of Trade of the City of Hamilton, which are the results of the experience, not of any particular commercial interest, but of merchants, shipowners and shipmasters, who are thoroughly conversant with the trade of the lakes and its requirements. "The capacity of such vessels for the proposed increased size of locks would be similar to those engaged on the American side on the Upper Lakes, viz: 230 to 250 feet in length, 30 to 34 feet beam, with a draft of water of 12 feet, and a carrying capacity of 30,000 bushels of wheat. At present first class propellers of 450 to 500 tons and carrying fifteen thousand bushels of wheat through the Welland, can afford to carry from Chicago to Montreal at a freight of 12½ cents per bushel, and *do well* at that; and if the locks were enlarged to the suggested dimensions, then steam and sail vessels of a carrying capacity of 30,000 bushels could advantageously engage in the trade between the Upper Lakes and Montreal; and a reduction in the present rate of freight might reasonably be anticipated to the extent of at least 12½ per cent. By steamers of the proposed size engaging in the trade between Montreal and the Upper Lakes, not only would the large bulk of the produce of the basin of the great lakes find its way to tide water by the St. Lawrence, but return cargoes of iron, salt, crockery, and other heavy goods would find their way into the interior by the same route. Iron is now received from ocean ships in Quebec, and laid down in Chicago for \$3.50 per gross ton, by the water route,

“even with our present imperfect facilities; and when it is understood that the cost of haulage over a railway for the same distance is at least \$10 per ton, it appears impossible for the rail to compete successfully with water. In the race of competition which we have inevitably to run, it becomes of paramount importance to avoid all unnecessary transshipments, and by grasping every natural advantage within our power, resolve with heart and hand, to place the St. Lawrence route in a position of unquestioned superiority to that of Buffalo, Oswego and New York, and thus render our own unrivalled inland waters the great highway to Europe. The people of the Dominion owe it to themselves, as the guardians of a noble heritage, to see that the American people on the shores of the great lakes have every possible facility given them freely to use the Welland, St. Lawrence and Lachine Canals on the same terms as our own people, with a view to assist in developing the enormous produce traffic that annually rolls its increasing volume from the West to the Atlantic. No unwise legislation should, in imitation of the crude fiscal policy of our neighbors, be permitted to check the growth of a commerce that is destined to eclipse in magnitude all the realizations of the past, and all the most sanguine anticipations of the future.”

Nor is this language, we repeat, the mere expression of the opinion of a single commercial community; it is supplemented by the opinions of all classes of the community, through the length and breadth of the Dominion.

When the St. Lawrence has become the principal avenue of intercourse with the seaboard, the people who live along its route must be largely benefitted by the tolls the trade will pay to the Canals, then at last remunerative, as well as by the stimulus it will give to all branches of industry; but there is another consideration which is all important in the estimation of Canadians, and must be particularly taken into account in maturing a policy respecting the inland navigation of the Dominion. The Boards of Trade of the principal cities of Canada have made especial reference to this point in the course of their replies to the queries the Commissioners addressed them. The language some of them used is so emphatic that we cannot pass it by without quoting a few very significant expressions. The Board of Trade of Toronto, after referring to the necessity of developing Western trade, say they are satisfied that by the deepening of the Canals the trade with the Maritime Provinces would be increased, for then “it would be carried without breaking bulk from the lakes to the ocean, creating thereby a reciprocity of interest, and connecting our several provinces more closely.” The Corn Exchange Association of the same city points out, that under existing circumstances “that reciprocity of trade, upon which we must count as the only basis of legitimate commerce, and the one great means of uniting the Provinces in the strong bonds of mutual interest, remains undeveloped, and will continue so until our water communications shall have been permanently established on such a scale as to induce the building of vessels suitable at once to the navigation of the lakes, the Canals and the ocean.”

These words give expression, briefly but emphatically, to the aspirations of the people of the Dominion, East and West, to stimulate trade between the different sections, and in that way create a feeling of mutual interest which will very materially strengthen the political ties which now unite Quebec and Ontario to Nova Scotia and New Brunswick.

Intimate commercial relations with one another must tend to dissipate jealousies, and create a truly national spirit, which will be the best guarantee of the stability of the edifice which we are now raising on the Northern half of this continent.

Intercolonial trade has already made considerable progress since the establishment of the Confederation and the repeal of the Reciprocity Treaty with the United States; but its proportions are still necessarily dwarfed, by the want of facilities for cheap and rapid intercourse between the different Provinces. The enterprise of the Grand Trunk Railway Company in putting on a line of steamers between Portland and Halifax, has done much to facilitate trade between Montreal and the Capital of Nova Scotia. The Gulf steamships, which ply between Quebec, Shediac and Pictou, and other ports of the Gulf of St. Lawrence, have also done a great deal towards developing a trade which, ten years ago, had reached its minimum point. Unfortunately the Trade and Navigation Returns,

since the 1st of July, 1867, when Confederation came into operation, do not enable us to ascertain the progress of the trade between the Provinces constituting the Dominion, and we are consequently forced to seek elsewhere for information which is especially interesting to us at the present time. We know, however, that there has been a steady increase in the trade carried on in the chief staple of the Provinces—the coal of Nova Scotia and the flour of Ontario for instance. In 1865, Canada only exported 58,233 brls. of flour to Nova Scotia, whilst she sent 131,336 to Halifax alone, *via* the Grand Trunk Railway during 1869. The total amount of shipments for four years by the same route to Nova Scotia and New Brunswick was as follows:—

1869	1868	1867	1866
293,754	328,204	228,345	157,859

In 1864-'65 the total quantity of flour exported from Canada to all British North America was only 139,581 brls., while the quantity had reached 542,412 during 1869. Of this quantity 293,754 were sent by the G. T. R., *via* Portland, and the remainder by steamers and sailing vessels by the St. Lawrence. The consumption of Nova Scotia coal, on the other hand, is steadily increasing in the Province of Quebec. Still the balance of trade is largely against Nova Scotia, who now buys over a million and a half of dollars of Canadian produce without receiving a corresponding return.

Direct trade between Ontario and the lower ports has no actual existence, and cannot be developed whilst the Canal communications above Montreal are so imperfect. An attempt was made not long since to employ a propeller, *Her Majesty*, between Toronto and Halifax. That steamer carried 7,000 barrels of flour, or about 2,000 bushels of grain, and drew 10 feet 6 inches of water, but she could only go through the Canals partly laden. Before this experiment could be fairly worked out, the Boat was lost on the lower St. Lawrence, but it was at all events sufficient to show what could be done under more favorable circumstances of inland navigation.

The growth of Intercolonial trade depends on *cheap transit*, since the merchandize passing between the Maritime Provinces and Ontario must be of a bulky character, requiring large vessels and rapid despatch to be really profitable. When a propeller can go direct with a cargo of coal, or other produce of the Eastern Provinces, to Kingston and Toronto, and there get a return freight of flour, barley and other Western produce, Intercolonial Trade will have entered on a new era.

When Nova Scotia coal of the best description can be supplied abundantly and cheaply to Western Ports, a great impulse will necessarily be given to the transfer of the trade of the St. Lawrence and Lakes to screw steamers, a transfer already taking place, as we have previously shown. A wrong impression prevails in many quarters with respect to the value of Nova Scotia coal for steam purposes; many think it very inferior to the American article in this particular. The true state of the case, however, is that whenever it has had a fair trial, it answers steam purposes most admirably. The last annual report of the Boston and Yarmouth (N. S.) Steam Navigation Company gives us some important facts bearing upon this subject. In 1868, they had to change the coal used in their boats, in consequence of the strike among the miners of Pennsylvania. Cow Bay, Cape Breton, Coal was then burned during the latter part of the season. Fourteen trips were made in which hard coal was used, and eighteen with soft or bituminous. A saving of \$1,000 was the result of the eighteen trips. The same steamer has, on the average, consumed forty tons of anthracite per round trip, which at a cost of \$5 50 per ton, made \$220. The round trip requires forty-three tons of Cow Bay Coal, which at \$3 60 per ton is \$154 80, showing a saving of \$66 20 per trip, or upwards of \$2,000 for the season. With a through trade between Toronto and Pictou, there is every reason to believe that coal suitable for propellers can be supplied at depots on the lake and river for very little over \$4 a ton. With the Canals enlarged, coal freights would be reduced to the minimum point—a lake propeller would always bring back from the lower ports a cargo of coal, rather than come empty—just as the English timber ships have been accustomed to bring the same article instead of ballast.

Inseparably connected with the growth of Intercolonial Trade is the construction of the Bay Verte Canal, across the Isthmus connecting the Provinces of Nova Scotia and New Brunswick. The advantages that must accrue, not merely to the Dominion as a whole, but to the commerce of the Maritime Provinces, are so clearly pointed out by the Boards of Trade of all the leading cities of Canada, and by men interested in the development of our commercial interests, not simply the merchants of St. John and other places in the locality of the proposed Canal, but merchants of Hamilton, Toronto, Ottawa, Montreal and Quebec, that it is superfluous for the Commissioners to do more than briefly refer to a few salient features of the scheme.

A steamer laden with flour for St. John, N. B. now goes down the Gulf as far as Shediac, where the cargo is transported by rail to its destination. The total distance by water from Shediac through the Gut of Canso and around the coast of Nova Scotia to the Bay of Fundy as far as the commercial Capital of New Brunswick, is about 600 miles, and the consequence is that there is little or no direct communication between the Bay of Fundy Ports and those of the River St. Lawrence. By a Canal through the Isthmus the distance from Shediac to St. John will not be much more than one hundred miles.

This fact will show the insuperable obstacle that now exists to anything like extensive commerce between Montreal and the Bay of Fundy Ports of New Brunswick and Nova Scotia, and the great impulse that must be necessarily given to trade by the opening up of a route which will shorten distance so considerably, furnish an inland navigation from the Lakes to Boston, and consequently lessen freights between these points at least 25 per cent.

The interests of the Maritime Provinces that will be especially benefitted will be their Coal Trade, their Fisheries, and the valuable products of their quarries. Pictou on the Straits of Northumberland now sends a large portion of its coal to Boston, and other American Ports, despite the high tariff which the selfish policy of the dominant party in Congress has imposed upon that article of traffic, so indispensable to the manufacturers and other classes of people in New England. A cargo of coal is now carried through the Strait of Canso (often a troublesome route in the Autumn and Spring) at the average rate of \$2 50 gold per ton to Boston, or \$3 to New York. According to a statement given elsewhere, the freight from the head of the Bay of Fundy is frequently as low as \$1 50, and averages \$1 75 to Boston, and \$2 and \$2 25 to New York. Gypsum, equivalent to coal as an article of freight, is carried from Windsor at the head of the Avon (less accessible than the Bay of Fundy terminus of the Canal) to New York for \$2 25 gold. When we consider the shorter distance, and the lessening of Insurance in the autumn, on account of a safer route than that now taken through Canso and round the Atlantic Coast of Nova Scotia, so exposed at certain seasons to fogs and storms, it is safe to estimate the saving of the freight on a ton of Coal from Pictou to Boston or Portland at \$1 per ton. The amount therefore saved, on the 60,000 tons which now find their way to Boston, would be \$60,000. It is also obvious that the coal production of Pictou county would be largely increased.

The lumber and fishery interests of the Gulf of St. Lawrence, both of the Island of Prince Edward, and what is generally known as the North Shore of New Brunswick, will also be benefitted equally with the coal trade of Pictou, by their being afforded a safer and shorter route not only to the Ports of the Bay of Fundy, but also to those of the North Eastern coast of the United States.

The fisheries of the Bay of Fundy are valuable, and prosecuted with considerable energy by the population that lives along its borders. Shad and Herring are the most profitable source of trade at present, but with the opening of the Canal, there must necessarily be a remarkable impulse given to the Mackerel Fisheries of the Gulf of St. Lawrence, to which a short and secure route will be given, not only to the inhabitants of the North and South Shores of the Bay, but to those in the Counties of Yarmouth and Shelburne, who are altogether engaged in Maritime pursuits. Yarmouth is the shipbuilding and shipowning county of Nova Scotia,—owning now an aggregate tonnage of over 90,000 tons, and already sends a number of schooners to the Gulf and Bank

Fisheries. With the construction of the Canal the people of this section of the Dominion will be encouraged to engage more largely in the prosecution of the deep Sea and Gulf Fisheries, especially of Mackerel, and to build a large number of the small craft suitable for this branch of enterprise. The American Fishermen, who also resort to the Gulf in such large numbers, will find it to their interest to use this Canal, as it will enable them to make an additional trip every season.

The country lying contiguous to the Bay of Fundy and the streams which flow into it is exceedingly fertile, and no part of Ontario or Quebec can surpass Dorchester, Hillsborough, Sackville, Annapolis or King's Counties in the growth of certain agricultural and horticultural products. Not only will this Canal give freer access to this fine section, a great part of which is the result of the action of the tides, which have in the course of ages formed a soil of rare fertility, but it will enable the valuable stones of its quarries, the olive freestone of Dorchester, the gypsum of Hants and Hillsborough, the grind and scythe stones in the vicinity of Cumberland Bay, as well as the Albertite of New Brunswick, which is unsurpassed for illuminating purposes, to be transported to the Canadian Market, from which it is now virtually shut out by the difficulty and cost of transit.

All these mines and quarries are now in active operation, and do a large business with the United States. They lie accessible to the water, and every convenience exists for rapid shipment.

A vessel taking these products of the Maritime Provinces to Canada, can return with cargoes of flour, and manufactures of Ontario and Quebec, which the people of the Bay of Fundy Ports are now buying in the American market.

The opening up of this new commerce is largely a question of freight. The St. John (N. B.) Chamber of Commerce tersely recapitulates the benefits arising from the construction of this as follows:—

“First: The Maritime Provinces import, say 700,000 barrels of flour annually, besides a great many other articles of bulky character.

“Second: The Maritime Provinces possess inexhaustible supplies of productions required by Ontario and Quebec.

“Third: The chief articles of import from Ontario to the Maritime Provinces, and *vice versa*, being bulky, the element of freight forms a large item in their value; hence, any greater facility for transit tending to cheapen the cost, must be productive of a greatly increased demand.

“Fourth: This Canal would not only afford the desired facility for transit, by rendering it unnecessary to break bulk between the points of shipment and destination, but would remove a great barrier to cheap freights by enabling owners of vessels to secure return cargoes to Ontario and Quebec, and thus build up a mutually desirable reciprocal trade, which may be increased to almost any extent.”

This Canal cannot be considered apart from the Canals of the St. Lawrence navigation. As a Canadian Canal at Sault Ste. Marie is the natural commencement of the improvements of the Inland navigation of the Dominion, so the work through the Isthmus of Chignecto is the inevitable conclusion necessary to give unity and completeness to the whole system. It is Canadian in design, and must prove national in its results.

We have considered this question of Canal improvements with reference to Western trade, as well as to internal or intercolonial commerce, but there is another aspect in which it may be viewed, and that is in connection with the very important subject of commercial relations with the British, and especially the Foreign West Indies.

Formerly the direct trade between those countries and the old Province of Canada was very considerable; but of recent years it has comparatively disappeared, though more attention has been directed to the subject since the visit paid, sometime since, to those Southern latitudes by the Commissioners appointed by the Four Provinces to enquire into the trade of the West Indies and South America, for the purpose of establishing, if possible, larger commercial relations between them and Canada.

As yet, however, the only sections of the Dominion that do any large business with those countries are Nova Scotia and New Brunswick. Quebec has a very insignificant

trade with them, whilst there is virtually none with Ontario. According to the trade and navigation returns for 1869, we learn the following facts:—

Exports from	To South America.	To British W. I.	To Foreign W. I.
	\$	\$	\$
Nova Scotia.....	111,010	1,421,972	605,561
New Brunswick.....	91,641	51,322	608,419
Ontario.....	.....	.....	.....
Quebec.....	304,570	73,296	9,602

Imports to	From South America.	From British W. I.	From Foreign W. I.
	\$	\$	\$
Nova Scotia.....	.....	337,100	34,752
New Brunswick.....	142	211,293	83,933
Ontario.....	.....	46,032	212,081
Quebec.....	.....	267,100	.....

From another statement in the same returns we find that of the total value of Importations into Quebec from the foreign West Indies, viz.: \$1,355,554, no smaller amount than \$1,032,594 came through the United States. Of the \$198,577 worth that came into Ontario, \$194,556 passed also through the American Ports.

A large direct trade must be opened sooner or later between the Western sections of Canada and these countries, which now purchase from the United States a great quantity of goods which can be supplied more cheaply from Canada. The only reliable figures available at present are found in the Commissioners' report of 1864. The Americans exported to South America and the West Indian Archipelago the following articles:—

Flour	to the value of.....	\$10,140,852
Bread and biscuits	.....	479,404
Butter	.....	823,856
Candles	.....	902,838
Cheese	.....	305,925
Hams and bacon	.....	828,309
Lard	.....	3,797,115
Apples	.....	116,614
Pork	.....	2,267,475
Potatoes	.....	433,655
Eggs	.....	30,628
Onions	.....	161,906
Rye, oats, barley, &c.	.....	332,430
Fish	.....	1,169,327
Beef	.....	528,069

Wheat	to the value of.....	\$144,010
Beer, Ale and porter	„	107,332
Petroleum and coal oil	„	1,025,221
Boots and shoes	„	902,038
Timber, boards, planks, &c.	„	2,889,990
Staves, hoops, shooks, barrels and hogsheads.....		3,109,454

Besides a great many other articles, unnecessary to enumerate, which can be supplied to a large extent by Ontario and Quebec. With the improvement of the St. Lawrence Canals, Ontario may be induced to embark to a certain extent directly in trade with the West Indies, for she possesses the products which those countries demand. By means of the Bay Verte Canal, a shorter and safer route will be open to propellers and sailing vessels.

The Ontario and Quebec merchants can supply the firms of St. John, interested in this trade, with the description of merchandise for which there is an ever ready and remunerative market in the tropics, and in that same way get back sugar, molasses, and other West Indian and South American produce, which is now supplied indirectly to so large an extent through the United States,

The largest class of screw steamers which must originate as one of the results of improving the inland navigation, can also late in the autumn proceed to the lower ports, and thence to the West Indies, where it is quite possible for them to find employment during the winter season, instead of laying up for five months in the year in Upper Canadian ports. In any case, the large proportion of vessels and steamers which will trade between Quebec or Montreal and the West Indies will generally take this route.

The impulse that will be given to ship building and the carrying trade of the Dominion must be very considerable. Of late years the shipping interests of the British American Provinces have made very great progress, and now they are entitled to the proud position of owning the largest commercial marine in the world after England, the United States, and France—in fact, it is almost equal to that of the latter country. Ship building as a branch of industry has almost disappeared in the United States, in consequence of their enormous taxation and the high price of labor; and Nova Scotia and New Brunswick have now taken the place that Maine and Massachusetts formerly occupied on this continent. Not only does Canada own her ships, but she sails them; her flag is to be seen in every port of the world where commercial enterprise has found its way.

The carriage of this great Western trade, the proportions of which can be measured by its rapid development, despite the obstacles to its free egress to the principal markets of the world, must sooner or latter find its way into the hands of Canadian shippers. New sailing vessels and propellers, better adapted to the sea and lakes, must be built in course of a short time, for the demands of trade must be satisfied; and the enlargement and extension of our Canal system will therefore be immediately followed by an increase of Canadian tonnage and the general improvement of our shipping interests, already large for a country whose commercial history does not extend beyond the present century.

At present the Canadian carrying trade is very much crippled by the Navigation Laws of the United States, which shut out Canadian vessels from the coasting trade of the lakes as well as the sea-board. By reference to the returns of the Welland Canal, noticed elsewhere, it will be seen how large is the trade in the hands of American shipowners. Our vessels are now unable to trade between Chicago and Oswego, and must also be prevented from trading between the American Lake ports and Boston or other places, with which there will be more or less direct trade after the improvement of our Canal System.

Indispensable as the navigation of the St. Lawrence is to the Americans, we can justly claim from them, as one of the conditions of its free use in the future, that they should abolish restrictions which are really more injurious to the commercial interests of their own Western Country than they are to those of Canada. No doubt the moment our Canals are improved, and the Great West sees the advantages the liberal policy of Canada has conferred on her, that her surplus wealth is no longer at the mercy of Erie Canal

monopolists, and New York forwarders, that her produce has increased in value by the saving in time, and decrease in the cost of freight, which the St. Lawrence route offers her, that her import trade has also decreased in the cost of its transit: then she will be the first to demand that these useless short-sighted Navigation Laws, the relic of an age of commercial fallacies, be struck off the statute book of a people, whose true policy is the freest intercourse with the whole world of commerce.

From the extracts we have given in the previous parts of this letter, the value the people of the Great West put on the free use of our Canals and system of Inland Navigation has been clearly shown, but it is hardly necessary to point out to those whom we are now addressing that it has always been the policy of the Government of the United States to obtain that boon from Canada. Mr. Andrews, in his valuable report submitted to Congress in 1852, on the subject of commercial relations between the British Provinces and the United States, said: "The free navigation of the St. Lawrence is greatly desired by all those Western States bordering on the great Lakes, as their natural outlet to the sea." This report had much effect in bringing about the Reciprocity Treaty, the fourth article of which extends to the inhabitants of the United States the right to navigate the River St. Lawrence and the Canals in Canada, used as the means of communication between the great Lakes, and the Atlantic Ocean, with their vessels, boats, and crafts, as freely as the subjects of Her Majesty. It also gives to British subjects the right freely to navigate Lake Michigan, and pledge the faith of the Government to secure to them the use of the several state Canals on terms of equality with the inhabitants of the United States.

The Reciprocity Treaty was a measure of mutual compromise and mutual concession; the use of our Canals, Fisheries and river navigation was given to the Americans in return for certain *quasi* privileges extended to Canada. Yet, despite the fact of the repeal of that treaty and its concessions, Canada has not closed her Canals to foreigners, but has given them every right which legitimately can be claimed by them; and it is only necessary to refer to the returns of trade to see how largely the Americans have availed themselves of the privilege.

Under these circumstances, we can fairly claim some return for the still greater advantages which their Western commerce must receive from the extension of Canal improvements.

DECISION ARRIVED AT BY THE COMMISSIONERS CONCERNING THE FOREGOING WORKS.

It will be observed that the evidence laid before us relative to the proposed enlargement and extension of our Canal System for the purpose of securing to Canada a larger share of the growing trade of the West, comprehends a wide range of opinion gathered from all quarters of the Dominion as well as from the neighboring cities of the United States interested in the subject. In some cases it may be supposed to represent the sectional or vested interests of the places from which it emanates, but for the most part it is characterized by the broad and definite views of the persons practically acquainted with the actual requirements of the trade.

We have carefully analyzed the statements and recommendations elicited by our questions, comparing them with each other, and considering them in relation to our own previous knowledge of the subject; and after earnest and mature deliberation in the interest of the Dominion, as to the best means of obtaining the desired object, we are enabled to arrive at decisions on the several points submitted.

Although there is a good deal of discrepancy between many of the replies which have been received, both as to the proper lines to be improved and the proper scale of improvement, still we think it will be sufficiently evident, all things considered, after a fair comparison of the answers given by parties best acquainted with the wants of the trade and the existing condition of our Canals, that there is a remarkable degree of unanimity in regard to all the essential requirements—so great an unanimity, indeed, that no person of ordinary capacity can fail to see what improvements are essential to the development of a proper Canal System for the Dominion.

Scale of Navigation.

First, then as regards the proper scale of navigation for the main line of water communication from Lake Superior to tide water, we are of opinion that there should be one uniform size of lock and Canal throughout, including the *Welland Canal*, the *St. Lawrence Canals*, and the proposed Canal at the *Sault Ste. Marie*.

That the most suitable size of lock for these Canals will be one having 270 feet length of chamber between the gates, 45 feet in width, and 12 feet of clear draught over the mitre sills.

That the bottom of the Canal should be sunk at least one foot below the mitre sills of the locks, with a width throughout of not less than 100 feet, to admit of two vessels passing each other with perfect ease in any part of the Canal, and that the slopes both in earth and rock excavation should be such as the nature of material may require for the preservation of the Canal, and the protection of the vessels navigating it.

That the most suitable size for the locks on the proposed *Bay Verte Canal* will be 270 feet in length of chamber between the gates, 40 feet in width, and having 15 feet draught of water on the mitre sills.

That the most suitable size for locks on the proposed *Ottawa improvements* will be 200 feet in length of chamber between the gates, 45 feet in width, and 9 feet draught over the mitre sills.

That the proper size for the locks on the *Chambly Canal* will be 200 feet in length of chamber between the gates, 45 feet in width, and of such draught over the mitre sills not exceeding nine feet, as the channel in the River Richelieu will conveniently afford.

The size of the locks, and the sectional area of the Canal must of course be suited to the class of vessels now in use and best adapted for the movement of the immense tonnage

of the Lakes. The vessel that does this work with the greatest economy of time and money, is the true ideal vessel of the future, the one that will continue to transport the most tonnage, and consequently presents the best claims for consideration.

The tendency in shipbuilding for the last quarter of a century on the Upper Lakes has been to construct larger vessels every way, whether propelled by steam or sails; while the screw is superseding the paddle everywhere on the lakes as well as on the ocean, the relative number and tonnage of screw steamers is gradually increasing upon the sailing craft.

The Lake St. Clair Flats were, in former years, the accepted gauge of the navigation; but, by the combined action of the Canadian and United States' Governments, the obstacles in this lake have been so far removed that vessels can now pass through it drawing 14 feet. The channel has been dredged out to 300 feet in width, and 13 feet depth at low water, affording 14 feet, however, at the ordinary level of the lake. As fast as the channel was deepened so the draught of the vessels increased. The iron screw-steamer *Philadelphia* can now navigate this channel at all ordinary stages of the water, drawing 14 feet. Her length is 234 feet, beam 34 feet, and carrying capacity 1,500 tons. The wooden screw steamers *Nebraska* and *Colorado* are each 265 feet in length, 34 feet in beam, and 1,600 tons capacity.

Then again as the line of navigation is extended, so the long voyage demands larger tonnage. As an approximate rule for the size of a vessel for any particular route, it has been observed that any vessel to be properly adapted to its business should have one ton of measurement for every mile of her voyage; and as examples, in illustration of the rule, it may be remarked that the vessels plying between Chicago and Buffalo, 916 miles, now range between 600 and 1,500 tons, while many persons, of considerable experience in the trade, are of opinion that a medium size of about 1,000 tons is best suited for this route. The ocean vessels laid upon the line between Montreal and Liverpool, for a journey of 3,220 statute miles, have a capacity from 2,000 to 4,000 tons. The distance between Chicago and Montreal, 1,261 miles, would seem, from these examples, to require that the vessels trading between these ports should have a capacity ranging somewhere between 1,000 and 1,500 tons.

The superior economy of the larger vessel is sufficiently established by the present cost of transport on the great channels of trade between Chicago and Buffalo, and Chicago and Oswego. On the former route, where all classes of vessels from 600 to 1,500 tons are in use, the average charge on a bushel of wheat, in 1869, for the whole year, struck from the weekly quotations, was 5.65 cents, while on the latter route, where the size of the vessels is limited to 500 tons, the average cost for the same year taken in the same way was 11.13 cents, or a difference of 5.48 cents for only 143 miles extra distance. Making a fair allowance for this extra distance, and the time and tolls on the Welland Canal, there is still a difference due to the different kind of vessel of about four cents a bushel. This agrees with many of the answers given on this point. As the price of freight to Kingston is generally the same as to Oswego, there would appear to be a saving of four cents a bushel after the Welland is enlarged, so as to bring through the larger vessels. This saving is equal to the cost of carrying a bushel of wheat from Kingston to Montreal, and the same difference obtains whether the cereal is carried by screw steamers or by sailing vessels.

The locks should not be of larger size than is necessarily convenient to pass the vessels using them. To make them larger than the necessities of the case demand, entails not only an unnecessary expense in cost and maintenance, that has to be borne by the vessel itself in the form of tolls to pay interest on the outlay, but causes a waste of water and loss of time in filling and emptying the locks.

Width of Locks.

If we had now for the first time to consider the proper width of the locks in relation to the most suitable breadth of beam for vessels adapted to the St. Lawrence trade, we

should feel disposed to limit it to 40 feet ; but inasmuch as 30 out of the 54 locks now in use on this line alone are 45 feet wide, we think this fact has already established the width, and, therefore do not recommend any change. The replies on this point correspond very generally with this view of the case. To reduce the width of the St. Lawrence Canals to 40 feet would exclude from them all the best class of steamers now running on this route, and inflict a serious injury upon the trade of the country.

On the Bay Verte Canal, however, we can see no good reason for a greater width than 40 feet, which will take in all the largest class of sea-going vessels which it is designed especially to accommodate.

Length of Locks.

If, from the length proposed of the chamber of the locks, 270 feet between the gates, the space required for the swing of the gates (20 feet) be deducted, the available length for the vessel is 250 feet, which, in proportion to the width, is as little as can be allowed by the accepted rules of naval architecture.

The Draught.

While some of the writers, who ought to be best informed on the subject, recommend a draught of 14 feet, and others as much as 16 feet, regard must nevertheless be had to the capabilities of the harbors, and to the engineering characteristics of our Canals, as well as to the prudent suggestions of moderate and experienced men who have limited their views to 12 feet. It would be extremely unwise to embark in magnificent schemes, exceeding the resources of a young country, with the view of introducing ocean vessels into our Canals and lakes. Montreal and Quebec are now established seaports and natural points of transshipment ; but under the influence of Confederation we are warranted in looking forward to a great development of trade between Ontario and the Maritime Provinces, and the interchange of commodities between them can best be effected by a special class of coasting vessels going directly through without breaking bulk.

Having, therefore, a prudent regard to the demands upon the resources of the Dominion, to the condition and capabilities of our Canals and harbors, and to the actual wants of the trade, we have agreed upon a draught of 12 feet as most suitable for the St. Lawrence route, and 15 feet as most suitable for the Bay Verte Canal.

The Ottawa Canal.

The scale of improvement recommended for this route is the same as that of the existing St. Lawrence Canals—locks 200 by 45 by 9 feet, and has been so fixed in consequence of the peculiar character of this river, which, when improved, as suggested by the engineers who have surveyed this route, by a series of locks and dams, making slack water navigation throughout, will be admirably adapted for a barge navigation similar to that which now obtains on the River St. Lawrence, and, as appears by the evidence, by far the cheapest means of transport. (App. A.)

The Chambly Canal.

The scale recommended for the enlargement of this Canal corresponds with that suggested for the Ottawa, except that the draught may fall a little short of nine feet in case the River Richelieu will not afford it without involving considerable expense.

As both these Canals will be principally used for the conveyance of lumber from Ottawa to the American market, it is desirable that they should be built of corresponding dimensions.

CLASSIFICATION OF WORKS.

Secondly,—Respecting the relative importance of the several public works and proposed improvements to which our attention has been directed, and the order in which they should be proceeded with, we have found it expedient to divide them into four separate classes, as follows :—

Works of the First Class.

In the first class we have placed all those works which it is for the general interest of the Dominion should be undertaken and proceeded with, as fast as the means at the disposal of the Government will warrant.

These works are—

The Sault Ste. Marie Canal.

The raising of the lock walls, waste weirs, and banks of the Welland Canal, on the present line from Allanburg to Port Dalhousie, in a permanent manner, to admit the passage of vessels drawing twelve feet of water.

The enlargement of the Welland Canal on the scale adopted for it.

The Ottawa Canal improvements from Ottawa City to Lachine, and the enlargement of the Chambly Canal on the scale adopted for them.

The deepening of the navigable channel in the River St. Lawrence between Quebec and Montreal to twenty-two feet draught at low water.

The construction of the Bay Verte Canal on the scale adopted for it.

The enlargement of the St. Lawrence Canals to the same scale as the Welland. At the lower entrance of the Lachine Canal another set of locks to be constructed with seventeen feet of water on the mitre sills, forming a second line of connection between the Montreal Harbor and the upper basin of the Canal. The lands purchased and set apart in former years for increasing the accommodation to the trade at this point when required, we now propose shall be used for the establishment of commodious docks and basins, the whole of which, as far as Wellington street, are to be made eighteen feet deep.

The improvement of the channel in the River St. Lawrence above Montreal, by removing all obstructions in the river and lakes between the several Canals, and also at the ingress and egress of these Canals, so as to give fourteen feet of water throughout.

We consider that all the works embraced under the head of *first class*, are really of so great importance, so essential to the welfare and prosperity of the whole country, that we feel some degree of embarrassment in recommending which of them should be first proceeded with; but we respectfully suggest that they should be undertaken in the order in which they are here recited, or as far as possible, simultaneously.

Without classing the Upper Ottawa Canal, the improvements of the rapids of the St. Lawrence, and the Murray Canal, among *works of the second class*, the Commissioners resolved, on the subject of the Upper Ottawa Canal, that the wide discrepancy between the different Engineers' Plans and Estimates, one being as high as \$12,058,680, and the other \$24,000,000, leaves them in doubt, both as to the proper methods of improvement, and their probable cost. The importance of this work to the whole Dominion cannot well prospectively be over-estimated, and the Commissioners are of opinion that further examination into the subject is necessary as early as possible, in order that, if found advisable, action may be taken with regard to it.

As regards the improvements of the rapids in the St. Lawrence, it is very desirable that the depth of water in the river should be so increased, as to afford, at least, eight feet at the lowest water.

The Commissioners are led to believe that this depth can be obtained at a very moderate expenditure, and recommend that it should be done as early as convenient. The further deepening of the channel to fourteen feet, is no doubt quite practicable, but it may be left for future consideration.

The Murray Canal is entirely a work of local importance, and is not required by the general trade of the Dominion. In this view, while so many works of general importance are calling for execution, the Commissioners recommend that for the present the consideration of this Canal be deferred.

Works of the Third Class.

In the *third class* we have placed the works which have been undertaken by private companies, which companies have received the necessary powers for constructing them, under special and most liberal charters from the Dominion Parliament; and for this reason we do not feel warranted in offering any recommendation in regard to them.

These works are :—

- The Caughnawaga Canal ;
- The Erie and Ontario Ship Canal.

Works of the Fourth Class

In the *fourth class* we have placed that proposed work, projected by a chartered company which has applied for a grant of the public lands to aid in its construction, but on which we do not recommend any expenditure of the public resources of the Dominion.

That work is :—

The Georgian Bay Canal, otherwise designated in the Charter as the Huron and Ontario Ship Canal. 29 Vic., chap. 78, Sept., 1865.

Rideau Canal.

From the evidence submitted in reference to this Canal, we are led to the conclusion that it is an important work, which ought to be maintained as one of the public works of Canada. That as constructed it is quite sufficient for the wants of the trade, provided it is kept in good working order, and the summit level maintained at its original height. That it requires no extension or enlargement, but only to be cleared of deposits which have accumulated in certain parts of the Canal, and to have the locks, gates, dams and sluices made reasonably water-tight—the cost of which falls naturally under the head of ordinary repairs and management.

Appendix A.

To insure a constant supply of water, at all seasons, for the several reaches of the Canal, but more especially at the summit, it is necessary that dams and regulating sluices should be constructed at the outlets of the larger lakes which empty into the Canal in order to retain the flood-waters, and let them off as may be required during the season of navigation. Four such dams appear to be necessary to secure this object. An appropriation of \$12,000 was made last year for this purpose, and two of these dams are now in course of construction.

 ENGINEERING ASPECT OF THE ENLARGEMENT.

We now propose to sketch the engineering aspect of the proposed improvements.

As it would obviously be out of place in a communication of this nature to enter minutely into engineering questions, they are accordingly treated in a general way, merely sketching their more salient features, but it is hoped, with sufficient distinctness, to afford a clear and comprehensive view of the subject.

SAULT STE. MARIE CANAL.

A survey for a Canal to surmount these rapids was made upon the Canada side, under the directions of the Department of Public Works, in 1852, some time before the existing Canal on the American side was commenced. The results of this survey are now before us. There are no engineering difficulties; on the contrary, every condition seems favorable to the construction, at a moderate expense, of a first class Canal, of the dimensions proposed for the Welland and St. Lawrence.

St. Mary's Island, through the middle of which it is proposed to make a straight cut, is about half a mile in length, and is composed of a regularly stratified sandstone (Lower Silurian), which is easily wrought, and of such solidity as to afford a good foundation for the lock. It has a superficial covering of drift, a few feet in thickness, barely rising above the level of Lake Superior.

The distance between the deep water bays at the upper and lower entrances, corresponding with the length of the Canal from end to end of the piers, is little over a mile.

The fluctuations in Lake Superior are limited to a rise and fall of about eighteen inches. The fall in the rapids varies according to the different stages of the lake and river, from 17 to 19 feet, but is generally about 18 feet.

This survey was made at a time when side-paddle steamers were in the ascendant, when they had nearly reached their maximum of size and tonnage, and monopolized the greater share of the passenger and freight business on the Upper Lakes.

The screw steamer was then on its trial, and its superiority in point of economy, speed and carrying capacity, was as yet undeveloped.

It is not surprising, therefore, that under these circumstances the Chief Engineer of the Department proposed to build this Canal of sufficient size to pass the largest class of side-paddle steamers at that time employed in the trade. Locks 350 × 66 × 10 feet, and the prism of the Canal 130 feet at the bottom and 140 feet at the surface to admit of two steamers passing each other in any part of the Canal. His estimate for this Canal with the two locks, (which it was necessary to build when the breadth was so great) was \$480,000. If the same amount of work had to be performed now, when labor is so much higher, a large percentage would have to be added to this estimate.

It is believed, however, that on the more moderate scale we have suggested for the Canal System of the Dominion, it will be quite practicable to overcome the whole fall by a single lock of 18 feet lift, and thus avoid the expense of the regulating weirs which would be necessary if two locks were constructed to divide the lift.

This will materially simplify the construction and operation, reduce the quantity of work to be performed, and consequently the cost of the Canal, and the time of passing through it.

There are now no less than three locks of equal lift in daily working on the Welland Canal, and therefore there can be no doubt, that if properly constructed, a single lock will be found most suitable for this short Canal, the last link in the great chain of the Canadian Canal System from Lake Superior to the Atlantic Ocean. The estimated cost for a Canal and single lock—Canal 100 feet at bottom, 110 feet surface, 13 feet deep—lock 270 × 45 × 12 including the entrance piers, and excavation to deep water, superintendents' and lock-tenders' houses, is \$550,000.

THE WELLAND CANAL.

The Grand River Level.

Up to this time the navigation of this Canal has been dependent on the Grand River. This river takes its rise in the southern part of the County of Grey, less than thirty miles from the shores of the Georgian Bay. In its circuitous course of one hundred and thirty miles, thence to Lake Erie, it, with its branches, waters the greater portion of the populous and flourishing Counties of Wellington, Waterloo, Wentworth, Perth, Oxford, Brant and Haldimand, and drains an area of 2,600 square miles.

If one-half the annual rain-fall within its watershed could be stored up and let off as required, it would afford 275,000 cubic feet of water per minute, or about nine times as much as would be necessary for continuous lockages both ways for the enlarged Canal. But there are no means of doing this, and only a fractional portion of the supply can be utilized. It flashes off at the the dam at every flood, and the waste is so great that there is often in dry seasons a scanty supply, even for the smaller locks now in use after shutting it off from all the mills along the line. A dam at Dunnville, four miles from its mouth, raises the water in that river nine feet, making slack water navigation for 16 miles, as far up as Cayuga, and a feeder 21 miles in length, 26 feet at bottom, and 9 feet deep, conveys to the main line at the junction the water required for locking both ways, towards Lakes Erie and Ontario.

A vessel entering the Canal at Port Colborne is first locked up 8 feet to the present summit level of the Grand River, and going towards Port Dalhousie begins its descent immediately, after passing through the deep cut at Allanburgh, a distance of 15 miles from Lake Erie, and in its course crosses the Welland River, by an aqueduct, at a distance of 8½ miles from the lake.

The lock at the junction is not used so long as the Canal is fed from the Grand River, but when Lake Erie becomes the summit and feeder, the water on the main line will be lowered to its level, and this lock will then have a lift of 8 feet, and will be used for all vessels and craft passing thence to Dunnville and Port Maitland.

From the annual reports of the Department of Public Works it appears that, while the business on the Canal is continually increasing, the supply of water continues to diminish from year to year, and in some seasons has fallen as low as 3 or 4 feet in the summit level. At no time, however, has the navigation been stopped on the main line from failure of supply in the Grand River, because of the great depth in the summit and the power reserved to the Superintendent of shutting off the water from the mills when it is wanted for the Canal.

Lake Erie Level.

While the Grand River, therefore, has continued for thirty-seven years, ever since the first opening to Port Colborne, in 1833, to afford a precarious supply of water, the existing conditions of the navigation were never considered satisfactory, nor looked upon as final. They left the most important link in the great chain of water communication, between two great lakes entirely dependent on the stability of a wooden dam, the sufficiency of an earthen embankment, and the possibility of failure in the source of supply. At an early day it was foreseen that as the country through which this river took its course was

cleared up for settlement, and opened to the influence of the sun and winds, it could not be depended upon as a feeder.

It was, therefore, wisely determined by the Board of Works, as early as 1843, to make Lake Erie the summit and feeder of the Canal, and the plans for its enlargement were arranged accordingly.

It was at first intended to lock down at the junction to Lake Erie level, and to raise the banks and mechanical structures on the summit of the main line from Allanburgh to Port Colborne to that level only; but when the slides began in the banks of the Deep Cut, it was deemed advisable to raise all the banks and structures high enough for the Grand River level, while at the same time the bottom was kept down to that of Lake Erie, so that, as now arranged, this 15 miles of the main line of the Canal is adjusted for both levels.

The Guard Lock at Port Colborne is provided with a double set of gates made to act in opposite directions, and the walls of this lock, of the lock at Allanburgh, the locks into the Welland at Port Robinson and Welland, and the walls of the aqueduct are all now raised to the Grand River level.

In the event of the navigation, at the lower level, being stopped by accidents from slides, it was deemed indispensable that there should be the means of resorting to the higher level to pass over them. Throughout the summit level the prism of the Canal was intended to be excavated to 50 feet at bottom of Lake Erie level and $11\frac{1}{2}$ feet deep, and the work is now very nearly completed.

The direct line of the Welland Canal between Port Colborne and Port Dalhousie, presents the lowest summit between these two lakes—yet on this line, nature has interposed two formidable lines of defence against the waters of the Upper Lake. The first consists of a band of stratified limestone two miles in breadth along the lake shore, rising eight feet above the level of the lake. Through this a channel has been cut 58 feet in breadth, with vertical sides, and with a depth of 12 feet below the low water surface of the lake.

The Deep Cut.

The second line of defence is the "Deep Cut," near Allanburgh, about a mile and three quarters in length, consisting of clay, resting in a bed of soft material of the nature of quick-sand. This clay cutting presents more formidable obstacles to the Lake Erie summit, than the longer and harder rock excavation. From the natural surface of the ground to the Lake Erie bottom level the depth at the summit of the cut is 45 feet, but in consequence of the spoil bank having been at first placed too near the slopes, the depth of the cutting, since it has been widened, is 60 feet.

In the early history of this undertaking by the Welland Canal Company, as previously stated, it was attempted to make the Welland River the feeder, and it was not until they had succeeded in excavating two-thirds of the whole length down to that bottom level, that the slides occurred which closed up the channel, and compelled the Company to abandon their plan and seek a higher level.

By means of powerful steam dredges the Deep Cut has been excavated to a depth of $19\frac{1}{2}$ feet below Grand River level, or $11\frac{1}{2}$ feet below Lake Erie level, and fifty feet at bottom, with slopes two feet horizontal to one foot vertical; but serious slides on several occasions have all but closed the channel, and their removal has delayed for many years the achievement of this important design. The work was begun in 1846, and with slight intermission has been prosecuted from year to year until the present time. In the last general report of the Minister of Public Works for 1869, the hope was expressed of bringing the Lake Erie water into the Canal during the summer of 1870, but settlements in the banks having been discovered in four different places during the season of navigation, in 1869, fortunately without any accident, the lowering of the water has been deferred in the hope that in the meantime the bank of the Canal will solidify and become more secure.

The upper portion of this cut is a stiff strong clay, passing by degrees as it goes below the water, into a treacherous unstable material resembling quicksand. When a slide

occurs, the bottom rises, and the harder material at the top descends on the line of fracture, and takes the place of the softer material. The dredging operations remove the softer substance, and the harder clay is left as a lining to the bottom, giving greater resistance to the pressure of the banks. It would therefore appear, that the only practical means of preventing slides, is to remove the superincumbent weight of the spoil bank, and widen the cut.

Years ago a scheme was mooted of washing out the Deep Cut, and wasting the material down the valley of the Twelve Mile Creek, and if there had been any other place to receive the stuff, than the harbor of Port Dalhousie, and the Canal between it and St. Catherine's, the project might have been entertained.

What the Enlargement Requires.

In order to enlarge the Welland Canal to the scale now proposed—locks 270 × 45 × 12, and Canal 100 feet at bottom—it will be necessary—

1. To construct a new Canal from Thorold to Port Dalhousie.
2. To raise the locks, banks, and weirs on the present line, so as to give 12 feet of water.
3. To deepen the Harbors at Port Colborne and Port Dalhousie to 15 feet, so as to give safe entrance to vessels drawing 12 feet of water.
4. To widen and deepen the main line between Thorold and Port Colborne to 100 feet bottom; and 13 feet depth, one foot below the lock sills.
5. To build a second lock at Port Colborne, in order to admit more water into the Canal.
6. To sink the floor of the aqueduct two feet, and possibly to build another aqueduct alongside of it, so as to give the free passage to the water for supplying the double set of locks from Thorold downwards.

As the Commissioners cannot have the results of the survey now in progress, before closing their letter, they are unable to give a correct estimate of the probable cost of these works, but would respectfully submit that, as well as they can judge in the absence of more positive data, their cost will be about \$6,550,000.

New Line—Thorold to Port Dalhousie.

The construction of an entirely new line from Thorold to Port Dalhousie, or to some point on the present line between the first and second lock, is imperative, for the following reasons.

The reaches between the present locks on the mountain declivity are entirely too short, and of too small capacity for the enlarged Canal. The locks are so close together that even supposing it possible to construct the large locks on this line without stopping the navigation, and to make use of one of the present walls to form part of the new locks, still the enlarged locks would be placed so close together, that there would not be left a vessel's length between them. They would be tantamount to combined locks, the operation of which is to retard the passage of vessels, and cripple the efficiency of the Canal.

Therefore, as combined locks cannot be admitted on such an important navigation as this is, it is imperative to seek another line where ample basins can be established between the locks to admit of the passage of vessels, and capable of holding an abundant supply of water for working the lock without drawing down the levels. It is believed that there is no difficulty in finding such a line, and of locating the locks on the sloping ground descending from Thorold to Port Dalhousie, where an efficient Canal can be economically constructed under the most favorable conditions. This survey is now in progress, under the direction of the Public Works' Department.

Lateral Cut to Niagara.

The idea has often been discussed of making an entirely new line of Canal from Thorold to Niagara, instead of the projected one to Port Dalhousie, thus giving two entrances to the Canal from Lake Ontario.

The inhabitants of the town of Niagara have always taken a lively interest in this question, and only last year a Company was formed, and received a most liberal charter from the Dominion Parliament for the construction of this branch.

A survey for a lateral cut to Niagara was made by Messrs. Barratt and Keefer in 1839, and again by Mr. Walter Shanly, in 1854. The estimate of the latter for a Canal $12\frac{1}{2}$ miles in length, on a scale commensurate with the Sault Ste. Marie Canal, with locks $350 \times 75 \times 12$, and Canal 100 feet broad at bottom was at that time nearly four millions of dollars.

More Water in Present Canal.

While the construction of the new line is in progress, it is not only necessary to keep up the present line to its full working capacity, but it is also desirable to extend further accommodation to the trade, by making it of the same depth as the proposed enlargement, viz., to pass vessels drawing 12 feet of water.

For the class of smaller vessels it will be advisable always to maintain the existing line of locks and keep them in good working order. At a moderate expense, these locks with the banks and waste weirs between Allanburgh and Port Dalhousie can be raised and finished in a permanent manner to admit 12 feet of water on the sills, and as this would have to be done at any rate, it is better to do it at once and secure a present advantage. The entrance locks at Port Colborne and Port Dalhousie have now the full depth of 12 feet on their sills. The second lock from Port Dalhousie is at St. Catherine's, $3\frac{1}{2}$ miles from that port, and is of the same size, only the depth is $10\frac{1}{4}$ feet on the sills. They are all 45 feet in width.

The aqueduct is also 45 feet in width. Thus the part of the Canal where the smaller locks obtain is confined to the eight miles between Allanburgh and St. Catherine's. The 24 locks on this division are $150 \times 26\frac{1}{2}$ feet. They were originally designed and built for 9 feet draught, but some years after they were completed, the water was raised to $10\frac{1}{4}$ feet by bolting down timbers upon the copings of the walls, and by raising the banks and weirs. The immediate effect of this improvement, was to increase the tonnage capacity of the vessels navigating the Canal, from 400 to 500 tons net. For the same reason, another addition of $1\frac{3}{4}$ feet will increase the tonnage capacity from 500 to 650 tons net.

There is no doubt that ship owners will immediately avail themselves of such an important addition to the carrying capacity of their vessels, and thereby avoid the necessity of lightening through the Canal, as they are obliged now to do when heavily laden.

The temporary timber now used to raise the water, should be replaced by substantial masonry, and the locks, gates, weirs and banks should be permanently finished to the higher level.

RIVER ST. LAWRENCE.

Quebec to Montreal, Distance 160 Miles.

Before any improvements were commenced on this part of the St. Lawrence, the draught of vessels was limited by the flats in Lake St. Peter to 11 feet at low water. The dredging of a channel through this lake was commenced in 1844, and completed in 1865, at a cost of \$1,347,018. It is $11\frac{1}{2}$ miles long, 300 wide at bottom, and nearly, if not quite, 20 feet deep at low water.

As the dredging of this artificial channel proceeded, it was discovered that several other points in the track of sea-going vessels presented obstructions which likewise had to be removed. These are all particularly pointed out by the Chief Engineer of the Public Works' Department in his report of the 25th January, 1868, published in the general report of that Department for the same year.

This marked improvement in the channel of navigation has given access to Montreal for a much larger and better class of sea-going vessels, including Atlantic steamers of

3,000 tons capacity, the effect of which has been a considerable reduction in the cost of Ocean freight, and a corresponding advantage to every branch of business throughout the country.

In order, however, to benefit to the full extent by the proposed enlargement of the Canals, and to be prepared for the great increase of business they will naturally bring to Montreal, it is considered essential that still further facilities should be extended to Atlantic vessels frequenting this port, so that they may be in a position to compete successfully with New York and Boston shipping, for the carrying trade to European ports.

Many of the larger steamers now trading at Montreal draw from 18 to 23 feet laden, without coal, and range from 290 to 350 feet in length. For the security of the navigation, the channel should be as wide as the length of the vessel, and the depth fully one foot more than her draught; this would require the enlarging the channel throughout, between Quebec and Montreal, to 400 feet in width and 24 feet in depth at low water.

The cost of such an enlargement has been estimated by the Chief Engineer in his report, before referred to, at \$2,500,000, but he states that having made no examination for this purpose he assumes the depths shewn on the Admiralty charts as giving a fair idea of the channel way not included in his surveys; consequently it is not founded on correct data, is partly conjectural and merely submitted for the purpose of giving some idea of the extent of the work. He remarks that it is a work of great magnitude involving the removal of a larger mass of material than has been excavated up to the present time, while it would of course embrace all those portions of the river where improvements have already been made, and probably other parts where no work was required for a twenty foot channel.

We therefore, recommend that the necessary surveys and examinations be made with a view to finding out all the places where obstructions to a channel 24 feet in depth are likely to be encountered, and that an estimate be prepared of the probable cost of removing them. Meanwhile the Commissioners recommend that the deepening of the channel to 22 feet depth of water be undertaken and proceeded with as already indicated.

THE ST. LAWRENCE RIVER.

Kingston to Montreal, 178 miles.

Fall in the rapids from Lake Ontario to tide water 234 feet.

The navigation of these rapids by steamboats was never thought practicable until after the completion and opening of the Cornwall Canal in 1842, when the experiment was tried and proved entirely successful. A daily line of passenger steamers was soon established, and for about seven months in each year these vessels have continued daily to descend all the rapids between Kingston and Montreal, affording for the pleasure travel in summer, one of the most delightful trips to be found in any part of the world.

Returning, these steamers make use of the Lachine, Beauharnois and Cornwall Canals, but have sufficient power to ascend the upper rapids, Rapide Plat, Iroquois and Galops without entering the Canals.

It is not usual, however, for freight vessels to navigate the lower rapids, Long Sault, Coteau, Cedars, Cascades, and Lachine, but as they can safely descend the upper rapids, it has long been a favorite project with many, and one that was strenuously advocated by the late Honorable William Hamilton Merritt, to make such improvements in the channel through the lower rapids as would enable all vessels, and especially the propeller class, to pass down with safety without making use of the Canals, thus saving both time and expense.

For this purpose, no less than three different surveys and reports have been made under the direction of the Public Works' Department for the improvement of the downward navigation.

The first was made by Mr. T. C. Keefer, in 1850; by placing wing dams and glancing piers at certain points, and removing certain rocks and shoals by blasting under water, it was proposed to increase the volume of water through the navigable channel, sufficiently to allow vessels drawing 9 feet of water to pass down in safety. His estimate at that time amounted to \$60,000.

The second report was made by the Chief Engineer of the Department in 1853. After a somewhat more extended examination of the currents, the Coteau, Cascades and Lachine rapids, he submitted an estimate of \$120,000, predicated upon nearly the same method of pier work and blasting out of the channel to afford a draught of 10 feet, but recommended, before actually commencing operations, that further surveys and examinations of the rapids should be made.

The attention of the Department having soon after been directed to the successful operations of Messrs. Maillefort & Raasloff in submarine blasting without drilling at Hell Gate, near New York, arrangements were made with those gentlemen in 1854 for a regular hydrographic examination of all the rapids above Lachine, and the testing of their method by firing a certain number of charges. Their Report and Plans dated 15th November, 1854, were laid before Parliament in 1856. They reported that in order to make a perfectly navigable channel throughout, from Prescott to the head of the Lachine Canal, for vessels drawing 10 feet of water, improvements were required at the Galops, Long Sault, Coteau, Cedars and Cascades, the channels through which were to be mined out 200 feet wide and from 12 to 13 feet deep, and that the cost of carrying out this plan on their system of submarine blasting would be \$720,000. It does not appear, however, that any action was taken upon this Report.

Mr. J. B. Jarvis, in reporting on the Caughnawaga Canal, in 1855, seems to have entertained an unfavorable opinion of the project, remarking that "It would require much improvement in the channel to navigate a propeller of 600 tons with reasonable safety through the rapids opposite the Cornwall and Beauharnois Canals," and that, "no advantage can be promised to the route from this source."

With the information supplied by these Reports, the Department of Public Works, did not undertake any improvement of the rapids, and consequently, up to this time, the channel through them remains in its natural condition.

We have not time at present to give this subject the consideration its importance seems to deserve, but we state that, in our opinion, by a judicious employment and combination of the two systems—pier work for confining the currents within certain limits, and sub-aqueous blasting with the more powerful explosive substances now in use, nitro-glycerine or *dynamite*—very considerable improvements can be made, and at a much more moderate expenditure than that contemplated in the last estimate laid before the Public Works' Department.

SAINT LAWRENCE CANALS.

An estimate was prepared by the Chief Engineer of the Department of Public Works in 1860 for increasing the draught of water in the St. Lawrence Canals to 10½ feet—the depth specified in the Address of the Legislative Assembly of Canada of the 16th March, 1859. The Engineer's report and estimate were published in the Public Works' report for 1859, and were accompanied with copious notes, "explanatory of the circumstances, nature, and extent of the work to be done" in the accomplishment of this object.

The draught at present is nine feet. To increase it by only 1½ feet, the estimated cost was \$1,028,000. It does not follow, however, that doubling this increase and making the draught 12 instead of 10½ feet will necessarily double the cost. The difference between raising the banks, and deepening the Canal for 1½ feet or for 3 feet, may be directly arrived at, but if certain lock walls have to be taken down in order to sink the sills, or if the sills can otherwise be lowered by undersetting without disturbing the walls, the mere addition of work and material necessary for 3 feet instead of 1½ feet, is small in comparison to the cost of the elaborate preparations indispensable in either case. On the other

hand, since it has been recommended to add 70 feet to the length of the locks, which was not contemplated in the estimate referred to, it is evident that it cannot be taken at this time as any measure of the cost of increasing both the *length* and *draught* to the scale now proposed. It will therefore be necessary that another survey and estimate should be made in order to ascertain the probable cost of the enlargement.

It is unnecessary, therefore, at present, to enter into the engineering details respecting the manner in which the existing works will be affected by the proposed enlargement, but it may be proper to state in a general way that we do not apprehend any serious difficulty in carrying it out, and that we think it may be accomplished for somewhere about the sum of \$3,150,000.

Lachine Canal.

From the evidence laid before us, as well as from the Annual Reports of the Public Works' Department for many years past, there appears to be the most urgent necessity for increased accommodation to the trade at the lower entrance of this Canal.

Vessels are so crowded together in the limited space afforded, both in the Montreal Harbor and in the upper basin of the Canal, and the delays in passing the two lower locks forming the connection between them are so great as to become constant sources of complaint, and a heavy tax upon the business of this port. As the trade increases, matters are only getting worse. The entrance locks are proved to be altogether inadequate to the present requirements, and it is time that some action should be taken to remedy the evil, for if it is suffered to continue, the products of the West will be drawn into other channels.

As far back as 1860 particular reference was made to this subject in the general Report of the Public Works' Department for that year, setting forth the necessity for increased accommodation, and suggesting the means of supplying it, in the following terms:—

“The quantity of produce now arriving at Montreal indicates the necessity of providing, at an early day, for far greater dock room and warehouse capacity than is at present, or is likely this year to be afforded.

“By opening new basins on the south side of the Canal, and deepening the channel through the middle of the large basin up to them, sea-going vessels may with facility be brought in connection both with the Upper Lake vessels and the Grand Trunk Railway, for the draught upon the sills of the two lower locks has been made 16 feet expressly with this view, and the requisite quantity of land has long since been acquired, and is still retained for that express purpose.

“These basins might be proceeded with from time to time according to the requirements of the trade, and it is believed that the requisite accommodation can be obtained in this manner, in the readiest way, and at the very least amount of expenditure. Besides the advantage to the trade thereby afforded, the sale of the building lots around these basins, for the erection of warehouses, would alone, in the course of a few years, more than repay the cost of their construction.

“It is unnecessary to dwell upon the importance to the trade of the St. Lawrence, of having proper facilities for receiving, storing, and transhipping grain and other produce, or to recount the inconvenience and loss of time it has sustained during the past season for want of them. The mere fact that the Railway, although it reaches the city which is the head of ocean navigation, possesses none of these facilities, and is as yet, unconnected with the Harbor, is sufficient in itself to shew that a radical defect in the traffic arrangements remains to be remedied, and a great want supplied.”

To meet the increasing demands of the trade at this port we consider it indispensable that the former entrance to this Canal should be re-opened and another set of locks laid alongside the present ones, in the line of the old Canal, with 17 feet of water on the sills to admit ocean vessels into the upper basin, and that the whole of the Canal reserve containing upwards of fifty acres, be laid out into docks and basins in the manner suggested in the report just quoted, but instead of proceeding gradually with the

improvements, the whole as far up as Wellington street should at once be undertaken, and made 18 feet deep.

We feel confident that the additional basin accommodation will be used as fast as it can be provided, and that the warehouse lots can be sold as soon as they can be put into the market.

These are not merely local works—they have a direct bearing upon the interests of the whole country, and are essential to the proper development of the Canal System.

We have not had time to obtain the necessary information in regard to the cost of the proposed works, but in order to give some general idea of it, we may state that they have been roughly estimated at \$1,350,000. Adding \$3,150,000 for the enlargement of the St. Lawrence Canals, the total cost will be \$4,500,000.

BAY VERTE CANAL.

The evidence submitted points out with remarkable force and unanimity, the necessity of opening a highway for commerce between the Gulf of St. Lawrence and the head waters of the Bay of Fundy through the Isthmus of Chignecto dividing them.

The project of connecting these two tideways by a Canal has been discussed for the last fifty years without arriving at any practical result. The perusal of the reports heretofore made by Royal and Civil Engineers including that of the Chief Engineer of the Department of Public Works, submitted to the Legislature in 1869, tends rather to create a doubt as to its practicability than to encourage a hope of its accomplishment.

In his several interviews with the Commissioners this latter gentlemen represented that the surveys, as far as known, did not warrant him in saying whether the Canal was feasible or not; but accepting such facts as he has made known to us we cannot see that nature has here placed any insuperable obstacle to the progress of commerce when it demands a passage through this Isthmus; and therefore we submit the following special report on this subject by the Secretary of our Commission, endorsed by one of our own body, both of whom are Civil Engineers. We think this will remove all doubts as to the practicability of the proposed undertaking.

HUGH ALLAN, Esq.,
Chairman, Canal Commission,
Ottawa.

SIR,—I beg to submit the following remarks on the practicability of the Bay Verte Canal.

In the reports which have been made on this projected work, which for so many years has been under consideration, without as yet any definite action having been elicited, it appears that while Captain Crawley, R. E., in 1840 pronounced it impracticable, Mr. Thomas Telford, C. E., a higher authority in engineering matters, when reporting on Mr. Hall's Survey of 1825, "saw no serious obstacle to be encountered."

Francis Hall had proposed an intermediate summit six feet above high water of Cumberland Basin, to be fed by the fresh water streams of the Isthmus. Mr. Telford, however, observing that the whole of the ground over which the Canal will pass between the two tideways approached nearly to a level, proposed the adoption of the highest spring tides in Cumberland Basin for the top water line of the Canal, remarking that the omission of the extra locks on Mr. Hall's summit would greatly facilitate the navigation and afford better opportunity of acquiring the use of the water of adjoining districts. His estimate for a Canal on this summit, 14 feet deep, 45 feet wide at bottom and 90 feet at surface, except in deep cuttings where the bottom would be 30 feet, and top 70 feet, with locks 150 × 40 × 13 feet was £155,898 sterling; but no provision was made in this estimate for piers or harbors at either end.

In reviewing these several reports in 1860, the Chief Engineer of the Public Works' Department remarks that the adoption of the highest spring tides in Cumberland Basin

as the summit level of the Canal in the manner proposed by Mr. Telford "would doubtless be in many respects a serious mistake." He says the highest spring tides are of uncertain occurrence and at most only periodical, and consequently the supply would be irregular. "In fact the Canal could only be used for a few hours at a time, and at distant intervals, whilst it would be wholly unserviceable during neap tides."

However, not to leave the advocates of the Canal without hope, after observing that Captain Crawley could not find a sufficient body of fresh water to supply a summit above that of Cumberland Basin, he suggests that the "Canal would be much more serviceable if the main level were made 10 or 12 feet below that summit," at which height he thinks it quite probable an abundant supply of fresh water could be obtained, whilst the water of the Bay of Fundy could be kept back by a lock at the western entrance of the Canal. But whether this arrangement could be judiciously carried out depends entirely on the height and nature of the ground between the terminal points. Before venturing to offer a definite opinion, he recommends another survey and examination of the Isthmus. This survey is now in progress under his own directions, but he has informed the Commissioners that he will not be able to submit his report thereupon before the time fixed for sending in their present communication. Consequently, from the documents now before them, as well as from the verbal statements of the Chief Engineer himself, they are not in possession of sufficient information to enable them to offer any opinion on the practicability of the scheme. In fact, as before stated, the Engineer referred to would not then undertake to say that the project was feasible.

It is very desirable that something more definite should be laid before the Commission with regard to the practicability of the Canal, before communicating with the Government, otherwise, action on this important question may have to be deferred. Under these circumstances I feel called upon to submit an opinion on the subject, expressed in general terms. This opinion, however, is based on the facts contained in the foregoing reports, and upon such further information as I have gathered from different sources including that communicated by the Chief Engineer in his several interviews with the Commissioners, in reference to the results of the survey as far as known.

The main facts are these.

1. The turbid water of Cumberland Basin cannot be used for feeding the Canal, nor can it with propriety be admitted into the Canal, as from the great quantity of vegetable and earthy matter held in suspension, it would, when quiescent, soon deposit and fill up the channel.

2. The fresh water supply in the district through which the Canal passes, available at some certain level below high water in the Bay of Fundy, has been found by measurement to amount to 3,981 cubic feet per minute.

3. The extreme range of tides in Cumberland Basin falls somewhere within 48 feet.

4. The extreme range of tides in Bay Verte is limited to 8 feet.

5. The lowest water of Cumberland Basin falls about 25 feet below the level of medium tides, and high water rises about 23 feet above that level.

6. The direct distance between the two tideways is about 15 miles, and between the mouths of the Aulac and Tignish rivers about 11 miles, and no serious difficulties are likely to be encountered in the excavation of a channel.

7. By the construction of the necessary artificial works at both ends of the Canal, it is assumed that the entrances can be made practicable.

The quantity of fresh water available at some certain level not yet determined, supposing the whole of it could be used for feeding the Canal, is barely sufficient, after making the necessary deductions for leakage, absorption, and evaporation, to afford one lockage in an hour and twenty minutes or 18 lockages in 24 hours, whereas with an abundant supply of water 70 or 80 vessels could be put through in the same time.

This statement is sufficient to show that the quantity of fresh water is inadequate for the supply of such an important public work as this is intended to be.

It has, however, been remarked with regard to the water in the Bay of Fundy, that it is only at the beginning of the flood that it is so exceedingly muddy as to be inadmissible, while at high water, it is comparatively clear, containing much less foreign matter, and therefore not altogether objectionable if used only to supplement the fresh water supply. If this be so then, Telford's summit, or one a few feet lower, corresponding with high water or neap tides, might be found to answer all the conditions. Further information on these points, and especially as to the proper level for receiving the fresh water into the Canal, is essential before they can be accepted as influencing the design.

Should these two sources of supply, however, fail to meet the requirements, it does not necessarily follow that the resources of the engineering art are exhausted. If the plan that is cheapest of accomplishment cannot be carried out, because Nature has not given the necessary facilities, the interest of commerce in this project is too great to be balked by an expenditure we did not at first anticipate. It demands the speedy opening of the channel, and will justify its construction almost at any cost.

There is nothing but the additional quantity of excavation to prevent the adoption of the high water of Bay Verte as the summit level of the Canal, and this may be reduced to a certain extent by seeking out the lowest and most favorable ground for the channel of communication. On this plan there will be one lock at the Bay Verte of See Sketch, 8 feet lift at low water, and three of 48 feet aggregate lockage at the other page 83. end of the Canal, the highest of which will have its gates set to work in opposite directions to the other two, serving to keep back the highest water of Cumberland Basin, and to pass vessels in either direction, and at any stage of the tidal fluctuations.

The clear water of the Gulf would be the source of supply, and render the Canal independent of the fresh water streams, while it would afford the means of washing out the mud from the south end of the Canal, and of keeping the locks and their machinery clear of deposits.

Mr. Hall's summit was six feet above the highest spring tides of the Bay of Fundy; Mr. Telford's summit corresponded with the highest spring tides of that bay. The Chief Engineer suggested the possibility of a summit, some ten or twelve feet lower, while the one I have here suggested would lower it still farther down to the high water of the Bay Verte, some 15 or 20 feet below that of the Bay of Fundy. The only object of adopting any intermediate summit between the high-water levels of the two tideways is to save expense in the cost of construction. The difference to the vessel in navigating the Canal is immaterial as regards the time and convenience of the transit, but, if anything, in favor of the lowest summit.

From my point of view, I am clearly of opinion that a Canal through this isthmus is practicable; but I would not venture to decide upon the most feasible plan without having first examined the ground, and been informed of all the details of the survey.

All of which is respectfully submitted for the information of the Commissioners, by

Your obedient Servant,

SAMUEL KEEFER,

M. Inst. C. E.

OTTAWA, 8th Feb., 1871.

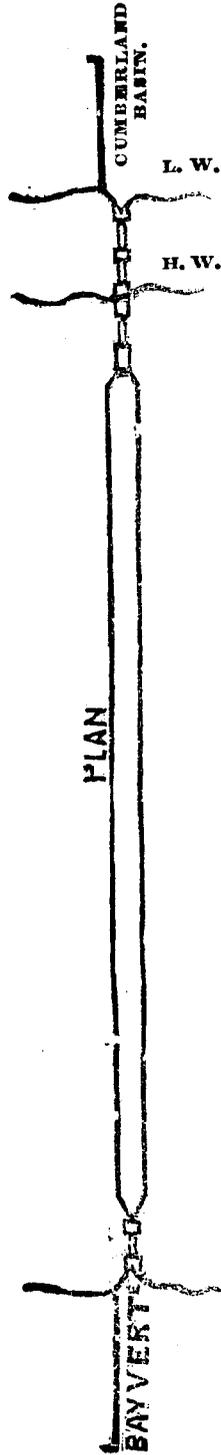
Having read all the existing reports referring to this Canal, and given the subject my very best consideration, I am perfectly satisfied that Mr. Keefer's plan is quite practicable, with or without a supply of fresh water; and that a Canal of the dimensions the Commissioners have decided on recommending, can be built for the amount estimated.

C. S. GZOWSKI, C. E.,
Canal Commissioner.

LONGITUDINAL SECTION.



If the water of Cumberland Basin could, without injury to the Canal, be admitted into it, No. 2 might be removed to the other end of the Canal, and thereby save a large amount of cutting. This would be coming back almost to Telford's plan. But if this water is inadmissible, then No. 2 must stand where it is. There being insufficient fresh water to supply an intermediate summit—this seems the only alternative.



ROUGH SKETCH of the arrangement suggested for a Canal across the Isthmus separating Bay Verte from Cumberland Basin, Nova Scotia, intended merely to shew the practicability of a Canal for uniting these two tide-ways.

S. KEEFER, C.E.

Ottawa, 8th Feby., 1871.

THE PROPOSED OTTAWA CANAL.

The proposed improvement of the Ottawa and French Rivers forming a line of navigation between Montreal and Lake Huron. From Reports of the two Surveys made between the years 1856 and 1860.

The Report of Mr. Walter Shanly is dated 22nd March, 1858.

That of Mr. T. C. Clarke for the same is dated 2nd January, 1860.

Both these engineers had the advantage of consulting the geographical results of the Geological Survey conducted under Sir William Logan, between the years 1852 and 1855, and they agree very nearly as to the proper line for improvement, as well as to levels and distances, and generally as to the method of improvement by locks and dams. Their estimates, however, are made on entirely different bases, and for different scales of navigation.

The Ottawa is one of the main tributaries of the St. Lawrence. It drains an area of 80,000 square miles, and by Mr. Clarke's measurements at Carillon, discharges five millions cubic feet of water per minute, at its ordinary stages. This is about one-sixth of the volume discharged by the St. Lawrence at the Cascades.

Its course from Montreal to the mouth of the Matawan is nearly due west. Here it turns away to the north, and the line of the proposed navigation continues on in the course of the Matawan, running in the same westerly direction to the line dividing the water sheds of the Ottawa and the St. Lawrence, on the border of Lake Nipissing. Crossing this summit, it then follows Lake Nipissing, and descends the French River to its mouth on Lake Huron, a distance of 431 miles from Montreal. The low water surface of the Ottawa River at Ottawa City, 116 miles from Montreal, is 120 feet above tide water. At the mouth of the Matawan, 308 miles from Montreal, it is 489 feet above the sea, Lake Nipissing is 640 feet, and Lake Huron 574 feet above the same level.

That portion of the Ottawa River between Lachine and Ottawa City is called the Lower Ottawa, while the part westward of that city is called the Upper Ottawa.

Mr. Shanly's estimate is made for 58 miles of Canal, from 60 to 100 feet at bottom, according to the magnitude of the obstacles to be overcome, and 10 to 11 feet deep; locks 250 x 50 x 10 feet.

It is not predicated, however, on the actual location of the proposed works at all the rapids, nor does it appear from his report that any plan was matured. He had commenced an elaborate hydrographic survey of the river which he intended should be as accurate and reliable as the admirable survey, by Bayfield, of the St. Lawrence and inland lakes, and when only a small portion of the long chain of navigation had been submitted to the test of instrumental examination, his labors were brought to a somewhat abrupt termination by instructions from the Public Works' Department. To arrive at the cost of the improvements, however, he estimates the 58 miles of Ottawa Canal (the enlargement of the Lachine Canal included) at upwards of \$370,000 per mile, and adding \$2,250,000 for the removal of shoals, makes the total amount \$24,000,000.

Mr. Clarke's estimate does not include the enlargement of the Lachine Canal, and provides for only 21 miles of Canal, with locks 250 x 45 x 12 feet. It amounts to \$12,058,680 exclusive of interest, legal expenses and land damages. It is accompanied with plans and sections shewing throughout the whole line the location, nature and extent of the works proposed for the improvement of the navigation, and with detailed estimates giving the quantities and prices of every description of work and material required in their construction.

Both these engineers aimed at providing a slack water navigation adapted for the largest class of screw steamers on the Upper Lakes, by a series of locks and dams and short cuts around the rapids. The main differences observable between these plans are ;

(1.) Mr. Clarke's line of improvement is more in the river, having more dams but a less number of miles of Canal, as appears from the fact that including the Lachine Canal, he gives only 29 miles of Canal where Mr. Shanly provides for 58 miles.

(2.) Lake Nipissing is dealt with differently. They both propose making it the summit and feeder of the Canal, but Mr. Shanly proposed raising its surface 23 feet to the level of Trout Lake, and flooding a very large tract of the best lands that are to be found in the immediate vicinity, while Mr. Clarke proposes raising it only 9½ feet, and lowering Trout Lake 8 feet, and by also lowering Turtle Lake 7 feet, and raising Lac Talon 21 feet he reduces these four lakes all to one common level, linking them together and making the summit level of navigation 57 miles in length, thus creating a vast reservoir 330 square miles in area, and affording an abundant supply of water, more than sufficient for the utmost demands of the navigation. His summit will be 651 feet above the level of the sea and 77 feet above that of Lake Huron.

In instituting a comparison between the St. Lawrence and Ottawa Routes, it is necessary here to point out an error which has been repeated in various official reports on the subject, with regard to the comparative distance by these two rivers, between Chicago and Montreal. This error has tended to exaggerate the advantage in favor of the Ottawa, and seem to have arisen from assuming that the distance between Chicago and Buffalo is 1,100 instead of 916 miles as shewn by the recent surveys of the U. S. Topographical Engineers.

The two lines of navigation are thus compared :—

	St. Lawrence.	Ottawa.
Lake Navigation.....	1,145 Miles	575
River Navigation.....	132 „	347
Canal Navigation.....	71 „	58
Totals.....	1,348	980

Shewing a difference of 368 miles in favor of Ottawa :—

The correct distances appear to be

	St. Lawrence.	Ottawa.
Lake Navigation.....	1,005 Miles	560
River Navigation.....	185 „	402
Canal Navigation.....	71 „ (Clarke)	29
	1,261	991

Shewing only 270 miles in favor of the Ottawa.

A comparison of Locks and Lockage will stand thus :—

	St. Lawrence.	Ottawa.
Number of Locks.....	54	69
Feet of Lockage.....	553	710

Making a difference against the Ottawa of 15 locks and 157 feet of lockage.

The Lower Ottawa.

Since the very great increase of traffic of late years on the Lower Ottawa, especially in lumber, has been such as to demand greater facilities of transport than the Ordnance Canals can afford, it has been decided to place the enlargement of these Canals, or the construction of a new line of navigation of greatly increased capacity, amongst the works of the *first class*, to be proceeded with as soon as the means can be granted for that purpose.

Mr. Shanly proposed a new line of Canal at St. Anne's, three miles in length, and to enlarge the Ordnance Canals. This would make altogether 11 miles of Canal, which, at the per mileage rate of his estimate, would amount to four and a half millions of dollars, for a Canal on the scale proposed by him.

Mr. Clarke's estimate for the necessary improvements on this section of the river, for a navigation of 12 feet draught (including \$136,105 for deepening the channel through Green Shoal) amounts to \$2,255,686.

He proposed to enlarge the St. Anne's Lock and deepen the channels leading to it — to dam the Ottawa at the Carillon and Chûte à Blondeau Rapids, and to enlarge the Grenville Canal. This plan requires two dams and 7 new locks in lieu of the 11 locks now in operation on the Ordnance Canals.

Without further information as to the effect of the proposed dams we are unable at present to decide upon the most feasible plan, but we are of opinion that a Canal of sufficient dimensions, such as we have suggested, can be constructed at a cost of about \$1,800,000.

RIVER RICHELIEU AND LAKE CHAMPLAIN.

Lake Champlain is only ninety feet above tide water, and thirty-four feet above the St. Lawrence at Lachine, while the Champlain Canal, connecting it with the Hudson at Albany, has a summit, fed by Glens Falls Feeder, only 150 feet above tide water, and occupies the lowest, shortest, and most favorable line for a Canal uniting these two great rivers. It is, however, of inferior capacity to the least of the Canadian Canals, allowing boats of only 70 tons to pass from Lake Champlain into the Hudson, whereas barges of 230 tons can navigate the Chambly Canal, steamers of 600 tons the St. Ours, and boats of 100 tons the Ottawa Canals, See Appendix C for relative sizes of Locks.

This anomalous condition of these Canals on the line of water communication between the lumber yards at Ottawa and the great lumber markets at Troy and Albany necessarily limits the dimensions of the boats engaged in this trade to the capacity of the smallest Canal, the class that can navigate the Champlain, many of which find their way to this city; but no Canadian boat or barge can make its way to Troy; and even if it were possible for the larger Canadian craft to navigate an enlarged American Canal, it would still be excluded by the operation of the American navigation laws, and if the lumber is carried in Canadian bottoms, transhipment must take place at Whitehall.

In the confident expectation, however, of seeing our international relations placed upon a more equitable footing, it is considered the wisest policy for Canada to enlarge all the Canals on this line of navigation from Ottawa City and Lake Champlain to one uniform scale, commensurate with that recommended for the Ottawa Canals, with which the lock at St. Ours already corresponds.

This necessarily involves the enlargement of the Chambly Canal, extending from Chambly basin to St. John's, 12 miles with 74 feet of lockage and 9 locks, the cost of which we have estimated, in round numbers, at \$1,500,000, and it is not considered necessary to make improvements in any other part of the Richelieu.

S U M M A R Y

Of the Estimates for the Works embraced in the First Class.

Sault Ste. Marie Canal.....	\$ 550,000
Welland Canal.....	6,550,000
Lower Ottawa.....	1,800,000
Chambly Canal.....	1,500,000
Deepening River St. Lawrence between Quebec and Montreal....	800,000
Bay Verte Canal.....	3,250,000
St. Lawrence Canals.....	4,500,000
Upper St. Lawrence River.....	220,000
Total.....	\$19,170,000

Georgian Bay Canal.

It has been stated by the promoters of this Canal that Engineers of high standing in England have given it the weight of their professional sanction, but we are not aware that any of these gentlemen have ever visited this country or passed over the ground to give it that personal examination, without which it appears to us impossible they can be qualified to offer any reliable opinion as to its practicability. In this case their opinions must be formed on such facts only as are laid before them while it is quite possible that other facts, essential to the formation of a proper judgment and to afford a comprehensive view of the whole question, may have been altogether omitted or overlooked.

We do not think that any of the promoters of this scheme, in this country, have ever fully realized the enormous magnitude of the undertaking.

Setting aside the estimates that have been published, which are merely conjectural, and not to be admitted as correct, it is only fair that the public should be reminded of the facts; that the proposed Canal is of equal length with the Suez Canal, which has cost upwards of eighty millions of dollars, and occupied fifteen years in construction. But it is encompassed with natural obstacles infinitely greater. While the Suez, being on a dead level from sea to sea, is unencumbered with a single lock, the Huron and Ontario has an intermediate summit of 470 feet above Ontario, to surmount which requires forty-two locks, and 600 feet of lockage. It has also no less than three deep cuts, the least of which is larger than the celebrated deep cut on the Welland, and the largest of which exceeds it in volume of material eighty-fold.

The formidable cutting through the township of King, is about two miles in length, and nearly 200 feet deep at the summit. It belongs to the same geological formation as that through which the Welland Canal was made, and is not unlikely to partake of the same uncertain character.

It has been stated that by test pits and borings it has been satisfactorily ascertained that the ground consists of indurated clay and gravel, but it is well known to practical engineers that neither borings nor test pits can fully reveal the true nature of the material to be encountered at so great a depth, and over such an extended surface, and therefore there is really no certainty that before the excavation is half done, slides may not occur as they have on the Welland, and render the whole scheme abortive.

In view of these incontrovertible statements, it must be apparent to any impartial judgement, even admitting it to be physically possible, that the cost of carrying out such a project would be so great as to render it commercially worthless.

CONCLUSION.

In urging this policy of Canal enlargement and extension upon the favorable consideration of the Government, the Commissioners feel that it is the one which will best stimulate the commercial development of the whole Dominion, and bind all sections together in the bonds of mutual amity and interest.

The expense of these improvements will be insignificant compared with the direct benefits Canadian commerce will receive, and will be immediately met by the larger revenue that must accrue from the tolls on a vastly increased traffic.

The contest for the supremacy of the carrying trade of the great West will be between New York, Montreal and Quebec. Nature has given the latter cities the advantage of position and route, and it now only depends on enterprise and capital to determine whether they shall be left behind in the competition for an enormous traffic, the control of which must elevate them to the foremost position among commercial communities.

If we look at the routes of all other projected Canals, the Ottawa, the Erie and Ontario, or the Georgian Bay, we see that each and all are intended to be subsidiary to the St. Lawrence route. Our duty is to improve that navigation in the first place, because it is the one which has been tried and found to answer all the purposes for which

it was intended. It would be unwise to spend millions of public money in assisting enterprises of minor utility at present, when a comparatively reasonable sum can so improve existing works, like the Welland and St. Lawrence system of Canals, as to answer all the requirements of trade for many years to come, and with the certainty of retaining a large income to the public revenues, and giving an impulse immediately to the development of the commerce of the whole Dominion.

In taking upon herself the entire burden of opening an avenue to the sea through her own waters for the trade of the West, Canada has a right to expect that the influence of the people of the Western States (whose commerce already employing five-eighths of the traffic now passing through the Welland Canal will be further stimulated, and whose productions will be enhanced in value by the expenditure), should be felt in the councils of their country, and that all unnecessary restrictions upon the trade between the two countries should be abolished.

The question is now presented, whether, under our existing commercial relations with the United States, it is advisable for Canada to embark in this expenditure without first obtaining such reasonable concessions, as she has so clear a right to demand. She may not unreasonably expect that the navigation laws of the United States should be so modified as to promote free intercourse with Canada, and that our trade relations should be put on a footing mutually advantageous to both countries.

We have thus endeavored to lay before His Excellency in this communication, as fully as our limited time permitted, all the information we could gather on these important questions without waiting until our report could be submitted.

By the categorical method of enquiry we have taken the sense of the community at large on all these questions, and in coming to a decision upon them, our labors have been very much facilitated by the methodical arrangement of this voluminous evidence under the directions of the Secretary, as well as by his intimate acquaintance with the public works, from the many years of his official connection with them both, during and after construction.

In setting forth the Canal policy recommended by us in the previous pages, and sustaining it by the facts and statements therein contained, the Secretary has been ably assisted in the historical and commercial portion by Mr. J. G. Bourinot, who, under his instructions, compiled the historical sketch of the Canals from official documents and other sources of information within the archives of the Dominion, and the commercial and statistical statements from the evidence submitted, and from such further information as could be collected in the course of this enquiry.

We have the honor to remain, Sir,

Your obedient servants,

HUGH ALLAN, *Chairman.*

C. S. GZOWSKI,
D. D. CALVIN,
P. GARNEAU,
ALEX. JARDINE,
S. L. SHANNON.

SAMUEL KEEFER, *Secretary.*
OTTAWA, 24th February, 1871.

 COMMISSION.

JOHN A. MACDONALD, }
Atty. Genl. } LISGAR.
 CANADA. }

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland,
 QUEEN, Defender of the Faith, &c., &c., &c.

To CASIMIR STANISLAUS GZOWSKI, of the city of Toronto, in the Province of Ontario, Esquire, Civil Engineer; DELINO DEXTER CALVIN, of the township of Wolfe Island, in the County of Frontenac, in the Province aforesaid, Esquire; GEORGE LAIDLAW, of the said city of Toronto, in the Province aforesaid, Esquire; HUGH ALLAN, of the city of Montreal, in the Province of Quebec, Esquire; PIERRE GARNEAU, of the city of Quebec, in the said Province of Quebec, Esquire, Merchant; the Honorable WILLIAM J. STAIRS, of the city of Halifax, in the Province of Nova Scotia, and ALEXANDER JARDINE, of the city of St. John, in the Province of New Brunswick, Esquire, Commissioners for the purposes hereunder set forth:—And to SAMUEL KEEFER, of the town of Brockville, in the County of Leeds in the said Province of Ontario, Esquire, Civil Engineer, Secretary of this Our Royal Commission, and to all others to whom these presents may come or whom the same may in any wise concern.

GREETING,—

Whereas it appears to us that the improvements required for the development of the trade of the Great Western country and the affording of such means of access to the sea-board as may best be calculated to attract a large and yearly increasing share of that trade through Canadian waters, as well as a thorough and comprehensive improvement of the Canal System of our Dominion of Canada, on such a scale and of such a character as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce, are objects of the highest importance to Our said Dominion.

NOW THEREFORE KNOW YE, that reposing especial trust and confidence in the loyalty, integrity and ability of you the said CASIMIR STANISLAUS GZOWSKI, DELINO DEXTER CALVIN, GEORGE LAIDLAW, HUGH ALLAN, PIERRE GARNEAU, WILLIAM J. STAIRS, ALEXANDER JARDINE, and SAMUEL KEEFER, We, of Our especial grace, certain knowledge and mere motion, and of Our Royal Will and Pleasure do, by these presents, under, and in pursuance of the Act of the Parliament of Canada made and passed in the thirty-first year of Our Reign, chaptered number thirty-eight and intituled, "An Act respecting enquiries concerning public matters" nominate, constitute, and appoint you the said CASIMIR STANISLAUS GZOWSKI, DELINO DEXTER CALVIN, GEORGE LAIDLAW, HUGH ALLAN, PIERRE GARNEAU, WILLIAM J. STAIRS, ALEXANDER JARDINE, and such other person and persons as We may think fit, by order of Our Governor-General in Council, and to add to this Our Commission to be Our Commissioners for the purposes following, that is to say: to institute and make a thorough enquiry as to the best means of affording such access to the sea-board as may best be calculated to attract a large and yearly increasing share of the trade of the North Western portion of North America through Canadian waters, as well as a thorough and comprehensive improvement of the Canal System of Our said Dominion on such a scale and of such a character as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce; and in such enquiry to consider the whole subject in all its bearings, as well in a commercial as in an engineering point of view, with the object of obtaining such reliable information thereupon as may furnish the necessary data on which to base a plan for the improvement of the Canal System of Our said Dominion, of a comprehensive character, and such as will enable Canada to compete successfully for the transit trade of the Great Western country,

and especially to enquire into the public works and improvements hereinafter enumerated, that is to say :—

- 1st. The Welland Canal and the enlargement thereof.
- 2nd. The St. Lawrence Canals and the enlargement thereof.
- 3rd. The deepening of the channels through the Rapids of the River St. Lawrence.
- 5th. The deepening of the said river in its most shallow parts between the cities of Montreal and Quebec.
- 5th. The Rideau Canal and its improvement, and the development of trade through the same.
- 6th. The construction of a Canal at the Sault de Ste. Marie between Lakes Superior and Huron.
- 7th. The construction of a Canal between the St. Lawrence at Caughnawaga and Lake Champlain.
- 8th. The improvement of the River Richelieu, and Lake Champlain line of Canals.
- 9th. The completion of the Montreal and Lake Huron system of navigation *via* the Ottawa and French rivers.
- 10th. The construction of the Georgian Bay Canal, to connect the Georgian Bay with Lake Ontario.
- 11th. The construction of a Canal in the Township of Murray through the neck of land lying between Lake Ontario and the Bay of Quinte, and
- 12th. The construction of a Canal through the Isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence at Bay Verte.

And also to enquire as to which of the said several works and improvements hereinbefore mentioned and referred to ought, in the judgment of Our said Commissioners, to be made and constructed for the purposes aforesaid ; and in what order they respectively should be proceeded with ; and of what dimensions and depths they should be constructed ; and the probable cost of the construction of such several works and improvements respectively ; and generally to enquire into and ascertain and report fully on the whole subject in all its bearings, making such recommendations as may appear to you Our said Commissioners hereby appointed, and to such other person and persons as We may think fit, by order of Our Governor-General in Council to add to this Our Royal Commission, to be likely to contribute to the better accomplishment of the said object so in view.

To have and to hold, the said office of Commissioner as aforesaid, unto each and every of you Our said Commissioners above named, and to such other person and persons as We may think fit, to add to this Commission as aforesaid during Our Royal pleasure.

And we do further hereby require you Our said Commissioners, to associate with you as Commissioners under this Our Royal Commission all such person or persons as We may think fit, by order of Our Governor-General in Council, to add to this Commission as Commissioners thereunder.

And we do further nominate, constitute and appoint you, the said SAMUEL KEEFER to be the Secretary of, and to the said Commissioners.

And it is Our further will and pleasure and We do, in pursuance of the statute in that behalf, confer upon you, and each of you, Our said Commissioners above named, and such other person and persons as We may think fit to add to this Our Royal Commission as aforesaid, the power of summoning before you any party or witnesses, and of requiring them to give evidence on oath (or on solemn affirmation if they be parties entitled to affirm in civil cases), orally or in writing, and to produce such documents and things as you Our said Commissioners may deem requisite to the full investigation of the respective matters into which you are hereby appointed to examine and enquire.

And We do hereby enjoin and require that a majority of you Our said Commissioners hereby appointed and such other person and persons as We may think fit to add to this Our Royal Commission as aforesaid shall be held to be, and be a quorum for the transaction of business, and the carrying out of the purposes of this Our Royal Commission.

Of all which Our loving subjects, and all others whom these presents may concern are hereby required to take notice, and to govern themselves accordingly.

In testimony whereof, We have caused these Our Letters to be made patent, and the Great Seal of Canada to be hereunto affixed, witness: Our Right Trusty and Well Beloved the Right Honorable John, Baron Lisgar of Lisgar and Bailieborough, in the County of Cavan, Ireland, in the Peerage of the United Kingdom of Great Britain and Ireland, and a Baronet, one of Our Most Honorable Privy Council, Knight Grand Cross of Our Most Honorable Order of the Bath, Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, Governor-General of Canada, and Governor and Commander-in Chief of the Island of Prince Edward.

At Ottawa this Sixteenth day of November, in the year of Our Lord one thousand eight hundred and seventy, and in the thirty-fourth year of Our Reign.

By Command,

(Signed),

J. C. AIKINS,

Secretary of State.

APPENDIX A.

ABSTRACTS OF THE EVIDENCE LAID BEFORE THE COMMISSIONERS.

- 1st. The Welland Canal.
- 2nd. The St. Lawrence Canals.
- 3rd. The St. Lawrence River and Rapids.
- 4th. The St. Lawrence River—Montreal to Quebec.
- 5th. The Rideau Canal.
- 6th. The Sault Ste. Marie Canal.
- 7th. The Caughnawaga Canal.
- 8th. The River Richelieu and Chambly Canal.
- 9th. The Ottawa Navigation.
- 10th. The Georgian Bay Canal.
- 11th. The Murray Canal.
- 12th. The Bay Verte Canal.
- 13th. The St. Peter's Canal.

WELLAND CANAL.

1. To what extent should the Welland Canal be enlarged, viz:—To what depth of water, to what width of locks, and to what length of chambers between the gates ?

	Depth of Water.	Width of Locks.	Length of Chambers
<p><i>S. D. Woodruff, St. Catharine's, Superintendent Welland Canal Office.</i>—Locks of these dimensions will admit the passage of craft either way through the St. Lawrence Canals, with exception of depth. With this depth in sills, harbors can be made easily to correspond ; now, with high water, vessels can enter the harbors with nearly this draught.</p> <p>It may be advisable to make the locks not less than 230 feet in length (that of Port Colborne is of these dimensions) as more suitable for propellers and sailing craft. Although the width may be greater than necessary for such craft, still it is desirable to have locks commensurate with size of vessel passing through the St. Lawrence.</p>	12	45	200
<p><i>J. W. Winn, Montreal.</i>—Deems uniformity of locks in all Canals indispensable, and recommends as standard present depth of Welland, with length and width of St. Lawrence Canal locks, viz:</p> <p>This enlargement would involve moderate labor and expense, and and not serve to divert trade from Canadian ports to Oswego</p>	10½	45	200

	Depth of Water.	Width of Locks.	Length of Chambers
and Ogdensburg, as would be the probable result of a greater depth.			
<i>G. E. Jaques, Montreal.</i>	12	45	250
<i>A. R. McGibbon, Montreal.</i> —Recommends enlargement to correspond with St. Lawrence Canals, as hereafter decided.			
<i>David McLean & Co., Montreal.</i> —Recommend enlargement for passage of largest vessels now trading on the Upper Lakes, and 25 per cent. over, as every year the craft of those waters are increasing in size, and Western harbors are being dredged to supply the necessary depth.			
<i>Hon. Malcolm Cameron, Ottawa.</i> —Would, of course, deepen the St. Lawrence, Beauharnois, and Lachine Canals to same depth. At present greater depth would entail too much expense.	12½	....	....
<i>Board of Trade, Toronto.</i> —Or of equal size to the Sault Ste. Marie after the enlargement.	14	70	350
<i>Corn Association, Toronto.</i> —Earnestly recommend that the capacity of the Welland should be equal to the dimensions of Sault Ste. Marie.			
<i>Arthur Harvey, W. H. Howland, Toronto.</i>	12½	45	210
<i>J. H. Ingersoll, St. Catharine's.</i>	12	....	....
<i>Board of Trade, Ottawa.</i> —Same dimensions as Sault Ste. Marie Canal.	12	75	350
<i>Board of Trade, Kingston.</i>	12½	37	200
<i>George Fellers, Mayor of Sandwich, for Duncan Stuart, of Detroit.</i>	14	45	275
<i>Montreal Corn Exchange Association.</i> —Recommend enlargement without delay to such a capacity as will admit the largest steam vessels trading on the Upper Lakes.			
<i>Board of Trade, Toledo.</i> —Depth same as St. Clair Flats.	....	45	215
<i>Oswego Board of Trade.</i>	14	45	250
	} ov'r the Mitre Sill.		

	Depth of Water.	Width of Locks.	Length of Chambers
<i>Town Council of St. Catharines, per J. G. Currie.</i>	12½	37	200
<i>F. S. Holcomb, Toronto.</i> —He says that experience is divided as to the size of locks required. The Americans are adopting 14 feet as the standard over the St. Clair Flats and in the Sault Ste. Marie Canal. This would seem to indicate what policy we should pursue to control Western trade.	14	75	350
<i>W. H. Smith, Master Mariner, Owen Sound.</i> —Welland and St. Lawrence should correspond.			
<i>Board of Trade, London.</i> —Recommend deepening the St. Lawrence and Welland Canals to admit ocean-going vessels with full cargoes.			
<i>Board of Trade, Windsor, O.</i>	14	45	275
<i>Board of Trade, Stratford, O.</i> —Recommend enlargement of the Welland, so as to allow the largest class of sailing vessels and steamers, now navigating the Upper Lakes, to pass through.			
<i>Chamber of Commerce, Milwaukee.</i>	15	50	300
<i>Allan Gilmour, Ottawa.</i> —Is of opinion that when it is deemed necessary or judicious to enlarge this Canal it should be done in keeping with the depth of water in the principal shipping ports of the Lakes, and the size of vessels now in use or likely to be used in the Lake trade.			
<i>Board of Trade, Chicago.</i>	14	35 to 40	{ 250 to 300
<i>Board of Trade, Guelph.</i> —Express their belief that the Canals at present in use ought to be enlarged sufficiently to enable vessels of (say) 14 feet draught to pass.			
<i>Board of Trade, Detroit.</i>	15 to 16	45 to 55	{ 250 to 275
<i>Adam Brown, Hamilton.</i> —The Welland and St. Lawrence Canals should be enlarged to admit vessels of not less than 1,000 tons measurement—indeed of 1,500 tons.			
<i>F. Wilson, Port Dover.</i>	12	36	180
<i>Board of Trade, Hamilton.</i> —(Send opinion of Ship Masters and Ship Owners, &c., of Hamilton, and adopt them as their own.)	12	45	{ 250 to 275
The St. Lawrence Canals, including the Beauharnois and Lachine, should have the same depth of water and size of locks as the Welland.			

	Depth of Water.	Width of Locks.	Length of Chambers
<i>Board of Trade, Stratford.</i> —(The Secretary only sends replies of the Secretary of the Chicago Board, which are already given.)	14	35 to 40	{ 250 to 300
<i>Angus Morrison, Vice-President, Ontario & Erie Ship Canal Company.</i> —Replies to this question and following ones are identical with those of Secretary of the Chicago Board of Trade, who revised them.	14	35 to 40	{ 250 to 300
<i>Alvin Bronson, Oswego.</i> —Who has had a life-long connection with the trade of the Lakes advocates an enlargement of the Welland to accommodate sail vessels and propellers of about 750 tons burden of the best models, excluding side wheel steamers and large armed Government vessels. Locks of would meet the wants of these 750 ton vessels. He believes that these locks will be sufficiently ample for the internal commerce of the Lakes, the Lower Provinces and New England. It would not be a wise policy to build larger locks, which would involve considerable expense, and cause a strong current in the Canal, and delay in working them, and all this to provide for a few and rare cases where large vessels would desire to pass them to and from the ocean.	12	45	200 excl. of gates.
In anticipation of an enlargement of the Welland, the property holders on the west side of Oswego have expended \$100,000 to obtain 12 feet of water on that size of the river. The objections to large locks and deep Canals are :—			
<i>First.</i> —Their cost to the Government and the necessity of high tolls on the commerce, thereby impairing their utility.			
<i>Second.</i> —The necessity they impose upon the whole lake region of a large and often repeated expenditure of money on harbors and rivers to meet the wants of a large class of vessels ; with a tendency to throw the lake trade into the hands of large capitalists, or associations of wealth, to the exclusion of men of smaller means ; or, of a few cities of large population, able and willing to make large disbursements on their harbors, to monopolize the traffic of the lakes, to the exclusion of their less opulent competitors.			
<i>Third.</i> —It is believed a large portion of the future traffic of the lakes will seek propellers ; these, if constructed of wood, and more than 200 feet long, will require heavy and expensive arches, augmenting their cost, and diminishing their carrying power.			
<i>Charles Howard, New York.</i> —These locks will be large enough to admit vessels of 800 tons, and would allow deep sea-going vessels of 1,000 tons to pass two-thirds loaded.	12	36	200
<i>Edsall & Wilson.</i>	12	50	250

	Depth of Water.	Width of Locks.	Length of Chambers
<i>A. Wright, M.P.</i> —The Welland should be enlarged to the same extent as the Sault Ste. Marie.			
<i>Hon. John Young, President of Dominion Board of Trade.</i> —Urges enlargement so that propellers of 850 or 900 tons, now in use on the Upper Lakes, may descend from Lake Superior or Michigan to Montreal or Quebec, or proceed on to Halifax without breaking bulk.			

2. What is the most suitable size of vessels, with reference to the general capabilities of the navigation, in order to carry produce from Chicago to any port on Lake Ontario, on the most economical terms, and which kind—whether steam or sailing vessels—are likely to be the most suitable ?

G. E. Jaques, Montreal.—Says that to conduct the Western trade, and direct it by the St. Lawrence route, both steam vessels and sailing craft are required—each carrying from 15,000 to 20,000 bushels of grain, or its equivalent in rolling freight, like flour, pork, &c.

Board of Trade, Toronto.—1. From 35,000 to 50,000 bushels capacity ; 2. Steam vessels are likely to be most suitable.

Arthur Harvey, W. H. Howland, Toronto.—Vessels of not less than 25,000 bushels capacity. Sailing vessels most profitable, if Canals are not deepened ; steamers otherwise.

Board of Trade, Ottawa.—Propellers' length 320 feet, beam 70, draught 11 ft., 6 ins. The trade of Lake Superior has to be taken into account, as during the incoming season the grain trade of Minnesota (which is now 20,000,000 bushels) will be enabled to pass down it by the Duluth and St. Paul Railroad, and the Northern Pacific from Duluth to Georgetown on Red River, whence there is steam navigation to Fort Garry.

Board of Trade, Kingston.—Sailing vessels for 30,000 bushels.

G. Fellers, Mayor of Sandwich, for Duncan Stuart, of Detroit.—With Canal enlarged, propellers of 1,500 tons, 250 feet long, 15 feet depth of hold, and 37 to 40 feet beam, would be best craft. Such propellers, with low pressure engines, would cost from \$95,000 to \$100,000 American currency.

Board of Trade, Toledo.—1,000 tons. Steam is most economical.

Hugh McLennan, Montreal (Manager of Transportation Co.)—Sailing vessels of 20,000 bushels capacity are most suitable for present harbors, as well as in reference to length of voyage.

Board of Trade, Oswego.—Experience on Upper Lakes shews that the largest class of sailing vessels and propellers, now plying on these waters, carry property at the

cheapest rate, and, therefore, the Canal should accommodate craft of the largest size. Yet an open question which class is most economical; but highly probable, taking competition with railways into account, steam craft must, before long, control the carrying trade.

Town Council, St. Catharine's.—Vessels of 185 feet in length, and 34 in beam are likely to be most suitable; would carry 40,000 bushels of grain.

W. H. Smith, Owen Sound.—35,000 to 40,000 bushels; draft of water, 11 feet 6 inches. Steam vessels.

Board of Trade, Windsor, Ontario.—Propellers that would carry about 1,500 tons.

Chamber of Commerce, Milwaukee.—35,000 bushels capacity; 800 tons register; 1,200 tons actual. Sail is cheaper—either suitable.

Allan Gilmour, Ottawa.—Believes that little, if any, benefit would arise from the employment of larger vessels than now navigate these lakes—many of these being quite up to the capacity of the chief harbors on the lakes. He understands that powerful steam-tugs, with large barges lightly masted and rigged for sailing under favorable circumstances only, are now doing a considerable portion of the lake trade, that of carrying lumber particularly; and they do it more cheaply and expeditiously than vessels dependent only on sail. The carrying trade might be advantageously extended in this way.

Board of Trade, Chicago.—Sail most in use now, and most likely to be; capacity of 35,000 to 50,000 bushels most profitable.

Board of Trade, Detroit.—Freight can be carried cheapest in the largest class of vessels allowed by depth of water in our harbors and Canals—probably from 1,000 to 1,500 tons, but tendency decidedly in favor of steam, on account of greater despatch.

Adam Brown, Hamilton.—Large vessels can be worked at comparatively less cost than small ones. Steam vessels would carry grain from Chicago to Montreal at less cost, owing to heavy expense for towing on the St. Lawrence Canals, and the time that would be saved.

G. Wilson, Port Dover.—Steam.

Board of Trade, Hamilton.—Under existing circumstances, steam vessels carrying 15,000 bushels, and sailing craft carrying from 15,000 to 18,000 bushels, are most suitable. Steam is believed to be increasing faster than sail; a fact which shews it must be found most profitable.

Alvin Bronson, Oswego.—(See answer to Question 1.)—The enlargement he there recommends, will add 50 per cent. to the present capacity of the Canal and locks; and the burden of the sail and steam vessels, giving them 24,000 bushels of wheat instead of 16,000, or 720 tons in place of 480, of the most approved models. Future traffic is likely to seek propellers.

Charles Howard, New York.—Experience has clearly established the fact that vessels over 700 or 800 tons are not so profitable on these lakes as vessels of less tonnage, even when they are not compelled to pass through Canals, and the records of our underwriters fully prove that small vessels are much safer on the lakes, and equally as safe at sea. With few exceptions, none of our harbors admit of vessels of over

12 feet draft of water in good weather, while it is hazardous to enter most of them, when drawing over 10 or 11 feet in a storm. Nature has placed barriers in front of most of our harbors; also wide flats across some of our greatest thoroughfares, that will, in spite of art, for ages to come, make it necessary to build light draft vessels. In his opinion, there will be always more vessels employed on these lakes under 500 tons than over. Besides, no sailing vessel over 700 or 800 tons could safely navigate the lakes, even if the harbors and Canals were deep enough. Square-rigged vessels cannot have sufficient sea-room—they would be stranded before they would be put in "trim." The only vessels suitable for this navigation are what are called "fore-and-aft" rig. Vessels of 700 or 800 tons must have three masts, or the sails will be too large for safety or convenience. Such as are designed for foreign voyages could be "square-rigged" forward, with the "main" or "mizzen mast" rigged "fore-and-aft." This "rig" would answer well for both lake and ocean trade. In his opinion, the lake trade will continue to be about equally divided between sailing vessels and propellers. He writes from experience—most of his life having been spent in the commerce of the lakes—as early as 1829 he discharged a cargo at St. Catharine's.

Edsall & Wilson.—Steam for through traffic, from 800 to 1,500 tons, with enlarged locks. Sail for long shore traffic.

A. *Wright, M.P.*—Propellers with a draught of 12½ feet.

3. What classes and sizes of vessels—whether steam or sail—are now employed in the trade between Chicago and Buffalo, and between Ports on Lakes Superior, Erie and Michigan?

Board of Trade, Toronto.—All classes from 100 to 1,000 tons.

Arthur Harvey and W. H. Howland, Toronto.—The trade between Lakes Michigan and Erie is chiefly carried on by sailing vessels, but between Superior and other lakes, chiefly by steamers. Sailing vessels, from 100 to 800 tons; steamers, from 100 to 1,200 tons, but from 400 to 900 tons principally.

Board of Trade, Kingston.—Classes from 10,000 to 50,000 bushels; sail and steam.

G. *Fellers, Mayor of Sandwich, for Duncan Stuart, of Detroit.*—Steam and sail varying from 300 to 1,500 tons capacity. At present there is only one of the latter class, the screw steamer *Philadelphia*, which has been very successful on Western Lakes. Steam must ultimately be entirely used.

Board of Trade, Toledo.—Various classes—steam, sail, and barges; 7,000 to 45,000 bushels capacity, or 150 to 1,500 tons.

Board of Trade, Oswego.—Propellers and sail vessels of all sizes, up to a capacity of 50,000 bushels, and wheat and corn.

Town Council, St. Catharine's.—Steam and sailing vessels, many 165 feet long, 32 feet beam, others nearly 200 feet long.

W. H. *Smith, Owen Sound.*—Sail and steam—major portion, sail on Lake Superior; steam on Erie and Michigan.

Chamber of Commerce, Milwaukee.—Steam and sail—400 to 1,500 tons.

Board of Trade, Chicago.—Propellers from 400 to 1,500 tons capacity, and sailing vessels from 500 to 1,200 tons.

Board of Trade, Detroit.—Majority sail—from three to fifteen hundred tons.

Adam Brown, Hamilton.—Both sail and steam are employed, and the tendency for some time has been to increase size of vessels for the Upper Lakes. Minimum to maximum of capacity is from 1,500 to 42,000 bushels—the latter yet few in number but increasing.

George Wilson, Port Dover.—Sail vessels, from 15,000 to 35,000 bushels. Steam barges, 35,000 to 70,000 bushels.

Board of Trade, Hamilton.—Both steam and sail of a capacity of about 30,000 bushels.

Edsall & Wilson.—Both steam, sail and barge. Sail from 200 to 1,000 tons; steam from 500 to 1,500 tons.

4. Is there any difference between the average cost of carrying grain from Chicago to Kingston and Oswego. If so, is it in any way owing to a relative scarcity of Canadian bottoms or to the navigation laws of the United States, or from what other cause?

Board of Trade, Toronto.—About the same rate, conditions being equal.

Arthur Harvey, W. H. Howland, Toronto.—Very little, and rates are generally the same. The trade is principally carried on in American bottoms, because the largest vessels that can be used carry freight cheapest and under the United States' navigation laws large Canadian vessels cannot be sailed in this trade to advantage, as they can only run from Chicago to Kingston, while American vessels can run from Chicago or Milwaukee to both Kingston and Oswego.

Board of Trade, Kingston.—As a rule the freight quotations from Chicago and Milwaukee to Kingston are the same as to Oswego, but when freights are brisk, the rate to Oswego is quoted at often one-half cent less in consequence of vessels going thither being sure of despatch and a better chance of getting an up freight. If it happened, as it does sometimes, there are little or no shipments to Canada, Canadian vessels have to lay up or to take a low freight to Kingston, whilst an American vessel can load to Oswego or Buffalo.

G. Fellers, Mayor of Sandwich, for Duncan Stuart, Detroit.—Little or no difference when Canal is enlarged. At present, owing to total want of anything like a spirit of accommodation at Kingston, American vessels avoid that port as much as possible. This necessarily cripples trade.

Board of Trade, Toledo.—With equal facilities at Kingston for discharging vessels, and with upward freight, there would be no difference.

Hugh McLennan, Montreal, Manager Montreal Transportation Company.—The rates to Kingston and Oswego are about the same.

Board of Trade, Oswego.—But very little difference. Rates of freight from Chicago to Kingston or Oswego are almost always about the same—as surplus of Canadian bottoms offering for freight at Chicago depresses the rates to Kingston, and a sur-

plus of American vessels does the same with respect to Oswego, and *vice versa*. There may be a variation of a cent per bushel according to the season and demand, as between Kingston and Oswego.

Town Council, St. Catharine's.—No difference.

W. H. Smith, Owen Sound.—Answers in the affirmative. There being but few Canadian buyers and vessels, Buffalo and Oswego get the preference. The United States' regulations exclude Canadian bottoms.

Chamber of Commerce, Milwaukee.—To Oswego it is $\frac{1}{2}$ c. less on account of no return freight from Kingston. Not owing, however, to any scarcity of Canadian bottoms, or to navigation laws of the United States.

Board of Trade, Chicago.—Freights between Chicago and Kingston or Oswego, are slightly in favor of Oswego, mainly on account of better and more return freights,

Board of Trade, Detroit.—Not much difference in the average cost of carrying grain to Kingston or Oswego. The small difference is against American vessels.

Adam Brown, Hamilton.—Freight higher to Oswego, because Chicago and Oswego are United States' ports. American vessels can only load for that voyage, as Canadian craft are precluded by the navigation laws of the United States; but the former can load for Kingston.

George Wilson, Port Dover.—Negative answer.

Board of Trade, Hamilton.—No difference except what arises from the superior facilities at Oswego for despatch in unloading vessels as compared with Kingston.

Edsall & Wilson.—Two cents less to Kingston. Oversupply of Canadian vessels for through traffic sometimes. The trade is spasmodic.

5. What reduction per bushel in the rates of freight from Chicago to Kingston and Oswego would result from the enlargement of the Welland Canal to the capacity of the largest class of vessels now carrying from Chicago or Milwaukee to Buffalo?

Board of Trade, Toronto.—From two to three cents.

Arthur Harvey, W. H. Howland, Toronto.—From two to three cents.

Board of Trade, Ottawa.—Fully one-third if not two-thirds.

Board of Trade, Kingston.— $1\frac{1}{2}$ per bushel reduction.

G. Fellers, Mayor of Sandwich, for Duncan Stuart of Detroit.—25 per cent. at least.

Board of Trade, Toledo.—40 per cent.

Hugh McLennan Montreal.—Difference between Buffalo and Oswego or Kingston, is now about five cents on grain; enlarged capacity of Canal would reduce this $1\frac{1}{2}$ @ two cents per bushel (tolls about one cent payable by vessel), two cents would be $\frac{1}{2}$ of present difference.

Town Council, St. Catharine's.—About five cents.

Chamber of Commerce, Milwaukee.—Five cents per bushel.

Board of Trade, Chicago.—Four to seven cents ; average probably 4½ cents.

Board of Trade, Detroit.—From 50 to 75 per cent.

George Wilson, Port Dover.—Four cents.

Board of Trade, Hamilton.—Rate from Chicago to Buffalo has averaged about 6 cents.
 " " " Kingston or Oswego " 10 "
 per bushel of 60 lbs.

W. J. Patterson, Montreal.—Average rates of freight (per bushel of wheat) by schooner or propeller, from Chicago to Kingston, during four years, were as follows :—

1863.....	12½	1865.....	13¾
1864.....	14	1866.....	14

These rates are in American currency. Average rate from Kingston to Montreal during those years was four cents per bushel in gold. Average rate paid by propeller from Chicago to Montreal in 1868, was 13 cents in gold ; in 1869, 12 cents ; immense difference, therefore, in favor of Montreal.

Edsall & Wilson.—Chicago, to Buffalo in 1868-69, six cents. Kingston or Oswego, 1870, five cents.

7. What is the average difference for the last three years in the rates of freight between Buffalo and New York, and between Oswego and New York ?

Board of Trade, Toronto.—See Buffalo trade returns.

Board of Trade, Toledo.—Three cents to four cents per bushel on wheat and corn.

G. Fellers, Mayor of Sandwich, for D. Stuart of Detroit.—Just about the difference in Lake freights—sometimes a little less and sometimes a little more than that difference. These differences would be the same from all lake ports between the points named.

Board of Trade, Oswego.—Average Canal freight on wheat :—

	1868			1869			1870		
	cs.	m.	ths.	cs.	m.	ths.	cs.	m.	ths.
From Buffalo to New York.....	15	6	5	16	3	1	11	0	3
" Oswego " ".....	11	2	2	11	8	1	8	0	0
Difference.....	4	4	3	4	5	0	3	0	3

Canal tolls on wheat during three past seasons of navigation were :—

1868.....	0	3	0	per 1,000 lbs. per mile
1869.....	0	3	0	" " " " "
1870.....	0	5	1	" " " " "

Reduction in Canal tolls in 1870 was 50 per cent., which gave Buffalo the advantage of one cent, four mills, seven-tenths of a mill per bushel over Oswego compared with previous years.

Town Council, St. Catharine's.—From five to six cents.

Chamber of Commerce, Milwaukee.—33½ per cent. less from Oswego.

Board of Trade, Chicago.—From nothing to two cents per bushel during the last year.

George Wilson, Port Dover.—Five cents in the former case. Three cents in the latter case.

Board of Trade, Hamilton.—Six cents in favor of Oswego.

Edsall & Wilson.—Four cents in favor of Oswego.

8. What difference in the demand for sea or American salt, and steam or other coal, would result from the employment of the largest class of American vessels on the Upper Lakes in the Kingston trade ?

Board of Trade, Toronto.—Probably a large increase.

Arthur Harvey, W. H. Howland, Toronto.—The demand in the west for sea salt would greatly increase, if the navigation from the Upper Lakes to Montreal were improved throughout. Steam and household coal would, in all probability, be taken for return freight for a long distance west, without the deepening of the St. Lawrence as well as the Welland Canal ; this return freight would be limited to American coal from Oswego, which would afford no profits to Canadian producers or employment to Canadian bottoms.

Board of Trade, Kingston.—No difference.

G. Fellers, Mayor of Sandwich, for D. Stuart of Detroit.—Lower rates of transportation would largely increase the demand for foreign salt, and the largely increased steam tonnage would greatly increase the use of Nova Scotia coal ; for it would then come in the largest ship that could cross lake St. Peter, and would be transferred at once at Montreal to barges to fill the coal yards of Kingston, Toronto, the Welland Canal, &c. The returning coalships would afford cheap transportation for the flour, beef, pork, butter, cheese, and other products of western Canada, required by the people of the Maritime Provinces.

Board of Trade, Oswego.—Cheapening of rates of freight by large vessels would doubtless tend to increase the demand for sea salt, but consumption would depend on Canadian tariff. As respects coal, there would not probably be much change except that cheaper freights would lower the price of Nova Scotia coal delivered at western ports.

Town Council, St. Catharine's.—Demand for both would increase.

Chamber of Commerce, Milwaukee.—Decided increase.

Board of Trade, Chicago.—These questions are more controlled by the American tariff, than by freight considerations, with a low tariff the demand would be largely increased, especially for salt.

Board of Trade, Detroit.—Cheapening transportation (which will be effectually done by substituting large for small vessels) will, of course, bring into more general use coarse articles that cannot afford high freights.

Adam Brown, Hamilton.—Answers in affirmative. He has good reason to believe bituminous coal from the Maritime Provinces could be brought to Western Canada,

and undersell the American. He also thinks there would be greater demand for salt from Montreal and Quebec. The original cost of Liverpool salt is so trifling that all reduction in the cost of transit must increase the consumption at the point of delivery. Chicago is the largest packing point in the world, and as Liverpool salt is preferred to the American article, its consumption ought to increase in the ratio of the reduction of the freight.

Board of Trade, Hamilton.—Reduced freight would cause greater demand.

Edsall & Wilson.—As respects English salt no difference; it is now carried from Kingston to Chicago, 75c. to \$1 per ton. Not much wanted. Turk's Island could be carried by the St. Lawrence. Questionable if we could compete with American coal.

9. What have been the relative rates, for three years, of freight from Chicago to Montreal; and Chicago to New York—distinguishing between the summer rates and the winter rates?

Board of Trade, Kingston.—13c. to Montreal; 18c. to New York—summer. Winter rates at the caprice of Railway Managers.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—The winter rates have been at least 30 per cent. in favor of Montreal; they should be no more by rail to one place than to another.

Board of Trade, Oswego.—For rates to New York see question 7.

Town Council, St. Catharine's.—Summer rates have been 13c. to Montreal; summer rates have been 17c. to New York.

Chamber of Commerce, Milwaukee.—Summer rates about two cents less to Montreal.

Board of Trade, Chicago.—Summer rates about 13c. to Montreal; do. 20c. to New York—per bushel of wheat.

Board of Trade, Detroit.—Summer rates 25 per cent. less to Montreal.

Board of Trade, Hamilton.—Rates from Chicago to Montreal about 13½c. per bushel; do New York about 22½c. per bushel.

W. J. Patterson, Montreal Board of Trade, Gives the following (from official sources) as the average rate of freight per bushel of wheat from Chicago to New York:—

Years.	Via Buffalo.	Via Oswego.
1861.....	27½	27
1862.....	26½	26¼
1863.....	23	22¾
1864.....	28¼	28½
1865.....	26¾	27½
1866.....	30½	31½
1867.....	22½	22½
1868.....	23	23
1869.....	23	23¼

The average rate paid per bushel by propeller from Chicago to Montreal, 1868 was 13c. in gold ; in 1869 the average rate was 12c. in gold.

These figures show an immense difference in rate in favor of the St. Lawrence route to Montreal as an ocean port (the difference in time being 10 or 12 days) and yet only a small proportion of wheat comes to the sea-board by that route.

Notwithstanding that the recorded receipts of wheat at Montreal during the season of 1870 show a decrease of 724,619 bushels, as compared with 1869, still the aggregate is one-third of the quantity carried from the West to New York city ; but it is impossible that that proportion can be maintained, as the small lock capacity of the Welland Canal is forcing Canadian vessels out of the Upper Lake trade. The following figures are very suggestive on this point :—

Receipts of wheat and corn at Kingston during season of 1858 :—

58 cargoes in British vessels.....	839,948 bushels.
46 " " U. S. "	641,311 " "

Receipts of wheat and corn from U. S. during season of 1870, as per statement made by one Forwarding Company.—

79 cargoes in British vessels.....	1,127,987 bushels.
111 " " U. S. "	1,892,875 " "

Total receipts of grain at Kingston in season 1870, from U. S. ports amounted to a trifle over 6,000,000 bushels.

The proportion is computed to be—

In British vessels.....	2,256,000 bushels.
" U. S. "	3,785,000 " "
	6,041,000 " "

In 1857 there were at least as many Canadian vessels of all classes trading between the Upper and Lower Lakes as in 1870 ; while U. S. craft during the same period had probably increased ten-fold. Unfavorable trade relations have no doubt had much to do in bringing about this decay in Canadian Commerce ; and while the enlargement of the Welland would be of great advantage in removing a natural impediment—were American vessels allowed to navigate the improved outlet it might enable the Government to secure some advantage in return.

Edsall & Wilson.—1868-9, Chicago to New York, 26c. ; do. to Montreal, 18c.—summer. 1870, Chicago to New York, 19c. ; do. to Montreal, 17c. Low rates in 1870 to New York, due to railway competition.

10. Has there been during the last twenty years, any increase in the relative number of any one class of carrying vessels ?

Board of Trade, Toronto.—A large increase in vessels of large capacity.

Arthur Harvey, W. H. Howland, Toronto.—In large American vessels. The large vessels which have been built in Canada have been generally turned into American bottoms, the limitation of their business to Kingston, which affords no return freight, making them comparatively unprofitable while owned on this side.

Board of Trade, Kingston.—An increase of vessels to the full capacity of the Welland Canal trade.

G. Fellers, Mayor, Sandwich, for D. Stuart, of Detroit.—Steam is rapidly displacing sail for all freights requiring despatch.

Board of Trade, Toledo.—An increase in size of both sail and steam vessels.

Board of Trade, Oswego.—A very great increase in large propellers, and a like increase in large carrying capacity sail vessels, over small or present Welland Canal vessels and propellers. It is probable three-fourths of all the steam and sail craft built for the last ten years on the Upper Lakes, *cannot pass* the Welland. Doubtless, the most of them would gladly do so if it were possible, as the longer the voyage, the cheaper and more profitable the vessel can afford to freight. This agrees with the expressed opinion of Upper Lake owners of large steam and sail craft.

Town Council, St. Catharine's.—Steam vessels have increased most in proportion.

W. Smith, Owen Sound.—In steam—steam barges and barges.

Chamber of Commerce, Milwaukee.—Steam vessels.

Board of Trade, Chicago.—Large vessels have been steadily increasing.

Board of Trade, Detroit.—Steam vessels.

Adam Brown, Hamilton.—In steam vessels and sailing craft of large size.

Geo. Wilson, Port Dover.—In vessels of full capacity of the Canal.

Board of Trade, Hamilton.—In propellers and sailing vessels of large size.

Edsall & Wilson.—Enormous increase in British sail; enormous increase in American steam and sail.

Hon. John Young.—The demands of trade in its infancy required the smallest class of vessels. As trade increased the demand was met by an increased number; but during the last twenty-five years it has been found that the cost of transport is much less in large than in small vessels, both on the ocean and on the lakes; hence the tonnage of the propellers now engaged in the trade of the Upper Lakes to Buffalo, is about five times the size of the vessels employed a few years ago, and freight can be carried in these one-third less than formerly, the improvement in the steam engine ensuring the greatest economy of fuel, and the celerity and certainty of the voyage by the steam propeller, has drawn to that class of vessels a large part of the carrying trade of the Upper Lakes.

11. What are the dimensions, power and tonnage capacity of the largest propellers now doing profitable business on the Upper Lakes?

Arthur Harvey and W. H. Howland, Toronto.—From 600 to 900 tons.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—From 1,000 to 1,500 tons; no small propeller can now pay expenses in the general trade of the lakes.

Board of Trade, Toledo.—1,000 to 1,500 tons.

Board of Trade, Oswego.—Carry from 30,000 to 50,000 bushels of corn or wheat. Propeller *Philadelphia*, of Buffalo, carries 1,500 tons dead weight, in 14 feet of water. *Colorado* and *Nebraska*, 1,600 tons. Smaller craft, from 700 to 800 tons, can only be used in Lake Superior trade, as the depth of water in Sault Ste. Marie Canal, ten feet, precludes the heavier craft.

Town Council, St. Catharine's.—Propellers of 1,000 tons, 200 feet long and 35 feet beam, with a carrying capacity of 50,000 bushels.

W. H. Smith, Owen Sound.—900 tons.

Chamber of Commerce, Milwaukee.—250 feet long, 36 feet wide, 16 deep, and 1,500 tons.

Board of Trade, Chicago.—Length 240 to 250 feet; breadth of beam, 33 to 36 feet; depth of hold 14 to 15 feet.

Board of Trade, Detroit.—Length 350 feet; breadth of beam 35 feet; depth of hold 15 feet, with power sufficient to drive them ten miles an hour when laden, and capacity for carrying 1,500 tons.

Board of Trade, Hamilton.—Largest propellers on Upper Lakes are:—230 to 250 feet long, 32 feet beam and 12½ feet deep. Carrying capacity about 30,000 bushels.

Edsall & Wilson.—1,000 sail, and 1,500 tons steam.

12. Viewing time, insurance, and interest as elements of cost, can propellers carry freight between Chicago and Kingston, as cheaply as sailing vessels—or can they carry at less cost?

G. E. Jaques, Montreal.—Propellers can and do carry freight from Chicago to Montreal, at rates not exceeding those by sailing vessels; although the daily cost of management of the former is greater than that of the latter, yet the time of the trip is so much less by steam, as to enable them to compete with sailing vessels.

Board of Trade, Toronto.—Believe propellers cannot carry freight between Chicago and Kingston so cheaply as sailing vessels, from the difficulty of obtaining back cargoes from than point.

Arthur Harvey and W. H. Howland, Toronto.—They cannot now carry as cheaply, owing entirely to the fact that at Kingston they cannot get return freight. If the Canals admitted of their going to Montreal they could, we think, carry freight cheaper than sailing vessels.

Board of Trade, Kingston.—Sailing vessels cheaper.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—Propellers of the kind previously described are cheaper.

Board of Trade, Toledo.—Answer in affirmative.

Board of Trade, Oswego.—Taking everything into account including time and railway competition, large propellers can probably freight from Chicago to Kingston, or to Oswego, or through to Montreal, if the St. Lawrence Canals admitted the trade,

more cheaply than sail vessels of equal size or capacity, and large propellers much more cheaply than small ones.

Town Council, St. Catharine's.—About the same rate.

F. G. Holcomb, Toronto.—Refers in general terms to carrying trade of Lakes. The expense outside of first cost of vessel in transportation, is very much in favor of the larger class of vessels. For instance the only difference in a vessel of 10,000 or 20,000 bushels, will be one or two additional men. In the case of steam the same remark holds good with this exception, that by increasing size and power the consumption of fuel becomes greater, but still favors the large class of vessels. The theory of some practical men is, that a vessel to be profitable, should be at least one ton per mile for the route they are employed on. Practical men differ in opinion as to the relative merits of steam and sailing craft; both have their advantages, and can be employed to advantage. In moving the grain of the country, vessels will always be employed though at less rates than steamers. The auxiliary steam vessel is competing successfully with clipper and sailing ships on the ocean, and in the Indian trade, is driving them out of it. They combine economy of fuel and speed, and take coal for the round trip. Vessels of this class, if introduced on inland waters, no doubt would bring about similar results.

W. H. Smith, Owen Sound.—Steam costs less, provided there is quick despatch, and Welland Canal to accommodate vessels with 35,000 to 50,000 bushels.

Board of Trade, Windsor, O.—If propellers of 1,500 tons could go direct from Chicago to Montreal (not merely to Kingston) they would be cheaper than sailing vessels, owing to the saving in time, interest, insurance, &c.

Chamber of Commerce, Milwaukee.—Sail the cheaper.

Board of Trade, Chicago.—Reply in the negative.

Board of Trade, Detroit.—Expense about equal, taking time into account. Sail vessels can carry at a trifle less cost.

Adam Brown, Hamilton.—Propellers cannot carry so cheaply between Chicago and Kingston as sailing vessels, the expense of towing being light, as the Canal mileage is so trifling in comparison to the total distance; but should cargoes be consigned direct from Chicago to Montreal, then propellers would have the advantage over sailing vessels, as the Canal mileage would be largely increased on the total distance, thereby giving the propellers the advantage of their own tonnage on the canal system of the St. Lawrence.

George Wilson, Port Dover.—Propellers can carry at less cost.

Board of Trade, Hamilton.—Sail vessels are thought to be cheaper, but on the Upper Lakes steam vessels are increasing faster than sail vessels, which seems to establish the fact that steam must be found most suitable and profitable.

Edsall & Wilson.—Sail with present size of locks; steam with locks enlarged.

13. What is the cost, and what are the daily working expenses of a sailing vessel of 500 tons capacity?

Board of Trade, Kingston.—Cost, \$18,000 ; per day, \$25.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—First-class sailing vessels can be built of wood, and fitted ready for work in an A 1 manner for \$45 and \$47, American currency, per ton. The expense of sailing a 1,000 ton vessel would not be ten dollars per day more than for a vessel of 500 tons. The only extra cost would be in towing, and a few more seamen.

Board of Trade, Toledo.—Cost of vessel, \$25,000 ; daily expenses, \$30.

Board of Trade, Oswego.—Cost of sail vessels, of 500 tons, \$25,000 ; daily expenses, \$60.

Town Council, St. Catharine's.—Cost, about \$20,000 ; daily expenses, \$45.

W. H. Smith, Owen Sound.—\$34 and \$40 if fore and after, but if square rigged, more expensive.

Chamber of Commerce, Milwaukee.—\$25,000 cost ; \$50 daily expenses.

Board of Trade, Chicago.—Cost, about \$30,000 ; running expenses, \$37.40 to \$40.

Board of Trade, Detroit.—Cost, \$25,000 ; daily expenses, \$25. Working expenses here and hereafter do not include elevating, trimming and shovelling, Canal tolls, towing, insurance, &c., which constitute large items in the expense of transportation.

Adam Brown, Hamilton.—Including insurance and depreciation of property, about \$40.

Board of Trade, Hamilton.—Cost, \$18,000 ; daily expenses, \$30.

Edsall & Wilson.—Daily, \$25.

14. What is the cost, and what are the daily working expenses of a sailing vessel of 1,000 tons capacity ?

G. Fellers, Mayor of Sandwich, for D. Stuart, Detroit.—See answer to question 13.

Board of Trade, Toledo.—Daily working expenses, \$40.

Board of Trade, Oswego.—Cost of sail vessels of 1,000 tons, \$60,000 ; daily expenses, \$100.

Town Council, St. Catherine's.—Cost of sail vessel of 1,000 tons, \$35,000 ; daily expenses, \$60.

W. H. Smith, Owen Sound.—From \$90 to \$120, according to fuel, daily.

Chamber of Commerce, Milwaukee.—Cost of sail vessel of 1,000 tons, \$40,000 ; daily expenses, \$70.

Board of Trade, Chicago.—Cost of sailing vessel of 1,000 tons, \$40,000 ; daily expenses, \$45 to \$50.

Board of Trade, Detroit.—Cost of sail vessel of 1,000 tons, \$45,000 ; daily expenses, \$35.

Board of Trade, Hamilton.—Cost of sail vessel of 1,000 tons, \$30,000 ; daily expenses, \$45.

Adam Brown, Hamilton.—Daily expenses, \$55.

Edsall & Wilson.—Daily expenses, \$30.

15. What is the cost, and what are the daily working expenses of a propeller of 500 tons capacity ?

Board of Trade, Kingston.—Working expenses, \$80 a day.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—A propeller of 1,000 tons can be worked as cheaply as one of 500 tons ; except the greater cost of loading and unloading the cargo, the expense of carriage is no more except for increased fuel and oil, and this expense will not go beyond 30 per cent.

Board of Trade, Toledo.—Working expenses, \$50 a day.

Board of Trade, Oswego.—Cost, \$45,000 ; daily expenses, \$120.

Town Council, St. Catharine's.—Cost, \$35,000 ; daily expenses, \$120.

Chamber of Commerce, Milwaukee.—Cost, \$50,000 ; daily expenses, \$100.

Board of Trade, Chicago.—Cost, \$50,000 ; daily expenses, \$120 to \$140.

Board of Trade, Detroit.—Cost, \$45,000 ; daily expenses, \$100.

Adam Brown, Hamilton.—Daily, \$125.

Board of Trade, Hamilton.—Cost, \$28,000 ; daily, \$65.

Edsall & Wilson.—Daily, \$70.

16. What is the cost, and what are the daily working expenses of a propeller of 1,000 tons burden ?

G. Fellers, Mayor of Sandwich.—See question 15.

Board of Trade, Toledo.—1,000 tons, \$75 a day.

Board of Trade, Oswego.—Cost of 1,000 tons, \$75,000, of 1,500 tons, \$125,000 ; daily expenses, \$160 to \$200. (These and foregoing statements are estimates of men experienced in trade at Buffalo, and elsewhere, and are for wooden craft, and in American money.)

Town Council, St. Catharine's.—Cost of 1,000 tons, \$55,000 ; daily expenses, \$160.

Chamber of Commerce, Milwaukee.—Cost of 1,000 tons, \$80,000 ; daily expenses, \$125.

Board of Trade, Chicago.—Cost of 1,000 tons, \$80,000 ; daily expenses, \$180 to \$200.

Board of Trade, Detroit.—Cost of 1,000 tons, \$75,000 ; daily expenses, \$120.

Adam Brown, Hamilton.—Daily, \$200.

Board of Trade, Hamilton.—Cost, \$45,000 ; daily expenses, \$85 to \$90.

Edsall & Wilson.—Daily, \$90.

In reference generally to the Welland Canal, the Hamilton Board of Trade remarks:—

The locks and bridges on the Welland Canal have not a sufficient number of lock and bridge tenders. Captains of sailing vessels especially complain that they are compelled to allow a portion of their crews to assist in opening the locks and bridges, at a time when all hands are required for the safe working of the vessels. The closing of the locks on the Welland on Sunday is a great hardship to our mercantile marine. The loss of a day with a fair wind frequently prolongs the voyage for a week. It is a grievous tax on our shipping interest ; neither is it desirable in a moral point of view, as a large concourse of sailors subjected to compulsory idleness, is far more objectionable and less likely to be attended with beneficial results than when all are engaged in the midst of a voyage in attending to their ordinary every-day duties. It is alleged that farming the public property on Sundays is not an uncommon occurrence, and that masters of vessels frequently pay a handsome gratuity to the lock tender for opening the lock on a Sunday. At all events, the Canal locks should be opened on Sundays after the 1st of November, as is the case with the Lachine ; and during the whole season of navigation, vessels reaching the two last locks at Port Dalhousie or Port Colborne, any time on Sunday, should be locked out into the lake. The same regulation as to Sunday traffic on the Welland does not exist on the St. Lawrence Canals, and no good reason has ever been assigned for the distinction. The completion of the long-talked of Lake Erie level, combined with increased width in the Canal at an early day, is a work of great importance to the future enlargement and success of the Welland Canal, and should receive prompt attention at the hands of Government, as the Grand River is understood to be annually failing in the supply of an adequate quantity of water for the purposes of the Canal, as predicted by Hon. H. H. Killaly nearly 30 years ago.

ST. LAWRENCE CANALS.

1. Is it your opinion that the carrying of produce from the West can be best and most economically performed by vessels which navigate the lakes proceeding through the Canals to their destination, or by the transshipment at Kingston of their cargoes into barges specially adapted for Canal transportation, and what would be the difference of cost between the two systems?

T. Rimmer, Montreal.—The best and most economical method, even with grain grown in the Lake Ontario districts, is to tranship into barges at Kingston. His firm pays a schooner from two to three cents a bushel for freight of grain from a Lake Ontario port to Kingston; or if they engage the schooner to come to Montreal, they pay her just as much additional freight as they would have to pay a barge between Kingston and Montreal. But the schooner prefers the short voyage, for she can earn more money, if lucky, by trading on the lakes than by doing barge work. A barge is also very much more convenient to move about the harbor of Montreal, and deliver grain into ships, than a schooner can be, and will give a firm more time to discharge; or if, on demurrage, it is employed at a lower rate than a schooner—the former being a cheaper craft and paying a small crew. Then the grain is benefitted by the transshipment at Kingston—a very large proportion every year is rendered fit for shipment in this way, otherwise it would have to go into store at Montreal. Both Canadian wheat (after June) and Western maize, as well as the Western spring wheat (after July) require this transshipment.

J. W. Winn, Montreal.—His firm largely furnish return cargoes of pig iron from Montreal to Chicago, Milwaukee, &c., which are usually cheapest when sent by barge to Kingston, and thence by schooner. In his opinion, enlargement of Canals, with uniformity of locks, would make steam throughout, without transshipment, the cheapest as it is otherwise the best mode of transport.

G. E. Jaques.—In the present state of Canals—that is, the Welland being ten and the St. Lawrence only nine feet—most vessels have to lighten for the river, 20 or 30 per cent. of the cargo, and so long as this continues it would be no doubt desirable for many vessels to discharge at Kingston or Prescott, rather than proceed to Montreal.

A. R. McGibbon, Montreal.—Favors carriage by vessels direct from lakes to Montreal.

D. E. McLean & Co., Montreal.—Recommend transshipment into barges.

Board of Trade, Toronto.—As Canals are at present, transshipment of grain at Kingston from sailing vessels into barges would be cheapest; but in the event of enlargement of these works, this would be otherwise, for grain could be carried more cheaply without the transshipment.

Board of Trade, Ottawa.—As there must be a second transshipment at Montreal, that at Kingston should be avoided if possible. At the same time, it is fair to state that the oftener grain is shipped, the better will be the condition of the cargo at the end of the voyage. Barge navigation will be altogether too slow and expensive, for, taking into account the short season of navigation, such means of transport is likely to drive trade from the St. Lawrence route.

Board of Trade, Kingston.—Pronounce in favor of barges.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—There is no kind of transportation that can compare in cheapness with barge transportation. The new class of

steamers we suggest, in answer to questions on Welland Canal, should go to Prescott instead of Kingston, and there unload, for the reason the further the greatest tonnage can be carried, the cheaper the freight.

Board of Trade, Toledo.—With sufficient depth of water, transhipment should be avoided.

H. McLennan, Manager of Montreal Transportation Co.—Barges are cheaper both as respects original cost and working, better for Canals, and more convenient to discharge alongside ship, and deliver grain in better condition, owing to extra handling at Kingston.

Arthur Harvey and H. Howland, Toronto.—At present, it pays best to transport grain coming from Lakes Erie and Michigan from lake vessels into barges at Kingston. If the Welland and St. Lawrence Canals could admit the large-sized vessels which are profitably employed on the Upper Lakes, it would be without doubt cheaper to carry the grain to tide water, and possibly to its destination without transhipment. Under a proper system of through navigation, the cost of carrying through would be from 1½ to 2 cents less than to tranship. No distinction whatever should be made between Welland and St. Lawrence Canals.

Town Council, St. Catharine's.—Produce can be best carried direct to Montreal without transhipment.

Board of Trade, Windsor, Ontario.—Are of opinion that the carriage of produce from the west can be best and most economically performed by a large class of propellers carrying between Chicago and Montreal or Quebec, and not by transhipment into barges at Kingston.

Chamber of Commerce, Milwaukee.—In favor of vessels proceeding through.

Allan Gilmour, Ottawa.—Is inclined to the opinion that the carrying of produce from the west can be done more cheaply by transhipment at Kingston into barges especially adapted to Canal navigation; but in the case of steamers doing a general business, it would be otherwise, for they would doubtless find it more profitable to make the through trip without transhipment.

Board of Trade, Chicago.—Think it can be most economically done by barges.

Board of Trade, Detroit.—With the canals enlarged to the size mentioned for Welland (15 to 16 feet deep), and the river deepened so as to admit vessels of large capacity to proceed to Montreal, the carrying of produce could be more economically done by vessels proceeding through the Canals to their destination. The expense of transhipment, including detention, would be about ten per cent.

Adam Brown, Hamilton.—Direct transportation through enlarged Canals would be a great advantage to the trade, in time, money and preservation of bulk, and rolling freight, and would save the risk of deterioration of property; of course cereals are rather improved by transhipment.

Hamilton Board of Trade.—Same opinion.

Erie & Ontario Ship Canal Co., per Mr. A. Morrison.—Cheapest to transfer to barges until the Welland is enlarged to the capacity of the St. Lawrence Canals.

Edsall & Wilson.—Must be done by barge; at present delays occur at Kingston in connection with storage, and discharging; delivery in excess at spring and fall, but not at midsummer.

A. Wright, M.P.—Transshipment should be avoided.

Canadian Navigation Company, Montreal.—Transshipment into barges is the cheapest mode.

2. In the event of barge transportation being preferred, to what extent in your opinion is it desirable to increase the length, breadth, and depth of the locks?

T. Rimmer, Montreal.—Considers that the barges now employed in the trade are quite as large as is convenient, and therefore no increase in the size of the Canals appears to be necessary.

J. W. Winn, Montreal.—Believes that the deepening of the locks to 10¼ feet would be an advantage to barges, though more necessary, steamers. Present length and breadth of locks sufficient in any case.

G. E. Jaques, Montreal.—Considers it would be unjust to owners of steam vessels to regulate water of Canals for use of barges only. In his opinion, the whole system of Canal improvement should be based on assimilating the size and depth of water of the Welland and St. Lawrence Canals. It is now a disadvantage for crafts having passed the Welland to lighten, in some instances 3 per cent. at Kingston.

Board of Trade, Ottawa.—Barge navigation is inadvisable. The country should be spared the expense of an enlargement, if the Canals are only to be adapted to barges.

Board of Trade, Kingston.—Locks in length and breadth sufficient, but if practicable the depth should equal that of the Welland; doubtful, however, if possible. The flats below Cornwall should be dredged, entrance to Beauharnois cleaned of boulders, and entrance to Lachine deeper and safer.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—The Canals below Kingston are all large enough for the next 25 years, for barge transportation. Eight barges could be taken in one tow, when of 8 feet depth and built in first-class style.

Montreal Corn Exchange Association.—If it were possible (see answer to St. Lawrence River 3.) to open a channel of ten feet for vessels between Prescott and Montreal, it would be advisable to give same depth to Canals; but the immediate necessity, not imperative.

Arthur Harvey and W. H. Howland, Toronto.—In that event, no enlargement may be necessary.

Town Council, St. Catharines.—Do not consider it necessary to increase length or breadth, only depth to 12½ feet or thereabouts.

Board of Trade, Chicago.—Perhaps to capacity for passing barges of 20,000 to 25,000 bushels.

Board of Trade, Detroit.—No increase would be required.

Erie & Ontario Ship Canal Co.—They should be of the same capacity as the enlarged Welland.

Edsall & Wilson.—No enlargement of locks wanted.

Canadian Navigation Co.—Then, present locks sufficient.

3. Are there any points on the Canals, or connected with the Canal Navigation which, in your opinion, can be materially improved, so as to facilitate the passage of carrying produce through the Canals?

J. W. Winn, Montreal.—Obstructions exist which prevent at times vessels drawing anything near 9 feet from passing. Deepening to 10½ feet, therefore, earnestly recommended.

G. E. Jaques, Montreal.—Has a decided opinion that nothing short of making the St. Lawrence Canals the same depth as the Welland, can subserve any satisfactory purpose of trade.

Board of Trade, Toronto.—The deepening of the Canals and the river to 12½ feet would materially improve the navigation.

Board of Trade, Ottawa.—Canals should be enlarged to size of Sault Ste. Marie Canal.

Board of Trade, Kingston.—See answer to question 2.

G. Fellers, Mayor of Sandwich, for D. Stuart, Detroit.—If any reasonable sum would give the same depth of water through the small Canals above the Beauharnois as the Welland Canal would have, then he would recommend their simultaneous enlargement. This would double our chances of obtaining preponderance of Western business, and increase that business besides. Then, after some years' experience, the Government would be able to judge whether it would be expedient to enlarge the Beauharnois and Lachine to same dimensions as those above them.

A. Harvey and W. H. Howland, Toronto.—The deepening of the Canals is by so much the principal improvement to be desired that all others are quite subordinate to it.

Town Council, St. Catharines.—A greater depth of water at some points is only required.

Chamber of Commerce, Milwaukee.—Recommend enlargement of Welland and St. Lawrence Canals to same capacity.

Board of Trade, Detroit.—Same reply.

Board of Trade, Hamilton.—The Cornwall Canal is being turned into a mill race from the machinery erected thereon, and the difficulty in navigating the Canal is greatly increased. The fact of the waste weirs being so close to the entrance of the locks renders it dangerous for vessels passing out or into the locks, although it is quite possible to improve them so as to obviate this objection. It is generally supposed that the current created by supplying mills prevents the Canals from freezing over, but this is a mistake, as may be seen from the Lachine Canal, which is noted for its strong current and rapid freezing. This subject should be considered.

Erie & Ontario Ship Canal Co.—The construction of the branch Canal from Thorold to Niagara river.

Edsall & Wilson.—The west end sea wall requires extending to dead water by separate piers, to cause the water to draw into Canal. As the entrance now is, the water returns and creates a current outwards.

A. *Wright M. P.*—Advocates enlargement of the St. Lawrence Canals to same size as the Saul Ste. Marie Canal.

Canadian Navigation Co.—Upper entrance of the Beauharnois Canal requires improving by the removal of some dangerous boulders, and by placing a light-house on the Government pier. The Cornwall Canal requires bumping post at each lock.

L. H. *Masson, M. P., Soulanges.*—Refers at length to the Beauharnois Canal, and adds that the fact is now recognized by every one that this work should have been made on the north side of the Rapids at the head of which Coteau Landing would have had its entrance upon Lake St. Francis, with 18 feet of water. A great error was certainly committed in building the work on the south side, and it was recognized when it was too late to remedy the evil. Not only did many difficulties arise, but numerous losses from the mistake in the construction of this Canal. Not only is commerce more or less injured, but the Canal in a military point of view is a great mistake—a nuisance rather than a utility. During the two last Fenian invasions the authorities have been obliged to guard it by companies of volunteers, because it was possible for the enemy at any moment to seize it and effectually stop the navigation of the St. Lawrence. General Michael and all the other military authorities have pointed out the dangerous position of this Canal in case of invasion. Hon. John Young has also expressed the same opinion as to the mistake that was made in constructing the work on the south side. In conclusion he does not hesitate to say that he warmly approves of the scheme of improving our inland navigation, with a view to increasing the commerce of the Dominion, provided it is done as economically as is consistent with the interests of the public service. Above all, he presses earnestly upon the Commission the consideration whether it would not be more advantageous in point of usefulness, economy and defence, to construct a new work for large (ocean) vessels, on the north side of the Coteau Rapids, instead of enlarging the present Beauharnois Canal.

4. What is the bushel capacity of the largest barges navigating the St. Lawrence and Lachine Canals ?

T. *Rimmer, Montreal.*—A large sized barge carries 20,000 bushels.

Board of Trade, Toronto.—20,000 bushels.

Board of Trade, Ottawa.—20,000 bushels.

Board of Trade, Kingston.—22,000 bushels.

Hugh McLennan Montreal.—About 20,000 bushels.

Arthur Harvey and W. H. Howland, Toronto.—20,000 bushels.

Town Council, St. Catharines.—25,000 bushels.

Chamber of Commerce, Milwaukee.—22,000 bushels.

Board of Trade, Chicago.—Think about 15,000 bushels.

Board of Trade, Hamilton.—20,000 to 22,000 bushels.

Edsall & Wilson.—25,000 bushels.

A. *Wright, M. P.*—20,000 bushels.

5. Can such capacity be advantageously increased, without increasing the size of the present locks ?

T. Rimmer, Montreal.—Believes this capacity is quite as much as it is convenient to handle in the harbor in one barge, and also states, by Act of Parliament and the regulations of the trade, a bin of wheat in a sea-going ship must not exceed 1,200 bushels. A barge carrying 20,000 bushels must go to several vessels to discharge—at least generally so.

Board of Trade, Toronto.—Yes, provided the river and Canals be deepened to 12½ feet.

Board of Trade, Ottawa.—Doubtful if capacity can be profitably enlarged with view to general interests ; but it may be with regard to interests of forwarders.

Board of Trade, Kingston.—See question 2.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—Would increase capacity of barges to that of locks and depth of water at point of lowest water.

Hugh McLennan, Montreal.—Negative answer.

Arthur Harvey and W. Howland, Toronto.—The experiment was tried, but found unsatisfactory ; the barges were sold to be used in the lumber trade between Belleville and Oswego.

Town Council, St. Catharine's.—Answer in negative.

Board of Trade, Chicago.—Think not.

Board of Trade, Hamilton.—Not without deepening the Canals.

Edsall & Wilson.—Increase in width and length.

6. What has been the average rate of freight, for the last three years, for the carriage of wheat and flour from Kingston to Montreal and to Quebec, and by what class of vessels carried ?

Board of Trade, Toronto.—4¼ cents to Montreal, and 6¼ cents to Quebec—wheat in barges. 14 cents to Montreal, and 20 cents to Quebec—flour by steamer.

Board of Trade, Kingston.—Four cents to Montreal (free of tolls)—wheat by barge. 15 cents to 20 cents to Montreal (free of tolls)—flour.

Hugh McLennan, Montreal.—Wheat, four cents per bushel ; barges carrying 10,000 to 20,000 bushels.

Arthur Harvey, W. H. Howland, Toronto.—Averaged 4¼ cents to Montreal, averaged 6¼ cents to Quebec, wheat chiefly in barges.

Very little, if any, flour is shipped from Kingston, it being nearly all sent through by steamer from lake ports. The proportions of freight from Kingston to Montreal would be about 12 cents.

Town Council, St. Catharine's.—About four cents to Montreal by barges.

Board of Trade, Chicago.—Barges have been carrying wheat at about four cents per bushel to Montreal.

Board of Trade, Hamilton.—Wheat, four cents to Montreal. Flour, 15 cents to Montreal.

Edsall & Wilson.—From Kingston to Montreal :—Wheat, five cents to six cents ; Flour, 15 cents. From Kingston to Quebec:—Wheat, 8 cents, Flour 20 to 25 cents.

7. Is it practicable or advisable to enlarge the St. Lawrence Canals and deepen the Upper St. Lawrence River to the extent necessary to enable ocean vessels drawing 16 feet or over, to navigate from the Ocean to the Upper Lakes.

J. H. Ingersoll, St. Catharines.—Argues at considerable length in favor of improving our inland navigation with the west, by deepening the channel and enlarging the locks on the present St. Lawrence Canals, so that sea-going vessels of 1,000 tons burden and drawing 12 feet of water will be enabled to reach the different ports on Lake Ontario, without transshipment. In his opinion, it would be the height of folly to ask the country to construct entirely new works, costing from 30 to 40 millions of dollars, when, at a comparatively trifling outlay for enlarging the present Canals, we would effect the desired object, viz: Of connecting the two greatest food producing and food consuming countries in the world by the shortest, cheapest and quickest route.

T. Rimmer, Montreal.—Argues against sending ocean vessels beyond Montreal. Most of these vessels are clipper built, of very light class and finish, and so far as his own experience goes, no money would induce them to go into a Canal. Neither would it be generally advantageous to send them there, should they be willing to go. For example, the *Peggy*, 247 tons, cost about \$20,000, and was navigated by a crew of 10 men—her full capacity being 14,000 bushels. A barge to carry the same load costs \$8,000 and is worked by a crew of five men. These vessels, like most ships of whatever size in the trade, do not stand and cannot be moved without ballast, therefore they take in a part of their return cargo (grain) before they complete the discharge of their inward cargo. To effect this, he knows of no method so convenient and economical, and in all respects so desirable, as bringing a barge alongside which will put in grain enough to ballast her, and give the shipper time to handle the rest, say at a moderate charge for inevitable detention. In the Buffalo trade, all the grain goes at once into store, and barges or propellers cannot be too large. In the Montreal trade, on the other hand, the bulk of grain goes on board ship, and barges must consequently be adapted to that end. Besides, it must be considered that it is only at a large depot, like Montreal, a shipper may make a proper selection of his cargo, and give that personal inspection of his business which is necessary.

J. W. Winn, Montreal.—Believes that the deepening of the Upper St. Lawrence navigation to 16 feet would be so enormously costly as to be practically impossible, and offers no advantage commensurate with a tenth part of the cost.

G. E. Jaques, Montreal.—Does not think it advisable to deepen the St. Lawrence Canals to 16 feet for ocean vessels, as their form and build are not suitable to our rivers and lakes.

A. R. McGibbon, Montreal.—Would allow the passage of sea-going vessels drawing 16 feet ; of steamers, 225 feet and 50 feet beam over all.

D. E. McLean & Co., Montreal.—It will not pay ocean-going vessels to pass above Montreal. Therefore, answers question in negative.

Board of Trade, Toronto.—Recommend deepening Canals to 12½ feet for reasons set forth in a report of a special Committee on the subject. This Committee are satisfied that the great bulk of the trade with the Maritime Provinces would then be carried without breaking bulk from the lakes to the ocean, creating thereby a reciprocity of interest and connecting our several Provinces more closely. As an investment to realize annually a certain amount of capital invested, the enlargement is not likely to prove satisfactory; but the Committee do not hesitate to say that these works, in such an event, are much more likely to prove remunerative than they are at present. If the Dominion desires to keep pace with the neighboring republic as a mercantile community, it must be prepared to compete with the latter for the carrying trade of the great West to the ocean, which is yearly becoming more important and requiring greater facilities of transport. The larger the trade attracted through our Canals, the greater the number of transatlantic vessels that will be required—in this way our tonnage will be increased, the revenue materially benefitted, and the general prosperity of the Dominion greatly enhanced.

Corn Association, Toronto.—Also advocate deepening to admit vessels of 12½ feet, and in doing so refer to the advisability of encouraging trade between the West and the Maritime Provinces as essential to the success of the scheme of Confederation. Thus far they say in consequence of our inadequate water communications and the uncertainty which exists as to the nature and extent of these contemplated improvements, we have been almost entirely dependent on railway carriage which, although adapted, but at greater cost to the transportation of flour, cannot be made available on account of the expense for return cargoes of coal, fish or oil or other products of the Maritime Provinces. Hence, that Reciprocity of trade upon which we have counted as the only basis of legitimate commerce, and the one great means of uniting the Provinces in the strong bonds of mutual interest, remains undeveloped, and will continue so until our water communications shall have been permanently established, on such a scale as to induce the building of vessels suitable at once to the navigation of the lakes, the Canals and the ocean. Nor, while aiming at the development of our internal commerce, do they lose sight of the immense trade which the enlargement of our water channels, from the lakes to the ocean, would attract from the West, and the wonderful stimulus which such a diversion would give to our commercial marine, as well as to the general commerce of the Dominion.

Board of Trade, Ottawa.—As a general rule nothing would be gained by enlarging the canals to admit ocean vessels, because, to say nothing of handling such craft in a limited space, the difference of density in salt and fresh water would seriously affect the stability of the vessel by altering her trim, straining her when loaded, and increasing the tendency to refuse her helm in the narrow channels through which she would have to steer.

Board of Trade, Kingston.—Answer in negative.

G. Fellers, Mayor of Sandwich, for D. Stuart, of Detroit.—No present necessity for over 14 feet of water—there being no harbor on the Western lakes with a greater depth, while the St. Clair Flats will have no more.

Board of Trade, Toledo.—Answer in affirmative.

Arthur Harvey, W. H. Howland, Toronto.—Earnestly believe they should be deepened to admit vessels drawing 12 feet—a draught which the principal harbors on Lake Ontario would or could at a trifling cost, be made to admit.

Town Council, St. Catharine's.—Think it should not be done.

W. H. Smith, Master Mariner, Owen Sound.—Same answer.

London Board of Trade.—Recommend improvement of navigation to a sufficient capacity for the passage of ocean-going vessels with full cargoes.

Board of Trade, Windsor, O.—Answer in negative—corresponding with D. Stuart.

Chamber of Commerce, Milwaukee.—Think present ocean vessels are not adapted to Lake trade.

Allan Gilmour, Ottawa.—Probably practicable, but not advisable.

Board of Trade, Chicago.—Hardly think it advisable.

Adam Brown, Hamilton.—Answers emphatically in the affirmative.

Board of Trade, Hamilton.—Believe it to be practicable but not advisable, because, to say nothing of the cost of such a work, there are no harbors with a sufficient depth of water on the Upper Lakes to admit such a class of vessels.

Edsall & Wilson.—Answer in negative.

Canadian Navigation Co.—Ditto.

L. H. Masson, M.P., Soulanges.—Answers this question emphatically in the affirmative and adds—

All the experienced pilots agree in saying that they would have no fears now in piloting a vessel drawing from 14 to 15 feet of water from Cornwall to Coteau landing upon Lake St. Francis, and from the Lachine Rapids on Lake St. Louis.

8. Are there many vessels carrying Canadian products, drawing 16 feet or less, employed in the transatlantic trade, and is the number of such vessels increasing or diminishing, if either, from what cause?

T. Rimmer, Montreal.—States that a good many vessels engaged in the trade draw 16 feet or thereabouts, but the quantity of grain they carry is only a small proportion of the total export. These small vessels are such as are engaged in the fruit trade, and despatched homeward to look for orders. This class is very expensive, and would not go into a Canal, to be thumped by barges or rubbed against stone walls.

Board of Trade, Toronto.—There are few vessels drawing 15 feet, unless in the transatlantic trade, and the number is diminishing in consequence of larger vessels being able to do the trade cheaper.

Town Council, St. Catharine's.—None at present—as a general rule, the trade was found unprofitable.

A. M. Delisle, Montreal.—Majority of vessels draw 16 feet, and are increasing. Tonnage of this class, from 500 to 700 tons burden.

W. H. Smith, Owen Sound.—Two or three drawing less than 16 feet, not on the increase, on account of want of fitness for sea voyages.

Edsall & Wilson.—No vessel of 16 feet ; two of 12 feet when loaded at Montreal—worked at a loss.

9. Can vessels adapted for ocean navigation compete successfully with barges and other vessels usually employed in the carrying trade on the Lakes, Canals and Rivers?

J. Winn, Montreal.—Says that vessels adapted for ocean are too heavy, too costly, and in many other respects wholly unfit for economically navigating Canals, Lakes or Upper St. Lawrence.

T. Rimmer, Montreal.—See answer to question 7.

A. R. McGibbon, Montreal.—Says that much depends on future commercial treaties between the States and the Dominion. Return freights from Europe will be an important element in the consideration of this question of Canal enlargement.

D. E. McLean Montreal.—Is of opinion that sea-going vessels cannot compete with barges.

Board of Trade, Toronto.—Negative answer.

Board of Trade, Ottawa.—Ditto.

Board of Trade, Kingston.—Ditto.

Board of Trade, Toledo.—Answer in affirmative, provided depth of water is sufficient.

Arthur Harvey, W. H. Howland, Toronto.—As soon as Canals are enlarged, suitable vessels will be built to compete successfully with barges and the present plan of transhipment. To prove this they state that grain from Lake Ontario ports is never or seldom transferred at Kingston, but is carried through at lower rates than by transshipping. Rates from Toronto on grain through to Montreal are from 5½c. to 6½c., and 6½c. to 8c. by barge and vessel. This, too, despite the fact that barges are to a certain extent sustained by the towage subsidy providing power for them at less expense than it could be afforded by purely private enterprise, so that barges have really an assistance which steamers have not. If this were removed, steam vessels going through, not only to Montreal, but to ocean ports, would have an advantage over barge transportations, especially as even at equal cost they would be preferred, as not subjecting the cargo to the damage and delay consequent upon transshipment. These two gentlemen also lay before the Commissioners various considerations connected with the question :—Commerce between Nova Scotia and Ontario only awaits the removal by art of the natural obstructions to the St. Lawrence navigation, to assume at once much greater importance than it now possesses, though it is already great and is fast developing.

The Trade of the West must soon assume very different proportions from the present, and will flow where greater facilities are given. Duluth must soon ship as much as Chicago, and it is not much further from Montreal than the latter city. Our own North West Territory must shortly send its millions of bushels towards the sea-board. We should be ready for this commerce, which is even now bursting upon us ; we should offer by our route, low freights, quick despatch, and delivery to tide water without transshipment.

Town Council, St. Catharine's.—Think they cannot compete with such vessels.

A. M. Delisle, Montreal.—Similar answer.

F. S. Holcomb, Toronto.—As a carrier of some thirty years' experience, believes craft can be built suitable for the different classes of ocean, river and lake navigation, and especially adapted for each. For instance, a vessel can be built to navigate the lakes and make Kingston a point of transshipment at a cost, say \$1 per bushel, carrying capacity. A barge can be built to take that cargo from Kingston, better adapted for the trade, at about half the cost. This craft meets the ocean vessel at Montreal, the latter being of any size according to the requirements of the trade, and on the score of expense, can be manned and equipped for half the cost attending the schooner. This also applies to ocean vessels attempting the route, and if a Canal is built of any capacity, these different craft can be built for the various routes and compete successfully with any vessels constructed for a through trade. He does not wish to be understood to say that a class of steam propellers could not be built to run to great advantage to Montreal, and compete successfully with the description of craft named above, but then the size and importance would depend altogether upon the facilities afforded for the navigation of the route in question.

W. H. Smith, Owen Sound.—Answer in negative.

Board of Trade, Windsor O.—Answer in negative.

Chamber of Commerce, Milwaukee.—Ditto.

Allan Gilmour, Ottawa.—Thinks that sea-going vessels would not only cost too much, but would be heavy in frame, masts and rigging, and too difficult to move and control in the rapids, and in entering and passing through the Canals.

Board of Trade, Chicago.—Do not think they can.

Adam Brown, Hamilton.—Vessels can be constructed (on the composite principle) so as to combine ocean and lake navigation, passing from port to port direct, and they ought to carry cargoes at less cost than any system of transshipping involving delays, deterioration, breakage and labor. Emigrants for the west could come by such, and thus lessen rates of freights. Importers in Ontario could get their goods delivered at their own ports at a great saving of expense.

Board of Trade, Hamilton.—Answer in negative.

Edsall & Wilson.—Answer in negative.

A. Wright M. P.—Ditto.

Canadian Navigation Co.—Ditto.

10. Is it your opinion that schooners or other vessels, built to navigate the Lakes or inland waters of the Dominion, can compete successfully in trade to Europe with vessels specially adapted to ocean navigation?

J. W. Winn, Montreal.—Believes that vessels built for inland navigation are quite unfit for ocean traffic. The attempt has been often made, but resulted in so many disasters, detentions, damage to cargoes, &c., as to prevent mercantile men again trying the experiment. He writes from personal experience.

- A. R. McGibbon, Montreal.*—Says that one benefit of Canal extension would be that lake vessels could find employment elsewhere during the winter season as they could pass through.
- Trinity House, Quebec.*—Negative answer.
- Board of Trade, Toronto.*—Ditto.
- Board of Trade, Ottawa.*—Ditto.
- Board of Trade, Kingston.*—Ditto.
- G. Fellers, Mayor of Sandwich, for D. Stuart, Detroit.*—Ditto.
- Arthur Harvey, W. H. Howland, Toronto.*—Vessels now built for lake traffic are not suitable for ocean navigation, except under favorable circumstances, as to weather, &c. In case Canals are sufficiently deepened, vessels built after such enlargement would be so constructed as to be efficient on the lakes, and in at least the ocean-coasting trade of the Continent. Even under existing circumstances lake schooners have made profitable trips to ports on the seaboard: and in some few instances these voyages have not been very long. Last summer, lake schooners were sent from Toronto to Halifax and Pictou, and realized a good profit to owners and charterers both.
- Town Council, St. Catharine's.*—Are confident they cannot.
- A. M. Delisle.*—Occasionally cases have happened of vessels from the lakes proceeding to Europe, but in very few instances, and he may fairly assume that the attempts were not profitable since they have not been repeated.
- F. S. Holcomb, Toronto.*—See page 91.
- W. H. Smith, Owen Sound.*—Answer in negative.
- Board of Trade, Windsor O.*—Answer in negative.
- Chamber of Commerce, Milwaukee.*—Think not.
- Board of Trade, Chicago.*—Same reply.
- Allan Gilmour, Ottawa.*—Answer in negative.
- Board of Trade, Detroit.*—Think vessels adapted to the enlarged Canals could compete with vessels especially adapted to ocean navigation.
- Adam Brown, Hamilton.*—Screw vessels could compete from Liverpool to Chicago direct, and *vice versa*, provided the Canals are enlarged.
- Board of Trade, Hamilton.*—Answer in negative.
- Erie & Ontario Ship Canal Co.*—If the Welland and St. Lawrence were enlarged, large vessels would be built for that purpose.
- Edsall & Wilson.*—Answer in negative. The larger the ship, the less expense in proportion to tons carried.
- Canadian Navigation Co.*—Answer in negative.

11. Are there any Harbors on Lake Ontario which have sufficient water to accommodate ocean-going vessels drawing 16 feet of water or over?

Board of Trade, Toronto.—Answer in affirmative.

Board of Trade, Ottawa.—Answer in negative.

Board of Trade, Kingston.—Only know of Kingston.

Town Council, St. Catharines.—None.

F. S. Holcomb, Toronto.—Oswego, about 11 feet, and, with the exception of Toronto, Niagara, Hamilton and Kingston, 10 feet may be considered the average capacity of harbors.

W. H. Smith, Owen Sound.—None.

Board of Trade, Chicago, and Erie & Ontario Ship Canal Co.—Sackett's Harbor and Niagara River. (Latter quote report of Mr. Shanly M. P. on the subject of Niagara.)

Board of Trade, Detroit.—Not at present; but the St. Clair Flats are about being deepened to accommodate vessels of 16 feet. The harbors must soon be improved to same extent.

Adam Brown, Hamilton.—Hamilton can accommodate vessels drawing up to 20 feet, provided Burlington Bay Canal is dredged.

Board of Trade, Hamilton.—None with the exception of Kingston.

Edsall & Wilson.—No artificial harbor of 16 feet. Canadian side, two of 10 feet. American side, three of 14 feet.

Canadian Navigation Co.—12 feet maximum. Vessels drawing only 10 feet should enter in stormy weather.

LACHINE CANAL.

12. Do you find the lower entrance lock from the Canal Basin sufficient for the purposes of the trade, or is it attended with delay—and, if so, to what extent?

T. Rimmer, Montreal.—The lock is altogether inadequate to the requirements of the trade. Last month (November) it was not uncommon to find grain detained between the warehouses and harbor of Montreal for several days—sometimes as long as it is required to bring it from Kingston to Montreal. For example, a barge delivered her load in the harbor, and was sent to the warehouse for another load; locking up, loading, and locking down would take three days—a difficulty that should be remedied at any cost.

J. W. Winn, Montreal.—Entrance insufficient, and often causes delay; the growing trade makes need for improvement constantly greater.

G. E. Jaques, Montreal.—Lock insufficient; usually takes 6 or 8 hours instead of 30 minutes.

A. M. Delisle, Montreal.—Thinks entrance sufficient, but not used as it should be. Chief cause of delay is time taken to haul vessels in and out, and it frequently arises from fault of craft. Large vessels of 18,000 or 20,000 bushels are as heavy as a sea-going vessel, and yet they only carry two or three men as crew. During a high wind they can only be managed with difficulty. Facilities, either steam or water power, or horses are required to haul in and out. In this way present capacity would be largely increased. Fault is often on part of lockman also in refusing to lock a single vessel.

Board of Trade, Windsor.—Recommend that the Lachine be enlarged to the same dimensions as the Welland—14 feet × 45 × 275.

Board of Trade, Hamilton.—Believe the lower entrance lock to be wholly insufficient. Great delay is occasioned by barges being drawn by hand in place of horse power; with proper arrangements for passing the barges through the two lower locks, steam vessels might go through in 30 minutes, in place of taking, as at present, from two to three hours and upwards.

Edsall & Wilson.—Sufficient under existing circumstances, but another entrance requisite in case of the enlargement of the Welland.

A. Wright, M. P.—Says that the removal of a shoal at the lower entrance is advisable.

Canadian Navigation Co.—In its present condition it is altogether inadequate to the trade. Corroborate what Hamilton Board of Trade say respecting Mills.

13. Would it be advisable that the former entrance to the Canal should be re-opened, and the locks enlarged so as to admit a second entrance to the Canal?

J. W. Winn, Montreal.—Re-opening old entrance of Canal, with enlarged locks, would be of great advantage, especially if the Canal were continued theretrom through the

space now vacant in centre of unfinished wharf (Windmill Point Wharf) to the lower end thereof. This would give on each side wharfage of great length, admirably adapted both for use of vessels navigating Canal, and for discharging the numerous barges and schooners bringing fish, coal, salt, &c., from Quebec to the lower ports, which now at times grievously overcrowd the ship harbor. The Harbor Commissioners would doubtless construct the necessary wharves and deepen the channel between them, so that the new locks would alone create expense in connection with Canals.

J. E. Jaques, Montreal.—Answers in affirmative.

A. R. McGibbon, Montreal.—Always thought it a mistake to have closed former entrance, and recommends that it be re-opened, if only for small craft.

D. E. McLean & Co., Montreal.—Says there ought to be another entrance—one to let down and another to lock up, and adds that the Canal accommodation above Black's bridge is far too small.

Board of Trade, Ottawa.—Answer in affirmative.

Hugh McLennan, Montreal.—Ditto.

Town Council, St. Catharine's.—Ditto.

Hamilton Board of Trade.—Recommend enlargement of locks, as the present Canal is too small for the increasing want of traffic. The locks should be of the same size and depth as the Welland, and enlarged to the extent of three times its present width, or another Canal built. The stone pier outside the Canal at Lachine should be extended a 1,000 feet to render the approach to the Canal as safe as it ought to be. Mill owners should be compelled to find motive power elsewhere. Slack water navigation is requisite for Canal.

A. Wright, M. P.—Favors enlargement of locks.

Canadian Navigation Co.—Recommend re-opening of old Canal and enlarging locks, besides other improvements.

In reference generally to the St. Lawrence Canals.

G. E. Jaques, Montreal.—After giving answers to many queries, goes on to say that there are other improvements needed to retain or extend the Western trade by the St. Lawrence route. The insufficient space for receiving from the city, or Atlantic shipping, merchandize for the West, as well as for landing freight from the same has been severely felt for years; and yet the Board of Works has given no attention to this all important question. Some years ago a tract of land below the Wellington Bridge on the north side of the Canal, was bought from Hon. J. Young, expressly for extended accommodation for freight; but most unaccountably it has not been made use of, though the outlay of a few thousand dollars would have achieved the object in view. The want of this accommodation has been severely felt by vessels carrying rolling freight, as they lose some two days when they ought to be only four hours discharging—in this way at least 30 per cent. being added to the expenses of the trip.

T. Rimmer, Montreal.—At close of letter, insists on the great difference between the Buffalo and Oswego requirements on the one hand, and those of Montreal on the other. In the former everything goes into store; in the latter the bulk of the grain goes aboard ship, and barges must be adapted to that end. This quite alters the nature of the business and the style of the craft required.

Montreal Corn Exchange Association.—Refer emphatically to the great advantages which the improved navigation of the St. Lawrence would present—the lower rates of freight, and shorter route to a seaport which it affords to the Western grain trade, as compared with the route via Buffalo or Oswego.

Hon. R. B. Dickey, Amherst, N. S.—See answers to questions respecting Bay Verte.

Board of Trade, Toledo.—Regard the efforts of the leading men of the Dominion to enlarge their transportation routes as of the greatest importance to all the States bordering on the chain of Lakes; as an indication of the amity which should exist between different sections of the continent, which it is for the interest of all to strengthen. And while wishing abundant success to such efforts, they do it all the more earnestly because they see as likely to grow out of these exertions a friendship of a commercial and social character, which may, at no distant day, bind together as one all the States of the Union and Dominion.

Town Council, St. Catharine's.—Suggest to the Commissioners in concluding their letter, that the improvements required for the development of the trade of the great West with the seaboard are questions of the highest importance to the Dominion, and should be prosecuted at the earliest possible period that the state of the finances permit. With the Welland enlarged, and the St. Lawrence deepened to 12½ feet, the wants of our trade would be satisfied without the construction of new works of doubtful utility.

Board of Trade, Ottawa.—Are advocates of Canal enlargement, expansion and development, as they are persuaded that these are in reality the true channels through which agricultural produce must pass, and that their tendency is to develop the resources of the countries to which they give access; but are of opinion that attention should be directed to the construction of the *main lines* viz; *Sault Ste. Marie, Ottawa and Bay Verte Canals*, before anything in the way of meddling with existing structures is done, and that all these great lines should be made of the capacity laid down as that of the Sault Ste. Marie, except the Bay Verte, which ought to have at least 16 feet on the sills of its locks.

Board of Trade, Hamilton.—After recommending enlargement of Welland and St. Lawrence Canals, go on to say :—

With our Canals thus enlarged steam and sail vessels of correspondingly increased dimensions could engage in the trade between the Upper Lakes and Montreal, and would also at the same time be found admirably adapted for embarking in the trade between the Upper Lakes and the Lower Provinces, carrying flour and provisions on the downward trip and returning with coal, fish, &c.

The capacity of such vessels for the proposed increased sized locks would be similar to those engaged on the American side on the Upper Lakes, viz : 230 to 250 feet in length, 30 to 34 feet beam, with a draught of water of 12 feet, and carrying capacity of 30,000 bushels of wheat. At present first-class propellers of 450 to 500 tons, and carrying 15,000 bushels of wheat through the Welland from Chicago to Montreal can afford to carry at a freight of 12½c. per bushel, and even *do well* at that, and if the locks were enlarged to the suggested dimensions, then steam and sailing vessels of a carrying capacity of 30,000 bushels of wheat, could advantageously engage in the trade between the Upper Lakes and Montreal ; and a reduction in the present rate of freight might easily be anticipated to the extent of at least 12½ percent. By steamers of the proposed size engaging in the trade between Montreal and the Upper Lakes, not only would the large bulk of the produce in the basins of the great lakes find its way to tide water by the St. Lawrence, but return cargoes of iron, salt, crockery and other heavy goods would find their way into the interior by the same route. Iron is now received from ocean ships in Quebec and laid down in Chicago for \$3.50 per gross ton by water even with our present imperfect facilities, and when it is understood that the cost of haulage on a railway for the same distance is at least \$10 per ton it appears impossible for the rail to compete successfully with water. Indeed it may be laid down as a rule that the two parallel iron bars cannot compete in an economical point of view with our magnificent system of water communication in the carrying of produce and other heavy freight between the Upper Lakes and the natural terminus of ocean navigation in the St. Lawrence—the city of Montreal. In the race of competition which we have inevitably to run, it becomes of paramount importance to avoid all unnecessary transshipments, and by grasping every natural advantage within our power, resolve with heart and hand to place the St. Lawrence route in a position of unquestionable superiority to that of Oswego and New York, and thus render our own unrivalled inland waters the great highway to Europe.

The people of the Dominion owe it to themselves as the guardians of a noble heritage, to see that the American people on the shores of the Great Lakes have every possible facility given them freely, to use the Welland, St. Lawrence and Lachine Canals on the same terms as our own people with a view to assist in developing the enormous produce traffic that annually rolls its increasing volume from the West to the Atlantic. No unwise legislation, should, in imitation of the crude fiscal policy of our neighbors, be permitted to check the growth of a commerce that is destined to eclipse in magnitude and grandeur all the realizations of the past, and all the most sanguine anticipations of the future.

Mr. Patterson, Montreal.—Also refers, like Mr. Jaques, to the want of freight accommodation at Montreal, and makes some suggestions on this point.

Hon. J. Young.—Canada, in creating the Dominion, has assumed a Continental attitude. She desired that her jurisdiction should extend to the Pacific, and a great responsibility is thereby incurred to do her part in developing to the fullest extent the vast water communications from the heads of Lake Superior and Michigan to tide water. Not only should this be done, but a policy should be initiated, by which, within the next ten years, the Eastern Provinces and the Eastern States should be united with the Pacific Coast by a northern route of railway, and thus unite British Columbia at the West with all the British Provinces at the East, under one Government.

ST. LAWRENCE RIVER AND RAPIDS.

1. Can you give the Commissioners any information as to the nature and locality of the obstructions which exist in the channel of the River St. Lawrence from Prescott to Montreal, for the downward passage of vessels independent of the Canal ?

G. E. Jaques, Montreal.—Only refers to the report of Messrs. Maillefert, and Raasloff, published by the Government in 1854.

Montreal Corn Exchange Association.—Quote same report—

“It is practicable to open a channel of sufficient width and depth for vessels drawing 10 feet by removing the obstructions and this can be done for not more than £180,000.”

Assuming this to be correct, it will be desirable to give the same depths of water in the Canals ; but the immediate necessity is not imperative.

Board of Trade, Hamilton.—Say there is an obstruction in the middle of the Gallops Rapids ; one at the entrance of the upper end of the Beauharnois Canal ; two shoals in Lake St. Louis ; another at the first light-ship above Lachine, and the other between the first and second light-ships—all of which ought to be removed. A light is very much needed on St. Amicette's shoal in Lake St. Francis.

Canadian Navigation Co.—Refer to report of Maillefert & Raasloff.

2. Can you offer any suggestions to the Commissioners as to the best means of improving the navigation of the river itself, irrespective of the Canals ?

Board of Trade, Hamilton.—See question 1.

Canadian Navigation Co.—Think a channel admitting vessels of 8 feet would answer ; but refer to report of Maillefert & Raasloff on the subject.

For vessels of 8 feet the only improvement required would be the Coteau Rapids, Raceo, Hays, Shoal, Split Rock, a Shoal at Min's Island below Lachine Rapids, and the St. Lambert Shoal below Victoria Bridge. With the exception of Coteau Rapids and Split Rock, the cost would be small, as the obstructions are in almost slack water.

For the safety of vessels during fogs, and snow storms, fog signals are very much required, viz. :—

A gun at Nine Mile Point.

A bell at the Ducks.

A gun at Long Point.

” ” ” Toronto.

Bell at Burlington Bay.

Gun at Port Dalhousie.

In case of a channel of 8 feet, many light draught vessels as well as the passenger steamers would run the rapids, and thus greatly relieve the Canal.

ST. LAWRENCE RIVER—QUEBEC AND MONTREAL.

1. What is the available depth of water in the navigable channel at the lowest summer levels?

J. W. Winn, Montreal.—About 19½ feet, which could quickly be made 20.

Trinity House, Quebec.—19 feet, that is taking the lowest level on the flats of Lake St. Peter at 10 feet.

C. L. Armstrong, Dalhousie.—20 feet.

Board of Trade, Quebec.—18 feet.

Edsall & Wilson.—See question 2.

William Rae, Quebec.—For steamships, 17.6. For sail, 18.

2. At what points in the river do the obstructions exist which prevent vessels passing drawing greater depth of water?

J. W. Winn, Montreal.—The small obstructions to a complete channel, 300 feet wide and 20 feet deep, are fully shewn in Mr. Page's report to Public Works' Department; shortly after its publication the chief defect, that near Point aux Trembles, was removed by the Harbor Commissioners who ought to remove the others.

Trinity House, Quebec.—Montreal, Point aux Trembles, Flat Island, Lake St. Peter, Cap à la Roche and Cap Charles.

C. L. Armstrong, Dalhousie.—At Cap à la Roche, owing to a small shoal or poulier in the centre of the channel, which necessitates a short turn to avoid the large boulders lying to leeward with a strong ebb tide. With flood tide there is no danger. Further on he remarks:—

Obstructions are generally caused by boulders, &c., and are always found where there have been ice jams during the winter—the weight of ice embedding them in the clay, at such places as Longueuil, from Point aux Trembles to Varennes, Isle des Sauriers prevents the ice from going down the Vercheres channel. There are frequent jams from Lavaltrie to Lanoarie and again from Point du Lac to Port St. Francis, occasionally at Champlain, then from Leorand to Cap à la Roche and Grandines and through the Richelieu.

Board of Trade, Quebec.—Point aux Trembles, Flat Island (near Lavaltrie), Lake St. Peter, Cap à la Roche, and Cape Charles.

Edsall & Wilson.—Obstructions arise from deposits from the Ottawa, and streams from the south side, and will require a yearly outlay of public money. Quebec is the true place for large vessels.

W. Rae, Quebec.—Point aux Trembles, Varennes, Lanaorai, Lake St. Peter, Provencher Shoal, Cape Charles and La Roche.

3. Is it, in your opinion, practicable still further to increase the depth of the river by dredging, and to what extent could this increase be carried ?

J. W. Winn, Montreal.—Believes the increase is only a matter of expense, and refers to Mr. Page's estimate of \$800,000 for making a channel 300 feet wide and 22 feet deep—a work very desirable.

A. R. McGibbon, Montreal.—Should be 24 feet at least.

Trinity House, Quebec.—Practicable, but very expensive.

C. L. Armstrong, Dalhousie.—The channel may be dredged to any extent—the bottom being blue clay.

Board of Trade, Quebec.—Think it practicable to increase depth of river by dredging at places named, question 2, to the extent of four feet, but with this it would be necessary to combine the removal of boulders at Cap à la Roche and Cape Charles ; but no additional dredging in the river would be of much service without deepening the water in the harbor of Montreal.

W. Rae, Quebec.—Quite practicable to increase depth to 24 feet.

4. Would it be a great saving or economy in the carriage of freight, if the river were deepened sufficiently to enable vessels to pass up and down drawing 24 feet of water ?

J. W. Winn, Montreal.—Thinks deepening to 22 feet should be first completed, and further improvements subsequently carried to such an extent as the wants and prospects of trade should require sooner or later ; the channel should be deepened to 24 feet and widened to 400 feet.

A. R. McGibbon, Montreal.—Answers emphatically in the affirmative.

Trinity House, Quebec.—It would certainly be an economy, but vessels drawing 24 feet and of proportional tonnage, would find it difficult to navigate the narrow and crooked channels between the two ports.

C. L. Armstrong, Dalhousie.—The larger the vessels, the cheaper the freight.

Board of Trade, Quebec.—As a general rate, rates of freight diminish to some extent in proportion to increase in size of vessels ; as large vessels can be sailed at less expense than small ones.

Adam Brown, Hamilton.—Certainly, the reduction of cost of transit would be in proportion to the increased size of vessel, in proportion as the river is deepened.

W. Rae, Quebec.—Without doubt.

RIDEAU CANAL.

1. Is it your opinion that the business of this Canal is of sufficient importance to warrant any outlay for improvement ?

James Shaw, jr., Smith's Falls.—Answers in the affirmative.

B. Tett, M.L.A., Ontario.—Is of opinion that the business would warrant an outlay for improvements. The Canal passes through an old and well settled country, and supplies the cheapest mode of transport for merchandize to and from Kemptville, Merrickville, Smith's Falls, Perth, Newboro', and other places of business. It should also be remembered, he adds, that the Rideau Canal was given over to the Canadian Government upon the understanding that the Canal should be kept open, and in proper repair.

Hiram Easton, Merrickville.—Thinks Canal pays, inasmuch as it supplies manufacturing facilities to villages along its route ; should it happen that the Canal were closed, a large number of enterprizes would be ruined, and a large amount of wealth unavailable.

R. Kernahan, Kemptville.—Says the Canal is necessary for the trade of the country.

A. R. McGibbon, Montreal.—Does not think there is sufficient trade to warrant any large outlay.

W. H. Fredenburgh, Westport.—Recommends repairs.

J. D. Slater, Superintendent, Ottawa.—Answers in the affirmative and goes on to say, that the present trade is chiefly local. For instance, Ottawa and Kingston consumes in round numbers, 100,000 cords of wood annually, and of this quantity about $\frac{1}{3}$ is procured from the Rideau Canal ; and were it not for this supply, the consumer would have to pay at least one dollar more per cord. Accompanying Mr. Slater's letter in reply, are returns of the business of this Canal for the year ending the 30th June, 1870. From the return of the Ottawa Office we gather the following facts :—

	tons.	\$	cts.
Tonnage of vessels up	28,703	280	76
" " " down	25,925	213	49
Property tons up	28,350	1,225	36
" " down	30,519	1,202	21
Passengers up	391	10	03
" down	237	5	93
Total	628	113,497	\$2,937 78

Return from Kingston Mills shows—

"	"	52,599	399 11
"	"	62,547	528 53
"	"	107,818	2,184 71
"	"	2,665	167 44
"	"	690	17 26
"	"	633	16 04
		1,323	225,629
		\$3313	09

From these returns we find principal tolls collected on Salt, Wheat, Coal, Firewood, Floats, Traverses, Railroad ties, Shingles, Sawed Lumber, Saw-logs, Pork, Merchandize, (class 6.)

John Chaffey, Newboro.—This Canal is no doubt indispensable to the country through which it runs. A Cleveland Company have made a contract for carrying through it 20,000 tons of Iron ore from Hull to Kingston, during 1871, and the tolls on that quantity will amount to \$4,000. The trade of the Crosby Iron mines is increasing, and must increase to an unlimited extent.

Board of Trade, Ottawa.—If all obstructions were removed, business would be increased fifty-fold.

Board of Trade, Kingston.—Business fully warrants a considerable outlay,

John Manion, Perth.—Judging from the development of the country, north of the Rideau, the trade must increase very largely within the next few years; a most serious loss to this part of Canada most follow, if the Canal should be allowed to go out of repair.

Perth Town Council.—Recommend considerable outlay for improvement as the Canal is indispensable to the prosperity of that part of the country through which it passes, and that the present traffic might be greatly increased by opening up the water communication between Perth and the Rideau. Lumber, Ore and Merchandize would then find their way by the Canal, instead of by the present route.

A. J. Russell, Ottawa.—It seems to him, that as regards the purpose for which this Canal was originally constructed, viz: the transport of troops and military stores—a railway from Montreal to Ottawa, and another as now proposed, to be chartered from the Canada Central Railroad, at Carleton Place, to the Peterborough Railroad, would answer best.

Allan Gilmour, Ottawa.—Recommends outlay for improvement of the Canal to a small extent.

W. K. Dickinson, Manotick.—Corroborates other writers respecting the business of the Canal, and gives a detailed statement of the manufacturing establishments at present situated on the route—the increase of which, as well as the successful prosecution, depends in a great measure upon the efficient working of the Rideau:

MILLS ON RIDEAU RIVER.

Flour Mills.....	17
Carding and Fulling Mills.....	4
Saw Mills.....	12
Oatmeal Mills.....	2
Shingle Mills.....	5
Foundries and Machine Shops.....	3
Stave Factories.....	2
Cloth „.....	3
Sash and Door Factories.....	2
Match Factory.....	1
Malleable Iron Works.....	1
Tannery.....	1
Total.....	53

In addition to these, are numerous other mills situated at short distances, on either side of the route, whose interests are intimately connected with the navigation of the Rideau.

These establishments are wholly dependent upon a regular and sufficient water supply to the various mill privileges, for which the Government have undergranted leases, and receive an annual rental. Under these circumstances many persons have made heavy investments in good faith. It is, therefore, obviously unjust on the part of the Government to allow this route to become unreliable, as indeed has been the case for some time past.

The mineral productions immediately bordering on the Canal, especially on the Western shore, between Oliver's Ferry on the Rideau Lake and the City of Kingston, are varied and important, yielding iron, copper, lead and phosphate of lime.

The Hull Iron Mines, near Ottawa, have been recently purchased by an enterprising Ontario Company, who intend transporting their yield through this Canal on its way to Cleveland.

G. *Chaffey & Co., Kingston*—This Canal is of great value to the country through which it passes, including the cities at either end, and its traffic is likely to increase largely in years to come.

A. *Wright, M.P.*—Answers decidedly in affirmative.

2. Is the Canal sufficient for the present trade passing through it?

James Shaw, jr., Smith's Falls.—Yes; and for twice the trade.

B. *Tett, M.L.A., Ontario.*—Believes that had the Canal been kept up in the same state of efficiency as was the case when it left the hands of the Ordinance Department, it would have been sufficient for present trade.

Hiram Easton, Merrickville.—Answers in the affirmative.

W. H. *Fredenburgh, Westport.*—The Canal would be sufficient for present trade, if the water could be kept up to navigation height.

Mr. *Slater, Superintendent.*—Sufficient for present trade.

Mr. *Chaffey, Newboro'.*—Same answer.

Board of Trade, Ottawa.—Ditto.

Board of Trade, Kingston.—Yes, if properly repaired and attended to.

John Manion, Perth.—Same answer.

Perth Town Council.—Same answer.

A. J. *Russell, Ottawa.*—It seems generally sufficient for the trade passing through it.

Allan Gilmour, Ottawa.—Yes; and for much more.

W. K. *Dickinson, Manotick.*—Ditto.

3 Are there any obstructions to the navigation of the Canal that can be easily removed?

James Shaw, jr., Smith's Falls.—Only aware of obstructions arising from scarcity of water during the summer.

B. Tett, M.L.A., Ontario.—The greatest obstruction is at the Isthmus which passes through a Canal cut between the Upper Rideau and Mud Lakes—a distance of about $\frac{3}{4}$ of a mile in length. For some years past the dam at the Narrows lock has been leaky, as well as the upper sill of the Isthmus. On this account the water at the short cut at the Isthmus during dry summers has lowered to nearly $\frac{1}{2}$ of its first or usual depth. Consequently, boats have been able to pass only half laden, the larger boats being often unable to navigate the Canal. All this may easily be remedied by making the dam at the Narrows tight, the upper sill of the Isthmus lock secure from leakage, and by digging away and blasting this short piece of Canal eighteen inches or two feet—about two-thirds being rock and one-third clay.

Hiram Easton, Merrickville.—Recommends dredging portion of Canal from Kingston Mills to Kingston—(6 miles), and buoys or signal posts where the channel is very narrow.

Two piers at entrance, of Newboro' Cut, from Little Rideau Lake, should be repaired; Cut should be either lowered or lakes dammed for reservoirs to supply water during dry season. Cuts at Killmanoch, Merrickville, Burritt's Rapids, require cleaning out. Damming of some of lakes at head of River Tay is advisable; Big Rideau Lake depends chiefly upon this river for water.

Signal boat is necessary at head of Land Island, below Bickett's Bridge, as it is dangerous on dark nights.

R. Kernahan, Kemptville.—Also refers to want of water during dry season.

W. H. Fredenburgh, Westport.—Same answer, last season water only 30 to 36 inches in Newboro' Cut.

Mr. Slater, Superintendent.—The most serious obstructions have been the lowness of the water in the latter part of the season, and the floods in the spring. To remedy this, dams are being built at the outlet of lakes, the head waters of tributaries of the Rideau, to retain spring floods until the season of low water. The past season, however, has been peculiar, and may not occur again for a long time.

J. Chaffey, Newboro'.—The reservation of water to supply Canal is very much neglected, but it would not take much money to remedy the difficulty—what is chiefly required is the attention of some one of practical experience.

Board of Trade, Kingston.—There are several places where the water has been found too shallow—these should be deepened.

Perth Town Council.—Similar answer.

A. J. Russell, Ottawa.—No doubt much could be done to increase the depth of water at dry seasons, when vessels are obstructed now and then, by damming the lakes at its sources, so as to reserve part of the surplus waters of spring. If that be not done, then the draft of boats built for the Canal should be diminished, a necessity it is desirable to avoid, as gun boats might have to pass over it and the Ottawa in the event of war.

W. K. Dickinson, Manotie.—Many minor obstructions, but they can be easily removed. For instance, the accumulations of sunken logs, loose stones and other debris in the cuts forming approaches to many of the locks; rocky Shoals on the route give a good deal of trouble, and should be removed by blasting or an increased supply of water.

4. Is the supply of water from the summit sufficient for the present requirements of Navigation on the Canal? If not, what means can be adopted to increase it?

James Shaw, jr., Smith's Falls.—The supply of water is insufficient at times, and to increase it, it would be advisable to draw a supply from the numerous lakes which lie contiguous to the Canal and communicate with it. This should be done by the erection of dams at the outlet of these lakes, so as to prevent the waste of the water.

B. Tett, M. L. A., Ontario.—The supply is insufficient. A reservoir of water above the summit level, may easily be made for the Kingston end, by constructing dams at the outlets of Mud Lake and Canoe Lake, in the township of Bedford, and at the outlets of Loughboro' and Long Lakes, in the township of Loughboro'. In this way three or four feet of water may be saved to be let down, when required in the dry season from Devil, Mud, Birch, Desert, Canoe, Otter, Knowlton and Great Mud Lakes, embracing altogether an area of about 40 miles by 30; dams in an inefficient state exist in all the places mentioned. Such a reservoir, in his opinion, cannot injure any one, or create new claimants for damages.

R. Kernahan, Kemptville.—Suggests, as the best mode of supplying sufficient water during the dry season, damming the lakes on the upper part of the river Tay which falls into the Rideau below Port Elmsly. Then there would be nothing wanted but to get an increase of water for the lock at the Narrows and the locks at Newboro', and this could be done by draining the West Rideau Lake and one or two other small lakes. Some years ago this gentlemen measured these lakes, and was examined on the subject by a Committee of the Canadian H. A., which finally came to the conclusion that the Canal would be kept supplied with water in the way suggested.

W. H. Fredenburgh, Westport.—As the supply of water at summit level is insufficient, we recommend putting the locks and gates at Newboro', and the Narrows in a good state of repair, and raising the dam at outlet of West Rideau one foot higher. Water should be brought from Bob's Lake into the West Rideau, which can be done at a small expense after water is raised in that lake as contemplated by the dam now building at its foot. Then the surplus water can be held in the West Rideau till midsummer, and let into the summit. This would supply the summit the remainder of the season.

Mr. Slater, Superintendent.—The supply of water at summit is insufficient. If the dams were enlarged and the water retained until about August, the navigation could be maintained for vessels that do not draw more than $4\frac{1}{2}$ feet of water; but several vessels require greater depth and have to be withdrawn when the water begins to fall. It has been suggested that the surplus water from Bob's Lake could easily be diverted to the West Rideau and retained in that lake, which is the chief reservoir of the summit—this would require to have the dam raised at the outlet.

J. Chaffey, Newboro'.—The greatest difficulty occurs in the autumn at the Newboro' Cut, on the summit level; here the water runs and is very much wasted each way, par-

ticularly at the Isthmus. The defects in the upper sluices of this lock will fill it every 15 minutes, besides the waste that takes place through the lower gates—reducing the water in the Cut to 2 feet 7 inches at end of past season. Simply attention and a little expense at these points, together with holding all the freshet in the spring that the works will admit of, would obviate the difficulty.

Owners of mills and manufactories might object to tapping Bob's Lake, and running the water thence to the Upper Rideau. A dam, however, ought to be built on Long Lake, for it would reserve a large quantity of water to fall into Bob's Lake and further the interest of that locality as well as benefit the Canal. As he is himself interested in this water course, he will propose to the Government to build this dam free of expense. No person would sustain any damage thereby.

Then, as to the part on the Canal from the summit level to Kingston, there are two or three things required to improve it. Mr. Rowan, of the C. L. D., surveyed in 1864 the watershed (80 square miles) emptying at Bedford Mills and Crosby Mills into Mud Lake, forming the chief supply to the Canal descending to Kingston. He (Mr. C.) knows that the damage arising from the construction of two dams to reserve these waters would be very trifling, and he proposes to build them at his own expense in a substantial manner. For two months in the year this part of the Canal is very much in want of water. Again he would rid the Canal about Lower Brewer's Cut of a few sunken logs, traverses and pieces of cord wood at the bottom.

Board of Trade, Ottawa.—Not on Kingston side of summit level. The rain and snow-fall should be retained in the lakes as the sources of supply—this can be easily done on account of the peculiar topography of the district.

Board of Trade, Kingston.—Simply refer to insufficiency of water.

John Manion, Perth.—Present supply of water is not sufficient for present requirements of the Canal, but the supply for the coming season will be very much increased by the erection of the dams at the foot of Bob's Lake and Crow Lake, both of which will be completed within the next two weeks. Bob's Lake will give a surface of about 22 square miles of an average depth of eight feet summer level; Crow Lake about 3 square miles and an average depth of 18 feet. Two other dams would largely increase the supply of water—one at the foot of Long Lake, in Hinchbroke Point; the other at Elbow Lake. A large addition to the supply west of Newboro', could be obtained by erecting a new dam at Buttermilk Falls, at the foot of Devil Lake, and another dam at the foot of Mud Lake on the same stream; and further by renewing the dam at foot of Canoe Lake.

Perth Town Council.—The supply of water has been insufficient, but it is believed that the dams that are now being built on the head waters of the Tay will meet the exigencies of the Canal.

J. M. Cromwell, P. L., Surveyor, Perth.—Refers to north portion of Canal extending from Poonamalie Lock to Ottawa, which is supplied by the Lower Rideau Lake, and makes the following suggestions:—

Poonamalie Dam, which was permanently raised to 18 inches, in 1865, should be maintained to a sufficient height, and then all difficulty as to water supply would end—the maximum height is now reached without causing extraordinary damages. Contracts have been recently entered into for dams at the bottom of Bob's and Crow Lakes, both of which will be very substantial and efficacious. It will, however, perhaps yet be necessary to dam the outlet of Long Lake, which will give perfect control of all the waters of the Tay, and probably fully supply that part of the Canal through the whole summer and autumn.

It may also be necessary, in order to receive full benefit from these dams, to purchase from Mr. John Hony the entire control of Bob's Lake, which is now his reservoir for his mills. Amount already granted is fully sufficient to pay for dams now being completed, and the damages that may be caused by them, while \$3,000 will probably buy from John Hony the control of the lake. In short, \$16,000 will no doubt cover every emergency in connection with the water supply from the Tay.

W. K. Dickinson, Manotick.—The past supply has not been always sufficient, and this may be attributed in some degree to the want of proper care in not retaining in the several levels as much of the spring water as could be saved with safety to the works. There has also been a want of an efficient system of heightening the dams, &c. Steps in the direction of remedying this have been taken by the Department of Public Works during the past season, and favorable results are expected from this improvement, so far as affects the supply of water from the summit in the direction of Ottawa. Several inexpensive stop-log dams are being erected at the outlet of a series of lakes which discharge into the Tay. In this way a reserve of water will be retained. Similar provisions of nature also exist, and can be utilized at a small expense so as to afford similar increase to Kingston end. In this connection Mr. Dickinson refers to Mr. Chaffey, whose opinion is already given.

G. Chaffey & Bro., Kingston.—Corroborate what Mr. Chaffey says.

Edsall & Wilson.—Corroborate what precedes, respecting deficiency of water and necessity for dams.

SAULT STE. MARIE CANAL.

1. Of what interest to the commerce of the Dominion would be the construction of another Canal between Lakes Huron and Superior on the Canada side ?

D. E. McLean & Co., Montreal.—Recommend the construction of this Canal, and express the opinion that the Home Government should defray at least half the expense.

A. Waddington, (lately of British Columbia.)—Passed through the Canal several times last summer and collected a variety of information showing the insufficiency of the present work ; and the urgent necessity for a new one on the Canadian side. On the latter subject he says : The ground on the Canadian side seems to have been destined by nature for that purpose—indeed, in an engineering point of view, the Canal ought to have been built there in the first instance.

On the upper side it would open into a secure bay, very different, in that respect, from the entrance to the American Canal, while at the lower end the communication with the river would be deep, commodious and secure. The ground which has been surveyed and sounded consists of gravelly earth and boulders, and would present no difficulty, unless it be from the presence of water ; the Canal would be $\frac{1}{3}$ shorter than the present one. Therefore, with the much greater safety and convenience of its approaches, its greater depth and width, and the advantage of greater speed in getting through, in consequence of its being $\frac{1}{3}$ shorter, this Canal would have every advantage over its rival. The Canadian trade on Lake Superior at present is small, and of very recent date, and has been so far chiefly with Thunder Bay, Silver Islet and some light business with the fishing station at Point aux Pins, the Michipicoten Station, the fishing station near St. Ignace Lighthouse and Nepigon Bay. But besides provisioning the Volunteer force at Fort Garry (likely to remain there for some years) the whole of the trade of the Red River Settlement (that of the Hudson's Bay Company included) which now passes through Minnesota will naturally take this shorter route, whilst the arrival of emigrants for the North West, and the speedy settlement of that vast territory, will soon cause such an increase in the traffic on Lake Superior as altogether to change the present state of things. A railway between Fort Garry and Nepigon Bay must be accomplished in the course of three or four years, and then the whole traffic of the North West will be poured on Lake Superior. Under these circumstances we should take steps to control this trade, or else our commercial connection with the North West would be at best a matter of sufferance on the part of our neighbors ; if indeed, we escaped the repetition of certain outrages in the memory of every one. For these reasons a Canal of our own is imperatively required.

Board of Trade, Ottawa.—The advantage would be unrestricted access to Lake Superior, with a coast line of 1,200 miles, and to our newly acquired territory of Red River, together with better facilities for the descent of the grain trade of the North West by the Canadian route.

Board of Trade, Kingston.—The commerce of the Dominion is well enough served by the present Canal, if its permanent use can be guaranteed ; otherwise a new work on the Canadian side would be desirable.

F. S. Holcomb, Toronto.—This Canal should be built both for political and commercial reasons, especially as the location on the Canadian side is most favorable.

A. J. Russell, Ottawa.—A Canal on the Canadian side would be of very little or no interest to the commerce of Canada ; but we must consider the feeling of the Americans towards us, and the probability of their shutting their own Canal, at any moment against us,

Town Council, St. Catharine's.—Recommend immediate construction of new Canal.

F. S. Holcomb, Toronto.—This Canal should also be built on the Canadian side of the river, both for political and commercial reasons. The location on our side is very favorable.

W. H. Smith, Master Mariner, Owen Sound.—Thinks the increasing fleet on Lake Superior would pay two Canals.

Board of Trade, Windsor, O.—Think that it is of the greatest importance to the Commercial interests of the Dominion that a Canal should be at once constructed on the Canadian side, of dimensions equal to those recommended for the Welland, so as to make Canada independent of foreign caprice.

Allan Gilmour, Ottawa.—Does not think that the commerce of Canada requires this Canal as yet, but it may be necessary to have communication with Lake Superior through Canadian soil.

Board of Trade, Guelph.—Favor new Canal through Canadian territory.

Adam Brown, Hamilton.—After referring to necessity existing for a Canal through Canadian territory, goes on to say that it would also have a tendency to increase our revenue; as there is a large and soon will be an increased carrying trade from the shores of lake Superior, at present principally in the hands of Americans, and likely to continue so unless the work is accomplished.

Board of Trade, Hamilton.—Advocate the construction of the Canal because it would be the gate to the boundless regions on the north shore of Lake Superior, so rich in mineral resources, which must ultimately employ a very large population. Looking, therefore, to the early development of the natural wealth of that region, it would be impolitic for the Government to allow such a commerce to be subject to the caprice of any foreign power.

Ontario & Erie Ship Canal Company.—Same reply.

A. Wright, M.P.—Ditto.

2. Are not the lock and prism of the present American Canal the largest in America?

Board of Trade, Ottawa.—They are the largest.

W. H. Smith, Owen Sound.—Yes, but not too large.

Chamber of Commerce, Milwaukee.—Ditto.

Board of Trade, Hamilton.—350 feet long; 75 feet wide. The width of the Canal is at the top, 115 feet, at the water line, 100 feet, and at the bottom, 64 feet. The total length is now about $1\frac{1}{8}$ mile, of which fifteen hundred feet at the upper end had to be cut in the solid rock. The depth of water is 13 feet, and a steamer drawing 11 feet 10 in. passed through in 1869. Fourteen or fifteen feet, however, would be more in uniformity with the size of the two locks.

In reference generally to Rideau Canal and Tay River.

Hiram Easton, Merrickville.—Strongly recommends that the work of repairing the Canal be let out by contract; that some of the lock laborers be taken off, as one man to each is quite sufficient; that each craft should supply a number of men to lock through as in case of the Grenville Canal; that the Government lands at various stations should be rented to highest bidder, whereas now, Government receives no benefit from them.

John Manion, Perth.—Calls the attention of the Commissioners to the Tay River Canal which has for a number of years been out of repair, and advises the rebuilding of the locks of this Canal, as it would open up a larger trade in mineral and lumber, and become a very important feeder of the Rideau. The trade in lumber already exists but passes by the railway to the St. Lawrence; little is yet done in minerals owing to the want of Canal transportation.

Perth Town Council.—Make a similar recommendation.

W. K. Dickinson, Manotick.—Calls attention to several points connected with the management of the Canal.

A great part of the large expenditures made in the route for the past ten or twelve years is attributable in a great measure to the postponement of the application of inexpensive preventatives. On account of the systematic procrastination of necessary repairs, many expensive improvements had, in the course of time, to be carried out.

In reference to the Sault St. Marie Canal.

Mr. Waddington.—Suggests as one of the plans for building the Canal, that the Dominion imitate what has been done by the State of Michigan. Tenders might be solicited from reliable parties stating the smallest amount of lands to the north of Lake Superior, together with their situation, for which they would be willing to construct the Canal. In this way, the Canal might be built without any disbursement in money on the part of the Dominion, and a large area of land be very soon settled and cultivated.

CAUGHNAWAGA CANAL.

1. Is it your opinion that the construction of this Canal will benefit the trade of the Dominion generally?

T. W. Winn, Montreal.—Is of opinion that this Canal would benefit trade very considerably, if it could be made without cost, but such benefits would be wholly neutralized if tolls were imposed adequate to pay fair interest on cost.

A. R. McGibbon, Montreal.—Gives a favorable reply.

D. E. McLean, Montreal.—Same reply.

Hon. Malcolm Cameron.—Ditto.

Board of Trade, Kingston.—This Canal would be a great feeder to the Welland and St. Lawrence Canals, as it would divert trade to our own channels. It would probably cheapen freight sufficiently to enable it to be carried between the West and New York by this route. Passing so close to Montreal, a great deal of trade would thence be sent seaward. The freights on timber from the Ottawa would be very much reduced, but the Richelieu River and Chambly Canal would necessarily suffer in the diminution of its trade.

Montreal Corn Exchange Association.—Refer in general terms to this Canal, but its construction would, in their opinion, render the improvement of the Ottawa River Navigation a necessity for its vast timber trade.

Town Council, St. Catharine's.—Express themselves in favor of the construction of this work.

A. M. Delisle, Montreal.—Disapproves of this work.

Board of Trade, Quebec.—Reply to similar purport.

A. J. Russell, Ottawa.—The effect of this Canal would be to turn the great trade of the West from us to foreign ports of shipment, not only to the injury of the cities of Montreal and Quebec but also to that of the Maritime Provinces, which possess extraordinary facilities for becoming the ocean carriers of that trade.

Allan Gilmour, Ottawa.—Replies in affirmative.

Adam Brown, Hamilton.—It would give a second outlet to the sea-board at less cost than the present Erie Canal system, and increase the tonnage in favor of Canadian navigation.

Board of Trade, Hamilton.—Are in favor of the Canal, if its locks and depth of water correspond with the St. Lawrence and Welland Canals.

Board of Trade, Toronto.—The committee, to whom the subject was referred, do not favor the construction of this Canal, as its benefits would be contingent upon political considerations.

Ontario & Erie Ship Canal Co., per A. Morrison.—Answer in affirmative.

Edsall & Wilson.—Answer in negative.

W. Rae, Quebec.—Ditto.

Hon. John Young.—The export trade to foreign countries from the West is not the largest trade. The consumption of the New England or Eastern U. S. is far greater than the export trade, and the question comes up:—Can this trade be also attracted to the route of the St. Lawrence? The level of Lake Champlain is 25 feet above the level of the St. Lawrence, seven miles above Montreal. By the construction of the Caughnawaga Canal of 24 miles, the propeller of 900 tons could proceed on to Lake Champlain and deliver her cargo at Burlington or Whitehall, whence it could be distributed by the various railways throughout New England, or the cargo could be landed at Boston at one-half the present cost of freight, and in six days less time than the same western produce is now delivered. By the St. Lawrence route to Lake Champlain there would be 57 miles of Canal with 355 feet lockage, against the Erie and Champlain Canals of 426 miles with 854 feet lockage. Should the State of New York decide on enlarging the Canal from Lake Champlain into the Hudson, so as to admit the propeller of 900 tons, then this vessel could sail direct from the Upper Lakes down the St. Lawrence, through Lake Champlain, and down the Hudson to New York, carrying equal to 40,000 bushels of grain without breaking bulk, and be in New York in six days less time, *than is now taken* on the route through the Erie Canal, and at one-half the cost of freight.

2. What would be the effect of the construction of this Canal on the trade of the Cities of Montreal and Quebec?

J. W. Winn, Montreal.—Believes that the construction would rather benefit the trade of Montreal, but cannot say anything with respect to Quebec.

A. R. McGibbon, Montreal.—Believes that both cities would benefit from the impulse that the Canal would give to general trade of the Dominion.

D. E. McLean & Co., Montreal.—Know it will benefit Montreal, and Quebec indirectly.

Hon. Malcolm Cameron, Ottawa.—See answer to question 3.

Town Council, St. Catharine's.—Beneficial to both.

A. M. Delisle, Montreal.—Prejudicial to Quebec, Montreal, and Maritime Provinces; would operate upon our trade just as the Erie Canal, which taps the River St. Lawrence at Buffalo affects our commerce, by carrying nearly all the produce of the West to New York. So the Caughnawaga would operate prejudicially to Canadian interests generally by absorbing much of that kind of trade now done by way of the Lower St. Lawrence. In other words it would benefit American interests, as agitation on the subject in the United States shows.

Board of Trade, Quebec.—It may benefit Montreal, as it would give consigners of goods a choice of markets, but as far as the trade of Quebec is concerned, we prefer enlargement of the Chambly and the removal of obstructions on the Richelieu River.

A. J. Russell, Ottawa.—Argues that it would rather benefit New York, than either Montreal or Quebec.

Allan Gilmour, Ottawa.—Think it would benefit both cities. It would draw a large trade in breadstuffs, &c., down the St. Lawrence and through the Caughnawaga Canal, into

the Lake Champlain for distribution and consumption in the New England States which now obtain such supplies mainly by the Erie Canal and American railways. It would draw off some of the trade that now finds its way to Montreal and Quebec. But the very fact of a large additional trade being brought so near their doors must encourage them to secure a portion of it, and receive some benefits from it.

Board of Trade, Hamilton.—Answer emphatically with respect to Montreal, which is the great Canadian depot for grain and provisions, at the foot of Lake and River navigation, from whence the supplies can be distributed throughout the densely peopled manufacturing States of New England.

Ontario & Erie Ship Canal Co.—None whatever.

W. Rae, Quebec.—Prejudicial.

3. What particular interest would be benefitted by the construction and working of this Canal?

J. W. Winn, Montreal.—The Lumber trade would greatly benefit by the facility with which wood could be sent to Lake Champlain, New York, New England, &c. ; but if heavy tolls were imposed, he believes the route by Chambly Canal would be preferred as the cheapest.

A. R. McGibbon, Montreal.—The Lumber and carrying trade of the West would be benefitted, while shippers and owners would receive advantage of competing markets being opened to them.

D. E. McLean & Co., Montreal.—Similar answer.

Hon. Malcolm Cameron, Ottawa.—It would immensely increase the tolls on the St. Lawrence Canals, and fill the Grenville Canals with minerals, hoops, hop poles, railroad ties, and inferior woods that now lie waste, besides saving a dollar a thousand, and a week's time on sawed lumber. It would bring the great bulk of the far Western produce to within 9 miles of Montreal, where, if the St. Lawrence has the advantages we claim for it, the trade must centre for shipment to England, in preference to Buffalo, Oswego, and Ogdensburg.

Board of Trade, Kingston.—See reply to question 1.

Town Council, St. Catharine's.—The shipping lumber and Western interests.

Board of Trade, Quebec.—It would more particularly benefit the trade of Ontario, the St. Lawrence and Welland Canals, tolls and Western ship owners, provided the navigation laws of the United States are so altered as to permit produce destined for American Atlantic Ports to be carried to the Canal in Canadian bottoms, from ports in the United States, otherwise the main benefit would probably accrue to American interests.

A. J. Russell, Ottawa.—The chief interest that would be benefitted would be the city of New York and other American ports, inasmuch as it would preserve for them a fair share in perhaps the greater part of the trade of the West ; and the Ottawa country, by reducing the cost of the transport of its timber. It would also benefit in a smaller degree the trade of all the Dominion west of Caughnawaga by giving it cheaper access to New York and the Eastern States, either for shipment to Europe, or for local consumption ; very much, however, would depend on the tolls the company would charge.

Allan Gilmour, Ottawa.—It would be of very great benefit to the Ottawa lumber trade (with a moderate rate of tolls) as the distance from the Ottawa to Lake Champlain would be shortened about 80 miles, with a saving of over 100 feet of lockage, compared with the present route by the Chambly Canal. So the freight of lumber between the above mentioned points would be reduced nearly, if not quite, *one dollar* per mile, which, on the quantity now sent forward from the Ottawa to Lake Champlain, about 250,000,000 feet *B. M.* would make a large saving to the trade.

Adam Brown, Hamilton.—The Ottawa lumber trade.

Board of Trade, Hamilton.—The agricultural, commercial and shipping interests of the Dominion would be all benefitted. It would also relieve the Lachine Canal of a portion of the lumber traffic which now causes so much interruption to lake vessels.

Ontario & Erie Ship Canal Co.—The Ottawa lumber trade.

W. Rae, Quebec.—The River St. Lawrence, when deepened, will be more than sufficient to carry the trade of the West, and the folly of tapping it at the head of Ocean Navigation is evident. No great interest can be really benefitted by the construction of this work.

Hon. J. Young.—The products of the Ottawa Valley will be greatly increased in value, for the saving in transport in lumber alone by that route over the present one will not be less than \$1 per mile, and all such saving increases the annual value of the national wealth.

 RICHELIEU RIVER AND CHAMBLY CANAL.

1. Is the capacity of the locks on the Canal and River sufficient for the wants of the trade ?

A. R. McGibbon, *Montreal*.—Considers this work quite too small for any extensive trade ; but if the Caughnawaga were built, there would be no necessity for the enlargement of the former.

D. E. McLean & Co., *Montreal*.—Would not touch this Canal if the Caughnawaga were built.

Montreal Corn Exchange Association.—The completion of this work would entirely obviate the need for the enlargement of the Chambly.

Board of Trade, Quebec.—Negative answer.

2. Are there any obstructions in the River and Canal which require to be removed to facilitate navigation ?

Board of Trade, Quebec.—River requires dredging in several places.

3. Can you suggest any improvements for the river or Canal, which ought to be made in the interests of commerce ?

Board of Trade, Quebec.—In addition to improvements in Richelieu River, the Chambly Canal should be enlarged to at least 8 feet.

OTTAWA CANAL.

1. Of what benefit to the commerce of the Dominion would be the construction of a Canal, giving eight feet of water from Lake Huron via French River, Lake Nipissing, and the Ottawa River to Montreal?

J. H. Ingersoll, St. Catharine's.—Is of opinion that no sailing vessel would take this route, either for cheapness or despatch (even if no tolls were exacted), when we consider the cost of towage, wear and tear to vessels, and time occupied in a tedious and tortuous river and Canal navigation; for, allowing that a vessel could make three miles an hour, and was only detained twenty minutes at each lock, it would take seven days to reach Lake St. Louis from Lake Huron, to which must be added another day for remaining voyage to Montreal. Bases his opinion on survey of route made under superintendence of Board of Works.

J. W. Winn, Montreal.—Expresses himself most unequivocally in favor of this proposed work.

Hiram Easton, Merrickville.—Refers to benefit of Canal to lumber trade, and thinks it preferable to railways for the development of a splendid country.

A. R. McGibbon, Montreal.—Does not think such a work would materially benefit commerce.

Hon. Malcolm Cameron, Ottawa.—It would give Canada a back-bone, open up new timber districts, furnish enormous, unlimited water-power, develop valuable mines of iron, lead, plumbago, talc, and phosphate of lime. Marbles of great variety, pure and white as Carara, and variegated as other Italian marbles are. During its construction it would put 50,000 settlers into the valley, and on the streams that flow into the Ottawa. It would shorten the route from Chicago to Quebec at least 400 miles, and so command a large proportion of Western trade, besides creating an export trade in sawn lumber westward. In concluding, Mr. Cameron recommends devoting our public lands to the construction of these works.

Board of Trade, Ottawa.—This route for the trade of the West and North West would be fully *one-third* shorter than any afforded by existing outlets. See reply to question 6.

Board of Trade, Kingston.—Think this Canal should not be built for a long time to come.

Town Council, St. Catharine's.—Similar answer.

Board of Trade, Quebec.—Think this work of the greatest importance to the trade of the whole Dominion.

Mr. Little, Toronto.—See answer to question 3.

A. J. Russell, Ottawa.—If the external commerce of the Dominion be considered—that is to say, the receiving and movement of the through trade of the Western and North Western States, already so enormous, the warehousing and carriage of it to European and other markets—then the benefit would be very great indeed. The future trade of our North West Territories must also be considered. It would convert all the falls which are now obstructions to navigation into mill sites as valuable for the manufacture of sawed lumber, as those of the Chaudiere at Ottawa. It would also

be valuable for all other purposes of machinery besides, especially for milling the grain of the West into flour on its way to market. Towns and villages would spring up at these falls, and near the mouths of the principal tributaries. The total cost incurred by the Ottawa lumberers for one year's business, apart from expense of shipment may now be put down at over \$8,500,000. The outlay for pork and flour would be over \$1,500,000. Now, when it is considered that the transport of all this and other freight costs six times, at least, as much as it would do as if the river were canalised, the peculiar benefit that internal commerce of the Provinces would derive from this work will be better understood.

Allan Gilmour, Ottawa.—The construction of this Canal may fairly be expected to benefit the commerce of the Dominion by the increased facilities and inducements it would give to the settlement of the country on the Upper Ottawa and French River, and the facilities which would be afforded to the lumber trade in the forwarding of supplies to the neighborhood of the localities, where it is now carried on, and in its extension into regions now undeveloped; yet a large proportion of this land, in his opinion, will not be found of such a character as will induce settlement thereon to any great extent at the present day, or so long as really good agricultural lands can be had elsewhere at low prices, or as free grants.

Adam Brown, Hamilton.—Entirely opposed to any system of Canal navigation that would not admit of vessels of the largest capacity combining the system of lake and ocean navigation.

Geo. Wilson, Port Dover.—Thinks it would be of no benefit.

Board of Trade, Hamilton.—This Canal is not wanted at present for the commerce of the Dominion. The cost of such a work would be enormous. It is far too north for early resumption of navigation in the spring, and would be closed too soon in the fall. The money would be better expended in improving our present Canals.

Board of Trade, Toronto.—Fail to see the propriety of constructing this Canal, considering the shortness of the navigation season.

Edsall & Wilson.—Not wanted for the next fifty years.

A. Wright, M.P.—This route would shorten the voyage between Montreal and Chicago by one-third of the whole distance that has now to be traversed.

W. Rae, Quebec.—Is in favor of the construction of this Canal as soon as possible.

2. What saving of freight would result in the carriage of the products of the West and North West by this route to Montreal, on such depth of water as against the Welland and St. Lawrence Canals, as they now are, or supposing the Welland to be enlarged to a capacity suitable for the largest vessels now trading on the Upper Lakes?

J. W. Winn, Montreal.—Shortness of distance, and freedom from exposure to storms, as compared with the route through Lakes Huron, Erie and Ontario, would seem to insure a material saving in freight, besides, one steamer of small power could tow many barges from Montreal to Mackinaw, or Sault Ste. Marie, whence towage or sailing through Lake Michigan or Superior would not cost much time or money.

Board of Trade, Ottawa.—Fully one-third.

Town Council, St. Catharine's.—None whatever.

A. J. Russell, Ottawa.—Refers to Mr. Shanly's report, which gives the cost of moving freight per ton from Chicago to Montreal by this route, at \$2.89, while it would be \$3.20 and \$3.27 for the St. Lawrence and Welland Canals, and the Toronto and Georgian Bay Canal respectively.

Board of Trade, Windsor, O.—Are of opinion that the Ottawa Canal could not compete with the St. Lawrence and Welland when enlarged.

Chamber of Commerce, Milwaukee.—Consider Welland most desirable.

Allan Gilmour, Ottawa.—Conceives the answer to this question will depend almost entirely upon the solution of the problem, whether the product of the West and North West can be conveyed thereby more cheaply and expeditiously to Montreal or Quebec, than by the Welland Canal and St. Lawrence; unless that can be shewn, beyond a doubt, no sufficient inducement would be offered for the construction of an Ottawa Canal. The distance from Chicago or Milwaukee to Montreal would be about 370 miles shorter by the Ottawa and French Rivers, than by the Welland and St. Lawrence Canals. But against this there would be the extra lockage by the Ottawa of eighty-three feet up to reach the summit level, and the same descending, together 166 feet more than by the St. Lawrence route. How far these advantages and disadvantages would balance each other or predominate, only those well acquainted with Canal navigation can determine. Again there is the fact of the wider waters of the lakes on the St. Lawrence route, with the drawback of greater risk or higher insurance than by the Ottawa, especially late in the season.

Board of Trade, Chicago.—If enlarged, the Welland Canal route would probably be the cheapest.

Adam Brown, Hamilton.—If the Welland and St. Lawrence Canals were enlarged so as to admit of the passage of large vessels, it would be useless to take any other system to connect with the Upper Lakes into consideration, as the expense of keeping up any other system of Canal navigation would be out of proportion—taking the expense of Canal mileage into consideration.

G. Wilson, Port Dover.—None.

Board of Trade, Hamilton.—There would be no saving of freight by such a route, even under existing circumstances. In the case of the enlargement of the present system it could not possibly compete.

Alvin Bronson, Oswego.—In his judgment, the Welland stands at the head of the numerous projects presented for discussion by the Commissioners in point of utility, compared with the French River and Ottawa Canal, and the Lake Huron and Ontario Canal. It has the advantage over both in latitude, altitude, amount of lockage and length of Canal. Each of these Canals require more than double the lockage, and more than double the length of the Welland.

3. Supposing the amount necessary to enlarge the Welland Canal to the capacity of the largest vessels navigating the Upper Lakes, if expended on the Ottawa Canal, would give a continuous depth for barge navigation of eight feet, which would be the preferable investment?

J. W. Winn, Montreal.—Is in favor of the Ottawa, because it would bring a larger share of the traffic of the Western States through Canada, and furnish a second route in case of war or accident to the Welland, which would stop its navigation.

A. R. McGibbon, Montreal.—Expresses himself in favor of the Welland route.

Board of Trade, Ottawa.—Answer emphatically in favor of the Ottawa Canal.

Town Council, St. Catharine's.—Answer in favor of the Welland.

James Little, Toronto.—The Welland Canal is known to be some three hundred and seventy miles further between Chicago and New York, than would be the route by the Ottawa. All other things being equal, the difference in cost between enlarging the one and constructing the other, is not a matter of sufficient importance to be allowed to stand in the way when the volume of commerce to be opened up, is to be taken into consideration. The opening up of the Ottawa will ensure to the country a much larger amount of the benefits arising from the moving of products than the Welland, and while the enlargement of the latter will open up no new section of the country, the Ottawa will at once bring into market the timber, and promote the settlement of the vast Territory drained by the Ottawa, Matawan, and French Rivers—a distance of 330 miles from the city of Ottawa to the Georgian Bay—equal in length to the Erie Canal, and sufficient of itself, from its agricultural, timber, and mineral wealth, and the enormous amount of water power it would make available to overbalance any difference of cost that might accrue. Unlike the Welland, which had to wait on the agricultural development of the West, the Ottawa route would at once force business to itself on account of its immense advantages over every other route. It would leave the Erie Canal just as the completion of the St. Lawrence Canals has left the Rideau—simply dependent on the local traffic, and what it could gather from the shores of Lake Erie, and even there it would meet the competition of the Welland. It would be without a rival for the Western commerce, as no Canal can ever be constructed through the United States with a title of its advantages, even at the expenditure of hundred millions of dollars. Other advantages may be summed up as follows :—

1. It would open up a far safer and more capacious route than any other in use or contemplated.
2. It would effect a saving of time equal to two full trips, according to Mr. Shanly—possibly to three.
3. It would afford direct communication, without breaking bulk, between Lakes Superior, Michigan and Huron, and the head of ocean navigation at Montreal, and by the Caughnawaga to the head of Lake Champlain, within about 60 miles of steam navigation on the Hudson.
4. It would possess immense advantages for the timber trade of the Georgian Bay, the valley of the Saginaw, the whole northern peninsula of Michigan, and Green Bay.
5. It would give but a short lake run to reach the shelter of Manitoulin at either end.
6. It would leave the Welland undisturbed to do the business of Lake Erie and other ports that would make Oswego their distributing points; and above all, it (the W.) would supplement the overtaxed Ottawa route, for the latter, soon after its completion, would certainly have more than it could do to meet the requirements of the 17,500,000 of people of the great grain-producing country of the West, ever seeking a way to the points of distribution and consumption.

In conclusion, Mr. Little says that the locks should be not less than those proposed by Mr. Shanly, viz., 250 feet long, 50 feet broad, 10 feet deep. The difficulty of access to and of finding the material for cut stone locks—of distributing it as well as other material and necessaries at the points of requirement, especially on the line of the

Mattawan and French Rivers, would seem to be serious objections to the adoption of the Ottawa route ; but when it was remembered that the Rideau improvement, when made, was in a somewhat similar position, and that \$24,000,000—the interest on which the City of Montreal alone might well pay, on account of the benefits it would receive—would complete the work, these objections might be summarily set aside.

A. J. Russell, Ottawa.—The Welland would not do anything to develop our interior country of Quebec and Ontario, whilst the Ottawa would certainly do so.

Board of Trade, Windsor, Ontario.—Argue in favor of Welland route.

Chamber of Commerce, Milwaukee.—Argue in favor of Welland route.

Board of Trade, Chicago.—The Welland.

Adam Brown, Hamilton.—No system of navigation should be taken into consideration that would not allow of steamers of a large class passing to Lake Superior.

George Wilson, Port Dover.—The Welland.

Board of Trade, Hamilton.—The Welland.

Board of Trade, Toronto.—The Welland.

Ontario and Erie Ship Canal Co.—The Welland.

4. Suppose the French River were made navigable from Lake Huron to Lake Nipissing and a railway were built from the east end of Lake Nipissing to Montreal, or supposing a railway were built from Montreal *via* Ottawa to Parry Sound or any other port between it and the mouth of the French River, how would such railway answer the purposes of the trade to be done on the proposed Ottawa Canal ?

J. W. Winn, Montreal.—Apprehends that no railway can compete with Canals in the vital point of cheapness of freight.

Hiram Easton, Merrickville.—Believes a Canal would be more advantageous to the development of the country than any railway. Three barges, drawing 8 feet of water (with lockage equal to that of Lachine), would carry as much lumber as 130 cars. It would take three heavy locomotives to draw these cars, while one small tug will tow 9 barges—390 cars and 9 locomotives. Draw a comparison between the actual cost of said freight, and the expense of a small tug with nine barges, and an argument will be derived in favor of Canals.

A. R. McGibbon, Montreal.—A continuous line of navigation without transshipment has so many advantages over a water and railway line, that it should always be preferred.

Board of Trade, Ottawa.—Such a railway would be useful locally, but could not pay for many years to come. Fourteen railways would be required to do the freight business of the Canal.

A. J. Russell, Ottawa.—A few figures will show the difference. The freight of sawed lumber from Ottawa to Plattsburg on Lake Champlain costs \$3 per 1,000 feet, board

measure ; the distance is 260 miles. The transport to Brockville from Arnprior, by the Brockville and Ottawa Railroad, costs \$2 per 1,000 feet ; the distance is 70 miles ; shewing that the cost by rail is $2\frac{1}{2}$ times that by canalled rivers. Yet of the 260 miles, there are 26 miles of Canals, with 208 feet of lockage. One Canal of moderate size would carry as much as five railways, and one railroad could not possibly perform the work required of it, even if the expense of transport would be the same ; besides, it is conclusively evident that if a railway were sufficient to carry the contemplated trade of the West instead of a Canal, the Northern Railroad would be sufficient for it instead of a Canal from Toronto to the Georgian Bay—the intended object of that Canal would be already achieved, and the railway would now be successfully engaged in doing all that the advocates of the Georgian Bay contemplate and indicate as required to be done, which is even absurd to mention. It is still more absurd, if possible, when applied to the Ottawa, which is intended, just like the Georgian Bay Canal, to tap that bay for the purpose of taking the same trade, especially when coupled with the condition of canalising the French River, exactly that part of the route which has no trade of its own at present, and leaving the Ottawa uncanalised, though it has already a great trade of a bulky kind to carry, requiring, more than ordinary commerce does, a Canal for economy of transport.

Allan Gilmour, Ottawa.—Does not think that such a joint arrangement of Canal and railway or all railway would at all answer the purposes of the trade to be done on the proposed Ottawa Canal.

Board of Trade, Chicago.—So far as American commerce is concerned, a railway would not answer at all.

Adam Brown, Hamilton.—The proposed railway might answer, but we must, to a great extent, rely on the great chain of lakes which nature has provided. He regards it, however, as out of the question to suppose that a railway could compete for the trade, and be successful—*i.e.*, pay its proprietors—against such system as the St. Lawrence and Welland Canals and lake navigation.

Board of Trade, Hamilton.—The mouth of the French River and any other part of the Georgian Bay are undesirable as the terminus of a railway or the entrance of a Canal, for the navigation of the Georgian Bay is attended with great insecurity, and is even dangerous from fogs in spring and fall, subjecting property on its water to a higher rate of insurance than on any of the other lakes. The bold character of the shores on the Georgian Bay is a serious obstacle to their safe approach, and the great depth of water aggravates the difficulty by practically preventing the free use of the lead.

Board of Trade, Toronto.—Consider the railway decidedly preferable from Montreal to Parry Sound.

Ontario & Erie Ship Canal Co.—American trade would not go that way.

A. Wright, M.P.—No railway could do the freight business of the Ottawa Canal.

5. Would the construction of the proposed Ottawa Canal in any way reduce the cost of floating or carrying timber from points on the Upper Ottawa ?

J. W. Winn, Montreal.—Answers in the affirmative.

A. R. McGibbon.—Says that it might not have the effect of lowering the actual cost of transit, but it would enhance the value of sawn lumber when brought to market without being floated or rafted.

Board of Trade, Ottawa.—Materially.

Town Council, St. Catharine's.—It might to a small extent.

Allan Gilmour, Ottawa.—Does not think the Canal would reduce the cost of floating timber from points on the Upper Ottawa, because little, if any, would pass through it.

Board of Trade, Hamilton.—Answer in negative.

A. Wright, M. P.—It would benefit the timber trade by opening a new market for it in the West and North West—thus providing a return freight. It would also assist the trade by reducing the exportation of square timber and increasing that of manufactured lumber.

6. Is it probable that the tolls derivable from the trade on this Canal would pay a reasonable rate of interest on the outlay necessary for its construction ?

J. H. Ingersoll, St. Catharine's.—The country through which it passes is at present very sparsely settled, and the tolls and rents derived from local traffic would be trifling for some years to come. Neither would it attract a large share of the trade of the States of Iowa, Illinois, Wisconsin, or the Lake Superior region as anticipated, for it would not open up to the merchants of Chicago and Milwaukee their own ports on Lake Ontario, and lies at least so far North that it would not be open in spring for at least three or four weeks after the Welland and Erie Canals.

J. Winn, Montreal.—Believes that tolls could scarcely be expected wholly to pay interest on cost of such a work ; but from the vastness of traffic they might go far towards accomplishing that end, while the enhanced value to public lands along the line of the Canal would probably repay much of the cost.

A. R. McGibbon, Montreal.—Scarcely thinks it probable.

Board of Trade, Ottawa.—Tolls would pay more than a reasonable rate of interest, as it is not easy to conceive how the traffic of the West and North West is to find a passage to the sea-board except down the Valley of the Ottawa. The enlargement of the Welland must be at an immense cost, seeing that there are 23 miles of continuous excavation, some of it over 60 feet in depth. (Public Works, 1867, p. 24, ch. 59.) In short the country has to consider whether it is best to reconstruct 72 miles of Canal to the largest dimensions required to benefit the lake traffic, at a cost probably of \$40,000,000 or to build the Ottawa Canal of 30 miles at a cost of \$25,000,000—all other things being equal, the advantage in cost, time, and freight being fully more than one-third in its favor. Besides, the freight coming down Lake Superior will not run the whole risk of lake navigation, through Huron, St. Clair, and Erie, with the certainty of passing 72 miles of Canal before its voyage is ended, when the same object can be subserved by making use of 30 miles of Canal, and saving a distance of 418 miles. Then, the acquisition of the North West Territory opens up a new phase of this question. Heretofore it was the trade centering at Chicago that the people were anxious to control ; now it is the trade centering at Duluth. This place is at the head of navigation by the Mississippi to the Gulf of Mexico on the South, by the Red River to Hudson's Bay on the North, by the Lakes and the St. Lawrence to the Atlantic on the East. Its position is far better than that of Chicago, as it connects the trade in every direction—has Minnesota, Dakotah, and Red River tributary to it. Minnesota in 1870 had 20,000,000 bushels of wheat for export, and yet only one-twentieth part of her 40,000,000 acres of her rich prairie land is peopled.

This increasing wealth must to a large extent find its way by Duluth, and would come down by the Ottawa. Besides, the Ottawa route affords a return freight in lumber—the great want of the North West. The Ottawa also furnishes the advantage of having grain manufactured on the down voyage in the cheapest possible manner. Its Canals not being continuous but detached—the greatest length being three miles—the cost of unloading and manufacturing would not be more than half that on the St. Lawrence, where the power does not exist immediately. Besides the Canals on the Ottawa, a noble territory for settlement will be opened up. Nor must the question of defence be left out of the account. The Ottawa Canals will be entirely within Canadian territory and beyond the reach of foes, besides furnishing a line of defence, a base of supplies, and a safe channel for commercial purposes. In concluding their lengthy paper the Board of Trade say, that attention should be turned to the construction of the main lines viz. ; Sault Ste. Marie, Ottawa, and Bay Verte Canal, before anything is done in the way of touching the present works.

Town Council, St. Catharine's.—Are confident they would not.

Board of Trade, Hamilton.—Answer in negative.

W. Wright, M. P.—The tolls would pay many more times than the value of the reasonable interest on outlay—not to speak of the development of the trade of the country. Ordinary third-class lumber now sells at \$30 per thousand feet in Minnesota. If the Canal were opened we could send it there at an immense profit at \$15 per thousand feet. There is also the undeveloped trade of that State, which has 20,000,000 bushels of wheat this year for exportation and nearly 30,000,000 acres of the finest agricultural land in the world to be developed. The natural outlet of this fertile district is by way of Superior and the Ottawa, the shortest route to the sea-board. Adjoining Minnesota is the territory of Dakotah of similar extent, and then there is the Red River country with 50,000,000 acres. So, if the Canal were open to-morrow, its capacity would be at once put to the test.

In reference generally to the Caughnawaga Canal.

D. E. McLean, & Co., Montreal.—Advise that this Canal be of the same capacity as the St. Lawrence works.

A. J. Russell, Ottawa.—Whilst referring to the advantage that the construction of this Canal would confer on the general trade of the Dominion, acknowledges that it would probably do as much injury as good to the city of Ottawa, as the working of the Canal would interfere with the free running of saw-logs down to its mills, and many goods which are now landed there would be carried up to other depots nearer their places of final destination.

ST. ANNE'S LOCK.

Hon. J. J. C. Abbott.—States from personal knowledge that an improvement of the St. Anne's Rapids, either by the elongation of the Canal, commencing at a point below and extending to the point above the shoals in the neighborhood of those rapids, or by the dredging out of those shoals, would be of undoubted importance.

At present the difficulties to navigation in the ascent and descent of cargoes at St. Anne's are very great; and the necessity of improvement is obvious from the fact that the traffic which passes that point has become of enormous magnitude.

SHUBENACADIE CANAL, N. S.

Lewis R. Fairbanks, Dartmouth, N. S.—Submits plans and reports respecting the Shubenacdie Canal which extends from Halifax harbor in a direction due North across Nova Scotia to the Basin of Minas, or a distance of (54) fifty-four miles, and refers briefly to the inexhaustible deposits of coal, gold, iron, gypsum, lime, granite, freestone, slate and forest products along the route of this work.

GEORGIAN BAY CANAL.

1. What effect would the construction of the proposed Canal have on the general trade of the Dominion?

J. W. Winn, Montreal.—Does not think any large benefit would result.

A. R. McGibbon, Montreal.—Is strongly of opinion that the construction of this work would greatly increase the trade in produce, between the West and sea-board by lessening the time and cost of transportation. Much of the freight now carried via Buffalo would take the Georgian Bay route to Rochester and Oswego, and consequently the general trade of the Dominion would be benefitted. Besides, considerable trade, which now goes to Europe by Boston and New York, would take the shorter and more direct St. Lawrence route.

Kingston Board of Trade.—It is not desirable that the Canal should be built for a long time to come; it cannot pay directly or indirectly.

David Burn, Cobourg.—Is of opinion that this Canal is projected chiefly for the special benefit of the Americans of the West, and Chicago in particular.

Town Council, St. Catharine's.—It would have no effect on the general trade of the Dominion.

F. S. Holcomb, Toronto.—Apart from engineering difficulties, it was clearly proved at a Board of Trade meeting at Toronto, that at the rate of tolls named, and with a vessel to lock up and down every half-hour it would not pay simple interest on the investment. Under all the circumstances he thinks the other route deserving of the first consideration.

A. J. Russell, Ottawa.—Shows, that as there is no existing trade of great magnitude on Georgian Bay and as the small extent of country it would traverse is already served by a railroad, this Canal could only be of importance to the great trade of the

Western States, and what in future might arise from our Western territories ; nearly equalling the Ottawa Canal in that respect, but being incomparably inferior to it as respects the internaltrade of the Dominion.

No doubt it would largely benefit the trade of the United States, and it would feed, instead of rivalling, its Canals and railways.

W. Miller, Mayor, Owen Sound.—Expresses the opinion that this Canal, *if practicable*, and with a depth of water uniform with the St. Lawrence Canals, would in all probability, become the great highway for the carrying trade between the West, North West and ports on Lake Ontario and the St. Lawrence.

Board of Trade, Windsor, O.—Believe a self-sustaining Canal is impracticable, and if made would almost exclusively benefit American interests.

Allan Gilmour, Ottawa.—From what information he has been able to gather respecting this work, he is of opinion that it is a wild, impracticable project, and that from the enormous amount it would certainly cost, estimated by its promoters at nearly \$40,000,000, it would never pay.

Adam Brown, Hamilton.—Says there would be good times whilst the money was being sent, and that it would not materially affect the trade after it was built.

Board of Trade, Hamilton.—It would have little or no effect upon general trade.

Board of Trade, Toronto.—The Committee to whom this subject was referred are divided in opinion as to the advantages or otherwise of this Canal. The Toronto Board of Trade condemned the measure at a general meeting held on the 20th January, 1869, but a respectable minority entertain a strong opinion in favor of its construction.

Ontario & Erie Ship Canal Company, per Mr. A. Morrison.—None ; the trade would go to Oswego and down the St. Lawrence in the same way as it does now after passing through the Welland Canal.

Edsall & Wilson.—Characterize the scheme as “a grand humbug, got up by a class of men who would build public works to every man’s door.”

2. How much time would be saved by steam and sail vessels, respectively, between the ports of Chicago and Fort William and the port of Kingston, by using the proposed Georgian Bay Canal, instead of the Welland Canal ?

Town Council, St. Catharine’s.—None.

Board of Trade, Chicago.—Depending on weather, sail vessels would save from nothing to three or four days.

Adam Brown, Hamilton.—No time would be saved by sailing vessels, owing to the slow process of canaling ; and steamers would be little or no better as the extra time taken in Canal navigation, under the usual restrictions of Canal Board management would be more than compensated by the extra speed at which vessels could navigate on the chain of lakes *via* the Welland Canal system.

Geo. Wilson, Port Dover.—Much time could be saved by sail vessels ; very little by steam.

Board of Trade, Hamilton.—No saving of time by either steam or sail would be made by using this canal in place of the Welland, but, on the contrary, it is believed that, from the insecurity of the navigation of the Georgian Bay, and the great length of the Canal itself, there would be a great loss of time.

Erie & Ontario Ship Canal Co.—Two or three days, but generally this would depend on number of locks and weather.

3. What is the average time occupied in locking vessels through each lock of the Welland Canal and through the whole Canal?

Town Council, St. Catharine's.—Average time occupied in locking vessels through each lock is half an hour, and it takes steamers 20 hours, and sailing vessels 30 hours to go through the whole Canal.

Geo. Wilson, Port Dover.—20 minutes, each lock. 24 hours, whole Canal.

Board of Trade, Hamilton.—20 minutes, each lock. 22 hours for steam, whole Canal. 24 to 48 hours for sail, whole Canal.

Erie & Ontario Ship Canal Company.—20 minutes, each lock. 18 hours, whole Canal.

4. At the same rate, how much time would be occupied in locking vessels through the proposed Georgian Bay Canal.

Town Council, St. Catharine's.—It would take steam vessels three, and sailing vessels four days to go through.

George Wilson, Port Dover.—72 hours.

Erie & Ontario Ship Canal Co.—Depends on number of locks.

5. Suppose tolls to be charged on the proposed Georgian Bay Canal in proportion to its length, at the rate now charged on the Welland Canal, what would be the total amount of such tolls on a cargo of 500 tons of wheat?

Adam Brown, Hamilton.—If the mileage tolls be the same as on the Welland Canal, and taking towage into consideration it would be impossible to bring the trade in this way, as the vessels could not, in his opinion, pay expenses.

6. What revenue would be derived from such tolls on the proposed Georgian Bay Canal, supposing the whole of the produce of the West, now shipped through the Erie and Welland Canals, were shipped through the proposed Georgian Bay Canal?

Town Council, St. Catharine's.—A large revenue.

Adam Brown, Hamilton.—See question 1.

7. Would vessels having to pay tolls *pro rata* with the Welland Canal, sailing from ports on Lake Michigan or Superior, find it more profitable to take the proposed Georgian Bay Canal—or the Welland?

A. R. McGibbon, Montreal.—Speaks, in general terms, in favor of the Georgian.

Town Council, St. Catharine's.—The Welland.

Board of Trade, Chicago.—Sometimes the one, and sometimes the other; depending on freight and weather.

Adam Brown, Hamilton.—No vessels would pass through; the tolls and towage would eat them up; they would be compelled to take the Welland route.

Alvin Bronson, Oswego.—Says that the Welland is the preferable undertaking.

8. In either case what amount per cent. would such profit represent?

Town Council, St. Catharine's.—24 per cent. in favor of the Welland.

9. In the present state of the United States' Customs' and Navigation Laws, could Canadian vessels load grain at Chicago, and proceed through the proposed Georgian Bay Canal, and thence to Oswego, or other United States' ports without paying duty on such grain, as if it were the product of Canada?

Town Council, St. Catharine's.—No, not even by the payment of a duty.

Board of Trade, Chicago.—Presume it might be passed through in bond.

10. If an American or a Canadian vessel load grain at Chicago and proceed via the proposed Georgian Bay Canal, and tranship such cargo at any port on the said proposed Canal, can either an American or Canadian vessel re-ship such cargo and deliver the same in Oswego or other United States' port, without the grain being liable to the American duties?

A. R. McGibbon, Montreal.—In replying to this and foregoing questions, says that much will depend upon the views of the American Government and their orders to Customs' officers. From present appearances the interests of the Dominion will not be considered in matters of this kind. The navigation laws of the U. S. prevent the employment of foreign bottoms in the coasting trade.

Town Council, St. Catharine's.—An American could, but a Canadian could not do so.

Board of Trade, Chicago.—Think it would be regarded as a coasting business; in that case Canadian vessels would be shut out.

Erie & Ontario Ship Canal Co.—Probably it could be bonded and re-shipped by an American vessel.

11. What effect would the working of the proposed Georgian Bay Canal have on the traffic of the Northern Railway Company, or on the trade of the city of Toronto ?

A. R. McGibbon, Montreal.—The Northern Railway would probably lose a portion of its heavy freight, but otherwise its traffic, especially in passengers, would be increased.

David Burn, Cobourg.—Toronto would be deprived of the advantage she is likely to receive from the enlargement of the St. Lawrence Canals—of becoming the Great Western terminus of Ocean navigation. She would be reduced to the place of a second rate commercial city, similar to that which Natchez now occupies in relation to New Orleans, and Chicago would become the Great Western Emporium.

Town Council, St. Catharine's.—It would certainly injure the Railway.

A. J. Russell, Ottawa.—No doubt the contractors and their suppliers, and the share speculators, will be benefitted by the construction of this Canal, but it would certainly injure the people of Toronto, inasmuch as it would deprive that city of the advantage of being the exclusive depot of the back country as it is now, and take trade away from the Northern Railway.

Adam Brown, Hamilton.—It would hurt the traffic of the Northern Railway without giving corresponding advantages to the city of Toronto.

Erie and Ontario Ship Canal Co.—The proposed Southern terminus being at the Humber River, 5 miles from Toronto, the benefit is questionable.

12. Would the lumber, grain, flour, &c., now carried over the Northern Railway, and shipped by water or rail at the Port of Toronto, in the event of the proposed Canal being worked, continue to be so carried and shipped, or would such trade be done at ports on the Canal, or on Lake Simcoe, and so cut off the business of the Northern Railway Company and the City of Toronto to the extent of such trade ?

A. R. McGibbon, Montreal.—If the Canal offered greater facilities and lower rates than the Railway, doubtless it would attract the trade in those articles ; but in any case Toronto would be benefitted.

13. Suppose it was found that the Georgian Bay Canal could be built cheaper via the Humber River, or by way of the Beaver Lake, and Lake Scugog to Whitby, would the Canal on either such route affect its commercial value to the city of Toronto, and how ?

A. R. McGibbon, Montreal.—Any line that would divert the trade from Toronto to Whitby, would necessarily have an injurious effect upon the commerce of the former.

Adam Brown, Hamilton.—Same reply.

14. Do you believe a private company could obtain the capital necessary to complete such a work on its own merits, considering the risk of its use, without the guarantee of the Government for the payment of the interest and principal invested in such Canal ?

A. R. McGibbon, Montreal.—Understands that there are capitalists prepared to construct the work upon the grant of lands by the Government, without guarantee of principal or interest.

Board of Trade, Chicago.—Answer in negative.

Adam Brown, Hamilton.—Ditto.

Board of Trade, Hamilton.—Believe that no private company has the slightest chance of obtaining the capital necessary to complete such a work, without the assistance of the Government in the shape of a guarantee for the payment of the interest and principal invested in such a work. If the Government were disposed to undertake the construction of a Canal across the western peninsula of Ontario, the most eligible route would be found running from Goderich to Dundas and then following the Desjardins Canal to Burlington Bay, the head waters of Lake Ontario, and one of the finest natural harbors in the Dominion * * * * *. The cost, however, would be undoubtedly large—perhaps \$100,000,000—and looking at the uncertainty attending such an investment, it would almost look like insanity on the part of the Government if they were to entertain either project.

Erie and Ontario Ship Canal Co.—Not for 20 years to come.

15. How would the carriage of American produce, in American bottoms, from Chicago through the Georgian Bay and other Canals, without transhipment to other ports in the United States or to Europe, benefit the commerce of the Dominion ?

A. R. McGibbon, Montreal.—The mere passage of American bottoms would of course add to the revenue of the Canal, and undoubtedly benefit the Dominion indirectly. If that route were found on enquiry to be preferable to others it would tend to increase enormously the western trade *via* the St. Lawrence with Europe and the sea-board of Canada.

A. J. Russell, Ottawa.—On the principle that trade can only benefit those between whom it takes place or who have the carriage or handling of it, and not those who merely see it passing freely, it seems utterly impossible to see how the carriage of American produce in American bottoms, from Chicago through the Georgian Bay and other Canals without transhipment to other ports in the United States or to Europe, could in any way benefit the commerce of the Dominion, beyond what might arise from the casual expenditure of the crews of the vessels in Canadian shops and taverns at the few points they would call.

Adam Brown, Hamilton.—If Canada could obtain the carrying trade from the west *via* Montreal, either in American or Canadian bottoms it would materially advance the interests of the Dominion, and to do that trade, the chain of lakes, and the Welland and St. Lawrence Canals point out the route. It would benefit the Dominion by the carrying trade, and the money necessarily spent.

Erie and Ontario Ship Canal Co.—It would add to the revenue of the Canals, and the increased traffic would benefit the commerce of the Dominion.

In reference generally to the Georgian Bay Canal.

J. H. Ingersoll, St. Catherine's.—Supposing the Canal completed, it is doubtful whether the supply of water at the summit would be sufficient, as it is a well known fact that for some years past the Grand River (which discharges a far greater body of water than any stream entering into or discharging from Lake Simcoe) was so inadequate to the supply of the Welland Canal, that the deepening of the summit level from Port Colborne to Allanburg was necessary.

David Burn, Cobourg.—Is of opinion that the political consequences resulting from the construction of this Canal would be equally injurious to the British Government as they are to the commercial interests of Toronto; for he is convinced, that if the St. Lawrence and inland waters of Canada are thrown open to American ocean-going ships, the existence of Canada, as an integral part of the British Empire, will be seriously endangered.

F. Edward, Peterborough.—Calls attention to a proposed Canal to connect the waters of Lake Huron with Ontario by way of Trent, as preferable on the score of expense and trade, to the Georgian Bay scheme. He refers to reports and movements to bring the subject before the public.

MURRAY CANAL.

1. Of what benefit to the trade of the Dominion would be the construction of this Canal, and what class of vessels would be most likely to use it ?

J. W. Winn, Montreal.—This Canal could only benefit in a small way the local trade.

G. E. Jaques, Montreal.—Says that this work would be of very great value to vessels running between Montreal and the Upper Lakes, particularly to those trading to Toronto and Hamilton. It frequently happens in spring and autumn that violent gales of wind occur on Lake Ontario, and on some occasions such gales do not extend equally over its surface. When the violence of the wind obliges vessels to remain wind-bound at Kingston, the Lake at its head, near Toronto, is comparatively calm. If the Murray Canal were opened, then vessels could proceed through Bay Quinte without staying as they now do at Kingston until the storm abates. The same may be said of craft coming down the lake.

Joseph Keeler, M. P., Colborne, Ont.—The trade of the Bay of Quinte seeking western ports of destination would be benefitted by a saving of at least 20 per cent. in reduced rates of freight—the distance from Trenton, Belleville, Picton, Mile Point, and other ports to the West *via* Murray Canal being from 50 to 150 miles less than by the present outlet at Upper Gap.

The class of vessels likely to use the Canal would be those from 50 to 150 tons, drawing from six to eight feet ; but of course, in the event of the deepening of Canals, a large class would be profitably employed.

Board of Trade, Kingston.—Would be beneficial to the local trade of that part of the country, but not to the trade of the Dominion generally.

Board of Trade, Belleville.—Refer to the report of Mr. Page, 1867, wherein various authorities are given to show the necessity that exists for the construction of this work, and then go on to say : Steamers and sailing vessels up to 250 or 300 tons would avail themselves of this route ; it would be of unquestionable benefit to carrying trade between Kingston and Western ports, as at least four-fifths of the disasters on Lake Ontario occur east of Presqu' Isle Point. In case of war, too, its importance would be incalculable.

Town Council, St. Catharine's.—Do not think it necessary.

W. M. Platt, Brighton.—Refers to necessity for constructing this Canal in terms similar to replies of Belleville Board of Trade, and of Mr. Keeler.

Allan Gilmour, Ottawa.—Does not think that the construction of this Canal would benefit the trade of the Dominion to any perceptible extent or that it could be of much, if any, advantage to vessels trading between Kingston and Western Ports.

Adam Brown, Hamilton.—The Canal should be built, so as in rough weather, vessels could get through ; when they might be in great danger outside, it would be a harbor of refuge.

Board of Trade, Hamilton.—It would be useful for the present class of vessels engaged in the traffic of the lakes, but with the increased size of locks on the Welland and

St. Lawrence Canals and a corresponding increase in the size of vessels for the trade, such a Canal would be necessary.

County Council, Hastings.—Agree exactly with what Mr. Jaques, Mr. Keeler, and Belleville Board of Trade urge in favor of the construction of this Canal, and add :—

In a national point of view we cannot help calling the attention of the Commission to the fact that it will develop a section of country and stretch of water that are exclusively Canadian, and will be useful in case defences are necessary by opening an inland communication from Kingston to Toronto, and a harbor for the navy.

Edsall and Wilson.—This Canal is not wanted.

James Brown, M.P., Belleville.—Corroborate what others have said respecting the benefits that this Canal will confer on the carrying trade.

Committee of County Council of Northumberland and Durham.—Advocate construction of Canal on similar grounds.

2. Would the construction of this Canal be of any advantage to vessels engaged in the carrying trade between Kingston and Western ports ?

J. Keeler, M.P., Colborne, Ontario.—All vessels would avail themselves of a safe harbor of 70 or 80 miles in length *in foul weather*, in preference to the dangerous coast between Presqu'Isle Bay and Kingston, where nearly all the disasters upon Lake Ontario have occurred, and where enough money has been lost to build fifty such Canals. In fine weather, however, the vessels bound for Kingston would take the open lake as most expeditious.

Board of Trade, Belleville.—Answer similar in purport to foregoing, see p. 226.

W. M. Platt, Brighton.—Same answer.

Board of Trade, Hamilton.—In the fall of the year, our present class of steam vessels could leave Kingston in place of lying over as they now do during a heavy westerly blow, run up the Bay of Quinte, go through the Canal, and, by keeping well in shore, proceed on their voyage to the head of the lake.

3. Would the probable revenue to be derived from tolls on this proposed Canal be sufficient to pay interest on the cost of its construction ?

G. F. Jaques, Montreal.—Answers this question in the affirmative.

J. Keeler, M.P., Colborne, Ontario.—Bases affirmative reply on fact that tonnage inwards and outwards of the Bay of Quinte for year ending June 30th, 1867, was over 150,000 tons ; and this would be doubled if the Canal were opened, for there is a large trade to be developed in iron ore, lumber, timber, bolts, cedar posts, grain, &c.

Board of Trade, Kingston.—Answer decidedly in negative.

Board of Trade, Belleville.—Give no definite answer, but suggest that this Canal, when constructed, should be free for Canadian vessels.

W. Platt, Brighton.—Believes that the Murray Canal would be so largely made use of, that sufficient tolls would be collected to pay a reasonable interest upon the cost of construction ; and is certain that it can be constructed for a sum much below the original estimate. The steam dredge can be easily used, and the entrance of Presqu'Isle Harbor is remarkably free from moving banks of sand. In a military point of view, he adds, the work is important.

Allan Gilmour, Ottawa.—Answers in negative.

Board of Trade, Hamilton.—Thinks not. Sail vessels running down in thick weather from the Welland Canal for Long Point, frequently find themselves to the West, and in the vicinity of the proposed entrance to this Canal, and a good harbor would be useful. A vessel with all hands was lost there this autumn.

J. Brown, M.P., Belleville.—Considers, as the distance is but short, and no locks are required, that a very slight toll on the proposed Canal would be sufficient to pay the interest on the cost of construction.

Committee of County Council of Northumberland and Durham.—Express same opinion.

In reference generally to Murray Canal.

J. Keeler, M.P., Colborne, Ontario.—Considers the original line from Presqu'Isle Bay to the Dead Creek (which falls into the north-east part of the Bay of Quinte), for which a reservation of 6,000 acres of land was made in 1796, with 64 acres as the site of the Canal, as the only *feasible* route, as well as the one which should be adopted in justice to the settlers who purchased lands upon the understanding that the Canal would be built out of the proceeds of those lands whenever sold.

BAY VERTE CANAL.

1. Of what importance to the trade of the Dominion, and specially to that of the Lower Provinces, would be the construction of the proposed Canal ?

J. W. Winn, Montreal.—Is of opinion, looking at the locality and the surrounding trade, that this Canal would be a useful work.

Cyrus Black, Stipendiary Magistrate, Amherst, N.S.—Says that it would very materially reduce the distance between the many important parts of the Gulf of St. Lawrence, and those of the Bay of Fundy and the U.S., and open up an increased trade in flour and other articles from Ontario and Quebec, and in coal, &c., from the Maritime Provinces.

Lewis P. Fairbanks, Dartmouth, N.S.—Who owns the Shubenacadie Canal, extending from Halifax due north to the Basin of Minas, expresses himself in general terms in favor of the construction of the Bay Verte Canal.

I. Pickard, M.P., Fredericton.—Says that this Canal would, no doubt, give the people of the Maritime Provinces a cheap route for the transportation of goods from the Western Country, and at the same time open up a highway for the speedy and economical transit of West Indian and European goods to the Upper Provinces. Vessels from the Upper Provinces laden with flour, pork, and manufactures could return with products of our mines and fisheries. This Canal, in his opinion, should form a part of any scheme of improving the inland navigation of the Dominion.

Board of Trade, Ottawa.—Are decidedly of opinion that this Canal is most important to the trade of Canada, and advocate depth of at least 16 feet of water on the sills of its locks.

Board of Trade, Kingston.—The proposed Canal seems likely to promote a large trade.

Hon. R. B. Dickey, Amherst, N.S.—This Canal would be of vast importance to the Inter-colonial as well as foreign trade of the Dominion, and especially to that of Quebec, New Brunswick, and northern and western Nova Scotia.

Montreal Corn Exchange Association.—It appears to be a necessary part of the Canal System of the Dominion, affording a shorter line of water communication between the Bay of Fundy and the Straits of Northumberland, and presenting special advantages for commercial intercourse with Prince Edward Island and Newfoundland.

W. S. Cail, Kouchibougnac, N.B.—Simply refers to immense prospective advantages of the work.

James Hamilton, Bay Verte.—Similar answer.

Hon. S. R. McClellan.—Thinks the best route for the Canal would probably be across the isthmus from Shediac to the Petitcodiac River near Moncton. He corroborates what the foregoing writers say as to the general advantages of such a work.

John Wallace, Hillsborough, N.B.—Speaks of the importance of this work to the trade of the Maritime Provinces.

Board of Trade, Quebec.—Look upon the construction of this Canal as a great necessity, and invaluable to entire trade of the Dominion.

Christopher Milner (Chairman of Committee appointed at a public meeting, held at Sackville, to report on the subject of the Bay Verte.)—Refers to the development of the fisheries and coal mines as among the results of the construction of this Canal, which has been before the public ever since 1825, and shewn to be perfectly feasible by competent engineers and practical men acquainted with the locality. The value of the Nova Scotia fisheries alone, in 1869, was probably \$4,000,000, the largest proportion of which was derived from the Gulf; besides this, the year before the Reciprocity Treaty was abrogated, 200,300 tons of American shipping fished in colonial waters, principally in the Gulf. The coal trade of Nova Scotia (Pictou and Sydney), is expanding, and a large bulk of it must pass to the Bay of Fundy and the United States through this Canal. Timber and deals, one of the most extensive branches of industry in the northern parts of New Brunswick and Nova Scotia, shipbuilding, and other productive sources of wealth, the stone quarries of Bathurst and Wallace, and the grindstones of Minudie—all these must be benefitted. Prince Edward Island and the northern portions of New Brunswick and Nova Scotia, possess great agricultural capabilities, which must be stimulated when they have more speedy access to markets. In 1857, there was not sufficient trade for a single small steamer between Pictou and Shediac; now, half-a-dozen large steamers are busily employed in the Gulf—some trading between Quebec and the Maritime Provinces, others between Boston and the Maritime Provinces. This fact shows the expanding nature of the Gulf trade. Hence will be seen the necessity of a common public highway from Montreal down the St. Lawrence to the Bay of Fundy by the Isthmus of Chignecto, enabling the carriage of freight without transshipment, and developing the various sources and national wealth and industry just mentioned. Among other benefits will be the reduction of freights between Montreal and other cities of the St. Lawrence, and the Bay of Fundy and the United States, as far as New York. The voyage from Montreal to St. John, N.B., *via* Bay Verte Canal, would be 450 miles less, and, on an average, would occupy 8 days less than *via* Gut of Canso. The freight now on a barrel of flour from Montreal to St. John, *via* Shediac and the railway, is 50 cents; but this is attended with the loss to which packages are liable in handling. The saving in freight *via* Bay Verte (less tolls) would be 25 per cent. The markets of the Bay of Fundy, and the northern ports of the United States, would be supplied with Canadian flour by this route, for it would have naturally the preference over every other route. The difference of freight from Montreal to St. John by the Bay Verte Canal and the Gut of Canso would be 50 per cent. in favor of the former. The trade affecting the Maritime Provinces through this work, would be the transportation of their agricultural products, their lumber, coal, fish and stone to the markets of the Bay of Fundy and the United States—a trade of lumber and sugar shocks with the Bay of Fundy and thence westerly, would be created; a smaller class of fishermen would pass through the Canal to the fishing grounds than would venture round the Atlantic shores of Nova Scotia. The Straits of Northumberland are always free of ice, and navigable from 10 to 20 days before the Gut of Canso (which is blocked with ice driven from the north) can be passed. The Bay Verte Canal would give access to the fishing grounds a fortnight earlier than is the case at present. In this way, fishermen would be able to make an additional trip every season. Ships in St. John and the northern American ports, which would receive cargoes in the Gulf, would avail themselves of this safer and more expeditious route.

Ships in St. John and other Bay of Fundy ports laden for Europe would have the choice of this route, and thus be enabled with the south-west winds, which prevail for the greater part of the summer season, to run up the Bay through the Canal, and would be often carried past the Banks of Newfoundland before they could otherwise beat their way out of the Bay.

This choice of route is valuable not only to Bay of Fundy shipping but to West India traders and vessels from Western ports. If there were no difference in freights other-

wise, this choice of route would make a considerable deduction from present rates, and enable coarse goods like American hides to be carried more cheaply from New York. In this way a new trade would be created.

Another advantage to Canadian trade would be a direct trade by the Bay of Fundy between Canada and the West Indies. Vessels with West India produce for Canada would bring a return freight of flour, &c., to New Brunswick, and there take their usual cargo to the West Indies. So they would freight the voyage round. The olive stone of the Bay of Fundy, which, from its strength and unrivalled beauty, commands a remunerative price in the markets of the United States, despite a hostile tariff, would, by means of this Canal, be carried into Canadian cities.

The extensive marshes of Chignecto are unequalled as respects their hay crops, and this Canal would enable thousands of tons of pressed hay to be sent to cities on the St. Lawrence.

Allan Gilmour, Ottawa.—Merely expresses the opinion that that a Canal at this place would be of great benefit to the trade of the Dominion generally, and the Lower Provinces in particular.

Adam Brown, Hamilton.—The construction of this Canal would be one of the most useful works that could be undertaken for the general interests of the Dominion; it would reduce the cost of transportation between the productive portions of Canada on the one hand, and the consumptive power of the maritime Provinces on the other.

Board of Trade, Hamilton.—This Canal would be of great importance to the trade of the Dominion especially to that of the Lower Provinces, looking to the improved size of vessels on the lakes as the result of enlarging our Canals, and which would engage in the direct trade from the Upper Lakes to the Lower Provinces.

Alexander Wright, Westmoreland.—Refers to the various branches of industry which the opening up of this Canal would develop:—

Coal, of which there is an inexhaustible supply in the Cumberland Coal Basin, where companies are now engaged in raising the article. The quantity will be supplemented, on the completion of the Intercolonial, by the Spring Hill Coal, which has a seam of 18 feet thickness. These Coal Mines are easy of access for shipment at present, and in order to facilitate the communication with the Canal, small branch railroads can be made at a very trifling outlay, and coal sheds sufficiently extensive to suit the trade, at the mouth of the Canal so that vessels could take in their cargoes cheaply and expeditiously. Albertite Coal, so admirable for gas purposes, will also be exported from Albert County, N. B.

Ground gypsum is found in close proximity to the Albert Mines, and shipped to some extent to Canada *via* Shediac, but the cost of transit bars the extension of this business. Both the coal and gypsum are supplied at commodious wharves and with every facility for quick despatch. The plaster mills are driven by steam power and are the most extensive and efficiently equipped establishments of the kind in the Dominion.

The finest description of free stone, either for building or statuary purposes (already utilized in the New York Central Park), is exported to the American market. It is known as the Dorchester Olive Free Stone. This article is found in different localities, of different shades and textures, from the dark brown to the light gray, and all lying within easy access for shipment by the Canal. A somewhat similar stone has hitherto been brought to Canada from Ohio.

Flagging stone is found in strata of various thickness admirably adapted for the purposes for which it is used. From the knowledge of this business, derived from conversation with Canadians, he is confident that the export of this article alone could easily be worked up to \$100,000.

- The grindstones of the Soggins, Cumberland, have a South and North American reputation ; the quarries are in close proximity to the Canal.
- Scythe stones are now extensively manufactured by an American gentleman at the head of Cumberland Bay. Last year over 26,000 were sold in Canada alone. Paint is being extensively manufactured by an English or Canadian Company at Five Islands, Colchester, where extensive beds of valuable Byrata exist. This article is extensively used in the manufacture of white paint.
- The Bay of Fundy Shad is a very productive branch of industry, and is even now shipped in considerable quantities to Canada, herring and other fish as well as oil are also largely exported from the Bay, and it will occasionally pay to ship these to St. John, as a return cargo to Canada.
- West India produce can be furnished at St. John, on equal, if not better terms, than at any other point in the Maritime Provinces and can be exported to advantage as return cargo to Canada *via* the Bay Verte Canal, and not Canada alone, but the whole range of Gulf seaports will draw their supplies to a great extent from St. John, when vessels can avail themselves of the short, cheap, and safe transit which the Canal offers for passing from the Gulf of St. Lawrence to the Bay of Fundy. St. John has now, and will continue to have, for years to come, control of the shook trade. Maine being forced out of the trade, with the opening of the Canal, an additional supply will be furnished from the Gulf ports.
- Sole leather, cotton, warps, tacks, flocking, and other articles of New Brunswick manufacture are even now exported to Canada, and a larger trade in them would grow up, when the short Bay Verte route is opened.
- The Gulf fishermen will have additional facilities afforded them for sending their fish to the St. John market. The agricultural products of the Gulf country will also be stimulated.
- A trade would also be opened up with Newfoundland. The distance from Port au Basque, Newfoundland to St. John *via* the Bras d'Or Lake, St. Peter's Canal, and the Bay Verte, will be 380 miles—an inland, a safe navigation with the exception of a sail of 70 miles across the Gulf. Newfoundland exports are fish, oil, and skins; New Brunswick exports are boards, shingles, bricks, lime, laths, together with nets, chains, ropes, canvas, dry goods, provisions and West India produce; just such goods as St. John can furnish advantageously to the buyer, as well as with profit to the seller. In this way St. John would have additional inducement to embark more largely in the South American and West India trade.
- Ship builders will also be afforded facilities for obtaining special pieces of timber, such as oak, stem, and stern posts, keelsons, mast pieces, &c., which can be brought as deck load on flour-laden vessels, when they can come directly to Bay of Fundy ports without breaking bulk. The supply of timber of this kind has almost ceased, so far as New Brunswick is concerned.
- John Boyd, St. John.*—After referring to the resources of the Maritime Provinces, which would be developed by the Canal, in terms similar to those used by Mr. Wright, concludes by saying :
- There is no public work now presented to the Dominion which will be so far-reaching in its beneficial consequences not only to Canada, but to the whole of the Atlantic coast of North America. This Canal means, for Ontario and Quebec, cheaper coal, iron, stone, fish, leather, &c.; for Nova Scotia and New Brunswick, a better market for all these. It means cheaper flour and other products of the Upper, to us of the Lower Provinces—a larger market, or rather, greater facilities for supplying the United States, the West Indies and South America, with what we are now prevented from sending, owing to the distance and cost. It means to us *all* an immensely extended commerce, and to Prince Edward's Island the necessity of a closer Union with these Provinces, which can offer her such advantages for commerce and manufactures. It will be one of the most powerful inducements to persuade

her to join us, whilst it means the welding of us all together more closely in those bonds of commercial Union, which have so far proved so mutually beneficial, making us one people, because it will be *our interest* to be one, by building up our own Country and opening every possible channel of communication that can cheapen our products, we will be, in a position to be indifferent to the hostile legislation of other people. On the contrary, such legislation will the more bind us to one another, as by a refusal of reciprocity in the past, we have been driven from old markets to new, so will it be in the future, and the intended curse will prove a substantial blessing.

Chamber of Commerce, St. John, N. B.—It would be of immense benefit to the trade of the Dominion, for the following reasons:—

- 1st. The Maritime Provinces import, say 700,000 barrels of flour annually, besides a great many other articles of a bulky character?
- 2nd. The Maritime Provinces possess inexhaustible supplies of productions required by Ottawa and Quebec.
- 3rd. The chief articles of import from Ontario to the Lower Provinces and *vice versa* being bulky, the element of freight forms a large item in their value, hence any greater facility for transit tending to cheapen the cost, must be productive of a greatly increased demand.
- 4th. The Bay Verte Canal would not only afford the desired facility for transit, rendering it unnecessary to break bulk between the points of shipment and destination, but would remove a great barrier to cheap freights, by enabling owners of vessels to secure return cargoes to Ontario and Quebec and thus build up a mutually desirable reciprocal trade which may be increased to almost any reasonable extent.

The Board then goes on to enumerate commodities which will form the trade between the Upper and Lower Provinces, but these are already mentioned in the letters of Messrs. Boyd and Wright, to which the Board directs the especial attention of the Commission. In conclusion it adds: This Chamber of Commerce feels that it cannot too strongly urge upon the Commission the paramount importance of the work herein advocated, not only as a means of affording increased facilities for trade generally, but also as calculated materially to cultivate and strengthen that spirit of union, which is duly becoming more necessary, in order to make us practically one people.

Henry Livingstone, Richibuctô.—Believes it would be a link between the St. Lawrence Canal and the Maritime Provinces, providing it is made of the same size as the former. It will at once raise the value of saw-mill property in the Northern Counties of New Brunswick, particularly in Kent County.

He enumerates other advantages in terms similar to those who precede.

Hon. John Young, President, Dominion Board of Trade.—If this work is possible of construction it will have results of a most important character in a national aspect. The city of St. John, as well as all other places in the Bay of Fundy, would be brought 430 miles nearer Montreal, Quebec or Toronto, for the water-borne vessels than at present, and the propeller of 900 tons sailing from Lakes Superior, Michigan or Ontario could sail direct to Halifax or St. John with Western States' or Canadian products.

2. What would be the trade which would be done through this Canal, and how would it affect the Maritime Provinces?

Cyrus Black, Amherst, N. B.—If there are tolls, there will be undoubtedly a large trade through the Canal in coal, fish, lumber, stone and farm produce, as well as United

States' manufactures. Cumberland possesses coal, grindstones, scythe stones, &c. The Island of Cape Breton would also be benefitted, as her coal would be sent to St. John, Portland and elsewhere by this Canal.

Hon. R. B. Dickey, Amherst, N. S.—The trade would be transport from Ontario and Quebec, of flour and manufactures to St. John, Western Nova Scotia, Portland and Boston, and from the Upper Provinces and Northern New Brunswick of timber, lumber, free stone and provisions to American Ports and the West Indies:—The Prince Edward Island trade hereafter referred to—the passage of American and Canadian fishing vessels to and from the Northern fishing grounds and the return voyages with West India produce, St. John and Nova Scotia manufactures, Bay of Fundy shad fish and Cumberland coal. Notably the latter article, declared by Sir William Logan to be the finest coal for all purposes yet discovered on the continent, would furnish return cargoes for all vessels from the St. Lawrence. These coal measures of unusual length and thickness at Spring Hill, will be intersected by the Intercolonial Railway at a distance of about 25 miles from the Bay of Fundy terminus of the proposed Canal. The cost of transportatation to Montreal, in view of the distance and return freight, would inevitably be less than that of Sydney coal, which alone could be brought into competition with the Spring Hill coal for domestic use. Hundreds of American vessels would pass and repass through this Canal, and they could afford to pay toll, because it would enable them to make an additional voyage each season. It should be the policy of the Dominion to construct this national work—thereby completing the outlet of the great valley of the St. Lawrence through our own territory and down to the American coast.

W. Cail Kouchibougnac, N. B.—Refers to Canal in terms similar to foregoing.

James Hamilton, Bay Verte.—Chiefly lumber, fish, iron, coal, salt, and farm produce, amounting to about \$5,500,000 annually.

Hon. A. R. McClellan, Riverside, N.B.—Gives answer similar to previous ones, and expresses the opinion that the Canal would conduce to the development of a larger intercolonial trade.

Board of Trade, Quebec.—Similar answer.

C. Milner, Sackville, N. B.—See question 1.

John H. Harvey, Halifax.—If it can be constructed for moderate cost, and the money can be spared from other necessary improvements, it will probably promote the interests of the section through which it may pass.

Board of Trade, Hamilton.—Refer in general terms to commercial advantages derived from the Canal.

A. Wright, Westmoreland.—Goes at length into the consideration of the commercial advantages derived from the construction of this Canal. See question 1.

3. How would the construction of this Canal affect the trade of Prince Edward's Island ?

Cyrus Black, Amherst, N. S.—A very considerable quantity of farm produce is now annually shipped from Prince Edward's Island to St. John, N. B., and no doubt this trade would increase when the Canal would shorten the distance.

Hon. R. B. Dickey, Nova Scotia.—It could not fail to benefit the trade of the Island, and no doubt its construction would form a large item in balancing the advantages of Confederation in the minds of the people of this productive spot. The natural markets of its surplus agricultural and fishing products are St. John and the New England ports, to which this short cut would give more speedy access, with a *coast* instead of an *ocean* navigation.

James Hamilton, Bay Verte.—Its trade would be vastly increased by the greater facilities afforded to merchants, manufacturers and farmers, by the new and shorter route to large cities and depots of trade.

Hon. A. R. McClellan, N. B.—Similar answer.

Board of Trade, Quebec.—A large trade is now done between the Island and Boston, New York and the West Indies in farm produce, the transport of which would be greatly facilitated by construction of this Canal.

Adam Brown, Hamilton.—It would certainly benefit the trade of the Island, and tend to bring her into the Confederation.

Alex. Wright, Westmoreland.—The construction of this Canal must materially increase the traffic. This surmise is to a certain extent confirmed by the extensive trade now carried on between the Island and St. John *via* the European and N. A. Railway, which will no doubt be largely increased by opening up the proposed Canal, which will afford coasting vessels an easy and safe means of reaching St. John, or extending their voyage to the United States.

James Minerhead, Summerside, P. E. I.—Corroborates what others say respecting the advantages of the Canal.

Henry Livingstone, Richibucto.—It would certainly give greater facilities to Prince Edward's Island merchants to do business with St. John, and also with the Eastern States.

4. What would be the saving of distance, and the probable saving on freight respectively, between Prince Edward's Island and the Gulf Ports, and the Port of St. John, N. B., Portland and Boston, and the West Indies ?

Cyrus Black, Amherst, N. S.—Saving of distance to St. John, N. B., about 500 miles ; saving of distance to Portland about 400 miles ; saving of distance to Boston about 300 miles. Freight would be regulated in a large measure by amount of toll. This Canal would enable vessels to avoid the intricate navigation of the Gulf of Canso, as well as the rocky dangerous coast of Nova Scotia on the north, and the sandbanks of Sable Island on the south. Insurance would therefore be lessened.

Hon. R. B. Dickey, Amherst, N. S.—Replies to this question in terms identical with foregoing, and adds some facts which he considers conclusive with respect to freight. The freight of a ton of coal from Pictou or Cape Breton, varies from \$2.50 to \$2.75, gold, to Boston, or \$3 to \$3.25 to New York ; while from the head of Fundy Bay the figures are respectively, \$1.50 to \$2 to Boston, and \$2 to \$2.50 to New York. Gypsum is carried in large quantities from Windsor (less accessible than the head of Cumberland Bay), to New York for \$2.50, American currency, per ton, or say \$2.25 gold. Taking into account the distance from Bay Verte to Pictou, he estimates the difference of freight nearly \$1 per ton.

W. S. Cail, Kouchibougnac, N. B.—Similar answer.

James Hamilton, Bay Verte.—Nearly 400 miles; saving of freight about \$450,000 annually.

Hon. A. R. McClellan, Riverside, N. B.—Freights would not be more than two-thirds of what is now charged, while the insurance would be greatly reduced.

John Wallace, Hillsborough, N. S.—About 600 miles between Prince Edward's Island and the Gulf Ports, and St. John, Portland and New York.

Board of Trade, Quebec.—At least 400 miles, and consequently a great reduction in time and freight must result.

Adam Brown, Hamilton.—It would reduce the cost of transportation, each way, to a material extent.

5. Would a large increase in the Pictou coal trade with New Brunswick; Nova Scotia, and the Eastern States, result from the construction of this Canal?

Cyrus Black, Amherst, N. S.—Believes there will be a large increase—in fact, has been so assured by a Pictou Coal Mine proprietor.

Hon. R. B. Dickey, Amherst, N. S.—Similar answer, see question, p. 140.

James Hamilton, Bay Verte.—Ditto.

John Wallace, Hillsborough, N. B.—Ditto.

Board of Trade, Quebec.—Believe it would tend to increase coal trade between Pictou and New Brunswick, and the western coast of Nova Scotia, but doubt if it would materially affect the trade with the United States.

Charles Milner, Sackville, N. B.—See page 135.

A. *Wright, Westmoreland.*—Not only Pictou but Sydney coal (by means of the St. Peter's Canal, Cape Breton), would find easier access to the Bay of Fundy. Both these sources of supply, however, must in a great measure be superseded by the supply of the Cumberland Basin.

J. *Boyd, St. John.*—Referring to the impulse that this Canal must give to the coal trade, points out the value of Nova Scotia coal for steam purposes. The steamer *Linda* made 67 trips from St. John to Boston via Yarmouth and back. Average consumption of a trip was 40 tons of anthracite, at \$5 per ton (the lowest ever bought at St. John). Made 18 trips—average consumption a trip 43 tons Nova Scotia coal at \$3.60. Saving, therefore, in one year, for this small steamer, by using the Nova Scotia coal, \$1,500.

6. What would be the saving on freights from the ports of Toronto, Montreal and Quebec, via the Bay Verte Canal route to St. John, N. B., and other ports in Nova Scotia and New Brunswick, or the Bay of Fundy?

Cyrus Black, Amherst, N. S.—Does not mention any specific amount, but refers to the fact of the shorter and safer route the Canal will afford, as shewing there must be a considerable saving in freight. It should also, he adds, be taken into the account that flour laden vessels from Ontario, &c., to St. John, Amherst, Annapolis, and other maritime ports, will find a back freight.

Hon. R. B. Dickey, Amherst.—A considerable saving would obviously result, both in freight and insurance from the saving of 500 miles of dangerous navigation, and there would be consequently a vastly increased trade between these distant portions of the Dominion—objects worthy of special attention in the infancy of federation.

James Hamilton, Bay Verte.—The saving on freights from Montreal, Toronto, &c., *via* this Canal would be about \$150,000 on the aggregate trade at the present time, but this trade must largely increase year by year.

John Wallace, Hillsborough.—About ten cents a package.

Board of Trade, Quebec.—From 20 to 25 per cent.

C. Milner, Chairman of Sackville (N. B.) Committee.—50 per cent.

A. Wright, Westmoreland.—A saving of at least 25 cents per barrel, between St John and other Bay of Fundy ports and Toronto.

Chamber of Commerce, St. John, N.B.—It is estimated from information gathered and from ordinary experience, that on all kinds of heavy freight there would be a saving over present rates of from 30 to 50 per cent.

Henry Livingston, Richibucto.—It would save from five to six days' time between the mouth of the St. Lawrence and the point where two vessels would meet.

In reference generally to Bay Verte Canal.

Hon. R. B. Dickey, Amherst, N.B.—The navigation of the St. Lawrence has been facilitated by expensive Canals; but there is still a link wanting to the chain of improvement to connect the trade borne upon its waters with the important inlet between Nova Scotia and New Brunswick—in other words an outlet for the second if not the first river on this continent, by its natural channel through Canadian territory to the American coast. To carry out this improvement, in advance of all others, by a ship Canal 16 miles long would be the true national policy of the Dominion. Let us first combine to form Confederated Provinces by intercolonial improvements that will benefit them all. Instead of embarking in new projects of colossal magnitude on the one hand, or on the other of costly enlargement *not imperatively necessary* that prove to be beyond our means, let us for the present complete the system of water communication of which the St. Lawrence is the main artery; by all means, if practicable, deepen the channel to Montreal, and *then as necessities demand and means permit* take up these questions of enlargements—postponing new enterprises such as the Ottawa, Georgian Bay Canals, &c., until railway facilities, at infinitely less cost, have proved inadequate to meet the increasing requirements of trade.

Hon. A. R. McClellan, Riverside, N.B.—Thinks the Canal should be called "The Bay of Fundy Canal," as the more comprehensive appropriate title; that a passage across the Isthmus from Shediac to the Petitcodiac River near Moncton, (about 14 miles) either by a lock Canal or an open tidal way, would probably combine many advantages over a similar work from Bay Verte; it would be more accessible at either end

for nearly all vessels, save a distance of 60 miles, the greater portion of which is along a rather dangerous coast, lying between Bay Verte and Shediac.

Mr. Milner, Chairman of Sackville Committee (appointed to consider question of the Canal.)—States that in the event of it being found necessary or advisable to use the tidal waters of the Bay of Fundy, many persons have acquired a knowledge of preventing or obtaining a deposit of mud held in suspension in such waters;—that no practical difficulty, however, exists to prevent the use of such waters in the Canal, especially as it must be taken from the Bay, and at times of tide when there is a maximum of mud; that the water of the Bay is not more turbid or muddy than that of the Mersey where the Liverpool and Birkenhead Docks are worked without inconvenience.

ST. PETER'S CANAL.

Isaac Le Vesconte, Richmond.—Calls attention to the importance of the St. Peter's Canal, Cape Breton; it has been made so narrow that it will not permit the passage of an ordinary paddle wheel steamer through its locks, nor can many of the the brigantines avail themselves of this route. Closes by referring to marble and resources within a short distance of this work, and recommending its improvement.

Hon. E. P. Flynn, M.E.C.—Concurs in foregoing remarks.

W. Ross, M.P., Victoria, N.S.—During the past summer, more than 500 vessels passed through this Canal, and many more would have done so, had it been sufficiently deep and wide. It is too small for the general run of vessels that would pass by this route, and requires enlargement while the approaches might be easily improved.

A. Wright, Westmoreland.—Refers to this Canal as affording a safe route for the transit of Sidney coal to the Bay of Fundy via the Bay Verte.

Hon. J. Bourinot, Senator.—The manner in which this important work has been constructed is exceedingly unsatisfactory, since it is too narrow for the class of vessels engaged in the coal trade and other business of that part of the Dominion. The most valuable coal mines are on the route which this Canal is entitled to improve, but at present the object of its promoters is not achieved for the reasons just stated. The resources of the Bras d'Or are very valuable and must be developed according as the Canal facilitates navigation between the waters of the lake and the sea.

In this connection he calls attention to the advisability of constructing a short Canal between the Portage East Bay and Spanish River, which leads to the famous Coal Mines of Sidney. This Canal would not be more than three miles long.

APPENDIX B.

DEPTH of Water in the Harbors on the Inland Lakes, furnished to the Secretary of the Canal Commission by the Collectors of Customs at the several ports.

	Highest.	Lowest.	Ordinary.	Capability.	Authority and Remarks.
	Feet.	Feet.	Feet.	Feet.	
<i>Harbors of Ontario.</i>					
Kingston	18' 00	12' 00	12' 00	14' 00	William B. Simpson and Harbor Master.
Cobourg	11' 00	9' 00	10' 00	12' 00	George Perry.
Port Hope	18' 00	11' 00	12' 00	14' 00	M. Whitehead and Harbor Master.
Newcastle	9' 00	7' 50	8' 00	14' 00	F. Farncomb; sandy bottom, no rock.
Darlington	14' 00	9' 00	12' 00	14' 00	A. Dixon; Company intends to dredge it out.
Whitby	10' 50	8' 00	9' 00	12' 00	W. Warren; Company intend dredging to 12 feet.
Toronto—Main West Entrance ..	15' 44	12' 60	13' 00	14' 00	James E. Smith and Harbor Master.
do Eastern Entrance	10' 00				The eastern channel uncertain; should be closed.
Oakville	10' 50	7' 50	9' 00	11' 00	R. H. Chisholm.
Hamilton—B. B. Canal	17' 00	15' 00	14' 00	14' 00	William H. Kittson.
Dalhousie	16' 00	10' 50	13' 00		Official report, P. W., 1867. Depth on sill of lock.
Niagara	22' 00	20' 00	20' 00	20' 00	J. W. Taylor and Captain Milley.
Oswego	23' 00	18' 00			C. C. P. Clarke and Lieut. B. D. Green, U.S.N.
<i>Harbors of Erie.</i>					
Port Colborne	18' 75	10' 00	13' 00	14' 00	S. D. Woodruff, Supt. W.C., and official returns. Lock sill.
Port Maitland	16' 25	9' 00	11' 00	14' 00	do do
Port Burwell	12' 00	9' 00	9' 00	12' 00	E. A. Dunham; harbor not formed; variable depth.
Port Stanley	13' 00	11' 00	12' 00	14' 00	W. Hemphill and Harbor Master.
Port Dover	10' 00	8' 00	9' 00	10' 00	T. B. Barrett.
Buffalo	22' 00	8' 00	14' 00	14' 00	W. Daniels.
Erie	14' 00	12' 75	14' 00	14' 00	R. F. Gaggin and Captain.
Sandusky	13' 00	10' 00	13' 00		John Young.
Toledo	11' 50	8' 00	10' 50		H. Osborn, Deputy Collector.
Detroit	21' 00	18' 00	18' 00	18' 00	Major C. B. Comstock, Engineer, U.S.A.
St. Clair Flats, Channel	14½	13' 00	14' 00	14' 00	John Brown, Contractor, Thorold, and C. B. Comstock, Major Eng., U.S.A.
<i>Harbors of Huron and Michigan.</i>					
Goderich	12' 00	11' 00	11' 00		D. Doty.
Southampton	10' 50	9' 00	10' 00		Alex. Sinclair (Reeve), for Mr. Keith.
Grand Haven	22' 00	17' 00	19' 00	19' 00	J. A. Stephenson, Deputy Collector.
Chicago	16' 00	13' 50	14' 00	14' 00	J. E. McLean, and J. W. Steele, Harbor Master.
Milwaukee	15' 00	13' 50	14' 00	14' 00	S. T. Hooker.
Green Bay	13' 00	11' 00	11' 00	13' 00	T. P. Dousman; improvements aim at 18 feet.

NOTE.—The 4th column is added by myself, either from personal knowledge, or from representations of others who can be relied upon.

DEPTH of Water in the Harbors on the Inland Lakes, &c.—*Continued.*

	Highest.	Lowest.	Ordinary.	Capability.	Authority and Remarks.
<i>Harbors of Huron and Michigan.—Continued.</i>					
River Ste. Marie	Feet.	Feet.	Feet.	Feet.	
Lake George, St. Mary's River..	14'00	14'00	14'00	14'00	Capt. Fraser, H.M. Gunboat <i>Prince Alfred</i> , American Channel.
Sault Ste. Marie Canal, American side	12'50	12'00	12'00	14'00	To be deepened to 14 feet; P. W. Report, 1867.
Lake Superior					
Fort William (Thunder Bay, L.S.)					
Duluth (Fond du Lac, L. S.)					

APPENDIX C.

INLAND NAVIGATION.

Ten Routes from Lake Ports to Atlantic Seaports; also Relative Proportions of Locks of Canals.

From Chicago to Atlantic Seaports.

ROUTES.	Feet Lockage.	No. of Locks.	Miles Canal.	Miles River.	Miles Lake.	Total Distance.
1. From Chicago to Montreal, by the Welland and St. Lawrence Canals	553	54	71	185	1,005	1,201
2. From Chicago to Montreal, by the proposed Ottawa Canal	710	69	29	402	560	991
3. Chicago to New York, by Buffalo and Erie Canal	655	72	352	202	865	1,419
4. Chicago to New York, via Welland Canal and Oswego	955	94	224	196	983	1,403
5. Chicago to New York, via St. Lawrence and proposed Caughnawaga Canals	717	72	158	363	1,116	1,637
6. Chicago to New York, via proposed Ottawa and Caughnawaga Canals	872	87	125	572	671	1,368
7. From Duluth to Montreal, via Welland and St. Lawrence Canals	572	56	72	239	1,095	1,406
8. From Duluth to Montreal, via proposed Ottawa Canal	729	71	30	456	610	1,096
9. From Duluth to New York via St. Lawrence and proposed Caughnawaga Canals	736	74	159	417	1,206	1,782
10. From Duluth to New York, via proposed Ottawa and Caughnawaga Canals	891	89	126	626	721	1,473

1st Route.—From Chicago to Montreal, by the Welland and St. Lawrence Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Sarnia or Port Huron	Lakes Michigan and Huron			1,500			600*
Sarnia	Detroit	River St. Clair and Lake St. Clair			1,500		33	25
Detroit	Port Colborne	Detroit River and Lake Erie			1,500		18	220
Port Colborne	Port Dalhousie	*Welland Canal	346	27	450	27		
Port Dalhousie	Kingston	Lake Ontario			1,500			160
Kingston	Montreal	†River St. Lawrence.	207	27	700	44	134	
Totals			553	54		71	185	1,005

Miles Lake Navigation 1,005
 " River Navigation 85
 " Canal Navigation 71
 Total distance, Chicago to Montreal 1,261

* The difference of level between Lakes Erie and Ontario is 330 feet; but the Welland Canal is fed from Grand River, 8 feet above the Lake, making the total lockage, up and down, 346 feet.
 † The rise from tide water to Lake Ontario is 234 feet; the Locks in the St. Lawrence overcome 207 feet; leaving to be overcome in the River, 27 feet. It is estimated that 11 feet rise is found between Three Rivers and Montreal, and 16 feet between the Canals from Montreal to Kingston.

2nd Route.—From Chicago to Montreal by proposed Ottawa Canal.

From.	To.	Sections of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Month of French River	Michigan and Huron			1,500			560
French River	Montreal	The Ottawa Canal	710	69	700	29	402	

Miles Lake Navigation 560
 Miles River Navigation 402
 Miles Canal Navigation 29
 Total distance, Chicago to Montreal 991

3rd Route.—From Chicago to New York, by Buffalo and Erie Canal.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Sarnia or Port Huron	Michigan and Huron			1,500			600
Sarnia	Detroit	River St. Clair and Lake St. Clair			1,500		33	25
Detroit	Buffalo	Detroit River and Lake Erie			1,500		18	240
Buffalo	Albany	Erie Canal (enlarged)	655	72	220	352		
Albany	New York	Hudson River			1,500		151	
Totals			655	72		352	202	865
Miles Lake Navigation								
" River Navigation								
" Canal Navigation								
Total distance, Chicago to New York, <i>via</i> Erie Canal								

4th Route.—From Chicago to New York, *via* Welland Canal and Oswego.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Sarnia	Michigan and Huron			1,500			600
Sarnia	Detroit	River and Lake St. Clair			1,500			25
Detroit	Colborne	Detroit River and Lake Erie			1,500		18	220
Colborne	Dalhousie	Welland Canal	346	27	450	27		
Dalhousie	Oswego	Lake Ontario			1,500			138
Oswego	West Troy	Oswego and Erie Canals (enlarged)	609	67	220	197		
West Troy	New York	Hudson River			1,500		145	
Totals			955	94		224	196	983
Miles Lake Navigation								
" River Navigation								
" Canal Navigation								
Total distance, Chicago to New York, <i>via</i> Oswego								

5th Route.—From Chicago to New York, via St. Lawrence and proposed Caughnawaga Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Sarnia	Michigan and Huron			1,500			600
Sarnia	Fort Colborne	St. Clair and Erie, St. Clair & Detroit			1,500		51	251
Colborne	Dalhousie	Welland Canal	346	27	450	27		
Dalhousie	Kingston	Lake Ontario			1,500			160
Kingston	Caughnawaga	River St. Lawrence.	162	22	700	35½	134	
Caughnawaga	St. John's	Caughnawaga Canal	29	3	1,500	34½		
St. John's	Whitehall	Lake Champlain					23	111
Whitehall	Waterford	Champlain Canal	180	20	100	61	155	
Waterford	New York	Hudson River						
Totals			717	72		158	363	1,122

Miles Lake Navigation 1,122
 " River Navigation 363
 " Canal Navigation 158
 Total Distance, Chicago to New York 1,643

6th Route.—From Chicago to New York, via proposed Ottawa and Caughnawaga Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Chicago	Mouth of French River	Michigan and Huron			1,500			560
Mouth of French River	Caughnawaga	Ottawa Canal and River	663	64	1,500	29½	394	
Caughnawaga	St. John's	Caughnawaga Canal	29	3	1,500	34½	23	111
St. John's	Whitehall	Lake Champlain						
Whitehall	Waterford	Champlain Canal	180	20	100	61	155	
Waterford	New York	Hudson River						
Totals			872	87		125	572	671

Miles Lake Navigation 671
 " River Navigation 572
 " Canal Navigation 125
 Total distance, Chicago to New York, by Ottawa Canal 1,368

7th Route.—From Duluth to Montreal, *via* Welland and St. Lawrence Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Duluth	River St. Mary	Lake Superior			1,500			420
Point aux Pins	Fort St. Joseph's Island	River St. Mary	19	2	1,500	1	54	270
River St. Mary	Sarnia	Lake Huron			1,500			
Sarnia	Port Colborne	Erie, St. Clair, and River St. Clair and Detroit	346	27	1,500	27	51	245
Port Colborne	Kingston	Welland Canal (500) and Ontario (1500)	207	27	700	44	134	160
Kingston	Montreal	River St. Lawrence	572	56		72	239	1,095
Totals								
		Miles Lake Navigation			1095			
		" River Navigation			239			
		" Canal Navigation			72			
		Total distance, Duluth to Montreal, St. Lawrence Route			1,406			

8th Route.—From Duluth to Montreal, *via* proposed Ottawa Canal.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Duluth	River St. Mary	Lake Superior			1,500			420
Point aux Pins	Fort St. Joseph's Island	River St. Mary	19	2	1,500	1	54	190
Fort St. Joseph's Island	Mouth of French River	Lake Huron			1,500			
Mouth of French River	Montreal	Ottawa River and Canal	710	69	1,500	29	402	
Totals			729	71		30	456	610
		Miles Lake Navigation			610			
		" River Navigation			456			
		" Canal Navigation			30			
		Total distance, Duluth to Montreal, <i>via</i> Ottawa Canal			1,095			
		Fort William to River St. Mary		290				
		Duluth to River St. Mary		420				
		Difference			130			
		Total distance, Fort William to Montreal, Ottawa Route			966			

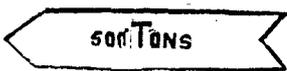
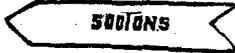
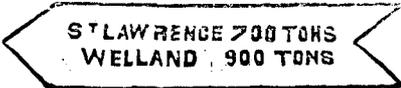
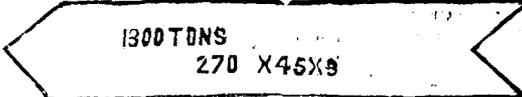
9th Route.—From Duluth to New York, by St. Lawrence and proposed Caughnawaga Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Duluth	River St. Mary	Lake Superior			1,500			420
Point aux Pins	Fort St. Joseph's Island	River St. Mary	19	2	1,500	1	54	270
Fort St. Joseph's Island	Sarnia	Lake Huron			1,500			245
Sarnia	Port Colborne	L. St. Clair & Erie, R. St. Clair & Detroit	346	27	1,500	27	51	
Port Colborne	Port Dalhousie	Welland Canal			450			160
Dalhousie	Kingston	Lake Ontario				35½	134	
Kingston	Caughnawaga	River St. Lawrence	162	22	700	34½	23	
Caughnawaga	St. John's	Caughnawaga Canal	29	3	1,500			111
St. John's	Provinces Line	Richelieu River			1,500			
Provinces Line	Whitehall	Lake Champlain			100	61		
Whitehall	Waterford	Champlain Canal	180	20	1,500		155	
Waterford	New York	Hudson River				159	417	1,206
Totals			736	74				
		Miles Lake Navigation						1,206
Fort William to River St. Mary		" River Navigation	290 miles.					417
Duluth to River St. Mary		" Canal Navigation	420 "					159
Difference			130 "					Total distance, Duluth to New York, St. Lawrence & Champlain Route. 1,782

10th Route.—From Duluth to New York, via proposed Ottawa and Caughnawaga Canals.

From.	To.	Section of Navigation.	Feet Lockage.	No. of Locks.	Tonnage Capacity.	Miles Canal.	Miles River.	Miles Lake.
Duluth	River St. Mary	Lake Superior			1,500			420
Point aux Pins	Fort St. Joseph's Island	River St. Mary	19	2	1,500	1	54	190
Fort St. Mary	French River	Lake Huron			1,500			
French River	Caughnawaga	Ottawa River	663	64	1,500	23½	394	
Caughnawaga	St. John's	Caughnawaga Canal	29	3	1,500	34½	23	
St. John's	Rouse's Point	River Richelieu			1,500			111
Rouse's Point	Whitehall	Lake Champlain			100	61		
Whitehall	Waterford	Champlain Canal	180	20	1,500		155	
Waterford	New York	Hudson River				126	626	721
Totals			891	89				
		Miles Lake Navigation						721
		" River Navigation						626
		" Canal Navigation						126
								Total distance, Duluth to New York, Ottawa and Champlain Route.. 1,473

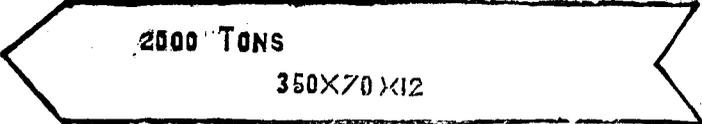
Relative Proportions of the Locks at present in use on the Canals of Canada.

First Opened.	Capacity.	Dimensions in feet.	Name of Canal.
1834	 100 TONS	107 × 19 × 6	Grenville Canal, small locks.
1843	 200 TONS	118 × 23 × 7	Chambly Canal.
1834	 300 TONS	126½ × 32 × 6	Carillon Canal.
1834	 300 TONS	131 × 33 × 6	Chûte à Blondeau.
1832	 250 TONS	134 × 33 × 5	Rideau Canal.
1846	 500 TONS	150 × 26½ × 10¼	Welland Canal, small locks.
1869	 500 TONS	122 × 26 × 13	St. Peter's Canal, Cape Breton.
1847	 ST LAWRENCE 700 TONS WELLAND 900 TONS	200 × 45 × 7	Saint Our's Lock.
1846		208 × 45 × 9	Saint Lawrence Canals.
		200 × 45 × 12	Welland Canal, Dalhousie.
		200 × 45 × 16	Lachine Basin, Montreal.
1843	 750 TONS	200 × 55 × 9	Cornwall Canal.
	 1300 TONS 270 X 45 X 9		Proportions recommended for uniform scale by Canal Commissioners, February 24th, 1871.

SAMUEL KEEFER, C. E.,
Secretary, Canal Commission.

OTTAWA, 24th Feb., 1871.

Relative Proportions of Locks on American Canals.

First Opened.	Capacity.	Dimensions in feet.	Name of Canal.
1822		97 × 14 × 4	Champlain Canal.
1862		110 × 18 × 7	Erie Canal, enlarged.
1855		350 × 70 × 12	Sault Ste. Marie.

SAMUEL KEEFER, C. E.,
Secretary, Canal Commission.

OTTAWA, 24th Feb., 1871.

 APPENDIX D.

SYNOPSIS OF INFORMATION

Laid before the Canal Commission at their second meeting in Ottawa, 18th January, 1871,

OF A GENERAL CHARACTER.

1. Register of the circulars sent, the number, to whom sent, and the answers received.
2. The answers to the questions contained in the circular adopted at the first meeting on the 25th Nov., 1870, from the following Boards of Trade :—Quebec, Ottawa, Kingston, Belleville, Toronto, Hamilton, London, Stratford, Guelph, Windsor, St. John, N. B., Halifax, N. S., Chicago, Milwaukee, Detroit, Toledo, Oswego.
From the corporate town of *Sandwich*.
From Corn Associations at Toronto and Montreal.
From Public Meetings at St. Catherine's, Ont., and Sackville, N. B.
From the Trinity House, Quebec, and from sixty-four (64) individuals.
3. Seven M.S.S. books containing tabulated abstracts of these answers, arranged under their proper heads for convenience of reference.
4. Replies of Collectors of Customs to the circular letter of the Secretary, giving the actual draught of water in the principal Harbors on the Inland Lakes.
5. Tabulated arrangement of this information.
6. Tables of distances, lockage, &c., on ten different routes between the Inland Lakes and the Atlantic sea-ports, revised by the Secretary from the latest and best authorities.
7. Report of the Buffalo Board of Trade for 1869.
8. Report of the Chicago Board of Trade for 1869.
9. Report of Montreal Board of Trade for 1869.
10. Report of the State Engineer and Surveyor on Erie Canal 1868-69.
11. Trade and Navigation Returns for 1867, 1868, and 1869.
12. M. J. McAlpine's Report on cost of transport on Canals, Rivers and Lakes.
13. T. C. Keefer's Map of the Dominion of Canada.
14. The Admiralty charts of its navigable waters.
15. Mercantile Map of the World, 1868.
16. Dawson's new map of Canada.
17. Sir W. E. Logan's Geological Map of Canada.
18. Mackinlay's map of Nova Scotia.
19. Profile of various water communications between Lake Huron and the sea.

I. WELLAND CANAL.

1. Annual reports of the Public Works' Department from 1841 to 1869.
2. Extracts from these reports, giving the history of the inception and progress of the measures adopted for making Lake Erie the summit of supply.
3. Traffic returns on the Welland Canal for the fiscal year ending 30th June 1870—called for by the Commissioners at their last meeting
4. Lieut.-Col. Philpott's report, plans, and estimate for the enlargement of the Welland Canal.
5. Walter Shanly's report, plans, and estimate of the lateral cut to Niagara, 1854.

6. Prospectus of the Erie and Ontario Ship Canal Company for the construction of the same.
7. Departmental plan of the Welland Canal, book and roll.
8. Plans of Harbors Dalhousie and Maitland, 1845.
9. Plan of the Aqueduct across the Welland, 1845. (See my letter to Secretary P. W. 29th Dec., 1870).

II. ST. LAWRENCE CANALS.

1. Book of plans of the locks on the Williamsburgh Canals.
2. Mr. Page's report and estimate for deepening these canals to 10½ feet water. Report 1859 ; estimate, \$1,028,000.

III. LACHINE CANAL.

1. Departmental plan of Montreal entrance to the Lachine Canal.
2. Projected improvements by the Hon. John Young, 1862.
3. Report and plan by Deputy Commissioner S. Keefer for increasing the accommodation for vessels in the Upper Basin.
4. General plan of Lachine Canal by Kingsford.

IV. ST. LAWRENCE RIVER AND RAPIDS.

1. General plan of the River St. Lawrence from Montreal to Prescott—shewing the rapids.
2. Maillefert and Raasloff's plan for improving the rapids for downward transit.
3. Maillefert and Raasloff's report and estimate in printed document, 1855.
4. Admiralty chart of the river from Montreal to Prescott.

V. ST. LAWRENCE RIVER—QUEBEC TO MONTREAL.

1. Latest published Admiralty charts shewing new channel through Lake St. Peter (1860).
2. G. F. Baillarge's soundings in Lake St. Peter, 1869 at Lavaltres, Point aux Trembles, Cape Charles and Cape St. Michael.
3. Mr. Page's report on the present state of the Channel and estimated cost for deepening it (1868).

To 22 feet.....	\$ 800,000
To 24 feet.....	2,500,000

VI. RIDEAU CANAL.

1. Mr. Rowan's report on supply of water for this canal, with map.
2. Report of Select Committee of H. A., 1865 on supply of water.

VII. SAULT STE. MARIE CANAL.

1. Plans, report and estimate for the construction of a canal on the Canada side, S. Keefer's report 19th August, 1852, contained in that of Dept. P. W. for 1851.
2. Chart of the river St. Mary—F. P. Rubridge.

VIII. CAUGHNAWAGA CANAL.

1. J. B. Jarvis' report and estimate of various routes published 1855.
2. I. B. Mills' plan of this canal—his report in Annual Return for 1856 ; his estimate in Annual Return for 1855, £453,602.
3. W. H. Swift's report on the foregoing, 6th June, 1866. In the same Annual Report.
4. Samuel Gamble's report on the same, 22nd Jan., 1856.

I X. RIVER RICHELIEU AND CHAMBLY CANAL.

1. Plan of lock and dam at St. Ours.
2. Plan of Chambly Canal.
3. Chart of River Richelieu.
4. J. B. Jarvis' estimate on Sorel route in his report above referred to, 1855.

X. OTTAWA CANAL.

1. Walter Shanly's report, plans and estimate, \$24,000,000
2. T. C. Clarke's report, plans and estimate, \$12,058,680.

X I. GEORGIAN BAY CANAL.

1. Kivas Tully's report, plans and estimate, 1858.
2. Report of the Huron and Ontario Ship Canal, 1868.

X II. MURRAY CANAL.

1. John Page's report, plans and estimates of these different routes.

X III. BAY VERTE CANAL.

1. John Page's report, reviewing projected plans of Hall, Crawley and Telford (printed 1869).
2. Admiralty charts of Bay Verte and Bay of Fundy.

APPENDIX E.

TABULAR STATEMENT SHOWING THE TRADE OF THE WESTERN STATES AND LAKES.

1. Total yield of Grain in the United States.
2. Increase of Population and Improved Land in Grain-growing States.
3. Total Quantity of Grain raised in Grain-growing States.
4. Receipts of Flour and Grain at Principal Receiving and Shipping Ports.
5. Movement of Flour and Grain from Chicago during 1869.
6. Exports of Flour and Grain *via* Erie Canal.
7. Total Tonnage of Lake Vessels.
8. Opening and Close of Navigation of Canals, &c.
9. Copper and Iron Trade of Lake Superior.

Total Yield of Grain in the United States for Eight Years.

Years.	Wheat Bushels.	Indian Corn Bushels.	Barley Bushels.	Oats Bushels.	Remarks.
1850.....	100,485,944	592,071,104	5,167,015	146,584,179	These figures are based on returns from the Agricultural Bureau at Washington. The returns for 1864, 1865, 1866 (except for Indian Corn) are for States which had not seceded.
1860.....	173,104,924	838,792,740	15,825,898	172,643,185	
1864.....	160,695,823	530,581,403	10,632,178	176,690,064	
1865.....	148,562,829	704,427,853	11,391,286	225,252,295	
1866.....	151,999,906	867,946,295	11,283,807	268,141,077	
1867.....	212,441,400	768,320,000	25,727,000	278,698,000	
1868.....	224,036,600	806,527,000	22,896,100	254,900,000	
1869.....	265,000,000	875,000,000	29,000,000	300,000,000	

POPULATION OF WESTERN CITIES.

	1850	1860	1870	1860	1870
Chicago.....	29,963	109,250	298,983	13,768	31,546
Detroit.....	21,019	45,619	79,580	10,401	20,031
Milwaukee.....	26,061	45,246	71,499	81,129	117,715
Cleveland.....	17,034	43,417	92,846	42,261	20,915
Toledo.....				3,829	
Buffalo.....				42,261	
Oswego.....				12,205	

Table showing the Increase of Population, and the Number of Acres of Improved Land in the Grain-growing States, since 1840.

States.	1840.		1850.		1860.		1870.	
	Population.	Improved Land.	Population.	Improved Land.	Population.	Improved Land.	Population.	Improved Land.
	Area of Square Miles.							
Ohio.....	39,964	7,558,750	1,980,329	9,851,493	2,339,511	12,668,787	2,662,302	No Returns available.
Michigan.....	56,243	.....	397,654	1,929,110	749,113	3,419,861	1,184,653	.....
Indiana.....	33,809	3,485,729	988,416	5,046,543	1,350,428	8,161,717	1,655,675	.....
Illinois.....	55,045	2,818,373	851,470	5,039,545	1,711,951	12,251,473	2,529,410	.....
Missouri.....	67,380	1,653,011	682,044	2,938,425	1,182,012	6,246,871	1,691,693	.....
Iowa.....	55,405	184,969	192,214	894,682	674,913	3,780,263	1,191,359	.....
Wisconsin.....	53,924	165,930	305,391	1,045,499	775,881	3,746,036	1,055,901	.....
Minnesota.....	83,531	.....	6,077	5,035	172,123	554,397	424,543	.....
Kansas.....	80,000	.....	.....	.....	107,206	372,855	379,497	.....

Total Population of the United States .. { 1850 .. 23,191,876 .. per centage of increase over 1840 .. 35.87
 .. { 1860 .. 31,443,321 .. " .. 1850 .. 38.58
 .. { 1870 .. 38,312,633 .. " .. 1860 .. 21.52

Table of Quantity of Grain raised in Nine Grain-growing States since 1850.

States.	Wheat, Bushels.		Corn, Bushels.		Oats, Bushels.		Rye, Bushels.		Barley, Bushels.						
	1850.	1860.	1850.	1860.	1850.	1860.	1850.	1860.	1850.	1860.					
	1860.	1869.	1850.	1860.	1850.	1860.	1850.	1860.	1850.	1860.					
Ohio.....	14487351	14532570	20400000	59078695	70637140	68250000	13472742	15479133	92700000	4259118	656146	1050000	354358	1601082	2600000
Michigan.....	6214458	15219120	20600000	52964363	69641591	73000000	5655014	5098755	12400000	98972	409226	575000	45483	296374	410000
Illinois.....	9414735	24189900	30000000	57649394	115296779	122000000	10987241	16336072	85000000	83364	961322	675000	110795	1175651	1250000
Wisconsin.....	4925889	8313185	16800000	5641420	12192110	14100000	2866056	4073098	8700000	105871	497197	630000	75249	305914	650000
Minnesota.....	4286131	15812625	24000000	1988979	7565290	9500000	3414672	11059270	22000000	81253	888534	76000	209692	678992	1500000
Iowa.....	1401	2195812	19000000	16725	2957570	5750000	30582	2202050	12500000	125	124259	56000	1216	125130	820000
Missouri.....	1530581	8433205	25000000	8656799	41116994	78500000	1524345	5879653	19000000	19916	176055	540000	25093	454116	1200000
Kansas.....	2981652	4227586	7500000	26214537	72892157	80500000	5278079	3680870	65000000	44268	293262	325000	9631	228502	300000
			2800000		24500000				1500000			2000			25000

Total Number of Swine in all States, 1869—46,945,931.

RECEIPTS of Flour and Grain at principal Receiving and Shipping Ports in the United States and Canada for three years.

PRODUCE.	MILWAUKEE.			CINCINNATI.		
	1867.	1868.	1869.	1867.	1868.	1869.
Flour, barrels	457,933	567,358	723,520	577,296	522,297	571,230
Grain, bushels	13,706,504	14,806,375	14,856,812	5,425,294	3,919,510	4,948,011
	CHICAGO.			OGDENSBURG.		
Flour, barrels	1,720,001	2,192,413	2,218,822	240,296	225,471	247,895
Grain, bushels	52,175,750	59,814,374	53,432,811	2,587,515	2,701,471	2,884,701
	DETROIT.			TORONTO.		
Flour, barrels	1,030,541	1,290,292	960,800	67,953	62,187	85,747
Grain, bushels	2,949,401	4,916,455	3,289,372	2,283,283	1,877,389	2,293,327
	TOLEDO.			ERIE.		
Flour, barrels	717,371	868,524	906,736	.....	117,759	156,328
Grain, bushels	9,545,050	11,280,525	12,969,713	.....	1,341,320	1,629,467
	BUFFALO.			MONTREAL.		
Flour, barrels	1,446,056	1,502,731	1,598,487	693,154	790,641	984,192
Grain, bushels	43,646,789	42,497,402	37,056,962	5,915,106	4,400,412	8,118,827
	OSWEGO.			ST. LOUIS.		
Flour, barrels	3,277	1,170	3,526	944,075	671,013	1,119,043
Grain, bushels	14,637,170	13,981,527	13,378,912	13,128,380	11,031,294	13,735,052
	CLEVELAND.			NEW YORK.		
Flour, barrels	662,272	737,204	800,000	2,619,002	2,869,170	3,502,830
Grain, bushels	6,007,825	7,359,484	6,000,000	36,957,785	47,592,130	48,692,420
	BOSTON.			BALTIMORE.		
Flour, barrels	1,402,826	1,467,681	1,479,975	161,260	246,446	359,121
Grain, bushels	4,846,624	4,816,070	5,434,143	9,155,105	7,793,508	8,562,228
	PORTLAND, ME.			PHILADELPHIA.		
Flour, barrels	602,269	669,045	439,648	536,829	759,366	850,121
Grain, bushels	2,068,111	941,760	413,109	5,372,727	8,354,377	8,562,228
	DUNKIRK.			NEW ORLEANS.		
Flour, barrels	21,688	5,298	8,526	993,334	868,068	1,276,921
Grain, bushels	595,139	212,662	247,885	4,062,164	2,019,334	1,906,798
	FREMONT, OHIO.					
Grain, bushels	266,000	246,000	248,000			

MOVEMENT of Flour and Grain from Chicago during 1869.

Shipped by.	Flour, Barrels.	Wheat, Bushels.	Corn, Bushels.	Oats, Bushels.	Rye, Bushels.	Barley, Bushels.
<i>By Lake.</i>						
To Buffalo	488,228	8,205,430	11,522,561	4,889,626	97,687	26,559
To Oswego		533,165	654,737	25,376	20,569	
To Ogdensburg	94,780	109,663	1,348,359	63,175		
To Port Huron	193,744	27,069	1,072,032	102,423		
To other American Ports	44,982	425,079	933,199	763,283	14,900	5,800
To Port Colborne		400,450	951,861			
To Kingston		1,332,206	142,422	7,300		
To Montreal	6,352	196,528	15,905			
To other Canadian Ports	1,186	49,294	378,964			
Total by Lake	829,272	11,279,514	17,019,940	5,791,183	133,156	32,359
Illinois and Michigan Canal ..	936	68,912	63,387	38,339	3,140	181
Chicago and N. W. Railroad ..	3,794	44,181	13,458	2,867	360	4,659
Illinois and Central do ..	105,934	10,190	350	3,000	990	33,600
Chicago, Rock Island, and Pacific Railroad	10,590	35,500		109	6,269	52,215
Chicago, Burlington, & Quincy Railroad	5,218	33,777	30,253	160	2,174	49,160
Chicago and Alton Railroad ..	60,084	13,922		770		163,965
Michigan Central do ..	220,678	207,845	1,727,977	763,534	78,491	47,313
Lake Shore and Michigan Southern Railroad	360,736	592,863	1,064,159	1,006,155	43,563	14,754
Pittsburg, Fort Wayne, and Chicago Railroad	469,141	424,522	714,510	817,940	252,771	165,558
Pittsburg, Cincinnati, and St. Louis Railroad	272,680	533,023	350,774	376,529	277,830	69,980
Total shipments	2,339,063	13,244,249	21,586,808	8,800,646	798,744	633,753

Total receipts in Chicago in 1869 were:—

Flour	2,218,822 barrels.
Wheat	16,876,760 bushels.
Corn	23,475,800 do
Oats	10,011,940 do
Rye	955,201 do
Barley	1,513,110 do

Exports of Flour and Grain from Buffalo, *via* Erie Canal for Four Years.

Articles.	1866.	1867.	1868.	1869.
Flour, barrels.....	52,325	15,468	5,744	51,928
Wheat, bushels.....	7,772,217	10,109,718	10,369,030	16,363,480
Corn „.....	25,548,596	14,931,812	15,099,136	7,816,960
Oats „.....	8,922,433	9,409,686	10,423,504	3,983,046
Barley „.....	1,301,715	1,206,733	209,218	82,429
Rye „.....	972,647	733,578	633,899	76,792
Total Grain, bushels.....	44,517,608	36,394,527	36,734,787	28,322,707
Flour reduced to Wheat.....	291,625	77,340	28,870	259,640
Grand Totals.....	44,779,233	36,471,867	36,763,657	28,582,347

Total Tonnage of Lake Vessels (American) for a Series of Years.

—	1860.		1861.		1862.		1863.		1865.		1866.	
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.
Steamers.....	138	69150	147	64669	143	53522	124	51522	141	46811	132	41870
Propellers.....	197	61550	203	60951	253	69666	286	78035	298	86714	139	75287
Barks.....	58	23417	62	25118	74	32203	1	310	155	66078	1543	376370
Barkantines.....							142	63341	1	66078		
Brigs.....	90	25047	86	24871	85	24831	1	307	1	307		
Brigantines.....							84	23835	69	20946		
Schooners and Sloops.....	974	198661										
Schooners.....			959	204900	1066	227519	1095	225868	985	207098		
Sloops.....			15	2800	16	667	16	725	16	519		
Barges.....					3	3719	121	26091	84	21452	123	30062
Tugs.....											234	23867
Totals.....	1457	377825	1502	383309	1640	412127	1870	470034	1747	449928	2171	547267
Value.....		\$10655200		\$11862450		\$13229620		\$16720800		\$14378600		\$7537440

Opening and Close of Navigation of Lakes, and St. Lawrence.

BAY OF SUPERIOR.			MILWAUKEE RIVER.		
Years.	Opened.	Closed.	Years.	Opened.	Closed.
1861	June 12	December 12	1861	March 23	November 24
1862	April 28	" 16	1862	" 26	" 29
1863	May 10	" 7	1863	" 17	" 29
1864	April 23	" 1	1864	" 12	" 29
1865	April 22	" 5	1865	" 21	December 8
1866	May 5	" 10	1866	April 2	" 8
1867	April 19	" 1	1867	" 4	November 30
1868			1868	March 13	December 2
1869			1869	" 26	" 3

STRAITS OF MACKINAW.			DETROIT RIVER.		
Years.	Opened.	Closed.	Years.	Opened.	Closed.
1861	April 24		1861	March 11	
1862	" 17		1862	" 29	
1863	" 16		1863	" 20	
1864	" 22		1864	" 13	
1865	" 20		1865	" 25	
1866	" 28		1866	April 4	
1867	" 21		1867	" 8	
1868	" 20		1868	" 24	
1869	" 23		1869	" 5	

ST. PAUL, MIN.			ILLINOIS AND MICHIGAN CANAL.		
Years.	First Arrival.	Last Departure.	Years.	Opened.	Closed.
1861	April 8	November 26	1861	March 4	November 28
1862	" 18	" 15	1862	" 24	December 3
1863	" 6	" 24	1863	" 4	November 30
1864	" 14	" 11	1864	" 10	" 30
1865	" 15	December 1	1865	April 3	" 14
1866	" 19	November 23	1866	" 11	October 31
1867	" 21	" 23	1867	" 10	November 15
1868	" 4	" 26	1868	" 4	October 31
1869	" 19	" 20	1869	" 7	November 15

OSHKOSH, WIS.			WELLAND CANAL.		
Years.	Opened.	Closed.	Years.	Opened.	Closed.
1861	April 4	November 23	1861	April 12	December 19
1862	" 15	" 20	1862	" 6	" 17
1863	" 3	" 24	1863	" 14	" 15
1864	" 13	December 3	1864	" 17	" 17
1865	" 10	" 4	1865	" 17	" 13
1866	" 23	" 1	1866	" 17	" 15
1867	" 15	November 26	1867	" 15	" 6
1868	March 31	December 1	1868	" 20	" 17
1869	April 12	November 19	1869	"	" 11

RACINE RIVER.			MARQUETTE.		
Years.	Opened.	Closed.	Years.	First Arrival.	Latest Arrival at Detroit from Marquette.
1866		December 10		May 5	December 8
1867		November 29		" 6	" 5
1868		December 1		" 7	" 1
1869		" 2			

Opening and Close of Navigation of Lakes and St. Lawrence.—Continued.

OSWEGO.			HUDSON RIVER.		
Years.	First Arrival.	Last Departure.	Years.	Opened.	Closed.
1861	April 2.....	December 23	1861	April 4.....	December 23
1862	" 2.....	" 19	1862	" 7.....	" 19
1863	" 3.....	" 15	1863	March 11.....	" 16
1864	" 5.....	" 17	1864	" 22.....	" 12
1865	" 1.....	" 17	1865	" 23.....	" 16
1866	March 15.....	" 15	1866	" 22.....	" 25
1867	April 3.....	" 9	1867	" 23.....	" 9
1868	" 3.....	" 4	1868	April 3.....	" 14
1869	" 3.....	" 20	1869	.....	" 6

TOLEDO.			BUFFALO.		
Years.	First Arrival.	Last Departure.	Years.	First Arrivals.	Last Clearances.
1861	December 13	1861	April 18.....	December 10
1862	" 12	1862	" 4.....	" 16
1863	" 13	1863	" 7.....	" 17
1864	" 6	1864	" 16.....	" 12
1865	" 10	1865	" 26.....	" 10
1866	" 15	1866	" 28.....	" 6
1867	" 6	1867	" 19.....	" 10
1868	" 2	1868	" 13.....	" 5
1869	November 29	1869	May 2.....	" 4

LAKE ERIE.				MONTREAL. (See Appendix H.)		
Years.	Lake Opened.	Canal Opened.	Canal Closed.	Years.	Opened.	Closed.
1861	April 13.....	May 1.....	December 16	1864	May 1.....	December 2
1862	" 5.....	" 1.....	" 7	1865	April 17.....	" 4
1863	" 7.....	" 1.....	" 18	1866	May 1.....	" 6
1864	" 13.....	April 30.....	" 8	1867	" 4.....	" 6
1865	" 26.....	May 1.....	" 12	1868	" 1.....	November 30
1866	" 28.....	" 1.....	" 12			
1867	" 27.....	" 6.....	" 10			
1868	" 11.....	" 6.....	" 7			
1869	May 1.....	" 6.....	" 18			

Production of Copper and Iron Mines of Lake Superior District.

Iron.			Copper.		
Years.	Tons.	Value.	Years.	Tons.	Value.
1856	7,000	\$28,000	1845 to 1857	18,954	\$9,000,000
1857	21,000	60,000	1858	3,500	1,886,000
1858	32,661	249,202	1859	4,200	1,890,000
1859	72,937	575,529	1860	6,000	2,610,000
1860	122,658	736,496	1861	7,500	3,337,000
1861	53,400	419,501	1862	9,962	3,402,000
1862	124,311	984,977	1863	8,548	4,420,000
1863	195,070	1,416,935	1864	8,472	6,110,000
1864	248,955	1,867,215	1865	10,991	5,148,000
1865	207,539	1,590,430	1866	10,376	4,760,000
1866	315,309	2,405,960	1867	11,735	4,140,000
1867	496,987	3,475,820	1868	13,049	4,592,000
1868	546,059	3,992,413	1869	15,200	5,368,000
1869	672,241	4,968,435			
Total...	3,119,630	\$22,769,713	Total....	128,275	\$56,661,000

APPENDIX F.

TABULAR STATEMENTS, SHOWING POPULATION AND TRADE OF THE PROVINCES OF BRITISH NORTH AMERICA.

1. Population and Area.
2. Agricultural Resources.
3. Imports and Exports.
4. Trade of the Dominion, 1868, 1869, 1870.
5. Statistical view of the Commerce of Canada.
6. Trade of Principal Ports on the Lakes and St. Lawrence.
7. Lumber and Timber Trade.
8. Exports and Imports by the St. Lawrence.
9. Coal Trade.
10. Shipping Interests.

Population, Area, &c.

Provinces.	Population in 1861.*	Rate of Increase.	Estimated in 1871.	Area in Square Miles.
Ontario	1,396,091	4·34	2,136,308	120,260
Quebec	1,111,566	2·50	1,422,546	210,020
Nova Scotia	330,857	1·82	396,449	18,671
New Brunswick	252,047	2·60	329,800	27,105
Prince Edward Island	80,857	2·07	99,261	2,173
Newfoundland (1857)	124,288	.....	148,387†	40,200
British Columbia	34,816	.....	65,000	220,000
Manitoba	100,000	.....	12,000	} say
N. W. Territory			100,000		2,730,000
Total population of British America	3,430,522	.....	4,707,751	

	1811.	1851.	1861.	1871. Estimated.
Population of Ontario	77,000	952,000	1,396,091	2,136,308

* These returns include Indian population.

† By Census in 1869, Newfoundland had a population of 146,533, or an increase of 1,854 per annum since 1857.

Total quantity of Wheat, Barley, Rye, Buckwheat, Indian Corn, Peas, and Beans, raised in the following Provinces :—

Province.	Bushels raised in 1851.	Bushels per Inhabitant.	Bushels raised in 1861.	Bushels per Inhabitant.
Ontario	30,129,622	31½	74,971,828	54
Quebec	15,190,027	17	23,534,903	21½
Nova Scotia	2,168,455	8	2,851,767	8½
New Brunswick	2,485,991	12¾	3,796,487	15
Prince Edward Island	1,041,691	16½	2,838,025	35
Wheat raised in—				
Ontario	12,692,852	13½	24,620,425	16½
Quebec	3,075,868	3½	2,563,114	2¾
Nova Scotia	297,159	1 1/18	312,081	1
New Brunswick	266,269	1 1/10	279,775	1 1/10
Prince Edward Island	219,789	3½	346,125	4½
Oats raised in—				
Ontario	11,193,844	11¾	21,220,874	15½
Quebec	8,967,594	10¾		
Nova Scotia	1,384,437	5	1,978,137	6
New Brunswick	1,411,164	7½	2,656,883	10½
Prince Edward Island	946,383	12	2,218,578	27½

IMPORTS AND EXPORTS OF THE FIVE PROVINCES OF BRITISH NORTH AMERICA FOR FOLLOWING YEARS.

	1851.	1857.	1860.	1861.	1864.	1865.	1867.	1869.	1870.	Duty in 1870.
ONTARIO AND QUEBEC.										
Imports	\$22,022,045	\$39,430,598	\$34,447,935	\$43,064,836	\$49,753,469	\$44,620,469	\$59,648,987	\$55,185,667	\$59,019,092	Ontario \$2,421,710.80
Exports	13,319,915	27,006,624	34,631,890	36,614,195	43,718,191	42,481,151	48,486,143	49,176,751	62,466,867	Quebec 4,860,859.31
NOVA SCOTIA.										
Imports	5,970,877	9,680,860	8,511,549	7,613,227	.....	14,381,662	.....	8,607,244	8,940,800	} 1,162,592.51
Exports	4,853,903	6,967,830	6,619,534	5,774,334	.....	8,830,693	.....	5,743,871	5,803,417	
NEW BRUNSWICK.										
Imports	4,077,655	7,605,890	7,233,700	.....	.....	10,000,794	.....	6,622,254	6,854,447	} 1,017,777.82
Exports	3,290,090	5,366,755	4,581,850	.....	.....	6,373,705	.....	5,554,519	5,303,206	
NEWFOUNDLAND.										
Imports	6,358,020	7,067,160	6,620,680	6,270,640	.....	5,784,849	.....	5,254,152	.....
Exports	6,693,985	8,255,855	6,785,565	6,358,560	.....	5,694,305	.....	7,300,636	.....
PRINCE EDWARD ISLAND.										
Imports	1,185,000	1,120,000	1,175,000	1,150,000	.....	.....	.....	1,720,000	.....
Exports	1,100,000	1,110,000	1,085,000	1,007,170	.....	.....	.....	1,825,000	.....

Total trade of Dominion in 1870. \$148,387,820
do do 1851. 53,534,485
Total trade of five British American Provinces in 1869. 146,969,734

Recapitulation of Principal Exports for following years.

	1868.	1869.	1870.	Duty in 1870.
	\$	\$	\$	\$
Products of Mines	1,446,857	2,093,502	2,487,038	
do Fisheries	3,357,510	3,242,710	3,608,549	
do Forest	18,262,170	19,838,963	20,940,434	
Animals and their products	6,893,167	8,769,407	12,138,161	
Agricultural products	12,871,055	12,182,702	13,676,619	37,912 28
Manufactures	1,572,546	1,765,461	2,133,659	
Other Articles	302,280	350,559	371,652	
Vessels built at Quebec	837,592†	1,080,000*	725,080	
Total Produce of Dominion	45,543,177	49,323,304	56,081,192	37,912 28
Coin and bullion	4,866,168	4,218,208	8,002,978	
Goods not produce of the Dominion	4,196,821	3,855,801	6,527,622	
Short at Inland Ports	2,961,722	3,077,468	2,962,398	
Grand Total of Exports	57,567,888	60,474,781	73,573,490	37,912 28

37--27,000 tons. † 32--22,722 tons.

Statistical View of the Commerce of Canada for Fiscal Year 1870.

	Value of Exports.	Goods entered for Consumption.	Duty.	Vessels entered Inwards.	Vessels cleared Outwards.
				Tons.	Tons.
	\$	\$	\$ cts.		
Great Britain	24,950,925	38,595,433	5,037,439 70	} 5,796,125	} 5,619,745
United States	32,984,652	24,728,166	1,738,162 99		
France	278,420	1,394,346	392,871 74		
Germany	15,535	469,275	121,863 60		
British North American Provinces	1,421,423	1,268,948	84,421 96		
British West Indies	1,512,780	892,134	387,136 75		
Spanish West Indies	1,280,268	2,423,421	1,041,284 79		
China		432,919	156,618 76		
Spain	85,082	314,925	64,452 48		
Other Foreign Countries	1,554,385	718,036	302,724 30		
Goods not the produce of Canada	6,527,622				
Miscellaneous			136,963 37		
Totals	73,573,490	91,237,603	9,462,940 44		

Exports and Imports *via* St. Lawrence for following years.

Years.	Total Imports.	Imports <i>via</i> St. Lawrence.	Total Exports.	Exports <i>via</i> St. Lawrence.
	\$	\$	\$	\$
1858.....	29,678,527	10,795,077	23,472,609	8,983,773
1859.....	33,555,161	11,472,754	24,766,981	8,400,096
1860.....	34,441,621	13,527,160	34,631,890	13,288,135
1861.....	43,046,823	16,726,541	36,614,195	17,607,744
1862.....	48,600,633	17,601,019	33,596,125	14,411,849
1863.....	45,964,493	16,439,930	41,831,532	16,391,172
1865.....	61,020,469	18,828,495	42,481,151	15,703,621

Importations of Coal and Coke into Ontario and Quebec.

	Total Imports.	Value.	From Great Britain.	From United States.
	Tons.	\$	Tons.	Tons.
Fiscal year 1868-'69.....	356,376	1,288,831	482,550	795,337
" " 1867-'68.....	354,023	1,363,207	539,606	791,676
" " 1866-'67.....	299,507	1,253,115	472,710	730,676
" " 1865-'66.....	220,276	906,700	419,847	455,890

American Coal *via* Welland Canal.

Fiscal Years to 30th June.	From American to Canadian Ports.	From American to American Ports.	Total Tons of 2,000lbs. each.	Remarks.
	Tons.	Tons.		
1864-'65.....	35,592	2,102	37,694	
1865-'66.....	34,967	2,429	37,396	
1866-'67.....	64,855½	3,786	68,641½	
1867-'68.....	63,128½	3,633	66,661½	
1868-'69.....	71,415	3,888½	75,303½	71,006½ for consumption in Canada.

Imports into Ontario *via* Oswego.

	Tons.
1860.....	17,644
1861.....	33,475
1862.....	25,981
1863.....	26,697
1864.....	37,498
1865.....	18,090
1866.....	32,237
1867.....	42,470
1868.....	46,280
1869.....	46,295

Return of Vessels owned and registered in Dominion of Canada, 1st July, 1867.

Provinces.	Total.		Occupation.								Value.	No. of Men Employed
			Sea-going.		River or Lake.		Trading.		Fishing.			
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.		
Ontario.....	481	66,959	1	125	480	66,834	480	66,937	1	22	2,787,800	3,191
Quebec.....	1,428	155,690	304	63,012	1,124	92,678	1,386	153,959	42	1,731	4,633,945	8,548
New Brunswick	826	200,777	588	188,399	238	12,378	717	198,132	109	2,655	5,904,505	6,207
Nova Scotia	3,087	352,917	3,081	352,646	6	271	1,479	302,416	1,608	50,501	10,256,812	19,288
Total.....	5,822	776,343	3,974	604,182	1,848	172,161	4,062	722,444	1,760	54,899	23,583,062	37,235

Total for all British North American Provinces :—

No.....	7,591
Tonnage.....	899,096
Value	\$85,000,000

APPENDIX G.

FLOUR AND GRAIN TRADE.

1. Imports and Exports.
2. American Flour and Grain *via* Canada.
3. Flour and Grain at Port Colborne *via* Welland Canal.
- " " " *via* Welland R. R.

FLOUR AND GRAIN.

Imports and Exports of the Dominion of Canada for two years.

Articles.	Imports.		Exports.			
	Total Quantity.	Quantity from U. S.	Total Quantity.	To Great Britain.	To United States.	To other Countries.
1867-'68.						
Flour and Meal—Barrels ..	285,627	283,044	383,944	163,555	126,337	93,452
Wheat Bushels ..	2,734,809	2,734,756	2,284,702	717,604	1,564,273	2,825
Corn " ..	2,376,353	2,203,298	10,057	3	9,374	680
Peas " ..			2,133,813	1,215,384	901,425	19,044
Oats " ..			1,738,441	927,642	776,720	34,079
Barley and Rye " ..			4,055,672	118,198	3,937,647	27
1868-'69.						
Flour and Meal—Barrels ..	456,778	455,224	399,081	193,458	100,692	104,931
Corn Bushels ..	2,561,240	2,559,810	6,093	.....	5,104	989
Wheat " ..	3,591,948	3,250,432	2,809,208	1,577,734	1,231,237	237
Peas " ..			1,046,300	596,290	432,339	17,671
Oats " ..			762,620	431,075	271,337	60,208
Barley " ..			4,630,069	400	4,629,608	61

Quantities of Flour and Grain passing into Canada from the United States; also quantities in transit to Ports in the United States since the repeal of the Reciprocity Treaty.

	Flour—Barrels.		Wheat—Bushels.		Indian Corn—Bushels		Other Grain—Bushels	
	To Canada.	Transit to U. S.	To Canada.	Transit to U. S.	To Canada.	Transit to U. S.	To Canada.	Transit to U. S.
1866	8,102	886,314	14,963	5,032,071	488,401	4,250,232	26,168	20,425
1867	4,401	1,073,686	23,804	5,148,714	295,726	5,448,144	3,128	223,719
1868	63,546	1,455,947	87,223	7,151,612	526,731	5,680,996	18,502	865,020
1869	105,963	1,306,054	5,458,692	7,996,233	1,186,947	7,024,835	65,835	1,248,470
Total	182,012	4,702,001	5,584,682	25,328,639	2,487,085	22,404,207	113,633	2,357,634

Flour and Grain passing into Canada at Port Colborne by Welland Canal.

—	Flour.	Corn Meal	Wheat.	Indian Corn.	Barley.	Oats and other Grain.
1869.	Barrels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Total passing inwards	267,400	338	13,605,129	3,215,685	9,466	343,822
From Canadian to Canadian Ports	1·20 p.c.	.....	4·79 p.c.	.....	all	55·51 p.c.
From Canadian to U. S. Ports .....	.....	.....	0·33 "	.....	.....	3·47 "
From U. S. to U. S. Ports	94·27 p.c.	0·51 p.c.	54·86 "	93·27 p.c.	.....	38·76 "
From U. S. to Canadian Ports	4·53 "	99·49 "	40·02 "	6·73 "	.....	2·26 "
1868.						
Total passing inwards ...	289,526	7,154	8,914,710	5,460,480	53,788	1,329,360
From Canadian to Canadian Ports	0·24 p.c.	21·30 p.c.	3·20 p.c.	.....	2·26 p.c.	16·44 p.c.
From Canadian to U. S. Ports .....	.....	.....	1·10 "	.....	26·39 "	14·07 "
From U. S. to U. S. Ports	91·16 p.c.	0·25 p.c.	74·67 "	72·75 p.c.	71·35 "	61·06 "
From U. S. to Canadian Ports	8·60 "	78·45 "	21·03 "	27·25 "	.....	8·43 "
1867.						
Total passing inwards	237,687	2,683	7,239,773	5,510,699	113,224	562,274
From Canadian to Canadian Ports	0·55 p.c.	.....	3·47 p.c.	.....	.....	.....
From Canadian to U. S. Ports .....	.....	.....	1·91 "	.....	1·60 p.c.	.....
From U. S. to U. S. Ports	92·92 p.c.	63·13 p.c.	69·95 "	80·98 p.c.	98·40 "	.....
From U. S. to Canadian Ports	6·53 "	36·87 "	26·67 "	19·02 "	.....	.....

Quantities of Flour and Grain passing into Canada via Welland Railroad.

Years.	Flour.	Wheat.	Indian Corn.	Other Grain.
	Barrels.	Bushels.	Bushels.	Bushels.
1869	25,105	1,526,306	968,773	1,892
1868	693	995,009	1,447,027	100
1867	2,560	1,202,741	720,585	61,027
1866 .....	.....	1,343,891	2,124,063	111,612
Aggregate in four years	28,378	5,067,947	5,260,448	174,631

Aggregate quantities passing into Canada via the Canal and the Railway.

Years.	Flour.	Wheat.	Indian Corn.	Other Grain.
	Barrels.	Bushels.	Bushels.	Bushels.
1869	292,843	15,131,434	4,184,458	355,160
1868	297,373	9,909,919	6,907,515	1,383,248
1867	242,950	8,442,514	6,231,284	726,525
1866	151,424	7,100,470	7,271,915	736,111
Aggregate in four years	984,590	40,584,138	24,595,172	3,211,044

APPENDIX H.

TRADE OF MONTREAL.

1. Receipts and Shipments of Flour and Grain for several years.
2. Opening and Close of Navigation, together with amount of sea-going Tonnage during 9 years.
3. River Craft.
4. Flour and Grain shipped, *via* the St. Lawrence.
5. Breadstuffs received by Lachine Canal.
6. " " " Grand Trunk Railway, &c.

Flour and Grain receipts at, and shipments from, Montreal during 1849, 1854, 1859, 1860, 1868, 1869.

Year.	Flour.		Wheat.		Corn.		Peas.		Barley.		Oats.	
	Received.	Shipped.	Received.	Shipped.	Received.	Shipped.	Received.	Shipped.	Received.	Shipped.	Received.	Shipped.
1849	Barrels, 485,901	535,593	Bushels, 481,768	50,514	Bushels, 48,637	6,985	Bushels, 2,911	357	Bushels, 18,243	12,001	Bushels, 11,927	12,000
1854	484,864	97,724	531,785	651,149	10,698	67,284	21,457	27,925	63,083	37,637	206,732	903,024
1859	575,810	105,973	635,424	71,430	113,186	3,015	27,483	27,483	215,075	84,086	576,984	330,730
1868	577,196	277,567	2,632,602	138,214	776,129	24,387	267,416	66,238	163,372			
1869	790,311	966,067	2,426,869	1,081,958	520,395	663,645	66,238	163,372				
	975,295		7,462,033	6,595,332	1,141,982	108,018						

Comparative Statement of the Opening and Close of Navigation, Arrivals and Departures, Tonnage, &c., of sea-going Vessels during the past Nine Years. (Montreal.)

Year.	Opening of Navigation.	Close of Navigation.	First Vessel from Sea.	Last Vessel from Sea.	No. of Steamers.	Tonnage.	Vessels from Lower Ports.	Tonnage.	Vessels to other Ports.	Tonnage.	Total No. of Vessels.	Tonnage.	Greatest No. of Vessels in Port at one time.
1861	April 24	Dec. 22	April 27	Dec. 4	40	51,298	115	15,306	433	202,601	574	261,793	117, June 6.
1862	" 23	" 7	Nov. 27	Nov. 27	53	62,912	103	14,271	430	195,348	571	265,243	78, October 16.
1863	" 25	" 6	" 6	" 26	54	56,460	101	13,664	369	144,594	504	209,224	86, June 13.
1864	" 10	" 11	May 28	Dec. 7	51	59,071	75	9,039	237	94,202	378	151,901	32, June 23.
1865	" 13	" 16	April 3	Nov. 24	63	78,015	114	18,056	182	63,726	368	152,943	42, October 19.
1866	" 19	" 15	" 1	" 28	70	75,474	172	21,960	273	111,257	516	206,775	91, June 13.
1867	" 22	" 6	" 4	" 30	106	87,199	190	29,561	305	176,240	464	199,053	59, October 24.
1868	" 17	" 9	" 4	" 27	105	101,566	178	22,413	301	175,735	478	198,759	51, June 21.
1869	" 25	" 6	April 24	" 24	117	117,965	222	37,648	359	232,686	557	259,863	61, Nov. 4.

Comparative Statement showing the number and tonnage of river craft, including Steamers, Barges, Bateaux, &c., in the port of Montreal during the past eight years and the greatest number at one time.

Years.	River Craft.	Tonnage.	In Port at one time.
1862.....	4,875	523,991	164, November 1.
1863.....	4,697	534,740	197, June 20.
1864.....	4,509	420,694	220, September 6.
1865.....	4,771	626,550	205, September 5.
1866.....	5,083	613,679	240, October 14.
1867.....	5,284	744,477	244, October 31.
1868.....	5,822	746,927	297, June, 22.
1869.....	5,866	721,324	259, November 5.

Flour and Grain Shipped from Montreal *via* the River St. Lawrence, including quantities by Steamships from Portland.

Years.	Flour, Barrels.	Oat and Corn Meal Barrels.	Wheat, Bushels.	Corn, Bushels.	Peas, Bushels.	Oats, Bushels.	Barley, Bushels.	Rye, Bushels.
1863.....	692,868	9,353	3,806,306	635,387	774,442	3,001,766	640,380	170
1864.....	420,509	532	2,347,126	259	469,983	1,786	375	.....
1865.....	205,181	3,743	591,343	657,514	596,472	199,246	2,440	.....
1866.....	166,586	37,028	16,671	1,831,049	1,124,616	2,993,932	247,495	73,370
1867.....	207,169	66,803	1,459,622	643,528	1,753,748	919,843	166,038	21,918
1868.....	261,285	23,101	1,044,344	730,422	657,345	711,996	6,995	.....
1869.....	492,768	5,045	5,496,109	78,294	490,894	60,863	171	.....

Breadstuffs received by Lachine Canal, during season of Navigation for Seven Years.

Years.	Flour, Barrels.	Oat and Corn Meal, Barrels.	Wheat, Bushels.	Corn, Bushels.	Peas, Bushels.	Oats, Bushels.	Barley and Rye, Bushels.
1863.....	735,182	1,511	4,970,099	861,361	651,658	352,721	305,757
1864.....	468,868	1,334	3,769,639	158,162	345,247	170,356	349,397
1865.....	441,340	1,587	2,201,645	934,071	402,776	146,555	335,783
1866.....	392,127	13,814	571,447	2,117,208	888,979	722,332	393,512
1867.....	312,936	32,862	2,441,272	890,555	1,079,263	215,342	451,339
1868.....	338,394	7,427	2,053,913	1,055,540	355,965	99,189	66,084
1869.....	436,805	3,683	6,937,300	135,493	428,639	16,489	16,018

G. T. R.

Breadstuffs received at Montreal *via* G. T. R. during 7 years.

Years.	Flour and Meal, bris.	Wheat and Peas, bush.	Corn and Rye, bush.	Barley, bushels.	Oats, bush.
1863.....	459,773	556,627	1,173	25,447	51,251
1864.....	390,271	436,518	1,398	65,660	62,200
1865.....	341,614	480,874	1,103	12,786	17,139
1866.....	321,444	319,036	15,485	58,694	206,134
1867.....	440,541	721,065	26,470	83,534	93,926
1868.....	453,553	537,386	33,248	53,733	115,886
1869.....	538,427	655,966	17,310	51,746	67,094

Shipments during the same period.

1863.....	124,767	65,902	15,267	.....	358,311
1864.....	134,046	29,047	16,875	20,452	137,326
1865.....	309,180	88,369	74,447	105,180	230,119
1866.....	301,958	76,464	42,785	29,618	37,672
1867.....	150,998	87,887	26,622	57,047	79,039
1868.....	172,841	19,106	36,760	66,084	54,648
1869.....	168,693	94,421	23,902	33,208	95,276

Monthly Imports at Montreal, in 1869, via Grand Trunk R. R.

Months.	Flour and Meal.	Wheat and Peas.	Corn and Rye.	Barley.	Oats.	Pork and Beef.	Pork in Carcass.	Coal Oil.	Total Freight of all kinds.
	Brls.	Bush.	Bush.	Bush.	Bush.	Brls.	Lbs.	Brls.	Tons.
January	33,564	18,053	9,626	607	6,575	357	467,717	113	11,638
February	28,812	13,379	.....	2,326	4,249	938	228,625	113	10,073
March	21,730	13,986	829	1,872	5,306	637	21,560	1,764	10,806
April	38,550	10,300	.....	125	2,031	137	.....	1,574	18,207
May	43,900	101,100	.....	.....	4,593	1,206	.....	1,354	15,432
June	37,400	143,900	.....	.....	3,125	.....	.....	1,297	15,056
July	66,500	95,333	.....	.....	5,000	.....	.....	1,189	14,003
August	38,700	54,333	.....	.....	3,125	.....	.....	2,054	12,381
September	46,500	45,033	.....	875	2,500	.....	.....	2,346	13,193
October	49,171	59,883	2,160	27,046	13,296	.....	42,000	2,582	16,898
November	62,600	56,416	1,267	15,541	6,169	346	376,100	1,101	20,376
December	51,000	41,250	2,357	3,354	14,125	445	1,733,000	684	17,900
Totals	538,427	655,966	17,310	51,746	67,094	4,066	2,869,002	16,171	175,963

Monthly Exports from Montreal, in 1869, via Grand Trunk Railway.

Months.	Flour and Meal.	Wheat and Peas.	Barley.	Oats.	Corn and Rye.	Pork and Beef.	Pork in Carcass.	Coal Oil.	Total freight of all kinds.
	Brls.	Bushels.	Bushels.	Bushels.	Bushels.	Brls.	Lbs.	Brls.	Tons.
January	14,300	18,053	607	6,575	9,626	357	467,717	113	11,638
February	10,409	13,379	2,326	4,249	.....	938	228,625	113	10,073
March	16,827	13,986	1,872	5,306	829	637	21,560	1,764	10,806
April	13,534	10,300	125	2,031	.....	137	.....	1,574	18,207
May	10,400	101,100	.....	4,593	1,071	1,206	.....	1,354	15,432
June	11,796	143,900	.....	3,125	.....	.....	.....	1,297	15,056
July	18,089	95,333	.....	5,000	.....	.....	.....	1,189	14,003
August	14,912	54,333	.....	3,125	.....	.....	.....	2,054	12,381
September	11,076	45,033	875	2,500	.....	.....	.....	2,346	13,193
October	11,000	59,883	27,046	13,296	2,160	.....	42,000	2,582	16,898
November	12,900	56,416	15,541	6,169	1,267	346	376,100	1,101	20,376
December	23,450	41,250	3,354	14,125	2,357	445	1,733,000	684	17,900
Totals	168,694	94,421	33,208	95,276	23,902	1,958	2,869,002	11,671	146,051

APPENDIX I.

RETURNS SHOWING TRAFFIC OF CANALS, &c.

1. Tonnage and Tolls.
2. Business of Welland and St. Lawrence Canals during 1868 and 1869.
3. Number, Nationality, and Tonnage of Vessels passing through Welland and St. Lawrence Canals.
4. Gross Revenue and Tonnage of Canals in 1849 and 1869, &c.
5. Cost of Canals, up to July 1st, 1867.
6. Dimensions and Capacity of Canadian and American Canals.

Tonnage and Tolls levied on Freight and Passengers passed through all the Canadian Canals from 1850 to 1870, inclusive, distinguishing whether from or to Canadian or United States' Ports; also Tonnage passed free.

Remarks.	Years.	From Canadian to Canadian Ports.		From American to Canadian Ports.		From American to American Ports.		Total Freight and Tolls accrued therein.		Deduct.		Net Tonnage and Tolls Collected on Freight.		Tolls Collected on freight and Vessels.		Net Revenue on Freight and Vessels.	
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons Free.	Tolls refunded.	Tons.	Tolls.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Ottawa Canals not included under control of Imperial Government. Navigation of season of year. Fiscal years.	1850	538,477	224,835	52,183	221,895	1,037,390	239,898 16	239,898 16	239,898 16	.....	.....	1,037,390	239,898 16	258,123 58	258,123 58	.....	.....
	1851	896,212	217,500	103,962	265,120	1,416,794	279,229 70	279,229 70	1,416,794	.....	.....	1,416,794	279,229 70	304,864 90	304,864 90	.....	.....
	1852	896,030	153,006	38,858	409,720	1,497,614	314,114 28	314,114 28	1,497,614	4,897 64	.....	1,497,614	309,216 64	343,306 96	338,409 32	.....	.....
	1853	1,015,202	141,801	85,211	463,495	1,805,709	355,194 30	355,194 30	1,805,709	7,571 52	.....	1,805,709	347,622 78	390,487 02	332,915 50	.....	.....
	1854	1,006,006	149,636	118,663	412,999	1,687,304	293,286 67	293,286 67	1,687,304	.....	.....	1,687,304	292,266 39	333,181 85	332,081 57	.....	.....
	1855	849,007	203,223	181,851	437,623	1,714,642	302,152 56	302,152 56	1,714,642	42,288	10,998 79	1,672,404	291,158 77	335,680 21	334,691 42	.....	.....
	1856	922,626	258,761	220,343	542,842	2,007,263	359,597 97	359,597 97	2,007,263	62,691	16,677 50	1,944,572	342,920 47	398,259 58	381,582 08	.....	.....
	1857	856,093	264,141	215,568	423,825	1,837,007	319,302 92	319,302 92	1,837,007	87,382	25,583 95	1,759,625	293,718 97	355,691 28	330,107 53	.....	.....
	1858	1,424,313	259,537	162,936	471,432	2,335,480	476,898 28	476,898 28	2,335,480	75,771	12,036 92	2,259,709	262,861 36	314,447 51	302,410 59	.....	.....
	1859	1,563,509	338,437	196,707	380,601	2,447,766	196,292 18	196,292 18	2,447,766	38,425	5,535 03	2,409,342	190,687 15	228,962 41	223,427 38	.....	.....
	1860	1,351,186	473,365	169,671	589,479	2,583,701	286,434 26	286,434 26	2,583,701	.....	127,340 63	2,583,701	159,093 63	333,262 56	206,921 93	.....	.....
	1861	1,522,029	246,742	293,798	546,323	2,614,892	369,681 58	369,681 58	2,614,892	.....	.....	2,614,892	136,818 31	419,385 02	185,521 75	.....	.....
	1862	1,545,219	552,606	371,510	644,393	3,113,728	438,702 10	438,702 10	3,113,728	.....	.....	3,113,728	154,883 55	497,305 96	335,220 21	.....	.....
	1863	1,664,908	491,112	274,897	621,358	3,052,275	337,697 19	337,697 19	3,052,275	.....	.....	3,052,275	337,697 19	385,200 21	385,200 21	.....	.....
	1864	1,498,449	127,756	69,112	158,764	812,496	91,371 69	91,371 69	812,496	.....	4,533 05	812,496	86,838 64	106,611 80	102,078 75	.....	.....
	1865	1,390,930	433,575	346,463	257,846	2,837,897	258,493 96	258,493 96	2,837,897	109,083	17,148 30	2,498,814	241,845 66	299,905 47	282,757 17	.....	.....
	1866	1,538,111	671,042	194,404	465,715	2,855,386	279,157 23	279,157 23	2,855,386	86,114	14,602 53	2,869,272	264,554 70	318,597 74	304,352 94	.....	.....
	1867	1,690,316	736,057	234,223	461,074	3,235,754	293,495 01	293,495 01	3,235,754	108,084	16,843 88	3,127,670	276,651 13	325,283 42	318,439 94	.....	.....
1868	1,752,425	810,939	278,706	644,946	3,599,043	330,174 59	330,174 59	3,599,043	111,927	15,352 86	3,487,116	316,821 73	381,129 18	361,756 82	.....	.....
1869	1,716,529	743,946	305,221	690,881	3,605,089	322,773 96	322,773 96	3,605,089	148,462	2,425 28	3,456,577	316,348 68	369,982 10	367,556 82	.....	.....
1870	2,368,871	858,870	330,794	685,350	4,276,820	389,179 61	389,179 61	4,276,820	261,418	37,469 03	4,015,402	351,710 58	444,932 25	407,463 22	.....	.....

WELLAND AND ST. LAWRENCE CANALS.

1. For the year ending June 30th 1868.

	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.
Vessels of all kinds	1,240,366	27,618 00	1,176,466	9,101 00
Produce of Forest	279,508	28,188 00	594,426	17,966 00
Farm Stock	222	54 00	2,508	265 00
Animal Produce	3,590	954 00	5,569	1,046 00
Vegetable Food	495,873	95,743 00	81,927	12,814 00
Agriculture Products	21,713	5,263 00	25,759	2,912 00
Manufactures	160,516	33,793 00	103,968	12,824 00
Merchandize	174,212	31,247 00	48,789	5,618 00
Passengers—No.....	7,536	\$679 00	47,346	\$2,899 00

2. For the year ending June 30th 1869.

	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.
Vessels of all kinds	1,267,451	28,430 00	1,174,650	8,978 00
Produce of Forest	258,978	26,723 00	590,385	16,936 00
Farm Stock	179	44 00	2,357	233 00
Animal Produce	4,013	1,081 00	5,025	960 00
Vegetable Food	503,869	98,071 00	86,067	12,562 00
Agricultural Products	24,419	6,109 00	19,678	2,133 00
Manufactures	202,764	41,954 00	103,146	13,405 00
Merchandize	200,528	34,236 00	53,710	5,760 00
Passengers—No	6,611	\$648 00	46,754	\$2,744 00

NUMBER, NATIONALITY, AND TONNAGE OF VESSELS.

1. For the year ending June 30th, 1868.

Canadian Vessels and Steamers.	Welland Canal.		St. Lawrence Canals.	
	No.	Tons.	No.	Tons.
From Canadian to Canadian Ports	1,882	294,254	11,413	1,093,363
" " American Ports	638	123,961	659	57,485
" American to Canadian Ports	700	128,989	78	7,350
" " to American Ports	5	993	3	390
Totals	3,225	548,197	12,153	1,158,649
American Shipping.				
From Canadian to Canadian Ports	20	2,029		
" " American Ports	394	37,730	143	9,354
" American to Canadian Ports	375	36,055	54	3,123
" " to American Ports	2,143	16,355	159	5,340
Totals	2,932	692,169	356	17,817

			\$	cts.
Amount of Tolls collected on Canadian Vessels on Welland Canal			10,664	03
" " " St. Lawrence Canals			9,018	38
" " " American Welland Canal			16,954	24
" " " St. Lawrence Canals			83	57
Total Tolls for 1867-'68			36,720	22

2. For the year ending June 30th, 1869.

Canadian Shipping.	Welland Canal.		St. Lawrence Canals.	
	No.	Tons.	No.	Tons.
From Canadian to Canadian Ports	1,888	269,413	10,096	988,790
" " American Ports	673	135,100	1,328	122,166
" American to Canadian Ports	707	140,878	572	48,182
Totals	3,278	548,019	11,998	1,159,179
American Shipping.				
From Canadian to Canadian Ports	12	1,503	5	108
" " American Ports	307	31,022	124	7,239
" American to Canadian Ports	356	51,966	75	4,656
" " American Ports	2,116	634,941	146	3,468
Totals	2,791	719,432	350	15,471

			\$	cts.
Amount of Tolls on Canadian Vessels on Welland Canal			11,044	02
" " " St. Lawrence Canals			8,888	34
" " " American Vessels on Welland Canal			17,386	90
" " " St. Lawrence Canals			90	17
Total Tolls 1868-'69			37,409	43

Number, Nationality, and Tonnage of Vessels.—Continued.

3. For year ending June 30th, 1870.

Canadian Vessels and Steamers, Welland Canal.

	No.	Tons.
Steam Vessels	1,199	104,100
Sailing Vessels.....	2,657	487,474
Total No.....	3,856	591,574

American Shipping.

	No.	Tons.
Steam Vessels	878	271,243
Sailing Vessels.....	2,006	494,300
Total No.....	2,884	765,543
Total tonnage of vessels		1,357,117

Amount of tolls on Canadian vessels in Welland.....	\$11,828 33
" " American " " 	18,937 10
Quantity of Canadian wheat	38,111 tons.
" American " 	394,051 "
" " corn and meal	84,252 "
" Canadian flour	16,555 "
" American " 	26,186 "
" " coal.....	98,109 "

Gross Tonnage and Revenue of Canals in 1869 compared with the same in 1849.

Years.	Welland.		St. Lawrence.		Chambly.		Burlington Bay.		St. Ann's Lock—1850.		Ottawa and Rideau.	
	Total tonnage of vessels and property up and down.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.
1849.....	820,006	\$ 138,967	657,793	\$ 68,793	205,858	\$ 7,429	373,383	\$ 8,460	184,132	\$ 3,669	795,726	\$ 10,004
1869.....	2,462,201	243,559	2,635,018	80,089	830,436	33,246	.....	.....	855,324	8,047	1,107,923	17,330

	Welland.		St. Lawrence.		Chambly.		Burlington Bay.		St. Ann's Lock—1850.		Ottawa and Rideau.	
	Total tonnage of vessels and property up and down.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.	Total Tonnage.	Gross Revenue.
1860.....	\$122,001 35	.....	2,182,593	.....	2,348,155	.....	2,182,593	.....	1,558,061	.....	1,896,377	.....
1861.....	42,247 27	.....	2,348,155	.....	2,348,155	.....	1,896,377	.....	1,896,377	.....	1,896,377	.....
1862.....	69,878 13	.....	2,495,774	.....	2,495,774	.....	1,938,235	.....	1,938,235	.....	1,938,235	.....
1863.....	180,499 46	.....	2,637,479	.....	2,637,479	.....	1,791,804	.....	1,791,804	.....	1,791,804	.....
1864.....	237,851 92	.....	2,479,559	.....	2,479,559	.....	1,676,680	.....	1,676,680	.....	1,676,680	.....
1865.....	182,175 64	.....	2,003,883	.....	2,003,883	.....	1,800,608	.....	1,800,608	.....	1,800,608	.....
1866.....	194,814 80	.....	2,067,532	.....	2,067,532	.....	2,020,216	.....	2,020,216	.....	2,020,216	.....
1867.....	188,668 62	.....	1,927,198	.....	1,927,198	.....	2,108,532	.....	2,108,532	.....	2,108,532	.....
1868.....	240,478 35	.....	2,432,188	.....	2,432,188	.....	2,085,018	.....	2,085,018	.....	2,085,018	.....
1869.....	229,114 14	.....	2,402,201	.....	2,402,201	.....	2,451,038	.....	2,451,038	.....	2,451,038	.....
1870.....	284,991 36	.....	2,631,935	.....	2,631,935	.....	.....	.....	.....	.....	.....	.....

Net Revenue from Tolls. (Incidental expenses and repairs not deducted.)		Tonnage (up and down) of Vessels and Property by the Welland since 1860.		Tonnage (up and down) of Vessels and Property by the St. Lawrence since 1860.	
1860.....	.....	1860.....	.....	1860.....	.....
1861.....	.....	1861.....	.....	1861.....	.....
1862.....	.....	1862.....	.....	1862.....	.....
1863.....	.....	1863.....	.....	1863.....	.....
1864.....	.....	1864.....	.....	1864.....	.....
1865.....	.....	1865.....	.....	1865.....	.....
1866.....	.....	1866.....	.....	1866.....	.....
1867.....	.....	1867.....	.....	1867.....	.....
1868.....	.....	1868.....	.....	1868.....	.....
1869.....	.....	1869.....	.....	1869.....	.....
1870.....	.....	1870.....	.....	1870.....	.....

Gross Tolls since Confederation.

Canals.	1867-'68.	1868-'69.	1869-'70.
	\$ cts.	\$ cts.	\$ cts.
Welland Canal	223,543 29	237,301 35	255,878 79
St. Lawrence Canals	65,450 29	63,714 63	198,167 35
Chambly and St. Ours	35,296 28	33,246 20	41,791 04
Burlington Bay	14,862 75	8,004 54	8,459 79
St. Ann's Lock	8,041 12	8,034 14	10,049 51
Ottawa and Rideau	18,582 59	17,255 96	20,585 77

Total cost of the Canals of Canada up to 30th June, 1867,—according to Statement of Department of Public Works, 1867.

Works.	Total Cost of Works, so far as can be ascertained, to 30th June, 1867.	
<i>St. Lawrence Navigation.</i>		
Lachine Canal	\$	cts.
Beauharnois Canal	2,587,532	85
Cornwall Canal	1,611,424	11
Williamsburg Canals	1,933,152	69
General expenditure on St. Lawrence Canals, not apportioned	1,320,655	54
Welland Canal	116,821	31
Burlington Bay Canal	7,638,239	83
Lake St. Clair Flats—dredging of Channel	432,684	40
Lake St. Peter—dredging of Channel	70,484	40
Improvement of Lachine, Coteau, and Cedar Rapids	1,164,235	08
	48,406	83
Total St. Lawrence Navigation	16,923,636	09
<i>Montreal and Kingston Navigation via Ottawa.</i>		
Ste. Anne Lock	134,456	51
Carillon Canal	}	63,053 64
Chute à Blondeau		
Grenville	4,064,764	07
Rideau Canal	17,764	05
River Tay		
Total Montreal and Kingston Navigation	4,280,038	27
<i>Montreal and Lake Huron Navigation via Ottawa.</i>		
Chats Canal—not completed	482,960	81
<i>Richelieu and Lake Champlain Navigation.</i>		
St. Ours Lock and Dam	121,537	65
Chambly Canal	634,711	76
Total Richelieu and Lake Champlain Navigation	956,249	41
Total River Trent Navigation	309,371	31
Desjardin's Canal, built before Union, and Government portion simply a loan	150,947	93
<i>St. Peter's Canal.</i>		
By N. S. Government up to 30th June, 1866	\$160,811 95	\$302,037 53 N.S. Currency, or
By Dominion " " " 1870	142,225 75	\$294,956 41 Canada Currency

Table shewing Cost of Construction, Repairs, and Maintenance, since 1867.

	1869-'70.			1868-'69.			1867-'68.			
	Construction.	Repairs.	Staff and Maintenance.	Construction.	Repairs.	Staff and Maintenance.	Construction.	Repairs.	Staff and Maintenance.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Lechine	587 50	13,287 28	10,139 03	2,000 00	11,950 21	14,494 65	1,852 70	13,550 11	14,357 81	
Beauharnois		6,384 81	10,167 57	51 00	6,498 57	9,776 99	7,008 00	5,599 15	10,087 31	
Cornwall	17,780 05	7,145 42	10,368 16	10,692 04	3,859 14	10,347 90	2,786 00	4,700 17	10,318 48	
Williamsburg		6,546 16	5,619 81		5,670 88	5,709 81		8,758 56	5,799 97	
Welland	24,173 72	63,009 10	38,340 45	43,486 36	50,773 06	39,060 61	12,099 84	38,832 96	38,399 05	
Burlington		47 27			577 94			57 32		
Ste. Anne Lock		1,280 36	1,136 54		1,873 51	1,062 96		374 57	836 06	
Carillon and Grenville	4,169 96	9,470 95	6,753 14		10,157 42	6,599 38	19,817 22	8,769 72	6,157 45	
Rideau		19,469 33	20,072 37		12,965 95	19,425 53	7,593 67	15,637 56	18,939 38	
St. Ours Lock		1,006 22	1,458 09		1,399 18	1,755 15		753 74	1,532 78	
Chambly		20,180 73	8,934 41		13,120 97	8,460 94		9,878 18	8,451 43	
St. Peters	46,193 57			70,719 80			21,519 72			

Dimensions and Capacity of Canadian Canals in their present condition, 1871.

Canals.	Date of Opening.	Length.	Locks.	Lockage.	Size of Lock.	Size of Canal.		Can Pass. Size of Vessel.	Tonnage.
						Bottom.	Top. W.		
St. Lawrence Canals { Lachine Beauharnois Cornwall Farran's Point Rapid Plat Galops	1848	8½ Miles.	5	44½ Feet.	{ 2 200 x 45 x 16 } { 3 200 x 45 x 9 }	80	120	180 x 44 x 9	700
	1845	11½	9	82½	200 x 45 x 9	80	120	180 x 44 x 9	700
	1843	11½	7	48	200 x 55 x 9	100	150	120 x 44 x 9	700
	1847	0½	4	4	200 x 45 x 9	50	90	180 x 44 x 9	700
	1847	4	2	11½	200 x 45 x 9	50	90	180 x 44 x 9	700
	1847	7½	3	15½	200 x 45 x 9	50	90	180 x 44 x 9	700
Totals, St. Lawrence Canals.	.....	43½	27	206½	200 x 45 x 9	{ 50 } 80 } 100 }	{ 90 } 120 } 150 }	180 x 44 x 9	700
Welland Canal, on the Main Line.	1846	26½	27	346	{ 1 230 x 45 x 12 } { 24 150 x 26½ x 10½ } { 1 200 x 45 x 12 }	70 } 58 } 50 } 26 }	110 } 58rock } 90 } 66 }	142 x 26½ x 10½	500
St. Ours Lock	1849	0½	1	5	200 x 45 x 7	30	60	180 x 44 x 7	600
Chambly Canal	1843	12	9	74	118 x 23 x 7	{ 54 } { 60 }	80	110 x 23 x 6½	230
Rideau Canal	1832	126½	47	446½	134 x 33 x 5	.....	80	120 x 31½ x 4½	250
(St. Ann's Lock	1843	0½	1	3	190 x 45 x 0½	.....	50	170 x 44 x 6	600
Carillon Canal	1834	2½	3	34½	126½ x 32½ x 6	.....	50	117 x 32 x 5½	300
Ottawa Canals { Chute a Blondeau	1834	0½	1	3½	136½ x 32½ x 6	.....	30	120 x 32 x 5½	300
{ Grenville Canal	1834	5½	7	45½	4 128 x 31½ x 6 } 3 107 x 19½ x 6 }	20 } 30 }	25 } 60 }	95 x 18½ x 5	100
St. Peter's Canal, Cape Breton, Bras d'Or Lake.	1869	0½	1	9	122 x 26 x 13	26	.....	114 x 25½ x 13	500
AMERICAN CANALS.									
Erie Canal, enlarged	1862	352	72	655	110 x 18 x 7	56	70	102 x 17½ x 6½	210
Champlain Canal	1822	66	20	180	97 x 14 x 4	35	50	89 x 13½ x 3½	70
Sault Ste. Marie Canal	.....	1½	2	19	350 x 70 x 12	.....	.....	330 x 69 x 12	2,000

SAMUEL KEEFER, Secretary,
Canal Commission.

OTTAWA, 24th February, 1871.

APPENDIX J.

TRADE OF LOWER PROVINCES.

1. Imports and Exports of Ports on the Gulf of St. Lawrence.
2. " " " Bay of Fundy.
3. The Fisheries.
4. Trade of Prince Edward Island.
5. Coal Trade of Nova Scotia, &c.

Trade of the Ports on the Gulf of St. Lawrence.

Ports.	Exports.	Imports.
<i>New Brunswick.</i>		
	\$	\$
Bathurst	65,771	24,032
Bay Verte	4,050	588
Buctouche	24,393	1,210
Caraquette	11,593	6,862
Chatham	294,069	201,774
Dalhousie	143,407	43,133
Moncton	1,541	38,808
Newcastle	196,940	95,479
Richibucto	164,342	27,540
Sackville	12,971	66,577
Shediac	141,494	241,806
Shippegan	41,816	20,952
<i>Nova Scotia.</i>		
Amherst	14,651	87,259
Tatamagouche	7,137	2,610
Wallace	10,896	4,700
Pictou	309,761	348,677
Pugwash	70,603	3,652

Trade of the Bay of Fundy Ports, and on Western and South Western coast of
Nova Scotia.

Ports.	Exports.	Imports.
<i>New Brunswick.</i>		
	\$	\$
Campo Bello.....	11,593	6,862
Dorchester.....	2,515	11,793
Hilsborough.....	132,420	3,497
North Joggins.....	10,311	5,970
St. Andrews.....	41,170	75,597
St. John.....	3,853,282	5,247,371
St. Stephens.....	96,311	232,533
<i>Nova Scotia.</i>		
Annapolis.....	62,409	112,274
Barrington.....	18,988	18,224
Bear River.....	46,319	18,604
Belvian's Cove.....	6,110	12,251
Bridgetown.....	12,735	6,882
Cheverie.....	12,149	5,952
Clementsport.....	12,182	8,035
Cornwallis.....	40,835	58,157
Digby.....	9,202	33,660
Five Islands.....	17,958	14,372
Hantsport.....	23,715	16,111
Horton.....	4,664	74,716
Joggins.....	19,805	9,027
Londonderry.....	46,969	25,596
Maitland.....	3,480	26,601
Parrsborough.....	9,411	11,555
Port la Tour.....	20,634	15,261
Ragged Islands.....	415	7,762
Shelburne.....	19,075	24,438
Tusket.....	10,682	18,637
Truro.....	544	11,535
Thorne's Cove.....	3,884	2,246
Walton.....	7,723	4,398
Westport.....	10,099	1,519
Weymouth.....	72,643	36,791
Wilmot.....	4,912	12,940
Windsor.....	75,616	101,995
Yarmouth.....	255,157	345,547

Total Value of Exports and Imports of Nova Scotia and New Brunswick, 1870.

	Exports.	Imports.	Duty.
	\$	\$	\$ cts.
Nova Scotia	5,803,417	8,940,800	1,162,592 51
New Brunswick	5,303,206	6,854,447	1,017,777 82
Total	11,106,623	15,795,247	2,180,370 33
Prince Edward Island, 1869	£365,191 stg.	£364,232 17 5	

Trade of Prince Edward Island in 1869.

	Imports.			Exports.		
	£	s.	d.	£	s.	d.
Total values of trade	364,234	17	4	284,227	8	7
With Ontario and Quebec	32,946	3	9	1,681	11	4
With Nova Scotia	68,215	18	5	82,013	10	3
With New Brunswick	35,124	12	8	30,100	13	5
Total	136,286	14	10	113,795	15	0
With Newfoundland	4,345	12	8	13,933	12	8
With United States	55,826	7	6	48,205	16	6
With Great Britain	165,099	10	0	102,896	12	8

Value of the Fisheries of the Maritime Provinces.

	Exports for year ending June 30, 1869.	Probable Annual Value.
	\$	\$
New Brunswick	362,840	900,000
Nova Scotia	2,235,519	4,000,000
Prince Edward Island (about)	10,000	200,000
Newfoundland, for 1869 (about)	6,800,000	7,000,000
	9,408,268	12,100,000

Magdalen Island.

Exports coastwise	\$45,474
Foreign exports	25,882
Total	\$71,356

COAL TRADE OF CANADA.

Quantity raised in Nova Scotia during Five Years.

	Year ending 30th Sept., 1865.	Year ending 30th Sept., 1866.	Nine Months ending June 30th, 1867.	Fiscal Year 1867-'68.	Fiscal Year 1868-'69.
Quantity raised...	Tons. 712,575	Tons. 684,766	Tons. 542,127	Tons. 462,188	Tons. 571,656

Pictou Coal Trade.

Years.	Total quantity raised.	Exported to U. S.
	Tons.	Tons.
1860.....	157,004	142,000
1863.....	198,313	160,000
1865.....	188,779	165,526
1866.....	205,729	171,000
1867.....	132,000	110,000
1868.....	144,851	92,000
1869.....	198,000	101,000

Coal Imported into Boston (from Pictou and Sydney chiefly) since 1860.

Years.	No. of Tons.	Prices in American Currency.		Average Prem. for Gold.
		\$ cts.	\$ cts.	
1860.....	116,330	4 40	to 6 50	2
1861.....	109,281	4 00	to 6 00	
1862.....	138,751	4 50	to 8 00	
1863.....	152,304	6 00	to 8 00	37
1864.....	171,163	8 00	to 14 00	56
1865*.....	189,881	6 25	to 18 00	102
1866.....	142,042	7 50	to 9 50	41
1867.....	103,449	7 25	to 9 25	41
1868.....	96,428	7 50	to 9 00	40
1869.....	96,284	7 25	to 9 00	32

Distribution of Product of 1868 and 1869.

	1869.		1868.	
	Tons Round.	Tons Slack.	Tons Round.	Tons Slack.
Raised.....	500,449½	77,441½	480,220	61,907½
Sold for home consumption.....	98,727½	17,209½	83,841½	13,804½
Exported to neighboring colonies.....	114,168½	14,929	92,551	10,729½
Exported to other countries.....	257,799½	9,031	271,129½	10,012
Total.....	470,625½	41,169½	447,532	34,546

Total (Round and Slack)..... 462,188½

578,062

* During following years we see effect of repeal of Reciprocity Treaty and the consequent heavy duty on Canadian Coal.

SUPPLEMENTARY RETURN.

CANAL COMMISSION OFFICE,
OTTAWA, March 3rd 1871.

SIR,—By request of George Laidlaw Esq., one of the Canal Commissioners, I have the honor to transmit a letter which he has prepared and addressed to the Secretary of State, setting forth his reasons for differing with the other Commissioners in the conclusions arrived at in their communication of the 23rd ult.

I have the honor to be, Sir,
Your obedient servant,
SAMUEL KE
Secy ry.

Hon. J. C. Aikins, Secretary of State.

OTTAWA, 28th February, 1871.

SIR,—I have the honor to inform you that having as one of the Canal Commissioners had under consideration the subjects involved by the instructions of the Commission of appointment to “institute and make a thorough enquiry as to the best means of affording such access to the sea board as may be best calculated to attract a large and yearly increasing share of the trade of the North Western portion of North America through Canadian waters, as well as a thorough and comprehensive improvement of the Canal system of our said Dominion on such a scale and of such a character as would best tend to afford ample facilities for the expansion and due development of its growing trade and commerce; and in such enquiry to consider the whole subject, in all its bearings as well in a commercial, as in an engineering point of view, with the object of obtaining such reliable information thereupon as may furnish the necessary data on which to base a plan for the improvement of the Canal system of our said Dominion, of a comprehensive character and such as will enable Canada to compete successfully for the transit trade of the Great Western country and especially to enquire into the Public Works and improvements hereinafter enumerated that is to say:—

- “ 1st. The Welland Canal and the enlargement thereof.
- “ 2nd. The St. Lawrence Canals and the enlargement thereof.
- “ 3rd. The deepening of the Channels through the rapids of the St. Lawrence.
- “ 4th. The deepening of the said river in its most shallow parts, between the cities of Montreal and Quebec.
- “ 5th. The Rideau Canal and its improvements and the development of trade through the same.
- “ 6th. The construction of a Canal at the Sault Ste. Marie between Lakes Superior and Huron.
- “ 7th. The construction of a Canal between the St. Lawrence at Caughnawaga and Lake Champlain.
- “ 8th. The improvements of the River Richelieu and Lake Champlain line of Canals.
- “ 9th. The completion of the Montreal and Lake Huron system of Navigation via the Ottawa and French Rivers,
- “ 10th. The construction of the Georgian Bay Canal to connect the Georgian Bay with Lake Ontario.
- “ 11th. The construction of a canal, in the Township of Murray, through the neck of land lying between Lake Ontario and the Bay of Quinte.
- “ 12th. The construction of a Canal through the isthmus dividing the Bay of Fundy from the Gulf of St. Lawrence, at Bay Verte.

“And, also, to enquire as to which of the said several works and improvements, hereinbefore mentioned and referred to, ought, in the judgment of our said Commissioners, to be made and constructed for the purpose aforesaid; and in what order they respectively should be proceeded with, and what dimensions and depths they should be constructed; and the probable cost of the construction of such several works and improvements respectively: and generally to enquire into, and ascertain and report fully on the whole subject, in all its bearings, making such recommendations as may appear to you, our said Commissioners hereby appointed, and to such other person and persons as we may think fit, by order of our Governor General in Council, to add to this our Royal Commission, to be likely to contribute to the better accomplishment of the said object so in view.” Having carefully studied the duty imposed by the foregoing instructions to consider “the whole subject in all its bearings,” I regret, with the same facts before me, being unable to arrive at the same conclusions with my colleagues or to sign the comprehensive letter or report, which has been addressed to yourself as Secretary of State. With the views of the Commissioners upon the Georgian Bay, Murray, and the Caughnawaga Canals, and with many of the aims and aspirations expressed in the report I most cordially concur, while I differ in part and degree only as to the ways and means by which such aims and aspirations can be the soonest and most judiciously accomplished. In explaining my convictions on the important questions referred to, it is unnecessary for me to recapitulate facts and statistics which are the results of the labors of the Commissioners, and embodied in *their* report.

I will now proceed to state my reasons for declining to sign the recommendations of my colleagues, and treat of the several works and their relations to the trade of the Dominion and of the United States.

SAULT STE. MARIE CANAL.

It is recommended to spend the sum of \$550,000 to construct the Sault Ste. Marie Canal, an expenditure for which I can see no commercial reason, nor occasion to doubt the estimated cost of the work. A short canal, with the largest locks in America, exists on the American side of the river, which is open to Canadian and United States vessels on equal terms, as in the case of the Welland Canal. There are only two Canadian steamers that plied last season on Lake Superior; one or two more may do so this season, but of the whole number I am informed only one could pass through the proposed new canal, they being paddle-wheeled steamers.

It appears, therefore, that the sole reason why such a canal should be built is predicated upon the hypothesis that in case of civil war in the North West Territories it would be a necessary avenue for the transport of men and material of war. Local Government having been instituted in these territories, I could not anticipate that a state of war should arise, nor could recommend the construction of a work which would be a lasting military menace to the now peaceable and loyal people of Manitoba, as yet numbering only 10,000 souls. No return in tolls could be expected from this work. The money would be wasted.

The common use of the Sault Ste. Marie and Welland Canals by Canadians and citizens of the United States, and the unrestricted flow of commerce might prove a stronger bond for peace than the construction of a military canal, which *one gun* could command, or *one man* destroy in a night.

There can be no more objection to the use of the American Sault Ste. Marie Canal by Canadians than to the use of the Railway to Portland, or the Railway from Dakota through Minnesota. The more effective way to provide an undisturbed access by water to the North West would be to expend the \$550,000 proposed for the Sault Ste. Marie Canal upon the improvement of the navigation between James's Bay *via* the Albany River to Lake Winnipeg; and the judicious expenditure of so much money in creating a shallow but rather wide barge canal on that route might be made the occasion of

establishing at the best points several small colonies of emigrants from Northern European countries, who would thus lay the foundation of civilisation and military strength in that remote but alleged to be valuable region.

WELLAND CANAL.

The report recommends the expenditure of \$6,550,000 to enlarge the locks of the Welland Canal to 270 feet in length by 45 in width, and 12 feet depth, and to build a new canal between Thorold and Port Dalhousie. Of the amount specified, \$300,000 is estimated as sufficient to secure a uniform depth of twelve feet of water in this canal with the present locks.

There appears to me no sufficient reason for recommending a larger lock than $250 \times 45 \times 12$, with a corresponding increase where necessary in the size of the prism of the canal, and in the depths of the harbors of Ports Colborne and Dalhousie. By adopting this sufficient size the construction of a new canal from Thorold to Port Dalhousie might be avoided, as well as the adoption of only a few combination locks.

Probably \$3,000,000 or *more* might be saved by this course. Referring to the objection that while the new canal would be constructed without delaying traffic, the enlargement of the present canal could only be proceeded with in winter or debar traffic in summer, I would respectfully submit that it would be a true economy if such were necessary, *as it is not*, to pay the canal freight on all produce destined for ports in Canada passing through the canal to the Welland or other Railways at its present rates for two or three years.

The cost of giving twelve feet of water in this canal by raising the locks and banks is only estimated at \$300,000, a point to which I will call your attention in another view of the case after considering the St. Lawrence Canals.

While considering the necessary enlargement of the Welland Canal, which is the key for a full share of the Western business for the St. Lawrence route, it should not be forgotten that serious incursions are being made by railways on the traffic of all artificial water communications in this and other countries; especially is this true in relation to the steady and surprising decline of the shipments by the Erie Canal, and their proportional increase by rail, as well as the multiplication of railways to compete with the Erie Canal for the traffic it was specially built to control.

There are now in operation or building four lines of railways from the St. Clair to the Niagara Rivers, which must seriously diminish the receipts from the Welland Canal, and no doubt the further loss of trade by the enlargement of the Welland Canal and the increase of railways will be promptly met by abrogation of the tolls on the Erie Canal. Five-eighths of the produce carried through the Welland Canal is the product of the United States, and the people of Canada have no further interest in providing facilities at their cost for the cheaper transit of American produce, than the profits derivable from the carrying trade and its incidental banking and insuring advantages, while the fact cannot be overlooked that the producers of this country, while furnishing the funds for reducing the cost of shipment of rival supplies to the home market, *do not share* in any appreciable manner in the profits derivable from such trade, while I consider that it is unquestionably delusive to expect any appreciable direct return in tolls for the capital to be invested in the enlargement *of any* of the canals.

ST. LAWRENCE CANALS.

This system of canals with locks $200 \times 45 \times 9$ feet, with the exception of the Sault Ste. Marie, is the most capacious on this continent, and with moderate improvements the proposed enlargement of the Welland Canal would afford facilities for the Western trade; which would at once place the St. Lawrence route to the ocean beyond the reach of competition.

It is not in the slightest degree probable that the enlargement of these canals to the extent proposed, with locks $270 \times 45 \times 12$ feet, at a cost, including proposed dock basins

in Montreal and opening of the old mouth of the Lachine Canal, of \$4,500,000 *would reduce the cost of freight from Kingston to Montreal one fraction below the rates at which it can now be profitably carried.*

There has been in the last few years a remarkably rapid increase in the proportion of Western cereals shipped to Great Britain, *via* Montreal, as compared with New York, and the still greater increase of such shipments *is not dependent* on an increase of the length and breadth of these locks, but primarily on the enlargement of the Welland Canal, and in a secondary degree on an increase of the depth of water in the St. Lawrence Locks and Canals, and overcoming other *more mischievous* objective circumstances, which can be more immediately, economically, and effectively obviated than by tearing down all the 200 feet locks on the St. Lawrence and building new ones, needlessly 270 feet long.

The fact proven by the evidence adduced before the Commission that the average freight from Chicago to Montreal is between 7 and 8 per cent less than to New York is conclusive that it is *not* between Chicago and Montreal that the main difficulties exist but, *in, and between* Montreal and Liverpool and other European ports.

I will enumerate what I conceive to be those difficulties altogether. 1st. New York having an open harbour all the year, and by reason of its population, banking power' and distributive facilities for supplying other important American centres of business, being much larger market than Montreal, there is attracted to it large quantities of produce, which if destined for Europe at the time of shipment from Chicago, could be carried much cheaper *via* Montreal.

2nd. The forwarders of Kingston and Montreal having formed a combination equivalent to being one firm to secure very profitable returns from their business, the excess of their rates, say two cents, becomes a premium in favor of shipment to New York.

3rd. The want of proper warehousing facilities such as exist at ports on the Lakes, adds to the cost of transshipment and warehousing, &c., in Montreal, three to four cents; as it so happens that holders have either to ship at forced rates of freight or store their property at heavy expense, which, added to the excess of barge rates from Kingston, makes a total of five or six cents per bushel in favor of the Erie Canal routes.

4th. While one concern, practically speaking, controls the rates from Kingston to Montreal, then again another concern absolutely controls the steam, and to a great extent the sail freight from Montreal to England; so that if the freight from Chicago to Kingston were reduced, it does not follow that the volume of exports *via* the St. Lawrence would increase at so great a ratio as expected, as the total rate of freight from Chicago to Liverpool might still remain the same and not be reduced below the rates from Chicago *via* New York to Liverpool. It is true the field is open for competition between Kingston and Montreal, and between Montreal and Great Britain, but every importer and exporter in Canada knows that under all the circumstances successful competition might be debarred from taking good root for another decade.

5th. The imperfect lighting and the want of fog bells on the lower St. Lawrence, occasion extremely high rates of insurance, which, taken together with rates of ocean freight and banking and exchange obtainable for special reasons in Montreal, go far to neutralise the lower rates of freight as compared with the New York route from Chicago to Montreal, and the shorter and greatly smoother voyage thence to Liverpool.

RIVER ST. LAWRENCE, BELOW MONTREAL.

The report proposes the expenditure of \$800,000 to obtain an uniform depth of 22 feet in the river below Montreal. Seeing that the Clyde gives only 20 feet to the Broomelaw at Glasgow, and that in Montreal has grown up in one lifetime a firm with a merchant fleet of steam and sail vessels which exceeds, I believe, by 25,000 tons the tonnage of any other company in the world, and which, although a just cause for great pride to every Canadian, shows it cannot be urgently necessary to invest \$800,000, and

probably a great deal more, in the bottom of the St. Lawrence, when there are so many works of importance to be executed which would benefit, *as this would not*, the people who bear the cost.

Having a full appreciation of the importance of the aims and results desired by the Commissioners who signed the report, and of the desires of the country, and having brought to bear on the consideration of the improvement of the navigation east of Kingston, and the removal of obstructions and the creation of facilities to make of Montreal a great mart, and the most successful competitor with New York as an *entrepot* and distributing point for the commerce of the lake and tributary regions, and being fully conscious of the desirability of improving and extending the pathways of commerce between the various Provinces of the Dominion to the full extent of their present and near future interests, I am led to the conviction that the most rational manner of achieving these objects with a due regard to the proportion of responsibilities and advantages that will accrue to the people of the Dominion who have to bear the vast cost of these projected improvements, while the people of the United States, in the aforesaid regions, will reap nearly the whole direct profit from them; and premising that these canals are large enough for all the agricultural and manufacturing interests of the people of the Dominion; that in twelve months the Grand Trunk Railway has carried as much produce as was water-borne east of Kingston in seven months, or a canalling season; that seven-eighths of the flour exported from Ontario to the Maritime Provinces has been, and undoubtedly will be, carried on the Grand Trunk Railway; and that when the Intercolonial is finished the region on the west coast of the Gulf of St. Lawrence will undoubtedly be supplied by its agency; and therefore there being no valid reason to suppose that enough of downward laden vessels would be obtainable to return with the supplies of coal required in Ontario, or that a profitable market could be had for Nova Scotia coal, west of Montreal, the excess of length of voyage from Nova Scotia to Toronto, acting as a protection to the import of Pennsylvania coal, even when subject to a duty of 50 cents per ton, as the duty levied against the lumber of Ontario is neutralised by the length of the voyage for Michigan lumber to ports in the Eastern States, and as the whole outlay proposed for canal enlargement on the St. Lawrence route is a *premium* to be paid by Canada for a *larger* share of the Western trade, it is highly expedient that the Government should proceed *tentatively*, accepting experience of results as the surest and safest guide to success.

I beg most respectfully to differ from the recommendation of my colleagues, although fully appreciating the splendid engineering idea of having an uniform system of canals from Lake Superior to the ocean, with locks 270 × 45 × 12 feet, to submit the following statements and recommendations in lieu thereof for your consideration.

1st. That the Welland Canal be immediately increased in depth by adding to the height of the embankments and locks what is necessary to give 12 feet of water, which is estimated by Mr. Gzowski, Commissioner, and Mr. Keefer, Secretary, at \$300,000.

2nd. That the tolls be abrogated this year on all freight not destined to ports in the United States.

3rd. That the expenditure, before mentioned, of \$3,000,000 to enlarge the locks and canal be delayed, pending rearrangement of the navigation laws and commercial intercourse on such basis as will be equitable and mutually advantageous to the people of Canada and the United States, and that the navigation of Lake Michigan without reporting at the Straits of Mackinac, and the navigation of the canals in the States be conceded on the same terms to Her Majesty's subjects as the Americans enjoy the navigation of the canals of the Dominion.

4th. That the subsidy for the tug service between Kingston and Montreal be increased this year to the extent necessary, as an equivalent for the reduction of 30 per cent. on the tariff for towing as fixed at present by Government.

5th. That no increase in the *length* and *breadth* of the present locks of the St. Lawrence Canals is in the slightest degree necessary, *or should be undertaken*, but that they should be built higher or under-set, and the banks of the canal heightened, and the

obstructions, if any, in the river removed, so that there would be available 12 feet of water from Kingston to Montreal, which may be estimated to cost considerably less than \$2,000,000.

6th. I concur in the report of the Commissioners as to the improvements necessary at the lower end of the Lachine Canal, excepting the proposition to build docks or basins on the Government land contiguous thereto, but in lieu thereof it would prove more effective for the purposes desired to give the whole of said land, or a proportion thereof, by way of bonus to the Harbor Trust in Montreal, or failing their acceptance, to a chartered company, who would erect, at a point accessible by the Grand Trunk Railway and Ocean Steamers, an iron or fire-proof elevator capable of containing 2,000,000 bushels of grain, subject to a tariff to be fixed by the Harbor Commissioners.

7th. That no expenditure of \$800,000 should take place in the river below Montreal, but that a reasonable amount should be expended in building lighthouses and placing fog bells where necessary, for the better protection of shipping.

BAY VERTE CANAL.

It is apparent that the construction of the proposed Bay Verte Canal would greatly facilitate the local shipping interests of the people on the shores of the Bay of Fundy, and on the northern shores of Nova Scotia and New Brunswick, while it is equally evident that the fishing interests of the people in the Eastern States, and the agricultural and shipping interests of the people of Prince Edward's Island, would be far more benefitted by the use of such canal than those at whose cost it may be constructed.

It is premature, to a certain extent, to offer an opinion upon this work, inasmuch as the Chief Engineer to the Department of Public Works, I believe, has stated that the successful building and working of a canal at that place is *impracticable*.

Although the results of the present survey may prove the practicability of the proposed canal, it would not be expedient to construct it at a cost of \$3,250,000, unless a differential tariff was charged on the shipping of Prince Edward's Island, or it joined the Confederation, and in the event of no general arrangement being made for the common use of Canadian and American canals on the same terms for Her Majesty's subjects and the citizens of the United States, a differential tariff on the shipping of the United States. If built it would be the best route for a line of steamers from the St. Lawrence to the West Indies and Brazil, an enterprise of far more immediate consequence to general Dominion interests than the Bay Verte Canal, as any rate of tolls that would yield any appreciable return for the \$3,500,000 invested, would drive a great part of the shipping through the Gut of Canso.

THE LOWER OTTAWA CANALS,

Or the canals and locks on the Lower Ottawa, between the City of Ottawa and the St. Lawrence, are very important, as affording a necessary outlet for the great lumber traffic of the Ottawa region. Referring to the size of locks, statistics, &c., given in the report of the Commissioners, I can see no good commercial reason for enlarging these canals without a corresponding enlargement of the United States, Champlain, or Whitehall Canal is secured, as that canal having the smallest locks on the system of canals leading from Ottawa to the Hudson River at Troy, *governs the size of all the barges that can be used for through traffic without transshipment*. Under these circumstances the enlargement of locks 9, 10, 11, on the Grenville Canal to $126\frac{1}{2} \times 30$ feet is all that is reasonable or necessary immediately, which could be effected for \$60,000 in round numbers.

THE UPPER OTTAWA CANAL.

The construction of the proposed Ottawa and French River Canal, at a cost necessarily exceeding the cost of all other canal improvements proposed in the Dominion,

is certainly not called for in the interests of the Dominion, and it would be a rival to the Welland and St. Lawrence Canals. The local and general interests to be promoted by this work would be much better and more immediately served by a plan hereinafter suggested, as logs can be much more economically floated on the river to Ottawa than the lumber could be freighted from points on the Upper Ottawa, in barges through canals.

RIVER RICHELIEU AND LAKE CHAMPLAIN CANALS.

The improvement of the Chambly, River Richelieu, and Lake Champlain line of canals would be of no *commercial advantage without a simultaneous and corresponding* enlargement of the Champlain or Whitehall Canals in the United States. There is no perceptible foundation for hope that an increase of tolls or an increase of business would result from the expenditure of \$1,500,000, as recommended by the other Commissioners on these canals. A slight reduction on the cost of carrying lumber might be obtained by the simultaneous enlargement of the canals in the States and Canada, including the Lower Ottawa, on this line of navigation, but even that is doubtful.

The expenditure recommended by the majority of the Commissioners, as compared with the propositions I consider it my duty to submit, are as follows:—

By Commissioners.

	\$
Sault Ste. Marie Canal	550,000
Welland Canal	6,550,000
Lower Ottawa.....	1,800,000
Chambly Canal.....	1,500,000
Deepening St. Lawrence below Montreal.....	800,000
Bay Verte Canal.....	3,250,000
St. Lawrence Canals.....	4,500,000
Upper St. Lawrence.....	220,000
Total	\$19,170,000

By the Undersigned Commissioner.

	\$
Sault Ste. Marie Canal	
Welland Canal.....	3,000,000
Lower Ottawa.....	60,000
Chambly Canal.....	
Deepening St. Lawrence, below Montreal	
Bay Verte Canal.....	
St Lawrence Canals, including improvements in Upper St. Lawrence River.....	2,000,000
Total.....	5,060,000

There is an element of great strength wanting in Montreal and Quebec to enable those cities more favorably to compete with New York or other United States Atlantic ports for the trade of the lake regions, and that is the want of regular steam communication between the cities on the St. Lawrence and the West Indies and Brazil, and the Spanish, French, and Italian ports on the Mediterranean. A vast amount of business and capital would be attracted to Montreal and Quebec if they were made *entrepots* for the receipt and distribution of West India produce and Mediterranean goods. Therefore rather than submerge \$800,000, *probably much more*, in the Lower St. Lawrence, I would suggest that a weekly or fortnightly line of moderate sized screw steamers be subsidised to run to the West Indies, and a monthly line to ports in the

aforementioned countries on the Mediteranean, these lines of steamers to be run to Halifax in winter. Neither have I any hesitation in stating my conviction that it would be much more advantageous (although perhaps not necessary for the attainment of the first two objects hereinafterspecified) to insure the accomplishment of the means "best calculated to attract a large and yearly increasing share of the trade of the North Western portion of North America," to give the \$2,500,000, recommended by the Commissioners in excess of my estimate of the amount necessary to enlarge the St. Lawrence Canals, to either of the three following objects, viz. :—

1st. To establish a new line of Ocean Steamships to Liverpool.

2nd. To donate the amount to the Grand Trunk in the shape of steel rails and rolling stock, the efficiency of that road being, in my opinion, of far more important and immediate consequence to the welfare and prosperity of this generation of the people of the Dominion, than 270 feet locks as against 200 feet locks on the St. Lawrence Canals ; or,

3rd. To give it as a bonus to secure the construction of a first class railway on the 4 ft. 8½ in. guage from Montreal to a good harbor near the mouth of the French River on Lake Huron, which railway would afford facilities for shipments from the Upper Lakes to Montreal and at Atlantic ports two weeks later than they could be made by the Erie or St. Lawrence Canals. At such a port on Lake Huron western products would accumulate late in the fall for shipment *via* the St. Lawrence and Portland, while the construction of said railway and the settlement of the country that would result therefrom, and the use of the railway all the year (as against seven months use of canal), would result in a vast increase of the population, trade, and resources of the Dominion.

I suggest the first two of these propositions only by way of illustration. The last is a necessity for the better accomplishment of the ends desired, and would form the first section of the proposed Dominion Pacific Railway.

Adding to the \$5,060,000 recommended to be invested in canal enlargement the sum of \$800,000 as the principal necessary to secure the establishment of the aforementioned lines of steamers to the West Indies and the Mediteranean, and \$2,500,000 as requisite to secure the construction of the aforesaid railway from Montreal to Lake Huron at or near the *debouchement* of the French River, my estimate of expenditure only amounts to \$8,300,000, as against \$19,170,000 recommended by the other Commissioners, while the expenditure proposed as aforesaid is likely to achieve far better, greater, more immediate and durable results for the permanent prosperity of the Dominion, than will be attained by the expenditure of the vast sum proposed to be sunk in canal works of doubtful utility, at a time when the supremacy of railways over canals is being fully and uncontestibly established, and when the experience and better management of railways now had is proving them, where judiciously laid and economically constructed, reasonably profitable investments ; while notwithstanding the immense recent increase of population and the volume of commerce, there is a *remarkable decline* in the receipts from all artificial water communication. The commercial question having been thoroughly exhausted by the queries and replies, added as an appendix to the report of the Commissioners, it appears to me that the reports might be accepted as final and the Commission dissolved ; the unaccomplished business of the Commissioners being altogether matter of calculation for professional engineers, who would incur very grave responsibilities, in selecting new routes for canals, as from Thorold to Port Dalhousie or Niagara, and from Bay Verte to Cumberland Basin.

From the very grave errors, wholly attributable to engineers, there have occurred in the selection of canal localities, such as building a needless canal at one place on the St. Lawrence, where I understand the construction of weirs and the improvement of the bed of the river at a small cost would have obviated the necessity for a canal ; and at another place on the St. Lawrence where a canal was built in all probability on the wrong side of the river ; and the expenditure of \$373,191 upon building the Chats Canal on the Ottawa in the wrong place, so that it is cheaper to abandon that route and re-commence a new one, and that no information other than that afforded by blue books

could be obtained from the Chief Engineer to the Department of Public Works, I am led to believe that it would be highly inexpedient to proceed with the costly works recommended by either report under present, or engineering auspices of those wedded to particular theories.

I therefore, with diffidence, respectfully suggest that an honorary Board of Engineers, of which five to be a quorum, be appointed Consulting Engineers to the Government, payable only when employed. The distinction of being Consulting Engineers to the Government would be a worthy object of ambition, and would stimulate a rivalry for correct and economical engineering, which would be advantageous to the Government, and secure it, at a low cost, independent opinion from first class authorities upon the many and important questions which must arise in relation to the great public works under consideration, and to those which may in future be projected.

In sifting and analysing the evidence and facts which have led me to all the foregoing conclusions, I have been governed solely by the desire to consider and recommend that only, which at a rational outlay would best secure the aims for which the Commission was appointed, which I interpret to be a wise provision for the great expansion of trade and commerce reasonably anticipated to flow from the policy of Confederation, the opening up of the North West, and the settlement of industrious and prosperous communities in the now waste places of this great Dominion.

I have the honor to be, Sir,

Your obedient servant,

G. LAIDLAW.

Hon. J. C. AIKINS,
Secretary of State for Canada, Ottawa.

No. 55.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 8th March, 1871; For a Return of the Tolls collected on the St. Peter's Canal since it was opened for the trade; also, the number of vessels which pass through the said Canal the names of such vessels and the tonnage of each; the names of the employés on the said Canal and their respective emoluments; also, the Report of the Engineer or Superintendent in charge of the condition of said work.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 3rd April, 1871.

No. 56.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 8th March, 1871; For copies of correspondence between the Department of Marine and Fisheries and the Government of the Province of Ontario, respecting the Lands on the Peninsula of Presqu'île, in the Township of Brighton; with the Reports of the late survey, and valuation of said lands.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
OTTAWA, 4th April, 1871.

[In accordance with the recommendation of the Joint Committee on Printing, the above Returns are not printed.]

No. 57.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 8th March, 1871; For the Report of the Officer sent to make Surveys of the Rivers Madawaska and St. John.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 4th April, 1871.

No. 58.

RETURN

Of expenditure for Printing and Binding done without tender, under authority of the Act respecting the office of Queen's Printer and the Public Printing.

No. 59.

RETURN

To an Order of the HOUSE OF COMMONS, dated the 8th March, 1871; That copies of all correspondence between the Government or Department of Public Works and the Manager and previous Managers of the Government Railways in Nova Scotia, touching the management of and rates of Tariff to be enforced on said Road since 1st July, 1867, with statement of Tariff charges now in force, and of any and all changes that have been made in said Tariff since date aforesaid, with copies of all reports and detailed statement of accounts of income and expenditure rendered by said manager or managers, since said date.

[In accordance with the recommendation of the Joint Committee on Printing, the above Returns are not printed.]

THIRD ANNUAL REPORT

OF THE

Directors of Penitentiaries

OF THE

DOMINION OF CANADA

FOR THE YEAR 1870.

.....
PRINTED BY ORDER OF PARLIAMENT.
.....



OTTAWA:
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1871.

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THIRD ANNUAL REPORT
OF THE
DIRECTORS OF PENITENTIARIES
OF
DOMINION OF CANADA.
FOR THE YEAR 1870.

—

*To His Excellency the Right Honorable John, Baron Lisgar, G. C. B., G. C. M. G.,
&c., &c., &c., Governor General of Canada, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY :

In accordance with the Act 31st Vic. cap. 75, the Directors beg to submit the Annual Report on the state of the Penitentiaries of the Dominion, for the year 1870.

—

KINGSTON PENITENTIARY.

The Directors cannot but regard as satisfactory the progress of this Institution in the past year, under both moral and economic considerations. It is, however, rather in its moral than its material gains that the Directors find the greater grounds for satisfaction.

Viewed in its disciplinary, hygienic and industrial aspects, as will be elicited from the reports of the officers charged respectively with these departments, this prison may justly be considered in a high state of efficiency.

The dietetic changes of the past two years have produced the happiest results, affecting beneficially alike the health and the temper of the convicts, which furnish a marked contrast to the dissatisfaction which arose from their, too frequently, inferior food, supplied by contract.

The way to effect the convict's reform, or to make his labor profitable, is neither by undue severity, nor by starvation, than which there are no surer provocatives to insubordination and laziness.

The leniency of the punishments, as exhibited in the appropriate table in the statistics, bespeaks satisfactorily the general good conduct of the convicts.

The indulgences, particularly the remission of sentence, granted for good conduct and industry, have produced the most salutary results ; and the Directors look with pleasing anticipation for still further advancement from rewards in contemplation. Experience proves almost daily that humane treatment, accompanied by some tangible tokens of recognition of good conduct, is the truly efficacious way of influencing the convict.

The boon graciously sanctioned by Your Excellency, and which has been confirmed by Parliament, of allowing to the convict a portion of his earnings for his own or his family's benefit, will prove a powerful incentive to good conduct and industry, and will probably effect a beneficial change in his aims and deportment.

But while sensible of the valuable agency of moral influences in the work of reform, the Directors cannot ignore the necessity of severity, when dealing with the hardened or intractable. Indeed, in all cases where reform is the object sought, a portion of the

imprisonment—and that the earliest—should be made intensely penal ; then the relaxations and indulgences, which follow upon good behaviour and industry, will be appreciated, and efforts made to earn them.

For this purpose a penal prison, constructed to carry out the principle of complete isolation, as practiced in Ireland (where criminal reform has, under the system inaugurated by Captain, now Sir Walter Crofton, received so satisfactory a solution), is an indispensable necessity, and it is with sincere pleasure the Directors bear testimony to the enlightened liberality of Your Excellency's predecessor in sanctioning the construction of such a prison.

A considerable reduction in the staff was effected early in the year. Several of the officers were found inefficient—some from advanced age, some from other causes ; their removal, therefore, became a necessity.

The vacancies, where necessary, have been filled ; the principle of promotion, where advantageous and practicable, being acted upon.

This has generally given satisfaction to the officers, as holding out chances of advancement, and it cannot fail to benefit the service by exciting to zealous performance of duty. On the whole, the staff may be considered in an improved condition, in consequence of the introduction of more intelligent and energetic material.

The Directors have deemed it advisable to recommend, in order to secure a superior class of officers, that the minimum rate of salary be altered, and that the present pay of several of the more deserving officers be increased.

The greater number of retiring officers were recommended to the favorable consideration of the Government, and in almost every case they received a gratuity.

The labor over which the prison authorities have direct control, has been employed during the year on works alike advantageous to the convict, and profitable to the institution.

In no year has so large an amount of work been done in the Government shops as in the past, and the prices thereof have been highly remunerative.

The value of the railway was this year largely experienced. The cost of its construction has been considerable, but that will ere long be repaid from its earnings. By it the value of the quarries is largely enhanced, and the improvements now being made on the Penitentiary wharf, will make this the most eligible point on the lake for vessels to be supplied with ballast or other stone—a branch of business highly advantageous to the institution.

There has been a considerable falling off during the last two or three years in the revenue received from contract labor. During the last year, however, the convict labor, under the employ of the prison authorities, though numerically less than in former years, has produced a larger revenue.

This is the more gratifying in that the convicts are likely to derive greater benefit from the employments carried on by the prison authorities than those by contractors, which, being for the most part executed by machinery, do not teach a trade.

The financial condition of the institution in relation to maintenance and earnings, will be found detailed in the report of the Deputy Warden, and reflects great credit on the prudence and energy of that officer while administering the office of Warden.

Notwithstanding the gratifying consideration that the labor of the convicts may be made pecuniarily profitable ; the earnings derived from contract labor must be much depreciated in the eyes of the reflective, from the fact, that while the contractor pecuniarily gains, the convict morally loses.

The long prevalent utilitarian desire of making the pecuniary profit, or in other words, the self-support of the Penitentiary, (next to the punishment and safe custody of the convict,) the paramount object of calculation, is rapidly giving way to the more sensible and humane desire of reforming him.

The contract system, so long patronized in the United States, is, from its tendency to neutralize the efforts at reform, now loudly inveighed against by the eminent Reformers, who compose the Prison Association of that country.

Those enlightened philanthropists continue energetically to invoke the legislative powers to terminate that system, that the convict may thereby be placed under the exclusive treatment of those interested in his reformation.

The Directors, while heartily wishing their benevolent neighbors "God speed" in their praise-worthy efforts for the abolition of this evil, earnestly hope that if they themselves have not the honor to precede, they may at least be not far behind them in the attainment of this desirable consummation.

The judgment of the Directors may perhaps be questioned upon the propriety of recommending the abolition of the contract system. They only do so upon the matured consciousness of the existence of ample reasons to justify their recommendations; convinced that works of compensating public utility can be found to absorb the labor of all the able-bodied for many years to come; therefore, no loss can arise to the public, whilst the convict is placed in the best possible position for reform.

The salutary change produced in the health of the convicts through the liberal use of vegetables, caused an increased quantity of land to be placed under cultivation. The labor thus employed will contribute alike to the good of the institution, and that of the convicts engaged in it.

Some changes were recently effected which have tended to improve the ventilation; these the Directors intend to extend still further.

There has been a considerable decrease in the number of committals for the past two or three years; but the Directors are unable to give any reliable reason for this falling off. Were it to be ascribed to an improvement in the morals of the criminal population, there would be reason for rejoicing; but the cause is too imperfectly understood to hazard more than a vague conjecture upon it. The decrease has not been confined to the Kingston Penitentiary, but has prevailed in those of St. John and Halifax, and, as far as the Directors learn, has obtained elsewhere.

It is also with sincere feelings of regret the Directors are called upon to record the death of the chief officer of the institution, early in the year.

The late Warden, J. M. Ferres, Esquire, carried with him into the important institution, over which he was destined so short a time to preside, abundant qualities to make him an effective administrator of its onerous duties. The Kingston Penitentiary, in his services, gained, in addition to great aptitude for business, large practical knowledge of the duties he had undertaken; and a disposition to perform them strictly. Had he been spared, he would assuredly have labored most effectively to raise the institution, with whose management he was identified, to the highest pitch of excellence. His labours, though but partly accomplished, must have the effect of materially smoothing the task of his successor.

It is the melancholy duty of the Directors to note also the severe loss the institution sustained through the death of Mrs. Plees, the excellent late matron. In the person of that esteemed officer were combined the most devoted zeal with admirable business capacity. That much lamented lady possessed, in a high degree, the power of influencing those committed to her charge by her personal bearing, rather than by the exercise of undue constraint or severity. The death of such an officer must be felt to be a loss to any institution.

It hardly pertains to a report for the past year to refer to an appointment which took effect on the first of January last. The Directors, however, do not consider it premature to state, by anticipation, that the appointment recently made by Your Excellency of Mr. Creighton, is regarded universally with favor, as securing to this important institution an officer in every way eminently qualified for the discharge of its many and important duties.

All which is respectfully submitted.

TERENCE J. O'NEILL,
Chairman.

ROCKWOOD ASYLUM.

This extensive and substantial stone structure, the work of the Kingston convicts, has been so far completed as to admit of its being fully occupied.

On all occasions, when visited by the Directors through the year, they have found it in the most perfect condition of cleanliness and order, and have much pleasure in testifying to the energy and devotion of the medical superintendent, Dr. Dickson.

The recent alterations, whereby the laundry, carpenter's shop, and other apartments have been converted into dormitorics, have added room for some 50 or 60 additional patients, so that, now, to the number of 400 may be comfortably housed.

A great want is experienced from the insufficiency of land attached to the premises; to meet the ordinary requirements. Such an institution should possess at least 100 acres of lands in order to afford the necessary supply of roots and vegetables, and pasturage for a sufficient number of cows.

Apart from the intrinsic value of the land, its cultivation by the insane would be of immense value to them as a remedial agency. Under these considerations, it is to be hoped that the Government will be induced to see the necessity for a further appropriation of land.

The medical superintendent in his report states his reasons for wishing the severance of the connection existing between this institution and the Kingston Penitentiary, and advocates its transfer to the Ontario Government.

Until called upon officially to do so, the Directors abstain from expressing their opinions on the subject; but in the transfer of the Rockwood Asylum to the Ontario Government, the difficulty of providing for the insane convict has to be considered. Should the change advocated by Dr. Dickson be carried out, a separate asylum for the insane convicts would be a necessary provision.

The medical superintendent is justly pained at the discomfort his patients have suffered in the past winter from the insufficient heating of some parts of the building. It is true, as Dr. Dickson states, that the fourth boiler has never been erected, but it is also true that the portion of the building originally intended to be heated by this boiler has, also, never been erected.

In the original design, it was intended that there should be further extensions to the east and west, and it was with a view to the heating of these extensions that the estimate for the fourth boiler was made. That these extensions have not yet been constructed is the sole reason that the fourth boiler has not been supplied.

From Dr. Dickson's remarks on the defective ventilation, it might be inferred that the Directors were insensible to this evil; but they have promptly corresponded with every suggestion on his part, for its mitigation.

The experiment for its improvement has happily proved successful, and it is only owing to the unusual press upon the Penitentiary labor, that these improvements have not been fully carried out.

True this might have been sooner effected if the Directors had been willing to call in extraneous labor, but the impropriety of doing so, while the convicts, supported at such expense to the country, were quite capable of the work, will at once manifest itself.

In this connection it may be also observed, that the delay in providing the necessary supports for the tank, arose from the necessity for obtaining the material from England.

It is painful to the Directors to have to notice in an invidious manner the report of any of the officers, but from the very ambiguous nature of the remarks contained in the second paragraph, under the heading, Ventilation, in Dr. Dickson's report, the reader would infer, that, from a very culpable negligence on the part of the Directors, the death of ten unfortunate patients had resulted.

As the fact stands, there certainly was one, and only one, water-closet in the west wing, which was in a faulty condition, but (as I am afraid would never be inferred from the remarks of the medical superintendent) its condition was no sooner made known to the Directors, than they, of course, ordered the necessary improvement.

As regards the hygienic condition of this institution, the Directors are fully in accord with the medical superintendent as to the ventilation and heating; as to the water closets and bath-rooms, with the exception of the one of the former before alluded to, they neither require, nor have required, further improvement.

With respect to the amusements, of which there has certainly been an absence, the only means of procuring them, until the proper time arrived for applying for an appropriation to Parliament, was that suggested by the Directors—the saving of the small sum required, \$400, out of the maintenance fund—an object it was supposed very easy of accomplishment. This supposition has proved quite correct, as the expenditure of the year has not absorbed the appropriation.

As regards that paragraph which alludes to the expunging of a portion of his last annual report, the Directors are of opinion that Dr. Dickson must surely have lost sight of the fact, that this was only done in accordance with the rule which requires that nothing shall be introduced into the annual report which has not previously been submitted to the Board.

During the past year, very much has been done towards improving and beautifying the grounds, and the Directors have much pleasure in uniting their testimony to that of the medical superintendent as to the efficient service rendered by the steward, Mr. Blair, in the carrying out of these changes.

ST. JOHN (N. B.) PENITENTIARY.

As has proved the case in the Kingston Penitentiary, the numbers have fallen off here considerably during the past two or three years; nevertheless, the amount of work performed by the prisoners would seem to be nearly equal to that done in previous years.

It is a pleasing feature in the Warden's report that no offences of a serious character were committed within the prison during the year. It is, perhaps, not too much to ascribe this result of self-restraint, imposed by the prisoners on themselves, to the desire to earn the remission of sentence, which is awarded to good conduct and industry.

As will be seen by the reports of the Chaplains and acting Schoolmaster, the prisoners continue to give much satisfaction on the points of conduct over which it is the province of those officers, respectively, to exercise supervision.

The health of the prisoners has been good throughout the year, as shown in the Surgeon's report.

The majority of the females are, as usual, employed in carding, spinning, and weaving the material used in the clothing of the male prisoners and themselves.

The Directors are constrained to remark, with both surprise and pain, that the results of the manufactures do not seem at all commensurate with the amount of capital invested, and the quantity of material used in them.

They have carefully examined into the items of expenditure and revenue, but they fail to be able to account satisfactorily for the very meagre returns which the capital and labor employed afford. They are still engaged in their enquiries, but the data at command are not as satisfactory for the purpose as they would wish to have.

The attention of the Directors was called, during the past summer, to the impure state of the reservoir from which the water supply of the prison is drawn.

This arose from the offal of two slaughter-houses, lately erected in proximity to the prison, finding its way into the reservoir.

The Warden received instructions from the Directors to warn the proprietors of the necessity for removing the nuisances at once, but no attention was given to the notice. The evil had at length become so intolerable that the Directors felt compelled to order the legal agent of the Government to institute proceedings for the removal of the nuisances.

Though the Directors do not feel all the satisfaction they would desire in the returns from the labor of the prisoners, it is due to the Warden to state that the condition of the prison, in cleanliness and order, is usually satisfactory.

HALIFAX (N. S.) PENITENTIARY.

In the month of October last, Your Excellency was pleased to appoint Robert Donkin, Esquire, Warden of this Penitentiary.

During the greater part of the interval between the death of the late Warden, Mr. McGregor, and the appointment of Mr. Donkin, nearly two years, the duties were performed by Mr. Charles Ross.

It is due to that officer, who was selected from amongst the Guards by the Directors, to mention that during his temporary occupation of the office of Warden, the duties were discharged in the most earnest and commendable manner, and so as to merit, at all times, the approval of the Directors.

In appreciation of his services the Directors recommended Mr. Ross's appointment to the office of Chief Keeper, which they have pleasure in stating has received Your Excellency's sanction; a measure which they have no doubt will incite others to equally meritorious conduct.

As is the case in the other Penitentiaries of the Dominion, and, indeed, as far as the Directors are able to learn, has proved the case elsewhere in the penal institutions, a considerable falling off in numbers has been taking place in the past two years.

The reduction would seem to have been in those of the vagrant class rather than those committed for more serious offences, who usually happen to be more robust subjects.

The Directors arrive at this conclusion from the fact that the revenue from the labor has hardly fallen off in proportion to the reduction in numbers.

Should the authorities of St. John (N. B.) insist upon possessing themselves of the Penitentiary situated at that city, in order to apply it to common jail purposes, it would become necessary to provide much enlarged accommodation here for the prisoners of both Provinces under long sentences, which neither the construction of the present buildings, nor the site, would advantageously admit.

Should such change take place, a new prison, as already suggested by the Directors in a former report, which would meet the requirements of all the maritime provinces, would be the wiser course.

The reports of the Chaplains and Surgeon afford favorable testimony of the moral and sanitary condition of the institution. And the state of cleanliness and order in which the prison and premises have been usually found by the Directors attest the attentive character of the officers.

REPORT OF THE ACTING WARDEN OF THE KINGSTON PENITENTIARY,
FOR THE YEAR ENDING 31st DECEMBER, 1870.

KINGSTON PENITENTIARY,
7th February, 1871.

T. J. O'NEILL, Esquire,
Chairman of Directors of Penitentiaries, &c.

SIR,—I have the honor to lay before you this, my Report, on the state and progress of the Kingston Penitentiary, for the year ending 31st December, 1870.

Although, in an official sense, my Acting-Wardenship dates back no further than the 21st of April, the almost continued illness of the late Warden left me, as Deputy-Warden, frequently and for prolonged periods in charge of the prison during the earlier part of the year, and I am thus enabled to embrace in this report the entire year.

In order to facilitate reference, I have thought it best, in the arrangements of the various subjects, to follow as much as possible, the Warden's report for 1869.

The first and most painful circumstance to which I have to allude is the death of the late Warden, James Moir Ferres, Esq. He died, after a protracted illness, on the 21st of April.

I cannot relinquish this subject without saying a few words in regard to Mr. Ferres' but too short career as Warden; he seemed to give his whole soul to the work in which he was engaged; no hour in the morning too early, none too late in the evening for him to labor, when he deemed his duties required it. His endeavors were not fruitless, and it is my earnest conviction that he has very greatly advanced the cause of humanity and civilization among the unfortunate inmates of this Institution; that he is generally regretted by them, forms not the meanest tribute to his memory.

DISCIPLINE AMONG OFFICERS.

I have but little to say on this head. There is, on the whole, small room for complaint. There were, indeed, some instances of slight derelictions of duty, but this is not surprising where there are over 100 employés; the prevailing spirit was that of order and obedience.

BUSINESS BOOKS.

I am happy to inform you that the irregularities giving rise to the remarks under this head in the Report for 1869, have in a great measure ceased to exist. The stock books are being regularly checked every month by the Clerk and Storekeeper, thus ensuring correctness not only in the general stock book of the latter, but also in the stock books of the several departments. The Accountant's books are also well up.

DISCIPLINE AMONG THE CONVICTS.

As I fully shared the late Warden's views as expressed under this head in the report for 1869, I continued, in most respects, the modes of treatment he had adopted, not only to punish disobedience and refractoriness, but also to reward merit, and with the happiest results. The great decrease of punishments, especially of the "cats," which you may perceive by referring to the annexed "Punishment Return," speaks loudly in favor of a system of discriminative kindness as opposed to one of indiscriminative repression. A reference to "Remission of Sentence" will show you that if the offenders have decreased, there has been a proportionate increase in the number of well-behaved men. There were few convicts discharged during the year who had not earned considerable remission. I am also of opinion, from what I have gathered from questioning convicts on their discharge, that the average of sincerely reformed convicts has greatly increased during the past year.

LABOR.

The tramway, which at the commencement of last year had been brought as far as the West Gate, is now completed ; it has been extended through the yard and stone-cutting shop. The stone can now be furnished the stone-cutters without previous unloading ; besides the heavy saving effected in horse-hire for bringing the stone from the quarries to the prison yard, a great amount of convict labor, formerly expended in drawing the stone from the yard to the shop on a hand truck, is now saved. The tramway also conveys the firewood from the Point to the Prison wood-yard.

At the termination of the tramway a boom-derrick for loading and unloading stone has been erected.

The contract labor is on much the same footing as last year, 1869, being carried on in the foundry, cabinet shop and contract shoe shop. A contract cooperage was started in the spring of the year, but discontinued in the fall.

In the Government shops everything has progressed satisfactorily throughout the year, and the average earnings have steadily increased. This I conceive to be owing, not only to the incentive to industry which the remission of time furnishes the convicts, but also in a great measure to the exertions of the Trade Instructors—a most useful class of officers—whose introduction, about two years ago, has materially benefited the entire system of convict labor, not only in its immediate results, but also in rendering the convict fitter to obtain an honest livelihood on his discharge from prison.

The stone department has been especially prosperous during the year, and its business bids fair to increase still. Further on you will find a more detailed statement of the earnings of the several departments.

A great number of men have been employed outside the prison walls during the year—a large proportion in the quarries,—a large gang at the Rockwood Asylum Buildings,—another gang (masons) at the Penal Prison wall and other mason work ; the rest on the Farm,—on the wharf, loading and unloading vessels,—on the Point, piling wood, &c., &c.

The men working in the open air are the healthiest and most robust in the prison. In connection herewith I may remark, without going into those details which belong more properly to the Surgeon's Report, that this has been a very healthful year, not among the men that work outside only, but as affecting the entire convict population of the prison.

SCHOOL.

In this department I regret to say that less good has been effected than under more auspicious circumstances might have been the case. The school was, for the greater part of the year, under the superintendence of the late schoolmaster, Mr. Benson, who died early in November ; he had been absent for a few weeks previous, having been in ill-health for a long while ; although once a good officer, age, or rather sickness, had rendered him unfit, for some time prior to his decease, to discharge his duties satisfactorily ; the effect of this on the school was of course very prejudicial.

On the 21st of November Mr. Delaney was placed in provisional charge of the school—so far, I am happy to state, with very satisfactory results.

REMISSION OF SENTENCE.

I have already alluded, under the head of labor, to the beneficial influence exercised on the industry of the convicts by this privilege ; it remains for me to tell you that its results are equally gratifying in other respects ; the prisoners' whole deportment is modified by the knowledge that it depends on themselves to abridge the period of their imprisonment, and although in many cases it is no purer motive than self-interest that causes their better conduct, the result is equally advantageous to the cause of order and discipline in the Institution. As for the moral effect on the convicts of their own better behavior, I

cannot but think that habit alone will go far to teach them self-control, and render them fitter to move in society, thus extending a wholesome influence even beyond the limits of their confinement.

In connection with this subject I may be permitted to remark what I have learned both from personal observation and also from questioning convicts on their discharge, that one of the most powerful means to induce good conduct in every respect, is the hope of being pardoned. I have found that those of the convicts who have friends, through whose exertions they hope to be released, are exceedingly careful of committing themselves, or giving the least cause of complaint.

PUNISHMENTS.

It is highly gratifying to me to be able to say that there has been a marked decrease in reports, and consequently in punishments. This holds good especially of more serious offences, the diminution of which has enabled me to dispense with the "cats" in all but a few cases, and these have been dealt with as leniently as possible. I refer you to the annexed tables for details.

ESCAPES.

Under this head I have a very painful circumstance to record. On the 7th of July last, two convicts, Daniel Mann and John Smith, were left at the lime kiln during the dinner hour, in charge of Guard Henry Trail. When Guard Groves' gang arrived at the quarry, at their usual time after dinner, they discovered the dead body of Guard Trail at the kiln. It appears he had been killed by the two convicts, who had made their escape. I am compelled here to state that had the guard exercised a due amount of vigilance, the occurrence could never have taken place, as it was only his permitting one of them to get behind him, that could enable them to prosecute their design. The runaways were re-captured on the 18th July, near Graham Lake, and brought back to the Penitentiary on the 19th.

This was the only escape effected during the year. An attempt was made by two convicts, Philander Allen and Peter Almond, to escape from the quarries, where they were at work, last September; they were recaptured within an hour, the guards having scarcely lost sight of them.

MEAT SUPPLY.

The mode of supplying the institution, commenced in 1869, was continued throughout 1870, with the most satisfactory results. Both beef and mutton are of excellent quality, and obtained at much lower rates than could be done under contract. Bad meat and small rations, of such frequent occurrence in former years, are now a thing unknown. Not only, however, is the meat far superior to that formerly supplied by contract, but it is actually far cheaper. The meat purchased in the fall of 1869, lasted till about the 1st of May, 1870, and in like manner the meat on hand now is calculated to last for about the same date in 1871. To enable you to see at a glance the cost of the meat for the year, from May, 1870, to May, 1871, I give you the following figures, viz:—

Meat used from 1st May, 1870, to 9th January, 1871, 127,177 $\frac{3}{4}$ lbs
On hand on 9th January (to last till May)..... 56,110

Total..... 183,287 $\frac{3}{4}$

Money paid for meat.....		\$9,451 54
Proceeds from hides (16,430lbs.).....	\$1,133 75	
" " 103 sheepskins.....	103 00	
4,983lbs. tallow (used for candles, &c.) at 10cts.....	498 30	
250 " " (used for cooking purposes) at 12 $\frac{1}{2}$ cts..	31 25	
		<u>1,766 30</u>

Leaving actual cost of meat..... \$7,685 24

or, an average price of \$4 19 per hundred ; this comprises 10,910lbs. of mutton, which, if valued at 5½cts. or 6cts. per pound, would reduce the price of the beef still more. You are aware that, when advertising for beef last fall, after offering in vain to accept several tenders, the lowest tender that we had not offered to accept was at \$5 90 per hundred. Had we entered into contract at that rate, 183,288lbs. of beef had cost us \$10,813 99, or \$3,128 75 more than was paid, while, judging from the past, the beef would have been far inferior.

ECONOMY.

The very satisfactory results which the annexed Returns of the Accountant exhibit, will convey more practical information on this head than anything I can say. It may not be amiss, however, to compare the last with the preceding year, as given in Statement No. 1, viz. :—

No. 1.

Comparative Statement of Expenditure of the Kingston Penitentiary, from the 1st January, 1870, to the 31st December.

To paid amount of salaries and accounts for supplies, to 31st Dec...	\$95,739 73
" " " " unpaid at 31st Dec.....	1,266 40
" " supplementary pay list (for back pay of Acting Warden)	694 42
To paid amount of accountable warrants for purchase of beef cattle	4,905 00
" " " " " barrack bedding.....	1,040 00
" " " " " cost of stationery.....	362 00
	\$104,007 15

Less.

Amount charged in above, paid for material for Rockwood buildings.....	\$4,232 71
Amount charged in above, paid for material for Penitentiary buildings.....	2,164 24
Amount due for bedding furnished to St. John Penitentiary.....	457 00
Amount due for hides and sheepskins sold.....	1,236 75
" paid gratuities to retired officers, not chargeable to maintenance	2,050 00
	10,140 70
Net cost of maintenance.....	\$93,866 45

Comparative Expenditure of 1869-'70.

Amount paid for salaries and supplies, to 31st Dec., 1869..... \$135,956 80

Less.

Amount paid on account of Rockwood buildings.....	\$9,360 23
Amount paid on account of Penitentiary buildings.....	2,840 31
	12,200 54
	\$123,756 26

Deduct.

For excess in population in 1869 over 1870—say $\frac{1}{8}$ th.....	\$ 15,469 53
Net cost of maintenance in 1869.....	108,286 73
" " " 1870.....	93,886 45
Reduction.....	<u>\$ 14,420 28</u>

No. 2.

Comparative Statement of the Revenue of the Kingston Penitentiary, for the years 1869-'70,

To amount received from work and sales' accounts,
1870..... \$48,324 31

Less.

To received in above for work and sales pertaining
to 1869..... 2,413 29
\$45,911 02

Add.

To sales to Toronto Corporation—not yet paid..... \$440 00
 " Northern Railroad " " 347 50
 " Rockwood Asylum " " 654 83
 " Cameron & Mudie and others—not yet
 paid 393 33
To balance from convict labor for the year..... 4,169 37
6,005 03
\$51,916 05

1869.

To amount of work and sales' accounts..... \$39,424 95

Deduct.

For excess of population in 1869 over 1870—say $\frac{1}{8}$ th 4,928 11
34,496 84
\$17,419 21

Comparative difference in favor of 1870, upon the basis of equal number of convicts,

No. 3.

Earnings of Kingston Penitentiary, for year ending 31st December, 1870.

To cash receipts from work and sales..... \$45,911 02
To debts of the year (not collected at 31st December)..... 6,005 05
\$51,916 07

Brought over.....	\$51,916 07
Productive labor engaged in sundry works not paid for in cash, viz. :—	
By Stone Cutter's, Mason and Quarry Departments	\$17,319 89
„ Carpenter's Department.....	4,405 78
„ Blacksmith's Department.....	1,450 32
„ Shoe and Harness Department.....	2,098 92
„ Tailor's Department.....	1,937 90
„ Orderlies	624 00
„ Matron's Department	565 03
„ Farm and Garden.....	121 73
	—————
	28,524 57
Earnings	\$80,440 64
Cost of maintenance.....	93,866 45
	—————
Deficiency	\$13,425 81

Account of labor engaged in the management of the Institution,
viz. :—

In bakery, 5 men, 1,550 days @ 40cts.....	\$620 00
In wash house, 4 men, 1,814 days @ 40cts.....	725 60
In stable and yard, 9 men 2,665 days @ 30cts.....	799 50
In wood-sawyers, pilers and carriers, 13 men, 4,201 days @ 25cts.....	1,050 25
In steward's department, in dining hall, cooking kitchen, meat cellar, cleaning dormitories and wings, yard cleaners, whitewashers, lampmen, bucket-carriers, 25 men, 8,021 days @ 20cts.....	1,604 21
In drying and mending-room, 22 men (principally aged and invalids), 5,678 days @ 10cts.....	567 80
In hospital, 7 men, 2,555 days @ 30cts.....	766 50
Assistants to Storekeeper, Steward, and Trade Instruc- tors, 4 men, 1,240 days @ 40 cts.....	496 00
	—————
	\$6,639 86

The above Statement (No. 2) of Revenue, viz.: \$45,911 02 is simply confined to cash receipt from hired labor and work done for outside parties, but does not embrace the labor expended in works of construction and repair, as given in Statement No. 3, and the ordinary labor bestowed on management.

This large saving was not effected without practising the most rigid economy on the one hand, and on the other encouraging industry and diligence as much as possible in all the different branches that contribute to swell the revenue of the Institution.

I regret to have to mention the death of Mrs. Pless, late Matron, who died on the 26th of January.

In conclusion, permit me to express my entire satisfaction with the officers of the Institution, without whose cordial support the favorable results, as given above, could not have been achieved. I am especially indebted to Chief Keeper McCarthy, whose zeal and hearty co-operation with me have enabled me to conduct the affairs of the Institution to, I trust, the satisfaction of your honorable Board.

I have the honor to be, Sir,

Your obedient servant,

JOHN FLANIGAN,
Deputy Warden.

CRIMINAL STATISTICAL TABLES,

RECAPITULATION.

	Male.	Female.	Total.
<i>Race.</i>			
White	162	18	180
Colored	12	1	13
Indian	3	.....	3
	177	19	196
<i>Country.</i>			
England	29	2	31
Ireland	23	6	29
Scotland	6	.....	6
Canada	95	6	101
United States	20	4	24
Newfoundland	1	.....	1
Cape of Good Hope .....	.....	1	1
France	1	.....	1
Prince Edward Island	1	.....	1
Sweden	1	.....	1
	177	19	196
<i>Ages.</i>			
15 to 20 years?	39	3	42
20 to 25 "	49	5	54
25 to 30 "	29	3	32
30 to 40 "	27	4	31
40 to 50 "	16	2	18
50 to 60 "	13	.....	13
60 and upwards	4	2	6
	177	19	196
<i>Religious Belief.</i>			
Baptists.....	7	.....	7
Catholics.....	67	11	78
Church of England.....	59	6	65
Methodists.....	20	1	21
Presbyterians.....	19	1	20
Congregationalists.....	1	.....	1
Lutherans.....	1	.....	1
Universalists.....	1	.....	1
No Religion.....	1	.....	1
Quakers.....	1	.....	1
	177	19	196

CRIMINAL STATISTICAL TABLES.—*Continued.*

RECAPITULATION.

	Male.	Female.	Total.
<i>Education.</i>			
Neither read nor write.....	45	10	55
Read only.....	35	4	39
Read and write.....	97	5	102
	177	19	196
<i>Civil Condition.</i>			
Single.....	109	7	116
Married.....	58	10	68
Widowed.....	10	2	12
	177	19	196
<i>Moral Habits.</i>			
Abstinent.....	76	.....	76
Temperate.....	74	5	79
Intemperate.....	27	14	41
	117	19	196
<i>Lengths of Sentence.</i>			
2 years.....	66	12	78
2 years and 1 day.....	1	.....	1
2 years and 2 months.....	1	1	2
2 years and 6 months.....	5	.....	5
3 years.....	49	2	51
4 ".....	19	2	21
5 ".....	22	2	24
6 ".....	1	.....	1
7 ".....	3	.....	3
10 ".....	5	.....	5
14 ".....	2	.....	2
Life.....	3	.....	3
	177	19	196
<i>Crimes.</i>			
Burglary.....	11	1	12
Larceny.....	72	16	88
Robbery.....	9	.....	9
Horse Stealing.....	10	.....	10
Felony.....	6	.....	6
Attempt at Arson.....	1	.....	1

CRIMINAL STATISTICAL TABLES.—Continued.

RECAPITULATION.

	Male.	Female.	Total.
<i>Crimes.—Continued.</i>			
Wounding with intent to Murder	2	.....	2
Horse Stealing and Larceny.....	3	.....	3
Arson.....	7	2	9
Attempt to commit Bestiality.....	1	.....	1
Receiving Stolen Property	2	.....	2
Burglary and Larceny.....	12	.....	12
Larceny and Receiving	4	.....	4
Cattle Stealing.....	4	.....	4
Forgery	5	.....	5
Manslaughter.....	7	.....	7
Inflicting grievous bodily harm	3	.....	3
Perjury	1	.....	1
Firing a Bridge	1	.....	1
Wounding with intent to do grievous bodily harm	3	.....	3
Rape.....	2	.....	2
Horse Stealing and Receiving	2	.....	2
Bigamy.....	1	.....	1
Passing Counterfeit Money.....	1	.....	1
Sheep Stealing.....	1	.....	1
Obstructing Railway.....	1	.....	1
Murder.....	3	.....	3
Conspiracy	2	.....	2
	177	19	196
<i>Occupations.</i>			
Females.....	.....	19	19
Printers.....	1	.....	1
Painters.....	3	.....	3
Machinists	3	.....	3
Laborers.....	89	.....	89
Shoemakers.....	11	.....	11
Tailors.....	6	.....	6
Blacksmiths	4	.....	4
Turners	2	.....	2
Plasterers.....	1	.....	1
Farmers	9	.....	9
Carpenters.....	9	.....	9
Stonecutters	5	.....	5
Moulders.....	2	.....	2
Colliers.....	1	.....	1
Butchers.....	1	.....	1

CRIMINAL STATISTICAL TABLES.—*Continued.*

RECAPITULATION.

	Male.	Female.	Total.
<i>Occupations.—Continued.</i>			
Weavers	1	.....	1
Clerks.....	4	.....	4
Gardeners.....	1	.....	1
Saw-filers	1	.....	1
Merchants.....	1	.....	1
Brick-makers	2	.....	2
Sailors	4	.....	4
Teachers	1	.....	1
Bakers.....	1	.....	1
Waiters	2	.....	2
Curriers.....	1	.....	1
Engineers.....	2	.....	2
Saddlers.....	1	.....	1
Coopers.....	1	.....	1
Bricklayers.....	1	.....	1
Roofers.....	1	.....	1
Barbers.....	1	.....	1
Cabinet-makers.....	2	.....	2
Watch-makers	1	.....	1
Masons	1	.....	1
	177	19	196

TABLE of movements of Convicts in the Kingston Penitentiary, from Midnight on the 31st December, 1869, until Midnight, 31st December, 1870.

Description.						
	Males.	Females.	Total.	Males.	Females.	Total.
Remaining at Midnight, 31st December, 1869.....				668	45	713
Admitted since :—						
From County Jails	177	19	196			
,, Rockwood Asylum				177	19	196
				845	64	909
Discharges :—						
By expiration of sentence	158	12	170			
,, Pardon.....	26	2	28			
,, Sent to Rockwood Asylum	9	2	11			
,, Suicide.....	1	0	1			
,, Death.....	12	0	12			
,, Handed to civil power	1	0	1	207	16	223
Remaining at Midnight, 31st December, 1870				638	48	686

Kingston Penitentiary,
6th January, 1871.

NOMINAL LIST of Convicts re-committed to the Kingston Penitentiary, during the year 1870, and number of re-commitments.

No.	Name.	Imprisonments.		No.	Name.	Imprisonments.	
		2nd.	3rd.			2nd.	3rd.
1	Charles Donohoe.....	1		15	John Smith	1	
2	Jean B. Longpré.....	1		16	John Devaney	1	
3	Joseph Proctor	1		17	John Burke		1
4	John Ashley.....	1		18	John Evans	1	
5	Thomas Graham	1		19	Benjamin Wilson	1	
6	James Stormont	1		20	James Berry Steele	1	
7	Eliza Whalen.....	1		21	Edward Hall.....	1	
8	Thomas King.....	1		22	Richard Nelligan	1	
9	Bernard Keegan		1	23	Daniel Donnelly	1	
10	Guillaume Ledoux	1		24	Hannah O'Connor	1	
11	Leon Benard		1	25	Joseph Rouleau.....	1	
12	Henry Wilson	1		26	Margarite Lacoste	1	
13	John Lawler	1		27	Alexander Arnold	1	
14	George Watt	1		28	Henry Thompson	1	
						25	3

Kingston Penitentiary,
6th January, 1871.

NOMINAL LIST of Convicts who have been pardoned during 1870, with crime and name of place where convicted.

No.	Name.	Crime.	Where Convicted.
1	Richard Bretton	Felony	Northumberland and Durham.
2	George W. McKenzie	Larceny and receiving	York.
3	George Blackwell	Post Office robbery	Waterloo.
4	William Prout	Felony	York.
5	John William	Attempt at rape	Essex.
6	Andrew Mervale	Murder	Montreal.
7	William Slavin	Lawless aggression	York.
8	Michael Feuten	Arson	Lambton.
9	Joseph Boucher	Mail robbery	Rimowski.
10	Anthony Waunch	Manslaughter	Simcoe.
11	Colin Campbell	Assault	Grey.
12	Lucinda Hines	Larceny	Victoria.
13	Thomas H. Green	Horse stealing	Wellington.
14	John S. Mason	Murder	Middlesex.
15	Thomas Alexander	Assault	Montreal.
16	Michael Connors	Inflicting grievous bodily harm	Quebec.
17	William Nolan	do do do	Quebec.
18	John Mathew	Larceny	Norfolk.
19	George Dunn	Manslaughter	Kent.
20	Alfred Frenette	Stealing a post letter	Quebec.
21	Elie Bauvais	Felony	Montreal.
22	John Sharpe	Larceny and conspiracy	Elgin.
23	Leon Poulin	Burglary	Quebec.
24	Jacques Turcotte	do	Quebec.
25	Sandford Simmons	Malicious stabbing	Bruce.
26	Ann Connolly	Larceny	Montreal.
27	William Woolley	Murder	Huron and Bruce.
28	Robert Black	Larceny	Prescott and Russell.

Kingston Penitentiary,
6th January, 1871.

NOMINAL LIST of Convicts who have died during the year 1870, with crime and place of conviction.

No.	Names.	Crimes.	Place of Conviction.
1	Leonhurst Becker	Arson	Perth.
2	Jean B. Corriveau	Murder	Quebec.
3	Thomas Tomico	Larceny	Elgin.
4	Thereseuse Wilham	Cattle stealing	Kent.
5	John Cochrane	Larceny	Frontenac.
7	Antoine Lacoste	Murder	Montreal.
7	Henry Smith	Larceny	Lambton.
8	Isaac Shanklin	do	Elgin.
9	Solomon Albert	Rape	Halton.
10	Gasper Waller	Larceny	Wentworth.
11	Larkin Hooker	Horse stealing	Essex.
12	John Rieley	Felony	Lincoln. (Suicide.)
13	Owen Clifford	Arson	Lincoln.

Kingston Penitentiary,
6th January, 1871.

NOMINAL LIST of Convicts who have been sent to Rockwood Asylum, during the year 1870,—giving their present state.

No.	Names.	Present State.
1	William Begg	Slightly improved.
2	Benjamin Lamb	No improvement.
3	Francis Murat	Much improved.
4	J. F. C. Benedict	No improvement likely to occur.
5	Catherine Caulfield	Improved.
6	Patrick Sullivan	Very much improved.
7	Patrick Daily	No improvement.
8	Susan Brown	No change.
9	William Shaw	No change.
10	Charles Brough	Improved.
11	William Barr	No improvement.

Kingston Penitentiary,
6th January, 1871.

REMISSION OF SENTENCES.

Table shewing the average number of days of remission gained, through good conduct and industry, by convicts discharged from the Kingston Penitentiary, during the year 1870 :—

7 convicts gained an average of	10 $\frac{1}{2}$ days each.
1	23 days.
5	34 $\frac{4}{8}$ days each.
3	43 $\frac{3}{4}$ "
2	57 "
12	64 $\frac{3}{4}$ "
35	75 $\frac{1}{8}$ "
18	85 "
18	95 $\frac{1}{3}$ "
13	114 "
25	123 $\frac{3}{5}$ "
8	138 $\frac{1}{8}$ "
5	142 "
1	162 days.
<hr/>	
153	

Total number of convicts who earned remission.....	153
Total number of convicts discharged	170

Smallest number of days earned by a convict.....	2
Greatest number of days earned by a convict.....	162

Kingston Penitentiary,
7th January, 1871.

PROTESTANT LIBRARY, 1870.

Number of books in library, 1,217.
 Number added during 1870, 454.
 Appropriation for library, \$80.
 Number of convicts who used books, 443.
 Number of issues of books during year, 3,420.
 Number of Protestant convicts, 410.

ROMAN CATHOLIC LIBRARY, 1870.

Number of books in library, 395.
 Appropriation for library, \$60.
 Number of convicts who used books, 184.
 Number of issues of books during year, 9,873.
 Number of Catholic convicts, 276.

TABLE of Punishments, in Female Department of the Kingston Penitentiary, for 1870.

Months.	No. of meals of bread and water.				No of nights' hard bed.	No. of 3meals bread and water, and nights' hard bed.			No. of days in solitary cell.					Reports not acted upon.	No. admonished.	Total No. of reports.	Total No. reported.
	1	2	3	4		1	2	3	1	2	3	4	5				
January																	
February																	
March			2					1	1				1		7	13	13
April													4		5	9	9
May				1					1	1	1	1			1	5	5
June								1							4	5	4
July		1		1					1							3	3
August		1	6			5		1	2	4	2	1	8	16	46	33	33
September									1		2		2		5	5	5
October										1			4		5	5	5
November		1							1	1			8		3	14	14
December										1					2	3	3
Total		3	8	2		5		3	7	8	5	2	27	38	108	94	94

Kingston Penitentiary,
 7th January, 1870.

STATEMENT of ACCIDENTS to Convicts in Kingston Penitentiary, for the year 1870.

Date.	Names.	Where Employed.	Nature of Accident.	Cause of Accident.	Days in Hospital.	Remarks.
January 7..	Patrick Baine.....	Stone shed.....	Contused wound of 1st and 2nd fingers of left hand.....	By fall of stone.....	10	
February 8..	Alanson Burton.....	Root house.....	Incised wound, 4th finger left hand.....	Crushed by block of ice.....	13	
March 17..	George Lovely.....	Cabinet shop.....	Incised wound, 3rd finger left hand.....	By planing machine.....	13	
April 19..	Pascal Bouchard.....	".....	Lacerated wound of 2nd finger left hand, necessitating amputation at 1st joint.....	By planing machine.....	14	
13 May 17..	James Kelly.....	Quarry.....	Contused wound of 1st and 2nd fingers of left hand.....	By fall of stone.....	13	
June 21..	Joseph A. Armstrong.....	Cabinet shop.....	Lacerated wounds of 1st, 2nd and 3rd fingers of left hand, necessitating amputation at 1st joints of 1st and 2nd fingers.....	By planing machine.....	41	
July 27..	Nathan Johnson.....	".....	Lacerated wound, 1st finger right hand....	By planing machine.....	20	
November 24..	Thomas Montgomery.....	".....	Lacerated wound of index finger left hand.....	By circular saw.....	30	
December 20..	Frederick Elson.....	Carpenter shop.....	Lacerated wound of palm of left hand....	By sharp point of wooden stake.....		In hospital 31st December, 1870.

Kingston Penitentiary
6th January, 1871.

PROTESTANT CHAPLAIN'S REPORT.

The Protestant Chaplain has the honor to Report, that he has made an inspection of the present condition of the convicts under his charge, with reference to their morals and religious impressions, as far as time and circumstances would admit.

He has pleasure in stating his conviction, that under the management during the past year, the conduct of the convicts has been generally satisfactory ; that while the rigor of a penal servitude has been made to fall upon them as lightly as possible under their circumstances, the deportment of the convicts has, nevertheless, been very creditable.

The system of indulgence as a reward for good conduct, in the permission given them, to take part in the musical portions of Divine Service (a privilege very properly appreciated) has had a wholesome effect.

The privilege of reading books, not distinctly religious, but of a sound moral character, (approved by the chaplain) has been found to exert a good influence, rendering the convicts more cheerful in their seclusion, and thus securing their gratitude and consequent good behaviour.

The total number of convicts under the charge of the Protestant Chaplain :—

	MEN.	WOMEN.
Number of convicts admitted during the year.....	114	7
" who have died.....	6	none
" pardoned.....	0	
Number of Communicants	31	
" under instruction in Church Music.....	55	
Visits paid to the Hospital.....	315	

Kingston Penitentiary, December 31st, 1870.

ROMAN CATHOLIC CHAPLAIN'S REPORT.

To T. J. O'Neill, Esq.,
Chairman, Board of Directors,
Kingston Penitentiary.

I have the honor to submit for your consideration, the Annual Report of the Catholic Chaplain of the Kingston Penitentiary, for the year of Grace, ending Dec. 31st, 1870.

It is a source of satisfaction for me to be able to state, in the first place, that convicts attending Catholic Worship, as a general rule, seem animated with proper disposition. They listen with marked attention to the different instructions imparted to them, and appear in most cases alive to the fact, that those instructions are intended for their welfare temporal and eternal. They assist with great respect and devotion at the different services prescribed by the Catholic Ritual. Indeed, their conduct in the chapel, at all times, is highly becoming, and I am quite assured that the great majority come to pray and not to scoff. Thus there seems good grounds to hope that this attention and respect in the House of God will, in due time, produce a salutary change in many of those convicts who will return to society, good and peaceable citizens.

Another fact worthy of note, and which will be eventually productive of considerable good, is the great desire to read that the convicts manifest. And as we are very careful to put into their hands only such works as will contribute to improve their moral tone, we may expect that they shall imbibe salutary lessons, to guide them in their conduct, because in those books they are necessarily led to the consideration of practical views in regard to the teachings of christianity.

Our Church Music continues to be productive of the happiest results. I consider the introduction of church music into prison economy, as a potent means of reformation. Sunday is now more than ever hailed with delight by the vast majority of convicts ; they

look forward to it, not only as a day of rest, but as a day of real devotion and piety ; a day wherein everything speaks to the heart, and tends to mould it after the christian model. The services of strangers in the choir has been entirely dispensed with, in view of the great proficiency the convicts themselves have attained.

I have visited the Penitentiary Schools on several occasions. It affords me great pleasure to be able to state that the School seems in admirable working order. The Teacher appears possessed of a certain amount of firmness which, of course, is an essential requisite to ensure success. The convicts are made to feel that they frequent this school, not to squander their time in idle talk, but to endeavor, as fully as possible, to improve their mental faculties. The Teacher is, I might add, a man of well-known abilities, and it is a source of encouragement to think that good results may be expected from his untiring efforts.

The number of convicts has not increased ; in fact, there has been a certain diminution ; this remark applies to men of mature age. On the contrary, the number of juvenile convicts has painfully increased. This becomes a melancholy fact when we consider the consequences it may lead to. The boy-criminals, in some cases under sentence, become necessarily the associates of men hardened in crime ; the consequences are fearful to contemplate ; they waste the precious time of youth in a school of vice. If those juvenile convicts are plunged into an atmosphere where they inhale, at every breath, the deadly vapors of vice, how can it be expected that they will return to society sound and healthy in morals ?

The Reformatory is the only fit and proper place for juvenile criminals ; it is there, or nowhere, that they can be moulded into good and useful members of society.

It is customary to state the number of prisoners attending Divine Worship in the Catholic Church. At present they number :—

Males.....	246
Females.....	30
Total.....	276

All of which is respectfully submitted.

W. J. KEILTY, Priest,
Assistant Chaplain.

Kingston Penitentiary, 31st Dec., 1870.

REPORT OF DR. DICKSON, SURGEON OF THE PENITENTIARY.

KINGSTON PENITENTIARY,

10th January, 1871.

GENTLEMEN,—The very full and elaborate Tables which I have the honor to transmit, were prepared by Mr. Halliday, the excellent Hospital Overseer. These Tables give, in detail, the number of admissions to Hospital during the year ; the diseases under which the patients labored ; the length of time in Hospital, and the result of treatment.

The Obituary Table gives the names of those who died ; the cause of death, and the length of time in Hospital.

The Table of Accidents gives the nature of injuries received ; how inflicted, and in what department they occurred ; also, the length of time each patient was in Hospital.

As my time is so completely occupied between the duties imposed on me at the Asylum and Penitentiary, I have not time to write a lengthy report, without I neglect some important work to do so, and as the Tables are so very elaborate, I think all needed information will be found in them.

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

JOHN R. DICKSON.

Messrs. O'Neill, King & Prieur,
Directors of Penitentiaries.

ANNUAL Return of Deaths in Hospital, Kingston Penitentiary, for the year 1870.

No.	Names.	Age.	Disease.	When Admitted.	Died.	Country.	No. of days in Hospital.	Remarks.
1	Leonard Becker	29	Typhoid Fever	21st December, 1869	7th January, 1870	Germany	17	
2	Jean B. Corriveau	69	Debility	10th January, 1870	27th January, 1870	Quebec ..	17	
3	Thomas Tomico	22	Phthisis	25th November, 1869	11th February, 1870	Ontario	78	Indian.
4	William Themuse	24	Phthisis	26th November, 1869	19th February, 1870	Ontario	85	
5	John Cochran	38	Typhoid Fever	5th February, 1870	3rd April, 1870	Ireland	57	
6	Antoine Lacombe	41	Phthisis	23rd May, 1870	9th June, 1870	Quebec	17	
7	Henry Smith	28	Phthisis	5th March, 1870	16th June, 1870	U. States	103	
8	Isaac Shanklin	19	Phthisis	17th May, 1870	14th July, 1870	Ontario	58	Negro.
9	Soloman Alberts ..	33	Febricula	22nd April, 1870	22nd July, 1870	Ontario	91	Negro.
10	Gasper Waller	21	Phthisis	3rd June, 1870	23rd July, 1870	England	50	
11	Larkin Hooker	23	Phthisis	8th May, 1870	29th August, 1870	Ontario	101	Negro.
12	Owen Clifford	71	Debility	28th September, 1870	19th November, 1870	Ireland	80	
	John Riley	68	Committed suicide by hanging		30th October, 1870	Ireland		

JOHN R. DICKSON, M.D., Surgeon,
Kingston Penitentiary.

ANNUAL RETURN of Cases treated in Hospital, Kingston Penitentiary, for the Year 1870.

Disease.	Remained.	Admitted.	Discharged.	Died.	Remaining.	Disease.	Remained.	Admitted.	Discharged.	Died.	Remaining.
Abscess	1	15	14	.....	2	Laryngitis	.....	1	1	.....	.....
Aneurism	1	.....	1	.....	.....	Lumbago	1	45	46	.....	.....
Anasarca	.....	1	1	.....	.....	Malingering	.....	6	6	.....	.....
Asthma	1	7	7	.....	1	Mania	.....	7	7	.....	.....
Boils	.....	10	10	.....	.....	Melancholia	.....	3	3	.....	.....
Bronchitis	1	1	2	.....	.....	Mumps	.....	1	1	.....	.....
Bubo	.....	1	1	.....	.....	Necrosis	.....	2	2	.....	.....
Burns	.....	8	8	.....	.....	Neuralgia	.....	10	8	.....	2
Cancer	.....	1	.....	.....	1	Ophthalmia	.....	28	28	.....	.....
Carbuncle	.....	2	2	.....	.....	Orchitis	.....	1	1	.....	.....
Chlorosis	.....	2	2	.....	.....	Pharyngitis	.....	1	1	.....	.....
Cholerae	1	3	4	.....	.....	Phthisis	6	14	12	7	1
Chorea	.....	1	.....	.....	1	Pleurodynia	.....	4	4	.....	.....
Colic	1	8	9	.....	.....	Pneumonia	.....	2	2	.....	.....
Contusions	.....	57	56	.....	1	Porrigio	.....	.....	.....	.....	2
Debility	.....	18	14	2	2	Rheumatism	4	27	28	.....	3
Diarrhoea	3	48	50	.....	1	Scabies	.....	7	7	.....	.....
Dysentery	.....	9	8	.....	1	Sciatica	.....	2	1	.....	1
Dyspepsia	.....	16	15	.....	1	Scrofula	.....	9	9	.....	.....
Epilepsy	1	7	7	.....	1	Sprain	.....	11	10	.....	1
Erysipelas	.....	7	7	.....	.....	Spermatocele	.....	1	1	.....	.....
Febricula	10	165	168	1	6	Synovitis	.....	1	1	.....	.....
Fever (Intermittent)	.....	5	5	.....	.....	Syphilis	.....	2	2	.....	.....
Fever (Typhoid)	2	20	18	2	2	Stricture	.....	2	2	.....	.....
Fistula in Ano	.....	2	2	.....	.....	Stye	.....	2	2	.....	.....
Gastritis	.....	1	1	.....	.....	Tenia Soliu	.....	1	1	.....	.....
Gout	.....	1	1	.....	.....	Tonsillitis	.....	9	9	.....	.....
Hæmoptysis	.....	3	3	.....	.....	Torticollis	.....	5	5	.....	.....
Hæmorrhoids	.....	6	6	.....	.....	Tuberculosi	1	.....	1	.....	.....
Hepatitis	.....	2	2	.....	.....	Ulcers	.....	2	2	.....	.....
Hernia	1	.....	1	.....	.....	Vertigo	.....	1	1	.....	.....
Heart Disease	.....	2	2	.....	.....	Whitlow	.....	2	2	.....	.....
Herpes	.....	1	1	.....	.....	Wounds	3	40	42	.....	1
Impetigo	.....	2	2	.....	.....				
Influenza	1	28	17	.....	12						
Ischuria	.....	1	1	.....	.....				
						Total	39	712	696	12	43

Suicide 1

JOHN R. DICKSON, M.D.,
Surgeon, Kingston Penitentiary.

STATEMENT of Accidents to Convicts in Kingston Penitentiary, for the Year 1870.

Date.	Names.	Where Employed.	Nature of Accident.	Cause of Accident.	No. of Days in Hospital.	Remarks.
January 7.	Patrick Baine	Stone Shed	Contused wounds of first and second fingers of left hand	By fall of Stone	10	
February 8.	Alanson Burton	Root House	Incised wound of fourth finger of left hand.	Crushed by block of Ice.	13	
March 17.	George Lovely	Cabinet Shop	Incised wound of third finger of left hand.	By Planing Machine	13	
April 19.	Pascal Bouchard	Cabinet Shop	Lacerated wound of second finger of left hand, necessitating amputation at first joint	By Planing Machine	14	
27 May	James Kelly	Quarry	Contused wounds of first and second fingers of left hand	By fall of Stone	13	
June 21.	Joseph A. Armstrong	Cabinet Shop	Lacerated wounds of first, second, and third fingers of left hand, necessitating amputation of first and second fingers at the first joint	By Planing Machine	41	
July 27.	Nathan Johnson	Cabinet Shop	Lacerated wound of first finger of right hand	By Planing Machine	20	
Nov. 24.	Thomas Montgomery	Cabinet Shop	Lacerated wound, index finger of left hand	By Circular Saw	30	
Dec. 20.	Frederick Elson	Carpenter's Shop	Lacerated wound of palm of left hand	By Sharp Pointed Wooden Stake.		

JOHN R. DICKSON, M.D.,
Surgeon, Kingston Penitentiary.

 SCHOOLMASTER'S REPORT.

To the Board of Directors of the
Kingston Penitentiary.

GENTLEMEN,—I have the honor to submit to you the Annual Report of the School in connection with the Kingston Penitentiary, for the year ending 31st of December, 1870.

I am happy to be able to inform you that the attendance for the past year has been very good, showing an aggregate of 35,880, which, allowing 260 days to the scholastic year, gives a daily average attendance of 138, of whom 77 are Protestants, and 61 are Roman Catholics.

Of this number the average attendance at the daily noon school was 95, of whom 34 have learned to read, 45 to write, and 37 to write and cipher.

The attendance to the morning and evening classes, viz. :—from 7 to 9 in summer, and from 7.30 to 9.30 in winter ; and from 1 till 3 in the afternoon, was nearly as follows :—

Morning—daily average, 15 ; of these 5 have learned to read, the remaining ten learning to write and cipher.

The afternoon School comprising both French and English, gives a daily average of 29 ; 9 of these are French Canadians, who have learned to read English ; the remaining 20 being English, of whom 10 have learned to read well, and 10 to read, write, and the first rudiments of arithmetic.

I would also inform you that the daily attendance at School at present remains at about 130 ; and of these 74 are Protestants, and 56 Roman Catholics.

They are subdivided into the following classes, viz. :—1st Class, 10 ; 2nd, 19 ; 3rd, 18 ; 4th, 6 ; 5th, 7 ; writing class, 14 ; and ciphering class, 56—of whom 17 are working in the simple rules, and 39 in the compound, or more advanced rules.

Of the French Canadians attending school, 14 are commencing to read French ; 16 read well in French ; and 12 are commencing to read English.

These figures go far to show that the privilege kindly granted to convicts to attend School is both appreciated and usefully applied by the great majority of them who are in need of the first principles of education ; and, also, the immense advantages which are to be derived from the existence of a School, in connection with the Institution, by those convicts who are inclined to avail themselves of the benefits conferred by it.

With reference to the morning and afternoon classes, I would recommend that permission be extended to as many as possible of those needing primary instruction, to attend them, as the pupils attending these classes make very rapid progress, and by their close attention and application to the studies assigned them show that the favor thus conferred on them is not misapplied.

In conclusion, I would beg to state that on account of it being near the close of the past year when I was placed in charge of the School, this Report is not so comprehensive as you might expect, or as I myself would wish it to be.

I have the honor to be, Gentlemen,

Your most obedient servant,

J. J. DELANEY,

Acting Master.

STOCK ACCOUNT of the Kingston Penitentiary, for the year ending
31st December, 1870.

Departments.		
		\$ cts.
1	Storekeeper's department	9,563 18
8	Wood yard	4,338 98
9	Oakum shed	288 34
10	Blacksmith's department	9,206 94
19	Bakery	813 39
21	Foundry	372 30
22	Cabinet shop	241 44
23	Contract shoe shop	325 28
24	Farm and garden	2,268 15
26	Roman Catholic Church	512 50
28	School room	124 89
30	Protestant Church	559 03
31	Steward's department	9,700 08
41	Matron's	3,539 64
54	North Lodge	250 67
56	Keeper's hall, deputy's office	123 65
57	Armory	3,302 79
60	Warden and Directors' offices	162 75
61	Warden's hall	106 40
62	Mess room	88 68
63	Saddlery and prison shoe shop	1,248 12
67	Accountant's office	162 81
69	Hospital and surgery	1,560 80
76	Mason's department	9,294 21
85	Tailor's shop	3,615 70
88	Carpenter's shop	5,548 50
104	Architect's office	54 00
105	Real estate	586,014 57
	Total	\$653,387 79

THOS. MCCARTHY,
P. O. DONNELL,

Valuators.

SUMMARY of Real Estate of Kingston Penitentiary, to 31st December, 1870.

	\$	cts.
Land	7,900	00
North Lodge	16,822	17
West	7,938	69
Main boundary walls and towers	61,110	30
Walls of female convicts and Deputy-Warden's yards	2,920	38
" gardens	1,984	40
Rotunda and dome	10,579	47
North wing, main centre block	55,285	69
East and west wings	122,173	08
South wing	64,899	85
South work shops and additions	67,456	32
Dining-hall building and kitchen	29,429	70
Hospital	25,155	75
East shops, store house, &c.	21,590	92
Dry kiln	1,623	42
West shops and engine house	18,014	00
Wash-house, smith's shop, &c.	2,951	40
Stable and coach house	3,699	20
Grading and forming land	4,249	03
Sewers and drains	13,940	75
Water supply, tanks, pipes, and cisterns	8,332	01
Wharves and breakwater	7,430	67
Stone cottage and out-buildings, corner of Palace and King streets	1,500	00
Two frame dwellings west of prison	600	00
Dwarf walls enclosing Warden's plot	4,870	30
Solitary prison-yard walls and stone for lodge	9,541	65
Farm house and out-houses	900	00
Barn	3,726	67
Piggery	1,352	45
Lime kiln and lime house	778	00
Slaughter house	582	77
Tram railway	6,675	53
Total value of Kingston Penitentiary Real Estate	\$586,014	57

H. H. HORSEY,
Actg. Architect of Penitentiaries.

 THE ARCHITECT'S REPORT.

To the Directors of Penitentiaries.

GENTLEMEN,—I beg to submit the following Report on the progress and position of new works, and plans of proposed works, for the year ending the 31st ultimo.

At Kingston Penitentiary, boundary walls of Solitary Prison plot have been finished on the south side, and the building of wall continued on the west side; in all, 413 toise have been built, the stone dressed for same, and 556 feet of coping set finished, with pilasters and entablature at angles, and with strengthening buttresses every 28 feet. There remains yet 1,100 toise to be built, or about 1,200 feet lineal of wall, 21 feet high above ground, to complete the boundary walls.

Entrance Lodge is to be built on the east side, in connection with the above walls, the plans for which have been prepared. The contract value of same is estimated at \$5,000. The cash outlay of prison, labor and material not included, \$800 to \$1,000. The lodge is to be built with hammer-dressed courses and to have bouchard dressings, a large portion of which have already been dressed. The lodge has a frontage of 55 feet, and a mean depth of 39 feet; two stories high; the centre is devoted to main entrance, and on either side are Keepers' quarters.

Warden's House.—Plans have been prepared for this for some time, but, in consequence of the decease of the late Warden, it has not been commenced.

Work has been resumed on new wharf, which has been raised two feet for a distance of about 250 feet, and preparation is being made to continue tram railway along same, on framing, some 9 feet above level of wharf, to facilitate the loading and ballasting of vessels with stone. 632 yards, lineal, of tram railway have been constructed. Gratings have been fixed in prison wings at the ends of the several ranges of cells, which give greater security to the prison.

Jacket-boiler and tank for hot water have been fitted up in wash-house, where the heating of water, making of soap, and boiling, is now done by the exhaust steam from engine, thus saving the fuel formerly used for these purposes.

Several other minor alterations and repairs have been made. The additions and improvements increase the value of the Real Estate of Kingston Penitentiary to the amount of \$12,310 51.

Plans have been prepared and submitted for the proposed Solitary Prison in connection with the above Penitentiary; which, when completed, will have five wings radiating from a centre rotunda, and which, with three wings and necessary offices, is estimated to cost \$94,679; this is the contract value of the works, but if the prison labor and the stone from Penitentiary quarries be not reckoned, the cash outlay will be but little more than one-third of this amount, or say \$35,000.

The total value of the works performed; the amount and value of material used; net cash earnings from private parties, and the average earning of convicts daily, will be shown by the returns from the Trade Instructors of the several departments, and while writing on this head I wish particularly to call your attention to the zealous and able manner in which the stone department is managed under Mr. Painter, whose returns will be found most explicit. They show that in addition to the Prison and Rockwood work performed, amounting to \$11,978 21, the value of sales to outside parties amounts to the sum of \$11,225 11.

The whole of which is respectfully submitted.

H. H. HORSEY,
Acting Architect of Penitentiaries.

Kingston Penitentiary, 27th January, 1871.

Summary of Blacksmith Department, Kingston Penitentiary.

Work performed for Rockwood Buildings :—	
Value of labor.....	\$295 08
Value of material used.....	133 53
Total value	\$428 61
Work performed for outside parties :—	
Value of labor.....	223 46½
Value of material used.....	148 16
Total value.....	371 62½
Work performed for Provincial Penitentiary :—	
Value of labor.....	2,516 90½
Value of material used.....	2,436 52
Total value	4,953 42½
Grand total	\$5,753 66
Deducting total value of material.....	\$2,718 21
Net value of labor.—Total.....	\$3,035 45
Total number of days' work.....	5,089
Average daily earnings of men in this Department for year 1870	\$0 59¾ nearly.
Average number of men employed.....	16½

EDWARD WILMOT,
Trade Instructor, Blacksmith Department.

SHOE SHOP REPORT, 1870.

Showing total value of work done and material used ; total value of labor ; total number of days' work done, and average daily earnings of each man, and number of men at work in shop, 31st December, 1870 :—

Total value of work done.....	\$2,975 40
“ “ material	1,200 55
“ “ labor	\$1,774 85
Total number of days' work done.....	1678
Average daily earnings of each man.....	\$1 05½
Number of men working in shop, 31st Dec., 1870..	7

WILLIAM FINN.

HARNESSE DEPARTMENT REPORT, 1870.

Showing total value of work done, and material used ; total value of labor ; total number of days' work done, and average earnings of each man per day, together with the number of men at work in shop, 31st December, 1870 :—

Total value of labor and material.....	\$1,179 25
" " material used.....	561 49
" " labor.....	\$617 76
Average daily earnings of each man	\$0 85
Total number of days' work done.....	725
Number of men in shop, 31st Dec., 1870	2

WILLIAM FINN.

ANNUAL RETURN of work done, Tailor's Department, Kingston Penitentiary, 1870.

Number of Articles Made.	Description.	Labor Value.		Remarks.
		Rate.	Amount.	
		\$ cts.	\$ cts.	
182	Discharge Suits	2 50	455 00	
600	Prison Mitts	0 05	30 00	
1,538 days	Mending Clothing	0 40	615 20	
20	Dyeing Linen	0 40	8 00	
37	Military Coats altered	0 19	7 00	
19 days	Making Carpets	0 40	7 60	
42	Canvas Aprons	0 12½	5 25	
3	Drawers	0 25	0 75	
5	Jail Pants	0 40	2 20	
			\$1131 00	
	Uniform Clothing		146 50	
	Civilian		272 50	
	Prison Linen		367 80	
	Prison Woollen		200 25	
	Rockwood Asylum		88 70	
	Total		\$2206 75	
	Changing Room		249 60	
	Cutting Room		124 80	
	Messenger		124 80	
	Machine		124 80	
	Grand Total		\$2830 75	
	8,021½ days employed.			Average earnings per day 35¼ cents.
	<i>Officers' Uniform.</i>			
12	Dress Coats	2 00	24 00	
30	Undress Coats	1 00	30 00	
18	Over-Coats	2 00	36 00	
25	Vests	0 50	12 50	
64	Pants	0 50	32 00	
48	Caps	0 25	12 00	
			\$146 50	
	<i>Civilian Work.</i>			
117	Coats	1 50	175 50	
90	Vests	0 50	45 00	
104	Pants	0 50	52 00	
			272 50	
	<i>Prison Work—Linen.</i>			
487	Jackets	0 40	149 80	
500	Vests	0 20	100 00	
472	Pants	0 25	118 00	
			367 80	
	<i>Prison Work—Woollen.</i>			
67	Jackets	0 75	50 25	
2	Vests	0 50	1 00	
185	Pants	0 40	74 00	
460	Caps	0 12½	57 50	
350	Stocks	0 05	17 50	
			200 25	
	<i>Rockwood Asylum.</i>			
50	Jackets	0 75	32 50	
40	Vests	0 40	16 00	
78	Pants	0 40	31 20	
72	Caps	0 12½	9 00	
			\$88 70	

SUMMARY of work done in the Carpenter's and Trades' Departments, 1870.

	Labor Value.	No. of days' work.	Remarks.
	\$ cts.		
Carpenter's, Cooper's, Tinsmith's, Painter's and Glazier's shop gang, under Mr. Walsh	9,524 days } 7,557 68	12,327	Averages, \$61 31
Mr. Dawson's Gang	2,803 do } 928 80	2,322	do 40 00
Mr. Farrell's Gang, Rockwood.....	928 80	2,322	do 40 00
	\$8,486 48	14,649	Averaging \$57 93 per diem.

Kingston Penitentiary,
Carpenter's Branch,
1st February, 1871.

MASON'S DEPARTMENT.

GENERAL SUMMARY—shewing the total value of work executed, for the year ending 31st December, 1870.

Reference to Page.		Value of Labor.	Total.
		\$ cts.	\$ cts.
6	"Custom" work (for private parties)—Cut stone as per accounts	3,207 68	4,533 16
4	Rubble, courses, and rough stone sold	3,110 40	4,088 96
4	Broken stone, &c., sold	1,260 50	1,460 55
4	Lime	268 20	1,142 44
3	Work on Prison property, making additions to real estate.....	5,740 66	9,658 38
Item 3, p. 21	Quarrying stone for Prison use and for stone cutter's shop	1,896 23	729 45
Item 8, p. 21	Hauling stone by R.R., to wharf, stone cutter's shop and works	1,695 45	1,740 44
Item 13, p. 21	Culling and piling wood for prison use	350 00	350 00
	Prison repairs and sundries	585 57	781 48
	Work at Rockwood, and stone delivered	1,988 45	2,411 83
Items 3 & 4, p. 5	Lime for Rockwood.....	44 50	170 85
		\$20,147 64	\$27,067 54

THOMAS PAINTER,
Trade Instructor, Mason's Department.

RECAPITULATION—Shewing severally the value of work done by the different Gangs, with their average daily earnings, for year 1870.

Reference to Page.		Value of Labor.	Average per day, per man.
6	Stone Cutter's Shop,—Overseer Leahy	\$ cts. 6,357 33	cts. 53
15, 16 and 17	Building Gang, No. 1,—Keeper Burgess	2,458 21	58
18, 19 and 20	Building Gang, No. 2,—Keeper Lauder, principally employed at Rockwood	1,864 63	Earnings per day not accurately known (say 40 cents).
22	Quarry Gang, No. 1,—Guard Carter	2,792 39	47
23	Quarry Gang, No. 2,—Keeper Elsmere	1,691 60	34½
24	Quarry Gang, No. 3,—Guard Cowper	1,932 95	41½
25	Laborers' Gang,—Guard Bryson (total earnings, \$1,271, less \$129.61 quarry act)	1,150 39	36
26	Railroad,—Keeper Fitzsimmons	1,811 64	
	Oakum picking, 885 days, @ ten cents	88 50	
	Total	\$20,147 64	

Total number of days' work 43,475
 Total general average 47 cts. nearly.

THOMAS PAINTER,
 Trade Instructor, Mason's Department.

RECAPITULATION

Shewing value of additions to Real Estate, from Mason's Department, for the Year ending 31st December, 1870.—(In Material and Labor.)

Penal Prison Boundary Walls	\$ cts. 4,862 73
Dwarf Walls	412 68
Cut Stone for Penal Prison Lodge and Drains	2,446 50
Extensions to Railroad	583 39
Addition to Wharf	625 40
Addition to Store-rooms	75 01
Shed to Boiler-house (Carpenter's)	43 49
Drains, Prison Yard	165 08
Levelling Debris and Making Land	504 00
Total addition to Real Estate, 1870.	\$9,658 38

Penitentiary Repairs and Jobbing..... \$686 50
 Work for Rockwood, and Stone Delivered..... 2,411 83

THOS. PAINTER,
 Trade Instructor, Mason's Department.

RECAPITULATION

Shewing Cash Receipts for Cut Stone, Rubble Stone, &c., for Year ending 31st December, 1870.

	\$	cts.
Cut Stone as per accounts	4,533	16
Rubble Stone do	1,841	50
Courses do do	2,075	50
Flagging and 12, "Stone, as per account"	171	96
Broken Stone do	1,332	70
Fine Gravel do	97	85
Lime do	1,142	44
Total Sales for Year 1870	\$11,225	11

THOS. PAINTER,
Trade Instructor, Mason's Department.

EARNINGS of Limekiln, for the Year 1870.

Cr.	\$	cts.	\$	cts.
1. By Custom Sales, as per accounts	1,142	44		
2. Issued for Penitentiary use and for Building Penal Prison Walls, 2,247 Bush. at 15cts.	337	05		
3. Do for Rockwood Buildings, 952 Bush. at 15cts	142	80		
4. Do do Maintenance, 187 do do	28	05		
			1,650	34
Dr.				
To Repairing Limekiln, 18 days, at 50cts.	9	00		
„ Convict Labor, Burning, &c., 672 days, at 40cts.	268	80		
„ Rubble Stone used, 65 Toise, at \$1 75	113	75		
„ Courses do 10 do 2 50	25	00		
„ Flagging, for Arching, 956 ft, at 05	47	50		
„ Hemlock Wood, 286 Cords, at \$2 25	630	00		
„ Wear and Tear of Tools, &c., say	50	00		
			1,144	05
Leaving a Balance of			\$506	29

THOS. PAINTER,
Trade Instructor, Mason's Department.

ABSTRACT value of work executed in the Stone Cutter's Shop of the Mason Department of Kingston Penitentiary, for year ending 31st December, 1870.

	Value of Labor.	Value of Material.	Allowing for tools and shipment.	Total value.	Time in days.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Custom work (daily average 55 cts)	3,207 68	1,325 50	762 72	5,295 90	5,832
For penal prison walls (daily average 54 cts)	722 74	267 16	59 80	1,049 70	1,338
New lodge, drains, &c. (daily average 51½ cts)	1,354 99	954 63	136 88	2,446 50	2,633
Dwarf walls, coping, &c. (average 53 cts)	270 90	95 46	18 39	384 75	510
Penitentiary jobbing (daily average 48½ cts)	227 27	37 46	8 82	273 55	469
Rockwood buildings (daily average 50 cts)	220 15	67 66	19 32	307 13	432
Loading stone on vessels	246 40	.....	.....	246 40	616
Work on R. R. through shop	21 60	.....	.....	21 60	54
Breaking stones	85 60	.....	.....	85 60	214
Messengers', shop cleaners', and clerks' time . . . . .	.....	.....	.....	.....	1,535
	\$6,357 33	2,747 87	1,005 93	10,111 13	13,633

THOS. PAINTER,
Trade Instructor, Mason's Department.

STATEMENT OF EARNINGS OF CONVICTS BY CONTRACT LABOR, DURING THE YEAR 1870.

Shoe Shop—36,062 days' work performed, at 40cts. per day.	\$14,424 80
Cabinet Shop—13,775½ days' work performed, at 35cts. per day	4,821 34
Foundry—22,125 days' work performed, at 40cts. per day	8,850 00
Cooper's Shop—1,291 days' work performed, (from 1st April to 31st October).....	645 50
	<u>\$28,741 64</u>

STATEMENT OF DEBTS DUE THE KINGSTON PENITENTIARY, AS ON 31st DECEMBER, 1870.

Bad and doubtful debts	\$534 16
Petty debts	343 63
A. Brooks	18 00
William Anglin.....	64 55
Hayward & Downing.....	12 50
McNaughton & Co.....	19 20
Ketchum & Sanford.....	68 58
Corporation of Toronto.....	440 00
Cameron & Mudie.....	110 50
Rockwood Lunatic Asylum	654 83
Maxwell W. Strange	81 68
Kingston Township	122 70
Frontenac Council.....	251 34
Kingston Agricultural Society	112 66
Thomas Donnelly.....	27 45
J. B. Fortune.....	341 60
Hamilton Gaol.....	60 00
Executors of Sir Henry Smith	34 42
Executors of Dr. Litchfield.....	39 24
J. J. Linton.....	74 00
M. Flanigan.....	9 12
Hon. J. S. Macdonald.....	23 64
Walter Ross.....	11 10
Neil McDougal.....	19 30
A. & C. N. Ross.....	18 75
G. W. Finkle	14 28
Dr. Betts.....	11 57
William Ford	20 25
Corporation of Kingston	48 00
A. Livingston.....	15 70
Peter Day.....	82 50
James Nimmo.....	39 50
Rev. C. P. Mulvaney.....	6 25
Herkimer Hamilton	18 20
C. W. Moberly.....	347 50
St. John's Penitentiary.....	466 66
John McEwan	57 73
S. T. Drennan.....	2,110 05
Thomas M. Thomson	2,710 26
W. C. Evans.....	9,514 52
J. Carruthers & Co.	583 70
	<u>\$19,539 62</u>

STATEMENT OF CLAIMS AGAINST THE KINGSTON PENITENTIARY, AS ON 31st DECEMBER, 1870.

Alexander McKenzie	\$78 51
Robert Hendry	48 44
Ontario Diocesan Repository	20 00
E. J. Barker.....	52 64
Dr. Lavell.....	30 00
Thos. Doherty	54 00
J. Carruthers & Co	33 60
James Davis.....	13 75
James Neish.....	56 80
Geo. M. Wilkinson	13 60
Geo. Davidson	20 00
Wm. Robinson.....	11 87
Chown & Cunningham	13 70
W. Berry.....	250 00
Morland, Watson & Co.....	83 61
Alexander McIntosh	16 40
Hugh Cummins	34 50
B. A. Booth.....	15 12
S. Muckleston & Co.....	438 06
Geo. Robertson & Son.....	36 72
G. S. Hobart	21 28
A. McLean	112 90
A. McNaughton	563 75
Wm. Atkins.....	20 00
A. Livingston	292 02
Henry Skinner.....	606 22
	<hr/>
	\$2,937 49

D. McINTOSH,
Accountant.

ROCKWOOD ASYLUM.

MEDICAL SUPERINTENDENT'S REPORT, FOR 1870.

ROCKWOOD ASYLUM,
January 20th, 1871.

GENTLEMEN,—The time has arrived for me to present another Annual Report on the movements of patients and all matters relating to the maintenance, management, and hygienic condition of this Asylum.

I propose to discuss the whole subject, as concisely as possible, arranged under the following divisions, viz:—

- 1st. Movements of Patients.
- 2nd. Heating the Asylum.
- 3rd. Defective Ventilation.
- 4th. Hygienic Condition.
- 5th. Improvement of Asylum Grounds by the labor of the patients only.
- 6th. Actual Annual Cost for the maintenance of each patient.
- 7th. Comparative Annual Cost for the maintenance of each patient.
- 8th. Severance of the connexion now existing between this Asylum and the Kingston Penitentiary.
- 9th. Amusements for the Patients.
- 10th. The unsafe state of the large water tank.
- 11th. Utter worthlessness of the dilapidated and rotten fences about the property.

1st. Movements of Patients.

	Male.	Female.	Total.
In Asylum on 1st January, 1870.....	188	101	289
Admitted from Ontario during 1870.....	62	36	98
" " Kingston Penitentiary, 1870	9	2	11
	259	139	398
Total under treatment during the year 1870.....			
Discharged—	Males.	Females.	Total.
Recovered	21	6	27
Died.....	22	13	35
Eloped	1	0	1
	44	19	63
Discharged, Died and Eloped.....			
Remaining in Asylum, 1st January, 1871.....	215	120	335

From the above figures it will be seen that 390 patients were under treatment during the year 1870. If we compare this number with 138, we will at once see how much the patients have increased since the 31st of August, 1868—the latter being the total number of lunatics in the Asylum at the latter date, being the last day on which my predecessor signed the "Daily Report Book."

The Asylum has grown to be a large and important institution, and demands a different course of treatment to what it received in its infancy, and I hope the Board of Directors will soon begin to view it in that light.

2nd. Heating the Asylum.

It is to be deplored that in a new and magnificent building, such as this Asylum really is, ample provision has not yet been made to heat it properly. This sad defect, and a very

sad one it is, is not chargeable to Parliament, for a sum was voted, quite sufficient, to have had the entire building thoroughly heated. The fault arose from the Board of Inspectors having refused to allow Mr. Garth to procure the number of boilers for which he estimated, the funds to purchase which were placed at the disposal of the Inspectors, but for some inexplicable reason they refused to allow more than three boilers to be purchased, instead of four. Perhaps they thought that number sufficient, but in this a sad mistake was made, and terrible suffering was thereby inflicted on the poor lunatics.

From the urgent appeals I frequently made, I did hope that some provision would have been made to prevent a repetition of the suffering from severe cold, and the unequal distribution of heat throughout the building, to which I referred in my last year's report. In this, however, I was grievously disappointed, as, instead of having additional steam generating power provided, an additional tax was placed on the three boilers, which had already proved themselves totally inadequate to heat the building. We now, and for some time past, use steam for cooking purposes also.

I refer to Mr. Garth, because he was employed by the Government to direct and superintend the construction of the heating apparatus, and as he has had a great deal of experience in these matters, it is to be deplored that his plans were, to a certain extent, ignored. If he had been permitted to pursue his own plans, he could have been held responsible for the proper working of the apparatus, but as he was restricted to what the Inspectors thought was necessary, of course he can not be blamed for the result.

If it be pleaded that economy was the object aimed at, I would simply state that Dr. Kirkbride, a Medical Superintendent of great experience, wisely remarked, that it was never economical to do wrong, and that it can not be considered other than the most flagrant wrong to put off the insane with only a part, and too often only a small part, of that which is their legitimate due.

So intense the cold, or, I should rather write, so inadequate the supply of heat during the present winter, that the contents of the urinals froze almost solid, frequently in the associate dormitories.

In the Female Department the nurses were, at times, compelled to huddle all their patients together in the dining rooms, even at mid-day, as the wards were so intensely cold they could not allow them to remain in them, or in the corridors, although the boilers were then taxed to their utmost capacity.

It is absolutely essential, for the comfort and safety of the patients, that an additional boiler should be procured at once, and the whole heating apparatus carefully examined, as its present working is very far from satisfactory.

3rd. Defective Ventilation.

I regret to report that the ventilation is not by any means what it should be in a large asylum. All who have had anything to do with the management of asylums know well how very important it is to have them well ventilated. I feel satisfied that the plan I recommended in my last annual report would, in a great measure, remedy the exceedingly defective ventilation. That plan was partially adopted, and has proved a partial success, but not by any means a complete one; in fact, some portions of the building are in a worse condition than they were previously, and others are very much improved. Until, however, such time as the laundry will be removed from the basement of the female department, we must expect that foul odors will be too easily detected throughout the house, especially on washing days, when the warm and dirty suds run into the cess-pool, which is within the walls, and receives the discharges from five water-closets, not one of which water-closets is provided with a stench-trap.

In my quarterly report, presented to the Directors in July of last year, I referred to the foul odors from the water-closets in the west wing, and stated that I dreaded the faulty ventilation would prove destructive if an epidemic should break out. I am sorry to be compelled to report that my worst fears were realized, as we were visited with both dysentery and typhoid fever—ten fatal cases of the former disease having occurred in the

west wing, and not a fatal case in any other part of the house. We had also three fatal cases of the latter disease—two of them in the east wing and one in the west.

Although the drains were examined by one of the architects, and pronounced by him in excellent condition, it will be necessary to have them thoroughly explored, as well as the water pipes, well and tanks.

4th. Hygienic Condition.

This Asylum is blessed with a most magnificent site and surroundings ; the prospect on every side is most charming. The house overlooks Lake Ontario ; is about four hundred yards distant from its shore, and elevated about fifty feet above its level. We have thus great facilities for obtaining an unbounded supply of good water, and an excellent opportunity for good drainage ; and as westerly and southerly winds prevail fully five days out of seven, we are in the full enjoyment of the purest air, as we are not surrounded with any sources of contamination. In spite of all these, however, our obituary table, which is appended, will show a high rate of mortality for the year 1870, which may, in part, be accounted for by the unsatisfactory hygienic condition of the Asylum.

Epidemics will sometimes break out in large public institutions when it will be very difficult, and at times impossible, to discover the cause, or apply a remedy.

We hear that the new Lunatic Asylum, at London, has been visited with typhoid fever, and that several of the officers, as well as of the patients, have been seized with it. In that Asylum, the drainage, ventilation and water supply, are said to be excellent, and the house has only been a few weeks occupied by the patients. No satisfactory way of accounting for this visitation has, I believe, been discovered yet.

The best plan to improve the hygienic condition of Rockwood Asylum will be, to have it properly heated, the defective ventilation remedied, and the water-closets and bath rooms properly equipped.

5th. Improvement of the Asylum Grounds, by the labor of the patients only.

Any person who saw the premises two years ago, and could view them when the snow will be off the ground, would be perfectly amazed at the improvements that have been effected. During the year 1869, seven thousand six hundred and eighty days of labor were performed by the patients ; and during 1870, ten thousand seven hundred and six days were performed at out-door work, besides those employed in the engine room, laundry, and tailor's shop.

The effects produced by this expenditure of labor, will be at once apparent by two extracts from the Directors' Books. On the 4th of October, 1870, the Directors recorded on their Minute Book, that, "They regard with great gratification the large amount of work which has been done in beautifying the grounds. They cannot but accord much praise to Dr. Dickson for the great taste displayed, which has completely altered the appearance of the property ; and that all the improvements accomplished and in progress, have been made by the sole labor of the patients, and without cost to the public, which can not but enhance their value very much indeed."

Also, in the Directors' Memorandum Book, on 14th January, 1871, it is recorded, that, "The occupation of the patients in out-door labor has almost entirely ceased, owing to the severity of the weather ; but much has been done by them during the summer and fall, under the skilful direction of the Medical Superintendent, in beautifying and otherwise improving the ground and premises. The works performed have indeed, in a marvellous degree, changed the aspect of the Asylum surroundings, whilst thoughtfully providing for the future recreation and enjoyment of the patients.

To make all the change, to which the Directors refer, required the assistance of an active, energetic, and pains-taking man, and such a person the steward of the Asylum proved himself to be, and to him belongs a great deal of the credit for the vast improvements that have been made. The keepers also, who had charge of the men, deserve a

great deal of credit, for they not only guarded and directed the patients in the work, but encouraged them by working dilligently with their own hands.

Mr. Blair, the Steward, will give a detailed account of the amount of work achieved, and the yield of the garden and farm. I will, however, here state the number of days' work performed at the different kinds of labor, viz :—

Days' work at general improvement.....	7,840
" " on the farm.....	1,200
" " in the garden.....	936
" " in the yard.....	730
" " in engine and boiler house.....	730
" " in tailor's shop	960
" " in laundry.....	1,252
" " sawing wood and attending wood and coal yards.....	938

14,587

Among the patients employed at general improvements, we had bricklayers, stonemasons, carpenters, quarrymen, and laborers ; and each class wrought in its own sphere.

In the Tailor's shop we have from five to seven patients steadily at work, and these men not only make all the clothes the patients require, but also repair them ; and they have now gotten so far ahead of their work, that they have deposited in the storekeeper's hands, ready to be issued when required, forty-nine new vests, forty-six jackets, and forty-five pairs of pants, all cut out and substantially made by their own hands.

If we, therefore, make a moderate estimate of the 14,587 days' work of different kinds performed by the male patients during the year 1870, and put one man with another at 60 cents per diem, we have the handsome sum of \$8,752.20, which should be clearly and fairly charged to capital account ; and a similar amount deducted from the maintenance account, as the property is really increased to that amount in its intrinsic value.

The female patients also, under the guidance of their excellent matron, do an immense amount of work. They not only make all their own articles of clothing and repair them, but they also make the men's underclothing, and knit and repair their stockings. The storekeeper has also in his hands the following articles, ready to be issued, which were made by the female patients, viz : 146 flannel shirts, 153 cotton ones, 250 cotton sheets, 60 pairs woollen socks, and 22 pairs woollen stockings. The value of all these amount to a large sum, and is a great saving to the institution to have all made and repaired on the premises, to which I will afterwards refer.

Gth. Actual Annual Cost for the maintenance of each patient.

In arriving at the actual cost to the country of maintaining each patient in this Asylum during the year 1870, I will first take the entire amount expended by the Bursar, for all purposes throughout the entire year, and then deduct such items as should be charged to capital or construction account, and the amounts that were applied to pay debts remaining from the previous year, as well as the sums to pay for articles which were purchased and not put to use during 1870, but will be used this year ; such as a large quantity of iron bedsteads, blankets, quilts, sheets, and bedticks which were bought from the military authorities, not because we were then in actual want of those things, but because they were well adapted to the requirements of the Asylum, and were obtained at a lower figure than we were likely to procure them again.

The Medical Superintendent's house had not been occupied as a dwelling for several years, and was a complete wreck. The roof leaked all over ; the floors were, in many of the rooms, so destroyed by the leaky roof that they had to be replaced with new ones. The plaster had tumbled from the walls, and the lower part of the house had been used to store straw. It required a large sum to put the house in a habitable condition, and as the expenses of doing so were paid out of the maintenance account in 1870, we must deduct that sum in calculating the annual cost of each patient.

Eighteen of the keepers pay eight dollars per month each for their board in the Asylum, and as the food which these men consume is paid for out of the general account, so the cash they paid must be deducted therefrom.

The Asylum only keeps one horse, and as the wharf, where the cordwood is delivered, is some distance from the boiler house, there is a great deal of carting of wood to be done, besides other sorts of work for the horse, to do all of which he is unable; we have, therefore, occasionally, to hire a horse and cart, and also a team for ploughing. The expenses of which must be deducted from general account.

We planted an orchard last year and some ornamental trees through the grounds. The cost of those trees must also be deducted. The manual labor in this, as in everything else, was performed by the patients and keepers.

The total expenditure, for the year 1870, as shewn by the Bursar's statement, was.....	\$44,474 70
From which must be deducted balance of Superintendent's salary from previous year, paid in 1870.....	\$1,666 60
Repairs to Superintendent's house.....	1,037 48
Cash from 18 keepers for board.....	1,728 00
Furniture, not for use, in 1870.....	657 11
Blankets, rugs, quilts, and sheets.....	323 51
Lumber, \$177 72; hardware, nails, &c., \$103 94.....	281 66
Garden and grounds, \$31 82; cartage, &c., \$248 85.....	280 67
Tools, \$86 08; putty, glass, paints and oil, \$137 16.....	223 24
	6,198 27
	\$38,276 43

The average number of patients under treatment during the year was 318. The actual cost charged against Maintenance Account is \$38,276 43, which sum, divided by 318, gives the actual amount the country had to pay for the maintenance of each patient, in Rockwood Asylum, for the year 1870. The actual cost was, therefore, \$120 36 per head for the year.

This sum might, in all fairness, be still further reduced; for instance, a sum of \$137 85 was paid for repairs to the boilers and heating apparatus. There was expended for repairs of glass and paints, during the year, \$68 58, which sums might fairly be taken from maintenance and charged to capital account. We also charge the Institution with expenditure on garden and grounds, but do not take credit for the value of the potatoes and vegetables which were raised and used by the patients. Nor do I allow myself to deduct the actual earnings of the patients in making and repairing all the clothing they used, nor the surplus stock of clothing and material now on hand. Nor do I take any credit for eighteen hogs which we fattened through the year, although I sold twelve of them for \$325, and had six of them slaughtered for the use of the patients.

7th. Comparative Annual Cost of maintenance of each patient.

I find a great deal of misapprehension exists as to the actual cost of maintenance of each patient in Rockwood Asylum, compared with other Asylums in Ontario. In the last report of the Bursar of Rockwood, published, it is shown from facts and figures that each patient cost the country \$177 11, for the fiscal year ending 30th of June, 1868. With the management of the Asylum, then, I had nothing to do, but, in the two years I have had charge of it, I have reduced the cost to the country of each patient from \$177 11 to \$120 36, being a saving of \$56 75 per annum for the maintenance of each patient. If we multiply this \$56 75 by 318, the average number of patients for 1870, we will find the handsome sum to which it will amount, as so much saved to the country.

In comparing the expense of this with other Institutions, we should compare the cost of maintenance at each for the past year, and not compare the expenses at Rockwood two years ago with the estimated cost of other Institutions for the present year.

I find that I am unable to state, at present, the actual cost of each patient at the Provincial Asylum at Toronto, nor the new Asylum at London, as the latter has only been occupied for a few weeks; but, in the excellent report of Mr. Langmuir, the Inspector of Asylums for Ontario, he estimates that the Provincial Asylum will require \$129 85 for the maintenance of each patient during 1871, and that the new Asylum at London will require only \$112 00 for a similar purpose.

On examining those estimates I see that neither milk nor potatoes are mentioned; I believe they derive an abundance of each from their farms, and in this they have a very decided advantage over us, as, in addition to what potatoes the garden and field yielded, we had to purchase \$752 41 cents worth, and pay a milk bill of \$485 93, which sums, added together, are equal to \$3 89 for each patient in the house for the year.

If we now take the actual cost of each patient on the same basis for the other Asylums in Canada, I think Rockwood will stand in a favorable position.

There is, however, another light in which I wish to present this matter, and to do so I must refer to an arrangement that was made between the Dominion Government and that of Ontario, by which the latter agreed to pay the former \$143 per annum for the maintenance of every patient that should be sent to Rockwood, under warrant of His Excellency the Lieutenant-Governor of Ontario. By this arrangement the gaols of Ontario were relieved of the charge of a large number of cases of dangerous lunatics, at a cost really far below what they could have been provided for in any other Asylum in the Dominion, and the arrangement was equally advantageous to the Dominion Government. In the Toronto Asylum we find that Dr. Workman states, in his report for 1870, that, "Reckoning the cost of maintenance at \$200 a year per head, (which, I think, including "interest on building outlay, it amounts to.") No man is a better authority than Dr. Workman on this point, and when we reflect that the building alone of the Asylum, over which he so ably presides, cost over \$620,000, I think, he is rather under than over the mark, even though we put the interest at a very low figure, without calculating the interest on the price of the land.

If we now take a glance at the new Asylum, at London, I think we will find that, in the last two years, the Government has expended for land, building and furnishing that Asylum, together with the proposed expenditure for additional buildings for the present year, the handsome sum of \$348,100. I believe interest on investments in buildings is generally reckoned at 10 per cent. per annum, but, take the interest at 8 per cent. on the above sum, and we will have \$27,848 to add to the annual cost of maintenance, so that the actual cost to the Ontario Government for each patient sent to the London Asylum will be at least \$167 69.

To tabulate this comparative statement, we find that the following is the cost for each patient per annum to the Ontario Government:—

At the Provincial Asylum	\$200 00
At the London Asylum	167 69
At Rockwood Asylum	143 00

We, therefore, find that the Ontario Government can keep their 330 patients in Rockwood, for one year, for \$18,810 less than in the Provincial Asylum, and for \$7,920 less than in the London Asylum.

It may be stated that I should have calculated interest on outlay for buildings at Rockwood, but that can not be taken into account in calculating the comparative cost to the Ontario Government of maintaining each lunatic at the principal asylums in the Province. Because \$143, the sum which is paid to the Dominion Government for each patient per annum, covers the entire outlay, not only of maintaining each patient while in the asylum, but, the cost of burial to all who die, and the expense of an outfit to all who recover, and also the expense of returning them to their friends.

When Rockwood will be transferred to the Ontario Government, interest on the purchase money will be a legitimate thing to include in calculating expenses. It must be borne in mind, however, that, although Rockwood Asylum is a beautiful and substantial building, yet, its erection did not cost the Government one-half the amount of the contract

price of either the Provincial or the new Asylum at London. In fact, the only cash outlay was the Architect's salary, and the cost of timber, tin, and hardware, embracing nails, paint, putty, and glass, and the sand.

The labor was performed by convicts, and the Guards' wages cannot be charged as they would be required to watch the men, wherever they might be. The stone was quarried and cut on the Penitentiary property, and the lime was burned there also, so that the building cost a comparatively small cash outlay.

For the satisfaction of those who would wish to institute a comparison between the cost of maintaining lunatics in Canada and the United States, I will give the annual cost for each patient at the following Asylums, taken from published Reports, viz :—

Massachusetts General Hospital, (Asylum branch, for 1868)	\$834 52
Pennsylvania Hospital for Insane	438 00
Government Hospital for Insane	410 00
Northern Ohio Asylum	372 00
Tennessee Insane Hospital	333 00
Michigan Insane Hospital	316 00
Illinois State Hospital	305 00
West Virginia Hospital	233 00
New Jersey State Asylum	247 00
Wisconsin Asylum	233 00
North Carolina Insane Hospital	250 00
Eastern Kentucky Asylum	215 00

8th. Severance of the connexion now existing between this Asylum and the Kingston Penitentiary.

I most respectfully submit that very strong reasons exist against allowing the present anomalous connexion to continue between the Kingston Penitentiary and Rockwood Asylum.

Most of the respectable people shrink with horror at the bare idea of allowing any of their friends, who may require Asylum accommodation, to be sent to an institution where insane convicts are admitted, and how much stronger objections have those to urge, who know that the lately passed Penitentiary Act enacts, that "The Lunatic Asylum, situated "at Rockwood, near Kingston, shall be, and form, part of the Kingston Penitentiary."

Some may suppose that respectable people do not seek admission for their friends to Rockwood Asylum, and, therefore, the above objection is not deserving of much consideration.

To such people I would say, that the learned professions and the mercantile class, as well as mechanics and laborers, have all been represented among the non-convict portion of the inmates of this Asylum.

There cannot be any valid reason urged why those two important institutions should be amalgamated. They do not possess any interests in common, and each affords ample scope for the exercise of all the talents that their respective managers may possess.

If the majority of the patients had been criminal lunatics, there would have been some reason for viewing this establishment as an appendage to the Penitentiary, but of the three hundred and thirty-five patients now in Rockwood only forty were convicts.

The objects of the two institutions are totally dissimilar. One is a place of punishment, and for the safe-keeping of the criminal portion of the population; and also, with the view of producing some reformation in the character of offenders, for all which purposes flogging, scant and coarse diet, confinement in a dungeon, and constrained hard labor, are legitimate means to employ.

The other is a place for the safe lodgment and treatment of those who have, in the Providence of God, been so unfortunate as to be deprived of their soundness of mind, and that they may be restrained from injuring themselves or others.

A most mistaken idea about lunatics is generally entertained. Many people imagine that they are at all times raving maniacs, and are not capable of enjoying any of those emotions that afford amusement and pleasure to rational beings; but such is not the case. There are times in the individual history of almost every lunatic (except those who are totally demented), when he, or she, appears happy, and is really capable of deriving pleasure from those amusements, pursuits, and studies, which afforded enjoyment before the affliction of a visitation of this dreadful malady.

Lunatics are generally sensitive, and the non-criminal portion of our patients sometimes express great indignation if they discover that a convict lunatic from the Penitentiary is permitted to associate with them, or even enter the same ward.

It is absolutely essential, for the economical and safe administration of the affairs of an Asylum, that the Medical Superintendent should have untrammelled control of all supplies, and have direct access to all who contract to furnish them, otherwise, inconvenience, injury, and loss must ensue, and have ensued. If, under the present arrangement, unwholesome food, or unsuitable articles of any kind are sent to the Asylum, the Superintendent cannot at once communicate with the contractor, but, must notify the Warden of the Penitentiary, and he may send his store-keeper (if not otherwise engaged) to enquire into the cause of the default, meanwhile the poor lunatics must suffer.

I, unhesitatingly assert that neither the Warden of the Penitentiary, nor his store-keeper, is a proper person to judge of what may, or may not, be required for the use of the Asylum. The Medical Superintendent is the only person that can understand those matters. I sincerely hope, therefore, that Asylum and Penitentiary will be totally separated.

9th. Amusements for the Insane.

If it is intended that this Asylum shall be merely kept as a punitive institution, in which to confine dangerous lunatics, without requiring any efforts to be made to restore them to a sound state of mind, then, I suppose it will not be considered necessary to furnish it with any appliances to amuse or entertain the inmates. But, if Rockwood is to be used as an Asylum, in which efforts are intended to be made to restore dethroned reason, then it will be imperatively necessary to furnish it with some of those means which all Medical Superintendents rank as of the utmost importance in treating the insane.

What I had originally written on this topic in my last annual Report, I was induced to expunge, on a promise being made that I would be supplied with everything necessary for the purpose of amusing the patients. The extent of that supposed necessity may be measured by the fact, that I got authority from the Directors to purchase \$400 worth of articles of amusement, provided I could save that amount from the sum appropriated to maintenance. It is simply disgraceful, that in an asylum like this, there has never been \$100 appropriated for this purpose.

If we look at the actual earnings of the patients, which I have already estimated at eight thousand seven hundred and fifty-two dollars and twenty cents (\$8,752 20) in a previous part of this Report, surely, in common justice to the poor fellows, they are entitled to have some means provided for them, during the long winter evenings especially, whereby they can be amused, and, perhaps, the dormant energy of their brains aroused, and not allow them to go moping through the corridors and wards, brooding over the various delusions and real or imaginary wrongs that continually haunt some of them.

We have a sacred music class, and we practice three times a week; about fifty patients join, and they sing very nicely; but I am sorry to say it is the only entertainment I can yet afford them.

10th. Unsafe State of the large Water Tank.

Some months ago I reported that water had poured through the uppermost ceiling of the asylum which deluged the floor beneath. On examination, I found that the water

was flowing from the tank ; and on calling the attention of the architects to it, one of them said, it arose from the tank having settled down about two inches on one side, so that since then, the Engineer does not fill it within a foot of the top.

The idea of a tank, whose capacity is twelve thousand five hundred gallons, and when full of water, weighing fifty-four tons, being placed over the heads of all the inmates of the asylum, without being sufficiently stayed, is very alarming.

On reporting the unsafe condition of the tank, and praying that steps should be taken to remedy it, the following Minute was placed on the book :—" That the Medical Superintendent be and he is hereby instructed to give orders to the joint architects that the necessary steps be taken to remedy the injury forthwith, and that the Chairman be requested to represent the matter to the Honorable the Minister of Justice, as no provision has been made for such contingencies."

With such a minute of instruction on the " Directors' Minute Book," should any accident occur, the public might imagine that the Board had relieved itself of all responsibility in the matter, and that the Medical Superintendent only would be to blame ; but such is not the case, as the Medical Superintendent had not the power to purchase or procure the iron girders to support the tank, at any other place than at the Kingston Penitentiary. So we must just bide our time until such time as the blacksmiths at the Kingston Penitentiary will have leisure enough to attend to this matter. Had I not been thus restricted, I would have had the work done without delay.

This is just another instance of the many that might be cited to shew the great disadvantage under which we labor, by being considered simply an appendage of the Penitentiary.

Last year, I gave a requisition for a refrigerator and two meat safes early in the summer ; they were furnished about five months afterwards, when we had no use for them until another summer would arrive.

In like manner, when some of the violent patients had picked several bricks out of the walls in the strong cells when they were confined there, which were very handy weapons to injure themselves or others ; I requested, in writing, that these cells should at once be lined with oak plank, fastened with iron bolts, as I reported them in a very dangerous condition. A commencement was made to line those cells about twelve months afterward, and the job was completed, in a sort of way, in about sixteen months after the requisition was sent to the Penitentiary. There was not any oak on hand ; but as is always the case, we had to take what suited the Penitentiary authorities whether it would suit the Asylum purposes or not, and the cells were lined with rather shaky ash, some of which the patients have torn off already.

The property of the Asylum has been carried away to the Penitentiary, again and again ; so that some months ago I presented to your Board an account, certified by the joint architects, amounting to \$1,821 91 for lumber, tools, and implements purchased for Asylum uses, by money voted by Parliament for Asylum purposes. A large portion of the lumber removed from the Asylum was used for constructing the Railway at the Penitentiary, and when I have sent requisitions for lumber, some of our own, I am informed by one of the architects, has been sent back to us, and we are charged with it again as if it had been the property of the Penitentiary.

I must remind the Board that although the account was presented in due form at the meeting in October, no order has yet been given to have the above amount credited to the Asylum.

11th. Utter worthlessness of the dilapidated and rotten Fences around the Property.

It is certainly very discouraging, after expending so much labor in beautifying and improving the grounds, to have cattle and pigs wandering through them for want of proper fences to keep them out. The boundary fences have been in use more than thirty years, and are now so rotten in many places that they cannot be repaired.

There is not a laboring man in or about the adjoining Village of Portsmouth, that has such a disgracefully rickety-looking fence about his quarter-acre lot.

I hope that a sufficient sum will be placed in the Estimates for the purpose of building new fences, and that it will be put at the disposal of the Medical Superintendent, so that such fences may be speedily built to protect the property of the Asylum.

The Obituary Table and the Report of the Steward will be found appended, and the Bursar's balance-sheet also.

I have the honor to be, Gentlemen,
Your obedient Servant,

JOHN R. DICKSON, M.D.,

Mem. R. Coll. Phys. Lond.,

Mem. R. Coll. Surg. Eng.,

Fellow Royal Coll. Surg., Eng.,

Medical Superintendent,

Rockwood Asylum.

To Messrs. O'Neill, King and Pricur,
Directors of Penitentiaries,
Ottawa.

OBITUARY FOR THE YEAR 1870.

No. of Patient.	Register No.	Date of Death.	Date of Admission.	Age at Death.	Civil State.	Mental State on Admission.	Bodily State on Admission.	Duration of Insanity at Death.	Cause of Insanity Assigned.	Cause of Death.
1	379	7th January	9th November, 1868.	27	Single	Acute Mania	Emaciated	Seventeen months	None	Paresis
2	380	11th do	12th do	41	do	Chronic do	Feeble	do	do	Pulmonary Consumption
3	367	12th do	5th do	22	do	Acute do	Weak	Injury from fall	Injury from fall	Typhoid fever
4	1	17th do	25th June, 1855	51	do	do	Strong	Fifteen do	do	do
5	357	22nd do	19th October, 1868	49	Married	Chronic do	Feeble	Several years	Domestic troubles	Apoplexy
6	394	25th do	12th November, 1868	39	Married	Acute do	do	do	do	Phthisis
7	484	17th February	3rd August, 1869	31	Single	Chronic do	do	Ten months	Domestic trouble	Cardiac dropsy
8	477	4th March	13th July, 1869	21	Single	Melancholia	Robust	do	Injury to head	Apoplexy
9	381	10th do	4th March, 1870	37	Married	Acute Mania	Feeble	Three weeks	None	Exhaustion from attack
10	585	1st April	27th April, 1870	44	Single	Melancholia	do	do	do	Typhoid fever
11	398	9th May	13th November, 1868	35	Married	Chronic Mania	do	Twenty-two months	Sun stroke	Apoplexy
12	398	28th do	13th November, 1868	38	do	Recurrent do	do	Twenty-three do	Religion	Dysentery
13	465	27th do	29th May, 1869	23	Single	Chronic do	do	Three years	None	Phthisis
14	580	25th June	19th April, 1870	30	Married	do	Paralyzed	Eleven months	Drink and poverty	Paresis
15	606	11th July	30th June, do	55	Single	do	do	do	do	Dysentery
16	462	20th do	28th May, 1869	54	Married	do	Robust	Eighteen months	None	do
17	335	20th do	10th January, 1868	23	do	do	Emaciated	do	do	do
18	509	21st do	7th September, 1869	23	Single	Melancholia	do	do	do	Epilepsy
19	603	22nd do	18th June, 1870	19	do	do	Robust	do	Uterine disease	Dysentery
20	532	24th do	30th October, 1869	19	do	Acute Mania	Emaciated	do	do	do
21	412	28th do	27th November, 1868	37	Married	do	Robust	Three years	Masurbation	do
22	167	4th August	8th do	1861	33	Single	do	Twenty-nine months	Uterine Irritation	do
23	561	7th do	4th February, 1870	30	Married	Dementia	Feeble	do	do	do
24	384	10th do	11th November, 1868	30	do	Acute Mania	do	Twelve months	Congenital	do
25	410	11th do	26th do	do	do	Epileptic Mania	do	Three years	Jeaalousy	Paralysis
26	402	1st September	16th do	38	Single	Chronic Mania	do	Six years	None	Pulmonary Consumption
27	581	15th do	19th April, 1870	15	do	do	do	Since infancy	do	Dysentery
28	548	17th do	16th December, 1869	45	Widowed	Paresis	Paralyzed	Three years	Obscure affection of brain	do
29	533	19th do	4th November, do	47	Married	Acute Mania	Robust	Fifteen months	None	Paresis
30	602	15th October	7th June, 1870	19	Single	Epileptic do	do	Eleven do	do	Apoplexy
31	186	23rd do	31st do 1863	30	do	Acute do	do	Eight years	Congenital	do
32	260	27th do	3rd October, 1866	35	do	Melancholia	Weakly	Nine do	None	do
33	565	23rd November	17th February, 1870	20	do	Epileptic Mania	do	Several do	do	Dysentery
34	544	30th do	27th November, 1869	56	Married	Chronic do	do	Twenty-one months	Domestic troubles	Exhaustion, Epilepsy
35	541	10th December	24th do	26	Single	Epileptic do	do	Fifteen years	None	Exhaustion

JOHN R. DICKSON, M.D., Medical Superintendent, Rockwood Asylum.

ROCKWOOD ARCHITECT'S REPORT FOR 1870.

ROCKWOOD ASYLUM,
27th January, 1871.

JOHN FLANAGAN, Esquire,
Acting Warden, Kingston Penitentiary.

SIR,—We respectfully beg to submit to you our Annual Report of the several works done to this Institution, and its appurtenances, together with the number of days of convict labor employed in the performance thereof, during the year 1870.

The work done by the carpenters comprised the sheathing of the walls and ceilings of the strong cells with hardwood plank; fixing enclosures for nurses' beds; building stairs and partitions; building wooden trunks and pipes in the attics for improvements in the ventilation; fixing barriers, and general finishing throughout the buildings; preparing and fixing work for the new laundry and wash-house.

The masons and laborers accomplished the following works:—

- 190 toise of fence walls.
- 400 yards rock excavation.
- 135 „ earth „
- 2,000 „ stone filling, for foundations and break-water of south wall.
- 960 „ plastering to laundry and wash-house.
- 560 feet lineal of 28 x 6 inch coping, set on fence walls, together with a large amount of general finishing throughout the buildings.

The plumbers and tinsmiths were engaged in covering the roof of the gas and coal house; fitting up steam and water pipes; tubs and sinks in the new laundry and wash-house, and steam coils in the ventilating towers and cupolas.

The number of days' work was as follows, namely:—

Masons and laborers.....	3,226
Carpenters, plumbers and tinsmiths.....	2,322
	5,548
Total	5,548

We are, Sir,

Your obedient servants,

POWER & COVERDALE,

Joint Architects,

Rockwood Asylum.

STEWARD'S REPORT FOR 1870.

SIR,—I beg leave to submit to you a Return, showing the quantity of crops raised on the farm and gardens of this Institution in the year of 1870; also, appended, a statement of amount of work performed by the male patients in said year.

With regard to the potato crop, I wish to state that, although they were planted early, and the culture of the land was good, yet the returns were not as good as expected, the cause being an insufficiency of manure, and the protracted drought of last summer; nevertheless, the quantity raised were excellent in quality, and amply repaid every expense attending their farming. Other roots were plentiful, such as carrots, parsnips, &c.

I may be allowed here to add, that I would strongly recommend that cattle be procured, and fed on the premises, whereby a plentiful supply of good milk may be supplied the household, and, by rotting the large quantities of straw necessarily emptied from beds, a large amount of valuable manure may be obtained, which the farm much requires.

REPORT OF WORKS, 1870.

Service.	Days' Work of		
	Patients.	Attendants.	Total.
Improvements	7,840	384	8,224
Farm	1,200	365	1,565
Gardens	936	365	1,301
Stable and Horse	730	365	1,095
Laundry (Male)	1,252	313	1,565
Engine and Boiler-house	730	.....	730
Wood and Coal Yard	939	313	1,252
Tailor's Shop	960	.....	960
Total	14,587	2,105	16,692

The above return has been carefully compiled from the "Labor Sheet," and, with the exception of the cook's assistants, or fillers of straw beds, is a fair synopsis.

The first work at which "all hands" were engaged, when the spring opened, was planting an orchard and preparing the land between the rows of young trees to receive crop, as well as the field and gardens. The weather being favorable, the work sped on quickly, and the planting of root crops, corn and others, vegetables, &c., was performed in good time, the only expense attending being a few days of a plough, and horse and cart conveying manure to the field. The after culture was carefully attended to.

FARM PRODUCE OF YEAR 1870.

Artichokes, bushels 6	at \$1 00	.....	\$ 6 00
Apples, " 20	" 1 00	.....	20 00
Beets, " 38	" 0 40	.....	15 20
Cauliflowers, 100	" 0 12½	.....	12 50
Carrots, " 99	" 0 40	.....	39 60
Cabbages, heads 1094	" 0 06	.....	65 64
Potatoes, bushels 620	" 0 65	.....	403 00
Turnips, " 100	" 0 40	.....	40 00
Pork, lbs. 1,505	" 6 50 per 100 lbs.	.....	97 82

GARDEN PRODUCE.

Radishes, bunches	180	at	\$0 05	.....	\$ 9 00
Beans, (Lima) bus.	21	,,	1 00	.....	21 00
Corn, (Sweet) ,,	4	,,	1 00	.....	4 00
Currants, quarts	106	,,	0 09	.....	9 54
Cucumbers, pecks	3	,,	0 25	.....	0 75
Celery, roots	168	,,	0 10	.....	16 80
Lettuce, bunch's	1400	,,	0 04	.....	56 00
Melons,	40	,,	0 05	.....	2 00
Onions, bushels	16	,,	1 00	.....	16 00
Peas, in pod ,,	20	,,	0 80	.....	16 00
Parsnips, ,,	38	,,	0 50	.....	19 00
Rhubarb, bunches	80	,,	0 12	.....	9 60
Salsify, bushels	4	,,	2 00	.....	8 00
Tomatoes, ,,	34	,,	1 00	.....	34 00
					\$929 45

Attention was next turned to the work of improvements on the premises generally, and parties from among the patients, desirous of employment at out-door work, were selected and divided into squads, according to their several tastes or former habits, tradesmen or laborers.

The recreation ground, adjoining the lake shore, was entirely renovated. A portion of it was attached to the adjacent garden and enclosed by a dry stone wall, neatly built, and tipped by a picket fence. The material, of stone, was obtained from a large heap on the ground, which, being removed, the mount was shaped into graceful terraces, surmounted by a platform, on which is erected a well-rigged flag-staff. A gymnastic swing, also, is suspended close by.

Fronting the Asylum a new avenue of approach was opened, and, on its north side a handsome terrace was made, ascended by stairs, opposite to an area intended for a fountain, to be erected in its centre. All the surplus material, whether of stone or clay, excavated from this site, was conveyed away. The stone suitable for building to a dry wall, which was built to protect the park, and the rougher sort, not required for grading the avenue, was used for filling the cribs of the wharf, a work at the time much required; whilst the clay, not required for the embankment of the terrace, was carted on the park, and used for levelling the very uneven surface, which was greatly broken by stones having, while the building was constructing, been raised therefrom. The whole of the works have been carefully performed and your suggestions carried out, and now the park needs but to be planted with some ornamental trees, and its walks gravelled, to complete it, when its landscape appearance will be not only chaste with the design of the house, but also a beautiful retreat and pleasure grounds for the patients.

A great amount of work has been done during the year, and all of useful kind. The men wrought cheerfully, and it is pleasing to know that many who commenced the season's work with us, closed the year recovered in health, and returned to their homes.

The attendants, also, were uniformly kind to their respective charges, assisting cheerfully in the several departments, and thus stimulating the progress of the works. Great vigilance was necessary, on account of the dilapidated state of the fences, to prevent escapes; and I am happy to be able to state none occurred from the working parties.

STATEMENT OF WORKS PERFORMED IN 1870.

Constructed.	Admeasurement.		
Plank-walk	3 feet wide ..	3,997	Feet, lineal ..
Clay terrace, and sodded	6 „ high ..	937	„ „ ..
Picket fence	6 „ „ ..	814	„ „ ..
Stone wall (dry) .....	.....	12,016	„ cubic ..
„ (rubble) .....	.....	11,676	„ „ ..
Excavated and removed clay .....	.....	1,870	Yards, „ ..
„ „ stones .....	.....	624	„ „ ..
Graded and macadamized avenues	20 feet wide ..	716	Feet, lineal ..
Shingled roof of stables .....	.....	127	Yards, square.
Removed stones to wharf cribs and walls ..	.....	37½	„ cubic ..

All which is respectfully submitted.

ROBERT BLAIR,
Steward.

12th January, 1871,

J. R. DICKSON, Esq., M.D.,
Medical Superintendent, Rockwood Asylum.

ST. JOHN, NEW BRUNSWICK, PENITENTIARY.

REPORT OF THE WARDEN FOR THE YEAR 1870.

GENTLEMEN,—There have been three deaths within the year, as recorded in table No. 1. John Ryan, a very old man, and John Phillips, a colored lad, in April, and George Richardson, in December. All these were evidently consumptive on admission. Indeed, the Warden cannot say that he ever knew a man to die in the Prison yet, who could be called healthy when he came to it.

Early in March last, the reservoir water was discovered to be in a bad state, discolored and stinking. The cause was traced to two large slaughter-houses erected some time in 1869, about a quarter of a mile above the reservoir, and at the head of the water-shed supplying the same. Had at great inconvenience to discontinue the use of the water for drinking and cooking, for which and for steam-washing, and all other Prison purposes, it had been constantly used for seventeen years. It is not so bad now, but in spring and early summer, will probably become as bad as ever, and will never be entirely what it was until the cause of the trouble shall be removed.

In his reports for 1868 and 1869, the Warden recommended the erection of a building within the Prison Yard, to be used for a stable and for storing the hay grown on the Prison Grounds; for storing broom-brush, requiring much room and a safe place for brooms when made up; and for pails and tubs, when made, and prepared wood and other material used in their manufacture. For such use, there is now no suitable place on the premises.

Table No. 16, is a carefully prepared statement of the value of manufactured articles and material used in manufacturing, on hand at the close of 1869; material purchased for manufactures during 1870; the amount of sales during the year; and value of material and manufactured goods on hand at the close of the year; includes cost of running machinery for the time, and keeping it in such repair as to leave it of equal value at the close as at the commencement of the year. From this it appears there is a profit on manufactures for the year, of \$7,519 39, or a fraction more than 49 cents per day for the time employed thereon as shown in Table No. 13.

As stated elsewhere in this Report, and for reasons specified, the supply of manufactured articles could not be kept up to the demand. It is only fair, therefore, to infer, that if the 5,206 days charged to maintenance in Table No. 13, and expended as hereinafter described, had been employed on manufactures, the profit thereon, could as well have been \$10,000 as what it is.

The Warden is aware that this appears a very small profit; yet it is a profit, and would still be so if it gave but 10 cents a day for the time employed, and diminishes the cost of maintenance by so much. It will not appear strange either, that the profit should be small, when the article of broom corn alone foots up to the respectable sum of \$13,421 89. Again, the *daily* average of prisoners during the year, aged, infirm, sick and *useless*, is only 71, too small a gang, if all were available, for a profitable prosecution of the business as now carried on. The cost of broom corn determines the profit on manufactures; often so excessively high as to require the greatest care in working, to pay any thing more than cost. First nine months of the year could be made to pay only a mere trifle for working it; last three months came down about one-third in price.

During the year the following repairs and improvements have been made on the premises:—

A sink in the wash-house of the Female Prison, and a trunk drain therefrom to an underground pit in the yard, to receive and retain soap suds, to be utilized as a manure.

A circular saw outside, driven by machinery inside of the brick workshop, enclosed

by a framed building, 30 × 18 feet, and three stories high, has been completed. The saw is in the basement, for cutting fuel, and the other two flats can be advantageously used both for work and storage purposes, in connection with the workshops in the brick building, with which this is conveniently connected.

A suitable pig sty and yard has been constructed, to carry out an Order of the Directors, to keep hogs on the premises.

Stretchers have been made for the two tiers of cells in the Male Prison, requiring the same. The floor of the East Corridor of this Prison has been renewed—the sleepers were entirely rotten, and the floor in a very bad state.

The road from the main gate, west side of the Prison Yard, to the highway, over which much heavy hauling has to be done, has been altered and put in good repair, and posts set on each side, preparatory to fencing that part of the grounds, which is meadow land, and has lain for many years almost a common.

An Altar, after a plan given by the Catholic Chaplain, has been constructed, and a place set apart and fitted up for the celebration of Mass in the Prison.

A good deal of time—much more than will appear by inspection of the work—has been spent on the old palisade fence, south side of the yard, particularly. By such attention it can be made to stand for years yet, in about the same state of dilapidation, little or no worse than for the last five or six years.

Much of the work, done as aforesaid, required the services of some of the most useful men among the few really useful convicts in this small prison population. Consequently it has been impossible to supply the demand for prison manufactures. Keeping the interests of the Prison in view, this should not be lost sight of so long as it continues a manufacturing establishment. The small stock of manufactures now on hand and the prospect of even a smaller number of prisoners than at present, will make it advisable to keep the whole prison force in the business, otherwise it will be better to stop steam, and cease dabbling in manufactures. The whole prison force makes little more than half an effective gang for the purpose in hand.

For years prior to their removal, the military contributed not less than 20 to the daily average of prisoners here, and this falling off has not as yet been made up from any other source. The Warden, however, would not have it understood that he regrets the fact, that his native Province sends so few to this, its only receptacle for convicted offenders of every grade. Comparing population, directness and extent of intercourse with the world at large—is there another Province or State on the continent that can point to a fairer record, a smaller criminal calendar?

Gentlemen, your obedient servant,

JOHN QUINTON,
Warden.

The Chairman and Directors of Penitentiaries.

TABLE NO. 1.

Number of prisoners in St. John Penitentiary, January 1st, 1870 :—	
Males, 68 ; Females, 15.....	83
Received during the year :—	
Males, 119 ; Females, 65.....	184
	— 267
Discharged within the year :—	
Males, by expiration of sentence	123
,, pardon *.....	1
,, died	3
Females, by expiration of sentence	61
	— 188
Remaining, 31st December, 1870 :—	
Males, 60 ; Females, 19.....	79

* Convict, Alexander McMullin, was pardoned 12th December, 1870, imprisonment would have expired 22nd January, 1871.

TABLE No. 2.

PRISON STATE, midnight, December 31st, 1870.

Convicts—sentence two years and upwards.				Committed prisoners—under two years.			
Sex.	Under 16 years of age.	Over 16 years of age.	Total convicts.	Under 16 years of age.	Over 16 years of age.	Total committed prisoners.	Total convict and committed prisoners.
Male.....		32	32	1	27	28	60
Female.....		3	3		16	16	19

TABLE No. 3.

Convicts, sentence 2 years and upwards, in prison on the 1st day of January, 1870:—

Males, 30 ; females, 2	32
Received during the year :—	
Males, 13 ; Females, 3.....	16
	— 48
Discharged within the year :—	
Males, by expiration of sentence.....	7
" pardon	1
" died	3
Females, by expiration of sentence.....	2
	— 13
Remaining, 31st December :—	
Males, 32 ; females, 3	35

TABLE No. 4.

Sentences of convicts in prison, December 31st, 1870:—
 Males,—for life, 3; 27 years, 1; 12 years, 2; 8 years, 1; 7 years, 1; 6 years, 3; 4 years, 1; 3 years, 6; 2 years, 14. Females,—2 years, 3.—Total, 35.
 Names of "life" prisoners; date of admission, and age at that time :—
 Patrick StavinNovember, 1857.....aged 16 years.
 Johnston Bean.....January, 1861....." 44 "
 James RayJuly, 1865....." 56 "

TABLE No. 5.

Offences of convicts, sentence 2 years and upwards, in prison, December 31st, 1870 :—
 Males—murder (aiding and abetting), 1 ; manslaughter, 1 ; rape, 2 ; robbery, 5 ;
 burglary, 3 ; mutiny and assault, 3 ; assault, stabbing and cutting, 8 ; obtaining goods
 under false pretences, 1 ; stealing, 8. Females—assault, 2 ; stealing, 1.—Total, 35.

TABLE No. 6.

Ages of convicts, sentence 2 years and upwards, in prison, December 31st, 1870 :—
 Males, 20 to 30 years of age, 20 ; over 30 to 40 years, 6 ; 42 to 54 years, 4 ; 62 years,
 1 ; 66 years, 1. Females—21 years, 2 ; 30 years, 1.—Total, 35.

By birth the above are :—Males—English, 1 ; Irish, 10 ; Scotch, 1 ; American
 (U.S.), 2 ; Canadian, 16 ; Canadian (French), 2. Females—Canadian, 3.—Total, 35.

N. B.—One colored male and one colored female are included with those of Canadian
 nativity.

TABLE No. 7.

Religious profession of convicts, sentence 2 years and upwards, in prison, December
 31st, 1870 :—

Males—Protestant, 18 ; Catholic, 14. Females—Protestant, 2 ; Catholic, 1.—Total,
 35. Of these, five males and one female cannot read.

TABLE No. 8.

Prisoners committed for terms under 2 years, in prison, on the 1st day of January,
 1870 :—

Males, 38 ; females, 13	51
Received during the year :—	
Males, 106 ; females, 62.....	168
	— 219

Discharged within the year :—	
Males, 116 ; females, 59.....	175

Remaining, 31st December, 1870 :—	
Males, 28 ; females, 16	44

TABLE No. 9.

Sentences of prisoners committed for terms under 2 years, in prison, 31st December,
 1870 :—

Males—18 months, 3 ; 12 months, 5 ; 6 months, 6 ; 2 months, 10 ; 1 month,
 4.—28. Females—18 months, 2 ; 12 months, 1 ; 6 months, 4 ; 3 months, 3 ; 2 months,
 6.—16. = Total 44. Of these, there are, who cannot read :—Males, 9 ; females, 11.

TABLE NO. 10.

Religious profession of prisoners, committed for terms under 2 years, in prison, 31st December, 1870 :—

Males—Protestant, 9; Catholic, 9. Females—Protestant, 5 Catholic, 11.—Total, 44.
Nationality of the above :—

Males—Canadian, 12; Irish, 12; Scotch, 2; English, 1; French Canadian, 1.—28.
Females—Irish, 11; Canadian, 4; American (U.S.), 1—16. = Total, 44. As Canadian, there are of males—2 coloured, and 2 aborigines; females—1 coloured, and 1 squaw.

TABLE NO. 11.

The whole number of prisoners received during the year, as shewn in Table No. 1, is, males, 119; females, 65: of this number there are, who cannot read :—

Males, 48; females, 47.

Of these there have been recommitted within the year :—

Males—6, once; 5, twice. Females—9, once; 3, twice; 1, three times.

TABLE NO. 12.

Aggregate number of prisoners during the year 1870 :—

	Males.	Females.
January	2,113	509
February	2,157	589
March.....	2,443	675
April	2,130	535
May	2,213	503
June	2,194	532
July	2,338	568
August	2,276	604
September	2,220	607
October	2,162	600
November	1,879	688
December	1,963	668

TABLE NO. 13.

Employment of prisoners during the year 1870 :—

Males—making pails and tubs	4,219
" " brooms	5,126
" " rakes and other wares	1,377
" labor on account of manufactures	4,606
" " " maintenance.....	5,206

Females—labor all on account of maintenance: Cooking and washing for all the prisoners; carding wool; spinning and weaving; making all the cloth for prison clothing; knitting socks, stockings, and mittens for prison use; sewing; making underclothing for male prisoners, and their own garments; and doing housework of their own prison.

Sixteen male prisoners have been punished within the year, by confinement on bread and water for one to three days each.

TABLE No. 14.

Number of commitments each year, from 1860 to 1870 inclusive, shewing the number of military commitments in each year :—

1860.....	Commitments, 259.....	31 were military.
1861.....	254.....	5 "
1862.....	368.....	112 "
1863.....	383.....	70 "
1864.....	393.....	70 "
1865.....	336.....	55 "
1866.....	544.....	171 "
1867.....	543.....	273 "
1868.....	382.....	150 "
1869.....	221.....	58 "
1870.....	184.....	12 "

In no year since 1842 have there been so few commitments as in 1870, except in 1845, when the number was 173.

TABLE No. 15.

During the year 1870 the daily average number of prisoners has been smaller than any year of the preceding ten :—

Males, 71 ; females, 19.

The largest averages within that period were :—

In 1866—males, 119½ ; females, 33¼.

In 1867—males, 118 ; females, 36½.

TABLE No. 16.

Statement of Manufactures, St. John Penitentiary, from 1st January to 31st December, 1870 :—

Inventory of stock, 31st December, 1870 :—

Penitentiary and warehouse.....	\$5,431 73
Sales of manufactures from 1st January to 31st December, 1870.....	29,131 20
	<u>\$34,562 93</u>

Expended for material for manufactures from 1st January to 31st December, 1870... 18,796 03

Inventory of stock on hand in Penitentiary and warehouse on 31st December, 1869. 8,247 51

\$27,043 54

In favor of manufactures for 12 months, to 31st December, 1870 7,519 39

\$34,562 93

Sales of manufactures for 1870 :—

January	\$1,229 70	August.....	\$2,388 03
February	1,313 00	September	1,889 75
March	1,669 05	October	2,051 30
April	3,603 57	November	1,945 07
May	4,394 18	December.....	1,577 10
June.....	4,135 05		
July	2,935 40		<u>\$29,131 20</u>

Particulars of expenditure for manufactures :—

For dye stuffs.....	\$8 10	For machinery oil	
„ lath yarn	42 35	and belting..	\$439 09
„ printing and ad-		„ hardware.....	37 26
vertising.....	20 00	„ brimstone.....	29 52
„ tacks and twine	250 98	„ hoop iron... ..	630 61
„ paints and oil...	1,151 81		
„ lumber	2,764 42		\$18,796 03
„ broom corn.....	13,421 89		

Inventory of property, St. John Penitentiary, Dominion of Canada, January 1st, 1871 :—

Granite prison (males).....	\$61,101 00
Brick prison (females).....	9,600 00
Brick workshop and boiler house	7,448 00
Warden's house and storehouse (brick)	5,906 00
Dwellings for keepers (brick).....	5,840 00
	<hr/>
	\$89,895 00

Steam engine, running gear, machinery and tools \$10,356 00

Prison furniture, bedding, clothing, &c. :—

Bedding	\$957 00
Tinware, lamps, clocks, &c.....	100 00
Clothing, material for same.....	995 00
Leather and shoes	151 00
Oil for burning, &c.....	30 00
Spinning wheels, looms, &c.	30 00
	<hr/>
	\$2,263 00

Stable, &c. :—

1 horse	\$160 00
4 hogs	24 00
Carriage, sleigh, and harness	210 00
Work waggons, sleds, cart, dray, &c.....	90 00
Hay	120 00
	<hr/>
	\$604 00

Value of manufactures and materials for manufacturing purposes, on hand 1st January, 1871 \$5,431 73

PROTESTANT CHAPLAIN'S REPORT, FOR 1870.

ST. JOHN, January 21st, 1871.

To the Directors of Penitentiaries.

GENTLEMEN,—During the year 1870 I have endeavored, diligently and faithfully, to discharge the duties of my sacred office. I am thankful to be able to say that the behavior of the men at Divine Service has been all that I could expect or wish. I have regularly conducted Service both on Sundays and Wednesdays, besides the Sunday School during the spring, summer and autumn.

Many of the men have committed to memory the ten commandments, and repeated them to me, and I hope they will, in future, act on them.

As many as can read, join heartily in the responses and also in the singing ; and I do hope that the instructions they receive from week to week, will, by the Divine blessing, be rendered permanently useful to them, and that they will become good and useful members of society.

In consequence of the Day School having been held, generally in the evening instead of at mid-day, I have not been able to maintain so constant a superintendence over it during the winter ; but Mr. Patchell is now trained to his duty, and I believe discharges it faithfully.

My own impression, however, is that if the school was held every day after dinner, a large number would attend ; the men would not then be so tired, and there would be the advantage of having day-light. Yet, I would forbear urging this, as it might interfere with other regulations of importance.

I thank you for the grant of \$20.00 for a set of Robes which I am now procuring.

I remain, gentlemen, respectfully yours,

GEORGE SCHOFIELD,
Protestant Chaplain.

SURGEON'S REPORT FOR 1870.

ST. JOHN PENITENTIARY, December 31st, 1870.

To the Chairman, Directors of Penitentiaries.

GENTLEMEN,—The close of the year calls for the Annual Report, as to the sanitary state of the St. John Penitentiary, of the Province of New Brunswick, during the year 1870. My half-yearly Report to the Directors, on 18th August last, contains references to which I shall again return, so as to bring all subjects within the Annual Report. In August Report I had noticed that we had, between the 1st and 5th April, two deaths. One is an old man, named Ryan, long ill of consumption ; and one is a colored lad who came into the Prison with confirmed consumption. These prisoners, of course, have never done any work, and have been only on the sick list of the prison. On the last day of the year but one, another death occurred, from the same cause (consumption), in a man named Richardson, one of the long-term prisoners. About a year since he began to break down ; so that will make for the yearly return of deaths, three. That, for this prison, is a large statement,—two for prisoners of long terms, and one for a prisoner of short time duration. The release of McMullen just saved us from adding a fourth death from the same cause. I replied to the telegram from the Minister of Justice relative to his case. He had been failing for over a year, and I urged his immediate release. The release was granted ; and I am sorry the poor man did not get to his relatives in New York. I have been informed that he died in Boston. He had been confined over five years. It is such subjects as these that make me urge on the Directors the necessity of a Hospital, and the introduction of a diet referred to in my former reports. I am happy to see that Dr. Dickson, of the Kingston Penitentiary, expresses sentiments similar to those I entertain, in reference to prison dietetics, and to meet these cases of long imprisonment will require the best consideration of the Directors and other official minds on these subjects.

In my August Report, I referred to the subject of the water in the reservoir. In the spring I was obliged to forbid its use, in any way, for domestic uses. The Warden will put this subject before the Directors in its proper light, and I need not add to it. We have had no disease of an epidemic character during the year ; and the accidents have been of a very slight character. The number of cases treated have been :—

Males 122

Females..... 12

The Prison has been conducted, so far as my department has reference, in its usual ordinary manner. The inmates have received kind and considerate care from those in

charge and care of them ; and I have to say that I am thankful to the Warden, and all the other officials and others, for the kindness and assistance I have always received during the year.

I have the honor to be, gentlemen,

Your obedient servant,

THOMAS S. WETMORE, M.D.

MATRON'S REPORT FOR 1870.

December 31, 1870.

GENTLEMEN,—During the year 1870 the daily average number of female prisoners has been about 19. Every one able to work has had full employment in the usual house work of their own prison ; washing and cooking for themselves and male prisoners ; sewing and knitting for themselves and male prisoners ; and wool-dressing, spinning yarn, and weaving the cloth wherewith they and the male inmates are clothed, &c., &c. The matron has had no serious difficulty in the management, and cheerfully bears testimony to the general good conduct of her charge.

With respect.

CATHRINE KEFFE,

Matron.

Directors of Penitentiaries,

CATHOLIC CHAPLAIN'S REPORT FOR 1870.

ST. JOHN, N. B., March 4th, 1871.

To the Chairman of the Board of Directors of Penitentiaries.

SIR,—I beg to report that the temporary Chapel has been fitted up in the Penitentiary according to your instructions ; that it has been provided with all the necessary furniture, vestments, &c., and that it gives much satisfaction. There has been service every Sunday, and oftener when required, during the past year, at which all the Catholic convicts, with one exception, have willingly and devoutly attended ; and I am happy to be able to add, that not only was their deportment at Divine Service, all that could be desired, but also that they continue to manifest a desire to make good use of the books of the library, during the hours allowed for reading. The Institution being now provided with everything necessary, as far as the spiritual wants of the inmates are concerned, I have no further suggestion to make on that subject.

The Warden having received no instructions, as regards the public holidays of the Dominion, has made no change in that respect, and holidays, therefore, are "not kept" or observed in the St. John Penitentiary ; the opinion of some to the contrary, notwithstanding.

THOMAS CONNOLLY,

Chaplain.

 HALIFAX, N. S., PENITENTIARY.

 WARDEN'S REPORT FOR 1870.

To T. J. O'NEIL, Esq.,
 Chairman of the Board of Directors.

HALIFAX PENITENTIARY,
 2nd January, 1871.

SIR,—Although it was late in the year when I assumed the duties of Warden of the Halifax Penitentiary, yet, owing to the very creditable manner in which the affairs of the prison had been managed, and the records kept, I am enabled to make this, my First Report, much more full and satisfactory than I possibly could have done had it been otherwise.

I entered upon my new duties on the morning of the 4th November last past, by assembling the guards in the office, and addressing them in a few appropriate words. I afterwards had the prisoners paraded and addressed them also. I assured them of my desire to do all in my power to alleviate their condition as much as possible; that they would always find me easy of access, and ever ready to give patient heed to any reasonable complaints; and that I would think it not only a duty, but a pleasure to contribute to their comforts, as far as the rules of the prison would allow; but I reminded them, at the same time, how much lay in their own power in bringing about this happy state of things, as all depended on how they conducted themselves; for whilst I would encourage, to my utmost, the well-behaved and industrious man, I would as certainly punish, with due severity, the idle and incorrigible offender. Among other incentives to good conduct—and I believe the strongest with prisoners—I alluded to the monthly remission which the Government had provided for those whose exemplary deportment came up to the stipulated conditions, which conditions were within easy reach of every man present. The prisoners, during my address, observed the utmost good order and attention, and, to judge by their countenances, I saw that they really believed that I wished to be their friend and protector.

Upon subsequent reflection I resolved to go a little farther, in order to show the prisoners that their good treatment in future was entirely in their own hands. I observed several of them in irons—"hard ones"—whose spells of goodness were few and short-lived; besides others who had forfeited certain privileges earned by them in the past. Accordingly, to gain their entire confidence in my words and purposes, I struck off chains and restored forfeited immunities, telling one and all that nothing which they had done up to the present would prejudice me a jot against them, if for the time to come, they would help me to accomplish that good for them which I so earnestly desired. I do not believe there was one among them who did not appreciate the kindness of my intentions; and up to date I have not had the slightest cause to regret the mild policy which I have inaugurated, there not having been since a single complaint brought before me worthy of notice. I shall therefore resort to harsh measures, only after moral suasion has been exhausted and failed. I was sorry to observe the very objectionable bearing of two of the guards towards the men under their immediate charge. I considered it calculated to annoy and exasperate the prisoners, and good them to acts of insolence and insubordination. I have demonstrated to these officers and all concerned, that kindness is not incompatible with discipline; and that convicts have feelings like other men, to be acted upon for good or for evil.

Feeling the importance of the trust committed to me, I have lost no time in making myself acquainted with the prison routine, visiting frequently and examining attentively every department of the Institution; and it gives me pleasure thus to bear testimony to the amount of cleanliness and good order which prevailed throughout; and the books in the office were so well written up, that an hour at any time would bring them to date.

Considerable improvements, which will be enumerated hereafter, have been going on during the past year under the supervision of the late Acting Warden, now Chief Keeper, Ross, who has been very attentive in affording me any information I required from time to time.

The moral culture of the prisoners is under the care of the Chaplain, whose accompanying Reports will show you the condition of their several charges. Those who attend school seem very attentive and eager to learn; Mr. Cotton sparing no pains in his efforts to convey the necessary instruction; and his labors seem to be attended with encouraging success. In addition to the above means of instruction I have extended to all who can avail themselves of it, the much esteemed privilege of the Common Library, which, small as it is, affords considerable instruction and entertainment. Besides, I allow such as have voices for church-singing to assemble, under proper supervision, for an hour, two evenings in the week for practice, their leader being a fellow convict, who has some knowledge of written music.

The foregoing privileges and indulgences have tended greatly to cultivate a more tractable and orderly spirit among the men, whose happy faces evince how much more quickly and certainly kindness acts upon them for good, than harsh words and coercive measures. It would, perhaps, be too much to hope that all will be alike amenable to kind treatment; but as the chances are largely in favor of it, I mean to give it a fair trial. In extreme cases even flogging may be necessary to maintain discipline; but once the cat has been applied, self-respect is gone, and then farewell to all probability of his future amendment.

The prisoners, at stated intervals, who can, are permitted to write their own letters to their friends, which I forward, after examination, to the address.

The chief works and improvements performed during the past year are as follows:—

Altering the remainder (28) of the cell doors, to open outwards instead of inwards, as at first.

Fitting up a Roman Catholic Chapel, with altar, seats, &c.

Making 60 foot-boards for cells, as ordered by Messrs. the Directors.

Unroofing and raising southern wing of the prison 11½ feet high by 81 feet long—new roofing same with Warren's patent—constructing and fitting up Protestant Chapel, and general store room.

Making a sea-wall, and reclaiming 12 or 14 feet from the sea; clearing and making up land in the vicinity of the wharf; turning the bath-house, and deepening and cleaning the bath, with a suitable pipe for the free ingress and egress of the tide.

Repairing prison roof with new slate, lead and gutters; also repairing roof of hospital and Blacksmith's shop, and new shingling and flooring Blacksmith's shop.

I might here observe that outside the prison walls the fencing and gates generally are in a very dilapidated condition, and should have a general repair in the spring.

The earning of the prisoners is almost entirely confined to the Shoemaking Department, which is chiefly occupied by contract work.

I would suggest to the Board of Directors the propriety of removing the high picket fence immediately in front of the prison windows, and applying it to repairing the other fences on the premises.

The necessary Reports and Tables you will find attached; all of which I hope will be considered sufficiently comprehensive and satisfactory.

I have the honor to be, Sir,

Your obedient servant,

ROBERT DONKIN,

Warden.

STATEMENT OF PRISONERS RECEIVED DURING 1870.

Crimes.

Arson, 1 ; Horsestealing, 1 ; Coining and Counterfeiting, 1 ; Burglary, 1 ; Larceny, 10 ; Robbery, 1 ; Indecent Assault, 1 ; Drunkenness and Insubordination (Military prisoners), 35.—Total 51.

Trades.

Slaters, 1 ; Shoemakers, 2 ; Carpenters, 1 ; Tailors, 4 ; Weavers, 4 ; Musicians, 1 ; Bricklayers, 1 ; Curriers, 2 ; Farmers, 2 ; Watchmakers, 1 ; Painters, 2 ; Clerks, 1 ; Miners, 2 ; Blacksmiths, 1 ; Laborers, 26.—Total 51.

STATEMENTS and Movements of Prisoners in Halifax Penitentiary, for 1870.

Description.	Males.	Females	Total.	Males.	Females	Total.
Remaining at Midnight on December 31st, 1869				53	1	54
Admitted since:—						
From County Jails.....	16		16			
,, Court Martial	35		35	51		51
				104	1	105
Discharged:—						
By expiration of sentence	40	1	41			
,, Pardon.....	2		2			
,, Order of Commanding Officer	16		16	58	1	59
Remaining at Midnight, December 31st, 1870				46		46

I am happy to inform you that there were no deaths or serious accidents during the past year.

NOMINAL List of Convicts Pardoned during 1870.

Names.	Crimes.	County where Convicted.
Patrick McMullan	Manslaughter	Halifax.
Neil McKinnon	Arson	Colchester.

NOMINAL List of Convicts re-committed during 1870.

Name.	No. of Comital.	Crime.
Alexander Jackson, <i>alias</i> Jerry Morris	5	Larceny.

STATEMENT OF CONVICTS RECEIVED DURING 1870.

	Male.	Female.	Total.
<i>Race.</i>			
White	46	51
Colored	5	.....
<i>Nationality.</i>			
England	11	51
Scotland	17	.....
Ireland	7	.....
Nova Scotia	11	.....
Newfoundland	1	.....
United States	3	.....
Germany	1	.....
<i>Religion.</i>			
Church of England	14	51
Roman Catholic	18	.....
Presbyterian	14	.....
Baptist	3	.....
Methodist	2	.....
<i>Education.</i>			
Could read and write on entering	41	51
Could not read or write	10	.....
<i>Age.</i>			
From 15 to 20	2	51
20 to 30	24	.....
30 to 40	21	.....
40 to 50	3	.....
60 to 70	1	.....
.....	
<i>Length of Sentence.</i>			
42 days	2	51
84 "	11	.....
112 "	3	.....
136 "	1	.....
168 "	10	.....
336 "	3	.....
672 "	4	.....
6 months	1	.....
1 year	2	.....
2 "	11	.....
3 "	1	.....
4 "	1	.....
5 "	1	.....

ABSTRACT OF INVENTORY, HALIFAX PENITENTIARY, 1870.

Furniture in Warden's apartments	\$196 70
Male Prison	1,522 53
Female Prison	11 00
Medicines.....	100 00
Fuel.....	349 20
Blacksmith's Department.....	125 38
Shoemaking do	117 32
Stonemason's do	70 05
Carpenter's do	206 54
Clothing and bedding	1,344 70
Horse.	100 00
Pigs	52 00
Waggon, sleigh, cart and harness.....	244 00
Provisions	148 12
	<hr/>
	\$4,587 54
Buildings, shops, fixtures, &c., as per architect's valuation..	*61,055 80
	<hr/>
	\$65,643 34
Omitted—Vestments, &c., for Roman Catholic Chapel	100 00
	<hr/>
Total	\$65,743 34

*N.B.—The \$61,055 80 is the re-considered estimate of the valuator.

Number and description of Punishments, at Halifax Penitentiary, for 1870.

	Admonished.	Without bed, with covering.	Without bed, partial covering.	Bread and water.	Dark cells, bread and water.	Short allowances	Loss of privileges.	In chains.	Total.
January		5		1	2				8
February		1	2		2	1	1	1	8
March		3	5		6			1	15
April	2	6		9	1	1			19
May		4	6	2					12
June		2							2
July		2		3	4	1		1	17
August		3			9		1		13
September	1	2		1	9			1	20
October		2		1	1				4
November									0
December									0
	3	42	13	17	34	3	2	4	118

Duration of punishment from 24 to 72 hours.

Number of Convicts employed in the various Departments of the Halifax Penitentiary, on 31st December, 1870.

Shoemaker's Department, 23; Blacksmith's, 1; Carpenter's, 2; Mason's, 1; Tailor's, 3; Dining-hall, Wash-house, and Kitchen, 7; farm-yard, wood-cutting, oakum picking, &c., 6; sick in cells, 3.—Total, 46.

Return shewing the number of days' work in the several Departments during 1870.

Shoemaker's, 6,980 ; blacksmith's, 169 ; carpenter's, 607 ; mason's, 483 ; tailor's, 686 ; dining-hall, wash-house, and kitchen, 1,988 ; farm-yard, wood-cutting, oakum picking, and other work, 3,435.—Total, 14,348.

Number of days of Remission earned by Convicts during 1870.

January, 120 ; February, 115 ; March, 109 ; April, 101 ; May, 104 ; June, 94 ; July, 88 ; August, 87½ ; September, 87 ; October, 84 ; November, 92½ ; December, 94.—Total, 1,176.

ANNUAL REPORT OF THE PROTESTANT CHAPLAIN.

To the Chairman of the Board of Asylums, Penitentiaries, &c.

HALIFAX, December, 1870.

SIR,—After the lapse of another year, it affords me much satisfaction to inform you, that the convicts committed to my pastoral instruction and oversight, have uniformly attended to the spiritual ordinances afforded them with strict propriety and seriousness. Some of them appear to be the subjects of gracious impressions of mind, and I believe sincerely purpose henceforth to pursue such a course of conduct as, by the Divine blessing, will promote their well-being during subsequent life and also secure their eternal interest.

I perform Divine service every Sabbath morning, and also on Wednesdays at one o'clock. Some of the men are allowed to meet together for prayer among themselves, and some also to improve their singing, these favors are highly appreciated.

I am sure, Sir, you will be greatly pleased to learn that order, peace, and harmony, prevail in every Department of the Institution.

I have at present under my pastoral care twenty-six (26) whites and eight (8) colored ; twenty-three (23) whites and the eight colored attend school.

Mr. Cotton is attentive to his duties, and many of the scholars are making proficiency under his effective teaching.

Our new Warden appears to be a wisely chosen officer ; “the right man in the right place.” I am thankful, indeed, for the sum allowed by the Honorable Board to replenish our little library.

I have the honor to be, Sir,

Your obedient servant,

HENRY POPE,

Protestant Chaplain.

SCHOOL MASTER'S REPORT.

HALIFAX PENITENTIARY, 2nd January, 1871.

Terence J. O'Neill, Esq.

Chairman of Board of Directors, &c., &c.

SIR,—I beg most respectfully to inform you that since my last annual Report, the pupils under my charge have made very favorable progress. The most indifferent of them have begun to feel the necessity of learning something ; and as they and I are agreed upon this material point, my efforts to instruct are met by their readiness to receive instruction ; I have well grounded hopes that all will obtain more or less permanent benefit from their steady attendance at school.

I am deeply indebted to the kind encouragement of the Chaplain, and the cordial support of the Warden, and also of the late Acting Warden, who made my duties easier and

more pleasant than they would have been under any other circumstances; and I hope I shall ever faithfully perform the task which I have to do in all singleness of heart and faithfulness.

At present I have in attendance, as per school register, 34.

The average attendance during the past year was 31.

Present attendance	White, 25
	Colored, 9
	—
	34
	—
Of these can read, write, and cipher	22
Can read and write a little	6
Cannot read or write	6
	—
	34

Hoping the above will be satisfactory.

I have the honor to be, Sir,

Your obedient servant,

JOHN C. COTTON,

School-master.

MATRON'S REPORT.

HALIFAX PENITENTIARY, 2nd January, 1871.

SIR,—This, my first Report, must of necessity be very meagre indeed, as it is so recently since I assumed the duties of Matron, and there being no female prisoner in custody then, nor has there been any committed since. The premises and all belonging thereto were left very clean and tidy by the late Matron.

I have the honor to be, Sir,

Your obedient servant,

ELIZA DONKIN.

T. J. O'Neill, Esq., Chairman of Directors.

SURGEON'S REPORT.

To the Board of Directors.

HALIFAX PENITENTIARY, December 31st, 1870.

GENTLEMEN,—The sanitary condition of the prison during the year just ended, has been for the most part good; no diseases of a grave character have prevailed, and no death has occurred.

On the 18th February last, the convict, No. 724, gave birth to a male infant, which was cared for during the continuance of the mother's term of imprisonment.

The whole number of convicts requiring prescriptions during the year, was two hundred and seventy-eight, of these eight only were removed to hospital, as follows, No. 724, accouchement; No. 616, removal of fibrous tumor of thigh; No. 704, chronic gastritis; No. 772, fracture of finger; No. 773, lacerated wound of wrist; No. 729, division of cicatrix of toe; No. 770, removal of adipose tumor of shoulder; No. 594, acute rheumatism; the remainder were sufferers from catarrh, tonsillitis, pleurodynia, ophthalmia, rheumatic pains; in addition, three were subjects of inguinal hernia, two of asthma, three of hæmoptysis, two of tenia solium, one of abdominal aneurism, two of secondary syphilis, one of stricture of urethra, three of intestinal hæmorrhage, two of spermatorrhœa, four of dyspepsia, the others were cases of diarrhœa, dysentery, dysuria, contusions, abscess, sprain.

In the month of July, when considerable anxiety existed in the city concerning the spread of small-pox, the convicts who were unprotected by vaccination were vaccinated.

I would again respectfully call the attention of the Board to the deficient ventilation in the shoemaker's shop; at times the air becomes very much vitiated, and the convicts therein employed are constantly complaining. I would suggest the introduction of one or two ventilators in the north wall. All of which is respectfully submitted.

I am, gentlemen,

Your obedient servant,

R. S. BLACK, M.D.

ARCHITECT'S VALUATION.

DETAIL Memorandum of the Valuation of the Halifax Penitentiary, in the Dominion of Canada.

	\$ cts.	\$ cts.
Carpenter's shop and wash-house.....		403 00
Blacksmith's shop and forge.....		309 00
Cistern, pumps and piping in yard, &c.....		900 00
Enclosure fence, north end.....		80 00
Stable and piggery, south end.....		550 00
Cart house, &c. front.....		30 00
Fences, gates, posts, &c., front.....		210 00
Bath or boat house, water side.....		252 00
Cesspit outside of wall.....		220 00
<i>Premises.</i>		
16 $\frac{1}{2}$ acres of land, with water grant and frontage, at \$1,200 per acre.....		12,750 00
<i>Enclosure Walls.</i>		
5,265 feet, cube, of rubble walling under granite..... per foot	0 15	789 75
12,170 superficial feet of granite walling, including setting..... "	0 50	6,035 00
2,281 cubic feet of coping..... "	0 50	1,140 50
Front, back, north, and south end of prison, with centre wall, 35,254 feet, cube, of footings, foundations, backing of granite, centre division walls, &c..... per foot	0 15	5,288 10
13,864 superficial feet of granite for face of prison chimneys, &c. including setting....	0 50	6,932 00
58 granite window sills..... each	2 50	145 00
58 window frames, glass sashes, iron bars, &c..... each	16 00	928 00
Chimney in connection with centre wall and also two end chimneys in brickwork....		260 00
<i>Slating.</i>		
82 $\frac{1}{2}$ square of slating, including lead flushings, at \$20 per square.....		1,701 50
Watercourses.....		390 00
North and south wings, embracing shoemaker's shop, &c., store, dining room, or chapel, &c., 5,429 feet of footings and foundation..... per foot	0 15	814 35
16,734 superficial feet of granite and setting..... "	0 50	8,367 00
12 window frames and sashes with iron bars, &c.....	16 00	192 00
Urinal.....		460 00
<i>Cells.</i>		
4,914 superficial feet of granite and setting..... per foot	0 65	3,194 10
18,590 cubic feet of foundation and division walls..... "	0 15	2,788 50
Two flights of stairs with columns, arches, balusters, platform, &c.....		950 00
5,040 superficial feet of stone floors..... per foot	0 20	1,008 00
90 iron doors, complete..... each	15 00	1,350 00
Galleries around.....		270 00
Cooking boiler and furnaces.....		240 00
Carpenter's, joiner's, plasterer's work, with materials, painting, asphalt roofing in prison and wings, including women's cells and entrance gates, &c.....		4,880 00
		\$63,877 80
Less—For reparation, setting of coping, &c.....		2,822 00
		\$61,055 80

GENTLEMEN,—Having been requested by Robert Donkin, Esq., Warden of Halifax Penitentiary, to examine the building and premises of the above Institution, I hereby certify that I have, by measurement, and observingly gone over the whole premises, and would say, according to my calculation, and to the best of my judgment, that the landed and water property, with the buildings, &c., &c., to be worth \$61,055 80.

I am, gentlemen,
Your obedient servant,

JOHN WM. MAROM,
Architect and Builder.

To the Commissioners of the
Penitentiaries of the Dominion of Canada.

No. 60.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 8th March, 1871; For a list of all convicts now in the Kingston, St. John and Halifax Penitentiaries, not giving the names of convicts, but initials only, for purposes of distinction; showing the offences for which imprisoned; the Provinces from which they came; the courts at which sentenced; the length of the sentence; alteration (if any) in the sentence; the date when the imprisonment commenced; the sex, nationality, religion and age of the convict; if married or single; conduct since imprisonment, and state of health.

By Command.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 6th April, 1871.

J. C. AIKINS,
Secretary of State.

In accordance with the recommendation of the Joint Committee on Printing, the above Return is not printed.]

No. 61.

RETURN

To an Address of the HOUSE OF COMMONS, dated 16th March, 1871 ; For copies of all correspondence and documents relating to the establishment of Boards of Examiners for granting certificates of competency to Masters or Mates of sea-going ships, in accordance with the Statute of Canada, 1870, 33 Victoria, chapter 17, with a statement showing the names of the different persons forming part of those Boards of Examiners ; and of the seaports where such Boards are established.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 8th April, 1871.

No. 62.

RETURN

To an Address of the SENATE, dated the 9th March, 1871 ; 1st. For copies of the correspondence which took place between the Trinity House of Montreal and the Montreal Water Police or any other person, on the occasion of the Regatta at Lachine last autumn ; 2nd. Copies of all Resolutions, Orders, or Minutes of Decision in relation to the said Regatta, adopted by the said Trinity House ; 3rd. Copies of the correspondence with the Government of Canada on the same subject.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 28th March, 1871.

[In accordance with the recommendation of the Joint Committee on Printing, the above Returns are not printed.]

No. 63.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 27th February, 1871; For copies of any orders or directions made at any time under the Railway Act, as to forms in which the returns thereby required should be made up; and of any orders or directions made under the provision empowering such to be issued for the purpose of obtaining returns of serious accidents occurring in the course of the public traffic upon any railway, whether attended with personal injury or not, in such form and manner as the authorities deem necessary and require for their information, with a view to the public safety; and for copies of any returns made under such last mentioned orders and directions, with a memorandum showing the dates at which each of such returns has been made.

A Return to Address of the HOUSE OF COMMONS, of the 27th February, 1871, for copies of the returns made by each Railway Company under the Railway Act of the late Province of Canada, and the Railway Act, 1868, by which Acts it is provided that each of the Companies affected thereby, shall, in the months of January and July in each year, make, under oath, a true and particular return of all accidents and casualties (whether to life or property) which have occurred on the Railway of the Company during the half year next preceding, setting forth:—1st, the causes and natures of such accidents and casualties; 2nd, the points at which they occurred and whether by night or by day; 3rd, the full extent thereof and all particulars of the same; and, 4th, shall also at the same time return a true copy of the existing By-laws of the Company, and of their rules and regulations for the management of the Company and their Railway, together with a memorandum shewing the dates at which each of such returns has been made.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 10th April, 1871.

[In accordance with the recommendation of the Joint Committee on Printing, the above Return is not printed.]

No. 64.

REPORT

Of the Minister of Agriculture; In terms of the Census Act.

—

*[In accordance with the recommendation of the Joint Committee on Printing, the above
Return is not printed.]*

REPORT

OF THE

MINISTER OF AGRICULTURE

OF THE

DOMINION OF CANADA.

FOR THE CALENDAR YEAR

1870.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA :

PRINTED BY I. B. TAYLOR, 29, 31, & 33, RIDEAU STREET

—
1871.

1870.

LIST OF DOCUMENTS.

GENERAL DEPARTMENTAL REPORT.

APPENDICES.

LIST OF ANNUAL REPORTS.

- 1.—Quebec Immigration Agent's Report—(*L. Stafford.*)
- 2.—Toronto Immigration Agent's Report—(*John A. Donaldson.*)
- 3.—Montreal Immigration Agent's Report—(*John J. Baley.*)
- 4.—Hamilton Immigration Agent's Report—(*R. H. Rae.*)
- 5.—Ottawa Immigration Agent's Report—(*W. J. Wills.*)
- 6.—Kingston Immigration Agent's Report—(*R. Macpherson.*)
- 7.—Halifax, N. S., Immigration Agent's Report—(*E. Clay.*)
- 8.—St. John, N. B., Immigration Report—(*R. Shires.*)
- 9.—Miramichi, N. B., Immigration Agent's Report—(*J. G. G. Layton.*)
- 10.—London Emigration Agent's Report—(*W. Dixon.*)
- 11.—Dublin Emigration Agent's Report—(*J. G. Meylan.*)
- 12.—Glasgow Emigration Agent's Report—(*R. Shaw.*)
- 13.—Belfast Emigration Agent's Report—(*C. Foy.*)
- 14.—Antwerp Emigration Agent's Report—(*E. Simays.*)
- 15.—Grosse Isle Quarantine Report—(*Dr. F. Mentzambert.*)
- 16.—Halifax, N. S., Quarantine Report—(*Dr. Gossip.*)
- 17.—St. John, N. B., Quarantine Report—(*Dr. Harding.*)
- 18.—Marine and Emigrant Hospital, Quebec—(*Dr. Wells.*)
- 19.—Report presented to Parliament by the Minister on the Census of 1871. ✓

REPORT
OF THE
MINISTER OF AGRICULTURE
FOR 1870.

To His Excellency, the Right Honorable John Baron Lisgar, of Lisgar and Bailieborough, in the County of Cavan, Ireland, in the Peerage of the United Kingdom of Great Britain and Ireland, and a Baronet, one of Her Majesty's Most Honorable Privy Council, Knight Grand Cross of the Most Honorable Order of the Bath, Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George, Governor General of Canada, and Governor and Commander-in-chief of the Island of Prince Edward, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY,

I have the honor to submit the Report of the Department of Agriculture for the Calendar year 1870 :

I. GENERAL REMARKS.

Two Acts of Parliament affecting the Department were passed during the last Session, namely, "The Census Act;" and "An Act respecting the marking of Timber."

The former provides for the taking of the first Census of the Dominion; and the latter makes needful provision respecting the marking of timber.

The steadily progressive increase of the regular work of the Department, which was noticed by my predecessor in his Reports for the years 1867 and 1868, and which I also pointed out in my last Report for 1869, continued during the year 1870.

The following tabular statement may be adduced in support of this remark:—

Years.	Total number of Letters Received.	Total number of Letters Sent.	No. of cases of Patents, Copyrights and Trade Marks.	Total number of Immigrants attended to.
1864	5,422	5,152	181	40,649
1865	6,694	7,638	200	47,103
1866	7,435	8,250	337	51,795
1867	7,571	10,679	840	57,873
1868	8,696	10,299	643	71,448
1869	9,516	13,654	965	74,365
1870	11,442	20,078	1,110	69,019

Out of the total number of letters received, 11,442, the number concerning the Census, including the Semi Official and other Correspondence of the Census Staff, may be computed at 1,000; and out of the total number 20,078 of letters sent, about 3,000 may be said to belong to the same category.

This great increase of Departmental Work has pressed very heavily upon the energies of all the officers of the Department, from the Minister and his Deputy downwards. Still further labor of an onerous character will be entailed by the Census for the two coming years.

II. AGRICULTURE.

1/3 P
 During the last summer there was an alarm in parts of Ontario respecting the appearance of what was feared to be a form of *Epizooty*, or "Cattle Plague," and the Department immediately entered into correspondence with the Government of the threatened Province with a view of having precautionary measures adopted, such as those which two years ago were so successful in protecting the country from an invasion of the "Texan cattle disease," which was then making havoc among the breeders and dealers in the Western States. The Commissioner of Agriculture of that Province caused an official investigation to be made, the result of which was communicated to the Department by the Lieut. Governor, through the Secretary of State for the Provinces; from which it appeared that the cause of alarm was not well founded. No trace was found in any part of the Province of any epidemic disease among cattle. Mr. Smith, Veterinary Surgeon, and Dr. Nichol, both of Toronto, commissioned by the Ontario Government, visited several of the supposed cases, and gave it as their opinion, that the symptoms complained of were attributable to the poisonous attacks of a species of fly, very prevalent last summer; that they were not dangerous; and that the animals attacked soon recovered, with the ordinary precautions of shelter and otherwise.

III. IMMIGRATION.

4 Q
 The immigration to the Dominion in 1870, did not exhibit the increase which was expected in 1869. Various causes may be assigned for this. The principal of these were the disturbed state of the Continent of Europe, and the revival of trade in Great Britain.

From the statistics which the Department has obtained from the Government Immigration Agents within the Dominion, it appears, however, that there was an increase in

the number of immigrants who arrived by the St. Lawrence route, over the year 1869, great as was the increase in 1869, over previous years. The following statement shows the number of arrivals by the St. Lawrence route, at the Port of Quebec, from the year 1854, to 1870 :—

YEARS.	ARRIVALS.
1854.....	53,180
1855.....	21,274
1856.....	22,439
1857.....	32,097
1858.....	12,810
1859.....	8,778
1860.....	10,150
1861.....	19,923
1862.....	22,176
1863.....	19,419
1864.....	19,147
1865.....	21,355
1866.....	28,648
1867.....	30,757
1868.....	34,300
1869.....	43,114
1870.....	44,475

The total number of immigrants who arrived in the Dominion from all quarters, during the calendar year 1870, was 69,019.

There was a marked decrease in the number of immigrants who entered Canada by the Suspension Bridge and the inland ports of the Dominion in 1870, not only as compared with 1869, but also as compared with either of the two previous years. The total number who thus entered in 1870, was 23,857.

The following statement shows the comparative number of immigrant arrivals for the last five years at all points of the Dominion, in so far as the Government Agents have been able to obtain information.

	1866.	1867.	1868.	1869.	1870.
<i>Via</i> the St. Lawrence	28,648	30,757	34,300	43,114	44,475
„ the Suspension Bridge and inland Ports of Ontario and Quebec	23,147	25,631	36,511	30,326	23,857
„ Halifax		781	366	448	437
„ St. John, New Brunswick		409	271	456	219
„ Miramichi				21	31
Total	51,795	57,578	71,448	74,365	69,019

Out of the 44,475 immigrants who landed at Quebec during the year 1870, 35,073 sailed from ports in the United Kingdom ; and of these, 31,747 came by the regular lines of steamships.

The employment of Steamships in conveying emigrants from the United Kingdom to North America, has greatly increased within the past few years. In 1863 the proportion of those who took passage in steamships to Canada, was only 45.85 per cent ; in 1865, it rose to 73.50 per cent. ; in 1867 it further increased to 93.16 per cent. ; and in 1869, it still further rose to 94.99 per cent. In 1870 it was 90.51 per cent.

The advantage to the emigrant arising from the use of steam instead of sailing vessels, is very great, although the cost of passage is much higher. Besides making a very great saving of time, a steam vessel brings a cargo of emigrants to port in a far better condition of health than a sailing vessel, and thereby lessens the danger of epidemics, as well for the emigrants as for the country which receives them. This important result is illustrated by the fact that the sickly passengers landed at Grosse Isle Quarantine Station, are almost invariably taken from sailing vessels, especially after long voyages.

The arrivals of emigrants in the Maritime Provinces, which have never been numerous, show a decline in 1870, as compared with 1869 ; in Halifax, N. S., this is very trifling, but in St. John, N. B., it is more than half ; the arrivals in Halifax in 1869 being 448, and in 1870, 437 ; and in St. John in 1869, 456, in 1870, 219. With respect to St. John it is, however, to be remarked, that the immigrants in 1870 are reported to have been *bonâ fide* settlers, while formerly that port was for the main part one of call, three-fourths of all those entering there, going on to the United States.

The advantages offered by the Dominion of Canada as a favorable field for settlers, appear to have excited interest in Great Britain. This fact is manifested by the action of numerous societies, which have been organized for the purpose of promoting emigration, and from the appearance of numerous pamphlets and other publications.

The Reports of the London Emigration Agent (Mr. Dixon) give an account of the organization and operations of a number of the Emigration Societies which have been formed in England. One of these, the "National Emigration League," sent in February, an influential deputation to wait on the Premier, with the object of soliciting public aid for promoting emigration. The deputation was introduced to Mr. Gladstone, by the Duke of Manchester, the President of the League. The memorial presented, setting forth the grounds of the request, is embodied in a Report of the London Agent which appears in an appendix, herewith. The application was subsequently brought up in Parliament, but not adopted.

The Dublin Emigration Agent (Mr. Moylan) whose labors are chiefly in the South of Ireland, states that when he first went there he found, especially among the peasantry, prejudices against Canada as a field for emigration ; but that these are losing their force in consequence of the spread of correct information through the press and other channels. The agent further states that he finds a disposition both on the part of the clergy and the press to aid him in his labors.

The Emigration Agent, at Belfast (Mr. Foy) states that the feeling in the North of

Ireland is very favorable towards Canada ; that the emigrants from that part of the country are of a good class ; and that the numbers who come would be very much increased if the fares, per steamship, could be placed at a lower price than six guineas.

The Report of the Glasgow Emigration Agent (Mr. Shaw) indicates that Scotland may supply a number of valuable settlers to the Dominion.

The Emigration Agent (Mr. Simays) sent to Belgium, reports a favorable disposition to emigrate to Canada among the dense and thrifty population of that Kingdom. Two Belgian immigrants have come to this country, as pioneers or delegates ; and the agent states that, upon their favorable report, depends the creation of a current of emigration from Belgium to Canada.

During the summer the Revd. A. Styleman Herring, incumbent of St. Paul's, Clerkenwell, London, who is very actively connected with the " Clerkenwell Emigration Society," came to the Dominion to learn from the immigrants themselves their opinions respecting their adopted country, and whether it would be advisable to assist others out. He visited many parts of Canada, and received a very favorable impression, as well of the condition of the newly arrived settlers, as of the country itself. This fact he has published in numerous letters to leading newspapers, and in public lectures, as also in a tract for distribution in which are inserted extracts from letters of settlers, showing that they had exchanged a state of want and misery for one of well-being.

The Clerkenwell Emigration Society assisted 746 persons to emigrate to Canada between April and August ; and Mr. Herring personally saw that, with insignificant exception, they were all doing well.

The Revd. Father Nugent, Chaplain of the Borough Gaol of Liverpool, also visited Canada during the summer, and went to various points. He delivered a number of lectures when here, in favor of an emigration of boys from the streets of large towns in England to this country.

Miss Macpherson came to this country last summer, with a number of boys whom she personally saw placed in situations. She brought out altogether 264. These boys had been picked off the streets, and from the " dens " of London ; they were without parents or relatives who cared for them ; and were placed during the winter, in the " Refuge and Home of Industry " in Commercial Street, Spitalfields, London, where their wants were provided for, and where they were educated and trained to habits of industry.

These boys were easily placed in situations on their arrival in this country ; and there have been numerous testimonies of their good behavior and usefulness. The County of Hastings officially offered Miss Macpherson a " Distributing Home " free of charge, the management of which would be placed entirely in her hands, provided she made that locality her point of distribution. She was also assured of the hearty co-operation of the individual members of the County Council. She accepted the offer, and the " Distributing Home " is now in operation.

Miss Rye, in the same way as Miss Macpherson, has frequently visited this country, bringing with her girls in considerable numbers, whom she has placed in situations in

different parts of the Dominion. Last summer she brought 253. With little exception they are reported to have done well.

Mr. Thomas Connolly, a delegate from working men's societies in London, has spent considerable time in the country in order to see its capabilities, climate and general fitness as a field of immigration for working men; and he will report his impressions on his return to England.

The "British and Colonial Emigration Fund," presided over by the Lord Mayor, and managed by a highly influential Committee, assisted, between the months of April and August last, 5,082 persons to come to Canada; and it has since published favorable accounts of the welfare of these emigrants.

The "Family Emigration from the East of London" Committee, of which the Hon. Mrs. Hobart is Treasurer, assisted to this country 974 persons, by the Allan steamships, between the months of April and September, 1870. From letters received in London they appear to have done well; and Mrs. Hobart is again asking subscriptions to continue her benevolent operations in 1871.

The following statement compiled from the returns of the Government Immigration Agent at Quebec, shows the number of assisted immigrants who arrived at that port during the year 1870:—

British and Colonial Emigration Fund	5,082
The Clerkenwell Emigration Society.....	746
Hon. Mrs. Hobart's Family Emigration from the East of London Committee.....	974
Miss Macpherson's.....	264
Bristol Emigration Club.....	114
Mrs. Thomas of Edinburgh.....	39
Working men's National Emigration Association and National League.....	501
Revd. Father Nugent.....	34
Miss Rye	253
Royal Dockyard Laborers.....	1,417
Other Societies and Institutions.....	363
Total.....	9,787

It may be remarked that these figures do not altogether agree with those published in the reports of the societies. The latter show a larger number than the Dominion Immigration Agent, at Quebec, records as having arrived.

There are other societies which have been formed, but which have not yet commenced their operations; and there may be others of which the Department has not yet received any report.

The total expenditure for immigration and quarantine purposes during the calendar year 1870, amounted to \$73,440.23, distributed under the following heads:—

Quebec Agency	\$31,000.30	
Montreal Agency	2,839.43	
Ottawa do	1,444.73	
Kingston do	888.23	
Toronto do	2,584.63	
Hamilton do	1,152.91	
Halifax, N. S., Agency	1,509.62	
St. John, N.B., do	1,055.25	
Miramichi, N.B., Agency	478.44	
European Agencies (amounts remitted)	13,594.55	
		<u>\$56,548.09</u>
Grosse Isle Quarantine	\$8,781.36	
Halifax do	2,328.56	
St. John, N. B., Quarantine	3,182.22	
Inspecting Physicians Quebec	2,600.00	
Total		<u>\$16,892.14</u>
		<u>\$73,440.23</u>

The sum of \$26,982.32, was expended during the year 1870, by the Dominion Government, through its Agents, in affording aid and free transport to over 12,000 indigent immigrants. Of this sum \$25,971.43 were spent at the Quebec Agency, and \$1,010.89 through the other agents.

In addition to the expenditure of the Dominion Government for immigration, the Governments of both Ontario and Quebec, made expenditures for the same purpose.

The Province of Ontario, during the calendar year 1870, as appears from its public accounts, spent \$24,382.05; out of which, \$11,150.03, were expended in provisions and transport for destitute immigrants, and \$601.88 in supplying them with medicines and medical attendance.

In the Province of Quebec, during the calendar year 1870, the sum of \$16,351 was expended for miscellaneous purposes in connection with immigration.

The amount of the capitation tax collected by the Dominion in 1870, was as follows:—

Quebec	\$41,746
Halifax, N. S.	457
St. John, N. B.	170
	<u>\$42,373</u>

This tax is not levied on infants, and, therefore, the amount collected will not agree with the total number of immigrant arrivals.

Against this there was the total expenditure before mentioned, of \$73,440.23; of which the expense at the agencies within the Dominion, including Quarantine, was \$59,845.68; and the expense of the European Agencies, \$13,594.55. Of the sum of \$59,845.68, for the Dominion Agencies and Quarantine, \$26,982.32 were paid, as before stated, in direct aid to immigrants.

The number of immigrants who passed through the Dominion, to proceed to the United States during the last five years, as ascertained by the Dominion Government Agents, may be stated as follows :—

1866.....	41,704
1867.....	47,212
1868.....	58,683
1869.....	57,202
1870.....	44,313

The number of those reported by the Dominion Agents to have settled in Canada during the same period of five years, was as follows :—

1866.....	10,091
1867.....	14,666
1868.....	12,765
1869.....	18,630
1870.....	24,706

It thus appears that there has been a steady and most gratifying increase as well in the numbers, as in the relative proportion of immigrants settling in Canada since 1866. The figures given, it is true, show simply the numbers of those who announced themselves as having come to settle in Canada ; and the natural subsequent movements of our population to and from the United States, may, to some extent, be held to affect their entire accuracy. Those movements, however, are in constant progress, and take place in both directions. It is not thought that they materially affect the question. And they certainly cannot do so at all, so far as the fact of this gratifying progress in favor of immigration to Canada is concerned. It may be added, that no means exist of ascertaining and recording arrivals of settlers along our inland frontier, except at those points mentioned in the reports of the Dominion Immigration Agents.

The national origins of the 44,475 immigrants landed at the Port of Quebec during the year 1870, as ascertained by the Dominion Agent at that port, were as follow:—

English.....	20,934
Irish.....	2,858
Scotch.....	3,279
German.....	595
Scandinavian.....	16,780
Other Origins.....	29
	44,475

It may be remarked with reference to the first item in the above classification, that some of the immigrants reported as "English" were not strictly speaking such. This remark specially refers to the Dock-yard labourers.

The trades and callings of the steerage male adults, were classified as follow :—

Farmers	4,144
Laborers	12,248
Mechanics	1,717
Clerks and Traders	146
Professional Men	10
	18,265

The number of deaths which occurred among the immigrants in the year 1870, during the voyage out is stated by the Quebec Agent to have been only 60 ; 52 of which were of children and infants. The number of deaths in steamers, (out of 33,164 passengers) having been only 11, or 0.03 per cent. ; the lowest average of mortality on record.

The deaths in Quarantine were also much below the ordinary rate, having been only six.

I have to record the death of the Kingston Immigration Agent, Mr. James Macpherson, which occurred on the 13th April last. After his death the duties of the Agency were satisfactorily performed by his brother, Mr. Richard Macpherson, who was appointed as his successor on the 1st January last, at the same salary.

The annual Reports of the Dominion Government Immigration Agents, are published in the Appendix herewith ; namely, from Mr. Stafford, for Quebec ; from Mr. Daley, Montreal ; from Mr. Wills, Ottawa ; from Mr. Macpherson, Kingston ; from Mr. Donaldson, Toronto ; from Mr. Rae, Hamilton ; from Mr. Shives, St. John, N. B. ; from Layton Miramichi, N. B. ; and from Mr. Clay, Halifax, N. S.

The annual reports of the Dominion Immigration Agents, resident in Europe, are also herewith published in the Appendix ; namely, from Mr. Dixon, London ; from Mr. Moylan, Dublin ; from Mr. Foy, Belfast ; from Mr. Shaw, Glasgow ; and from Mr. Simays, Antwerp.

In consequence of the disturbed state of the Continent of Europe, it was considered advisable to suspend the operations of the Antwerp Agent, Mr. Simays, and to recall, for the present, the Agent.

Mr. Simays accordingly closed his office in Antwerp at the end of the year, and returned to Canada.

A Conference was held in October last, in the room of the Minister of Agriculture, to consider matters relating to the more effectual promotion of immigration to the Dominion.

At this Conference the Dominion Government and the Governments of Ontario, Quebec and New Brunswick were represented. There were also present, the Rev. A. Styleman Herring, the Rev. Father Nugent, Col. Francis B. Maude, C.B., V.C. ; Mr. Thos. Connolly ; Mr. William Dixon, the Dominion Emigration Agent in London ; the several Immigration Agents of the Dominion ; and Mr. Thomas White, jun., late special Immigration Commissioner of the Province of Ontario. The question of immigration was

discussed in its various bearings, and suggestions were made as regards the future combined action of the Department and Provincial Authorities.

Arrangements have been made by the Local Governments of the Provinces of Ontario and Quebec, for ascertaining and recording at Quebec, Montreal, Ottawa, Kingston, Toronto and Hamilton, the number and description of the laborers wanted in the districts of country of which these cities are the centres.

The demand for immigrant labor both in Ontario and Quebec has been in excess of the supply.

The total number of immigrant laborers of all classes asked for in the returns from the Municipalities of Ontario for the year 1870 was :—

Agricultural laborers	14,407
Mechanics.....	1,192
Female servants	7,203
	22,802

The Hon. Mr. Carling, the Commissioner of Agriculture for that Province, expresses his belief, that at least 25,000 immigrants can be profitably absorbed and provided for during 1871.

In the Province of Quebec there is always a considerable demand (upon an average 5,000 a year) for farm laborers and female domestic servants.

The railways and other public works now in course of construction in all the Provinces of the Dominion will absorb a large amount of immigrant labor.

The cost of the Government Station for immigrants at Toronto was in round figures \$12,000. Toronto has hitherto been the largest distributing point for immigrants in the Province.

The Station is in every way well fitted for the intended purpose. It has sidings and platforms connected with three leading railways. The buildings of which it is comprised are seven in number, isolated from each other, and are of a convenient and substantial character. The dining hall is large enough to seat some hundreds. There are besides four large sleeping rooms, a cook-house, wash-house, water closets, &c., and good accommodation for luggage. It is proposed to build, during the coming season, an infirmary on the grounds ; which comprise seven and a half acres. The situation is healthy as well as convenient. The immigrants, as they arrive, have hitherto found immediate distribution.

It is proposed to erect accommodation on a similar scale at Point Levis, Quebec ; and also in a somewhat modified form at Montreal and Kingston.

IV. QUARANTINE.

GROSSE ISLE.

The return of vessels inspected at Grosse Isle during the season of 1870, shows a total of 49 ships carrying 13,136 passengers against 40 ships with 10,123 passengers in 1869,—an increase this year of 9 ships and 3013 passengers.

Amongst the ships from foreign ports, 9 had to undergo a regular quarantine, and 1, Quarantine of observation. 2717 immigrants were landed from the infected vessels; and they and their effects were cleansed, purified and disinfected.

The admissions to hospital in 1870 numbered 392; and the deaths 6; whilst in 1869 the admissions were 495; and the deaths 44.

The health, therefore, of the immigrants of the season may be considered to have been satisfactory. There was a number of severe cases of small pox amongst the Germans and Prussian Poles; but the other contagious diseases were of a less violent type than those remarked in previous years. The malignant typhus to which I had occasion to allude in my last report, as having been so prevalent in 1869, was fortunately absent in 1870.

Only one vessel carrying passengers from Great Britain, viz., the *S. S. Ganges*, had to land her passengers; in consequence of measles and modified small pox having broken out on board.

There was one unusual case of quarantine reported—that of the ship *Golden Age*, which performed quarantine for yellow fever; 3 deaths from that disease having taken place on the voyage from Rio de Janiero.

The Medical Superintendent, Dr. Montizambert, has complained of the extreme inconvenience to which he is subjected from want of a proper residence; and he mentions the fact that there is at present no provision, as there formerly was, for an augmentation of the medical staff in event of the breaking out of any serious epidemic, or the sudden increase, from any cause, of the work to be done at the station.

He suggests that the Medical Superintendent's House (destroyed by fire in 1869), should be rebuilt upon the old site.

The net expenditure at Grosse Isle during the season of 1870 was \$8,781.36.

The Superintendent states that 21 of the able-bodied men at the station have been formed into a detachment of the Quebec Brigade of Volunteer Garrison Artillery for service at Grosse Isle. In addition to being armed with breech-loading rifles, these men, who are attaining some proficiency in drill, have charge of a battery of 3 guns in position, which were left on the island when the last company of Royal Artillery was withdrawn. They are, therefore, competent to discharge the duties, in case of emergency, for which a force of Royal Artillery was for many years maintained at the Grosse Isle station.

HALIFAX.

There were (according to the Medical Officer's Report) several deaths at sea on board of vessels which touched at Halifax; but no death appears to have occurred actually in quarantine, in 1870, at this station.

Three cases of small pox are stated to have been brought into port during the year; the first on the 23rd March on board the *City of Brussels*, which put into harbor for the sole purpose of coaling; the second on the 16th April on board the *S. S. Delta*; and the last on the 1st of June on board the *S. S. City of Antwerp*.

In the first mentioned two cases, the Inspecting Port Physician did not consider himself justified in ordering the vessel to perform quarantine; and by permission of the city

authorities, who constituted the Board of Health, the passenger suffering from the disease was at once landed and conveyed to the city hospital, where he remained until recovery.

This course of action appears to have caused some alarm, and to have created some feeling among the citizens of Halifax. In view of this fact I caused enquiry to be made into the circumstances. Two letters from the Port Physician, describing the facts of each case, appear in the appendix to this report.

In the third case mentioned, that of the *City of Antwerp*, the civic authorities refused to allow the passenger to be removed to the city hospital. He therefore, remained on board, and every precaution was taken by the Port Physician to keep the case isolated, in order to prevent the spread of infection. The discharging of the ship's cargo, under proper guards, was superintended by the Port Physician, and the vessel took the patient away with her.

It is satisfactory to be able to add that no evil whatever resulted from the action of the Port Physician in the two cases to which I have referred.

It is further satisfactory to me to be at last able to state that the purchase of Lawlor's Island, which has been so long delayed in consequence of the difficulty of obtaining a good title, has been completed by the Minister of Public Works, for a quarantine station at the Port of Halifax. This will remove any further difficulties of the nature of those I have described. Lawlor's Island is well adapted for a quarantine station; and suitable buildings will be erected upon it.

The total expenditure for the year at this station was \$2,328.56.

ST. JOHN, N.B.—PARTRIDGE ISLAND.

During the season of 1870 no case of infectious disease requiring to undergo quarantine occurred on board any ship arriving in the port of St. John (N. B.), nor was it found necessary to detain any vessels further than the time necessary for purification.

This fact is gratifying, and of unusual occurrence at a port where there is a continual ingress and egress of shipping.

During the prevalence of small pox in New York at the beginning of the year, all passenger vessels from the United States were carefully inspected; and every possible precaution which lay in the power of the inspecting physicians was taken to arrest the disease.

The total expenditure at this station for 1870 was \$3,182.22.

V. MARINE AND EMIGRANT HOSPITAL AT QUEBEC.

On the 1st of January, 1870, there were reported to be in this Hospital 53 patients. The number of 1421 were admitted during the course of the year, making an aggregate of 1474 indoor patients, an excess of 113 over the number in 1869. Out of this number, 1375 were cured, 51 died and 48 remained in the Institution at the close of the year. The average duration of the sojourn of each patient in Hospital was $18\frac{1}{2}$ days; and the average mortality $3\frac{2}{3}$ per cent.

The admissions to the Hospital are thus classified :—

Seamen.....	888
Immigrants.....	124
Citizens and Residents.....	462
	1474

This number was composed of 1185 male adults, 245 female adults, and 44 children.

Their origins were :—

English.....	301
Irish.....	298
Scotch.....	210
Canadian.....	309
Other Countries.....	356
	1474

The expenditure incurred for the maintenance of this Institution during the calendar year 1870, was \$20,016 03, of which \$15,500.03 were defrayed by the Dominion Government.

The Report states that the Directors have adopted a new method of heating and ventilating the building, from which they anticipate favorable sanitary results.

As regards the internal economy and administration of the Hospital, they have nothing to add to the remarks upon the subject contained in former reports, beyond the fact that under a new system of contract, the expenditure in the item of Dictary has been reduced.

Very few cases of contagious disease were admitted into Hospital during the year 1870 ; and they were of such an unimportant character as not to call for any special report.

VI. CENSUS AND STATISTICS.

The compilation and arrangement of vital Statistics referred to in the last two reports of this Department have been steadily carried on by the small Staff assigned to this work.

The valuable Statistical tables of the French population, commencing with the earliest date of immigration in the year 1608, down to the present period, have been carefully compiled, and revised by comparison with a number of contemporary documents. They are now complete, and ready to be printed.

They present a complete chain of documentary evidence for a period of 250 years. During the earlier portion of this time the settlements were subject to the incursions and ravages of the Indians. But the system of registration remained unbroken ; and it might be very well taken as a model for the future.

Since my last report, Statistical records of the early settlements in Nova Scotia and New Brunswick, commencing with the year 1712, have been procured ; and they are now added to the Canadian records in the Department.

Tables of the British population of the Province of Quebec have been compiled for the period from the year 1763, to the Census of 1861, in so far as documentary evidence could be obtained.

Similar tables have been carefully compiled of the population of the Province of Ontario from the year 1824, to the present date, in so far as the records could be procured. The period of British settlement of that Province dates back to the year 1783; yet no records of the progress of the population for that time to the year 1824 can be found. The population is spoken of as amounting at various periods to certain given numbers; but no data have been discovered on which it has been possible to base any Statistics of value. Evidence such as that afforded by the Church Registers of the French population is not found; or at least is found only to a very limited extent, in Upper Canada.

The annual tabulated statements respecting Gaols, Penitentiaries, Division Courts, Agricultural Stocks, Inquests, &c., &c., have been continued; and they annually become more valuable from their increasing approximation to completeness and correctness; but they have not yet arrived at a point of sufficient exactness to justify publication.

The work of abstracting and tabulating all the previous Censuses of the four Provinces of the Dominion, has been both long and laborious; but it is now nearly completed, and will be ready in time to publish in conjunction with the final report of the forthcoming Census; so as to present as complete a history as possible of the progress of settlement and population from the time of Champlain to the present.

The taking of the first Census of the Dominion of Canada will commence within the time prescribed by the Act; that is before the first of May next.

The system which, after very careful consideration, has been adopted, is that which is known among Statists as the *population de droit* or *de jure*; that is the legal or domiciled population, as being the best adapted to the circumstances of the Dominion.

A series of nine Schedules has been carefully prepared for obtaining the number of the population, the vital statistics, and the statistics of products and property of the Dominion.

A plainly written Manual to explain the whole has been prepared and printed for the use of the Census officers, and generally for spreading information on the subject.

A *resumé* of the Schedules printed on a single sheet of paper is to be distributed from house to house throughout the Dominion; and a set of specimen filled Schedules to illustrate the manner of filling them in actual practice is to be distributed among the persons to be employed in taking the Census.

The schedules which are distributed throughout the Dominion, from house to house, will allow every one to acquaint himself with the questions which he is compelled by law to answer, and to prepare himself, whether by writing down or charging his memory, or by leaving orders at his house, for the visit of the Enumerator. In this way it is believed that mistakes will be avoided, which otherwise would be sure to arise from sudden questioning; and that the time necessary for taking down the answers will be materially shortened.

The persons to be employed in taking the Census will consist of Staff Officers, Commissioners and Enumerators.

Of the Staff Officers 13 have been selected from the Dominion, namely: five from

Ontario, four from Quebec, two from New Brunswick and two from Nova Scotia. These gentlemen have spent considerable time at the seat of government in studying census matters, assisting at the final consideration of the schedules and manual of instructions, and specially pointing out the circumstances and requirements of the several sections of their respective provinces. They are to act in the several Census Districts set apart as the fields of operation; and their duties will be to confer with the Commissioners,—to impart to each of them the advantage of their own labors and studies,—and generally to superintend the work of taking the Census. They will, in a word, represent the Department in the territorial divisions assigned to each of them.

A Commissioner will be appointed for each Census District; and the number of these is 206.

It will be the duty of the Commissioners to hold conferences with the Staff Officers; and when they have become fully imbued with a knowledge of the schedules, the manual of instructions, and details of census taking, they, in their turn, will hold conferences with the Enumerators in their respective Districts, in order to afford them the same course of instruction.

The number of Enumerators employed throughout the Dominion will be about three thousand.

The law devolved upon the Department the duty of dividing the several Provinces into Census Districts, and of sub-dividing these again into Census Sub-districts. This duty has necessitated much enquiry and labor, in which the Staff Officers have assisted. Every effort has been made to lay out the country in the most convenient manner possible, not only for the taking of the present Census; but also as far as may be, for future statistical purposes. And for more perfect assurance of accuracy, each Census Commissioner is to be furnished with a sketch map of his District, on which not only the Sub-Districts, but also the limits to be assigned to each Enumerator, will be carefully laid down.

It may be remarked, in reference to the work that has been done, that there was no previous machinery of any kind for taking the Census. Everything had to be created; the territorial divisions had to be defined and described and mapped, from very irregular, and in many cases, very imperfect records; the system on which the Census is to be taken had to be decided upon, and schedules prepared, those employed on the occasion of taking the previous census being of no use whatever.

The time allowed by the Act, being barely twelve months, was too limited for so vast an undertaking, without placing an undue pressure upon the energies of the Department; nevertheless I feel confident that the whole will be ready within the time allowed.

Besides the labor which I have indicated, it may be added that every person to be employed in the taking of the census has had to be educated to his duties; (the instruction of the Staff Officers has been already completed). Every document has to be translated. The magnitude of the printing may be gathered from the fact that over 2,000 reams of paper will be required; and the weight of the various packages of documents, &c., to be distributed over the Dominion, will be about 40 tons.

I think it right in this place to specially acknowledge the very great and valuable service rendered by the Deputy Minister in this most laborious undertaking.

As connected with general statistics, I may venture to express the hope that the working of the different parts of the system which has been adopted, will have a favorable effect that will extend far beyond the taking of the approaching Census ; in that, it will impart to all classes of society, more thorough information on the subject than has ever been attempted before in the Dominion.

VII. PATENTS.

The number of patents issued in 1870, as compared with 1869, shows a decrease, as will appear from the following table. But the number of caveats this year was more than double those of the previous year.

The whole amount for registration and fees received, including the Copyrights and Trade Marks' branch, shows an aggregate increase as compared with the previous year.

The slight decrease in the number of Patents granted cannot be assigned to any known cause, unless it may be owing to the present much more severe preliminary examination than that under the old system. It has, however, been found that when a Patent Office reaches an extension as great as that of the Dominion, there are always fluctuations observed from year to year.

The following is a tabular statement of the proceedings of the Patent Office for the past 16 years :—

	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.
Applications for Patents..	99	120	126	116	142	170	160	180	207	170	184	274	339	570	781	626
Patents granted.....	92	108	115	98	112	150	142	100	156	145	102	263	218	546	580	556
* Caveats.....															60	132
Transfers Registered.....	32	52	54	35	26	47	56	72	78	74	70	126	193	337	470	431
Designs Registered.....							2		4	1	1		5	6	12	24
Trade Marks Registered..							3	17	1	7	16	65	54	32	50	72
† Copyrights.....														34	62	66
Fees Received.....	\$ 1911 80	2370 80	2406 76	2105 00	2479 75	2644 07	3012 70	3650 90	3759 90	3267 95	3618 76	6132 78	8110 00	11052 00	14214 14	14540 07

* There were no Caveats provided for in the old Law.

† Transferred from the Department of the Secretary of State.

The 556 Patents issued during the year 1870, are classified in the Model room under the following heads:—

Classified list of Patents of Invention, 1870.

1	Agriculture, including implements and operations.....	123
2	Metallurgy and manufacture of Metals.....	33
3	Manufacture of fibrous and textile substances.....	20
4	Chemical processes, manufactures and compounds.....	27
5	Calorifics, comprising lamps, stoves, &c., &c., &c.....	61
6	Steam and gas engines.....	20
7	Navigation and maritime implements.....	7
8	Mathematical, philosophical and optical instruments.....	2
9	Civil engineering and architecture.....	40
10	Land conveyance.....	42
11	Hydraulic and Pneumatic.....	21
12	Lever, screw, and other mechanical power.....	4
13	Grinding mills and mill gearing.....	5
14	Lumber, including machine and tools for preparing and manufacturing.....	35
15	Stone and clay manufactures.....	8
16	Leather, including tanning, dressing, and manufacture.....	9
17	Household furniture, machine and implements for domestic purposes.....	55
18	Arts, polite, fine and ornamental.....	6
19	Fire-arms and implements of war.....	1
20	Surgical and medical instruments.....	2
21	Wearing apparel, including implements for manufacturing.....	2
22	Miscellaneous.....	33
Total.....		556

The records and models of the Nova Scotia and New Brunswick Patent Offices have been transferred to this Department, pursuant to the requirements of the present law. The arrangement and indexing of the records made a part of the labors of the Department during the year; but the work is not yet completed; the pressure of business on the small staff of officers in the model rooms not having allowed sufficient time for a task presenting difficulties and requiring care.

The model rooms are constantly increasing in interest; and they every day attract more and more attention from the public. Not a day passes without the rooms being visited by a number of people, many of whom take notes and make a careful study of the mechanical skill exhibited by the collection.

The total number of patents recorded in the Dominion Patent Office, as now constituted, is 4726. These include the Patent records of the late Province of Canada, those of Ontario and Quebec, Nova Scotia and New Brunswick. Of the total number stated 3,324 were issued under the authority of acts of the late Province of Canada; 230 under the authority of the Patent Act of Nova Scotia; 267 under the law of New Brunswick, and 905 under the present Patent Act of 1869.

Out of the total number of 4,726 patents, 944 are without models, being of such nature as not to admit of models being furnished; or not requiring any; or for which models have not been exacted from the patentees.

The model rooms contain 4,043 models; of which 261 do not belong to patents granted but are connected with pending applications, or applications refused or withdrawn; and 3,782 belong to the records of registered patents.

These 3,782 models may be thus classified: 2,887 are models connected with patents issued under the law of the former Province of Canada; 7 with patents of the Province of Nova Scotia; 195 with patents of the Province of New Brunswick; and 693 with patents issued in virtue of the present Act since July 1st, 1869.

All the classified models are in perfect order and arranged in such manner that any one of them may be easily and immediately consulted.

VIII. COPYRIGHTS, TRADE MARKS AND INDUSTRIAL DESIGNS.

It has been found necessary to separate this branch of the Department from the Patent branch of which it formerly formed a part, and to make it into a distinct one, in consequence of the increasing number of copyrights and industrial designs.

The duties of the officer, to whom the new branch is entrusted, comprise the registration of copyrights, trade marks, industrial designs and the certificates of registration to be delivered by him; together with the making up of the indices, the correspondence in both languages in connection with these subjects, and verbal information almost daily required to be given to the public.

The "Act respecting the marking of timber," which was passed during the last session of Parliament, obliges every person engaged in the business of lumbering or getting out timber, and floating or rafting the same in the inland waters of Canada, within the Provinces of Ontario and Quebec, to register the mark or marks adopted by the owners to distinguish such property.

The registration of these timber marks, the certificates to be delivered of the same, and all correspondence connected therewith, form also a part of the duties of the officer in charge of this new branch.

The copyright Act requires that every applicant for a copyright must accompany his application with two copies of the work intended to be copyrighted. One of these copies is deposited in the hands of the Librarian of Parliament, by the officer in charge of copyrights, who receives an acknowledgment of the same, the other is kept of record in the office of copyrights.

In this way, if the increase continues in the same ratio as in the past three years the Library of Parliament and the Department will be enriched by a valuable collection of Canadian works of science, arts and manufactures, literature, music, chromos, photographs, &c., which will be considerable. The number of books, pieces of music, paintings, photographs, and statuettes already deposited in the Department now amounts to 160.

The following table shows the number of letters received, letters sent, copyright registered, certificates of copyrights, trade marks registered, certificates of trade marks,

industrial designs, and certificates of industrial designs, timber marks registered and certificates of timber marks, during the year 1870, as compared with the two previous years :—

	1868.	1869.	1870.
Letters received.....	110	198	473
Letters sent.....	128	211	473
Copyrights Registered.....	34	62	66
Certificates of Copyrights.....	34	62	66
Trade Marks Registered.....	32	50	72
Certificates of Trade Marks.....	32	50	72
Industrial Designs Registered.....	6	12	24
Certificates of Industrial Designs.....	6	12	24
Timber Marks Registered.....			190
Certificates of Timber Marks.....			190

Forming the appendix of this report will be found the annual special reports of the officers at the head of the several branches of the outside service of the Department.

The whole of which is respectfully submitted.

CHRISTR DUNKIN.

DEPARTMENT OF AGRICULTURE,
OTTAWA, 1871.

APPENDIX No. 1.

ANNUAL REPORT OF QUEBEC IMMIGRATION AGENT.

(MR. L. STAFFORD.)

GOVERNMENT IMMIGRATION OFFICE,
QUEBEC, 17th January, 1871.

SIR,—I have the honor to forward you by this day's mail :—

1st. My annual report for 1870, accompanied with the usual tables.

2nd. Statement of expenditure at the various Agencies in Quebec and Ontario, up to the 30th June, and Quebec Agency to 31st December, 1870.

3rd. Statement of expenditure at Quebec Agency for the year ending 31st December, 1870.

4th. Statement of expenditure at the Quarantine Station, Grosse Isle, for season, 1870.

5th. Statement of expenditure for Inspecting Physician's and boats' crew, 1870.

6th. Statements of payments made through this office on account of the European Agencies.

Trusting that these documents may be found satisfactory, and meet your approval.

I have the honor to be, Sir,

Your obedient Servant,

(Signed,)

L. STAFFORD,
Immigrant Agent.

J. C. Taché, Esq.,
Deputy Minister of Agriculture,
Ottawa.

GOVERNMENT IMMIGRATION OFFICE,
QUEBEC, 16th January, 1871.

SIR,—I have the honor to submit for the information of the Honorable Minister of Agriculture and Immigration, a report of the number of immigrants landed at Quebec during the season of 1870. Classified as usual under various heads, shewing their destination as correctly as possible, with statements of expenditure for emigration purposes at this Agency, and for the Inspecting Physicians at Quebec, and the Quarantine Establishment at Grosse Isle for the season ending 31st December, 1870 ; also statements shewing the amount paid through this office for the various Immigration Agencies in the Provinces of Quebec and Ontario, and European Agencies for the six months ending 30th June, 1870 ; since which period these accounts are kept by the Department at Ottawa.

By referring to Table No. 1 you will perceive that the total of arrivals was as follows :—

	Cabin.	Steerage.	Total.
Add births at sea	2,216	42,274 49	44,490 49
Deduct births at sea and in Quarantine	2,216	42,323 64	44,539 64
Total	2,216	42,259	44,475

The arrivals, compared with those of 1869, shew an increase of 1,361 souls.

Comparative Table of arrivals, 1869 and 1870 :—

Where from.	1869.		1870.		Increase.	Decrease.
	Cabin.	Steerage.	Cabin.	Steerage.		
England.....	1,525	26,351	1,697	25,486	.....	693
Ireland.....	231	2,512	194	2,340	.....	209
Scotland.....	210	2,657	325	5,031	2,489	.....
Total from United Kingdom.....	1,966	31,520	2,216	32,857	2,489	902
Germany.....	.....	1,073	.....	411	.....	662
Norway, &c.....	12	8,541	.....	8,985	432	.....
Other Countries.....	.....	2	.....	6	4	.....
	1,978	41,136 1,978	2,216	42,259 2,216	2,925	1,564
		43,114		44,475		

Shewing an increase of 1,587 in the emigration from the United Kingdom, and a decrease in that from foreign ports of 226. Total increase, 1,361.

The emigrants were conveyed in 86 steamers of 123,813 tons, and 74 sailing vessels of 52,665 tons.

The average passage of mail steamers was, from Liverpool, 11 days, Londonderry, 10 days. Extra steamers from Liverpool, 13 days; Glasgow, 14½ days; London, 19 days; Dublin, 14 days; and H. M. transports, 15½ days.

The average passage of sailing-ships from the United Kingdom, was 39 days; from Germany, 63 days; and from Norway 53 days.

The first passenger-ship of the season was the sailing-ship *Lake Ontario*, which arrived on the 21st April, and the last vessel the steamship *Moravian* reached port on the 13th November.]

The number of cabin and steerage passengers by each line of vessels, was as follows :—

	Cabin.	Steerage.	Total.
Allan line mail steamers.....	1,773	14,658	16,431
do Extra steamers from Liverpool.....	52	4,621	4,673
do Glasgow line occasionally touching at Liverpool, Londonderry and Dublin.....	329	5,493	5,822
London line of steamers.....	44	4,777	4,821
H.M.S. troop-ships.....	.....	1,417	1,417
Sailing vessels from United Kingdom.....	18	1,891	1,909
do do Germany.....	.....	411	411
do do Norway.....	.....	8,985	8,985
do do Other Countries.....	.....	6	6
	2,216	42,259	44,475

The nationalities of the passengers brought out by each line was as follows :—

	English.	Irish.	Scotch	Germans.	Norwegians.	Other Countries.	Total.
Allan line mail steamers, Liverpool and Londonderry	11,187	1,812	.....	127	3,282	23	16,431
Allan line extra steamers	1,694	170	204	19	2,586	.....	4,673
do Glasgow steamers.	140	715	3,016	38	1,913	.....	5,822
London line.	4,625	144	38	.....	14	.....	4,821
H.M.S. Transports.	1,417	.....	.....	.....	.....	.....	1,417
Sailing vessels from United Kingdom	1,871	17	21	.....	.....	.....	1,909
Germany sailing vessels. ....	.....	.....	.....	411	.....	.....	411
Norway do .....	.....	.....	.....	.....	8,985	.....	8,985
Other Countries sailing vessels .....	.....	.....	.....	.....	.....	6	6
	20,934	2,858	3,279	595	16,780	29	44,475

The nationalities of the immigrants of 1870, compared with those of 1869, were as follows :—

	1869.	1870.
English.	14,691	20,934
Irish.	3,339	2,858
Scotch.	2,274	3,279
Germans.	1,959	595
Norwegians, Swedes, &c.	20,129	16,780
Other Countries.	222	29
	43,114	44,475

I may add that a considerable number of those assisted out by the British and Colonial Emigration Fund, as well as the dock-yard hands, by Her Majesty's Troopships, were Irish. They were entered on the passenger lists as English, and are placed so in these tables.

The immigrants of 1870 were extremely healthy, only 60 deaths having occurred on the passage, and 4 at Quarantine, of which 52 were children and infants.

In Table No. 2 will be found a comparative statement of the number of passengers from each port in 1869 and 1870.

Table No. 3 gives the trades and callings of the steerage male adults, which may be classified as follows :—

Farmers	4,144
Laborers	12,248
Mechanics	1,717
Clerks and Traders	146
Professional Men	10
	18,265

Table No. 4 shows the number of immigrants arrived at Quebec from 1829 to 1870 inclusive, giving an aggregate of 1,216,050, making a yearly average of 28,954.

The following table gives the number of Emigrants assisted by various Societies in Great Britain, who furnished us with lists of the people they sent out.

Date of Arrival 1870.	Ship's Name.	By whom Sent.	Sexes.			Total number of Souls.
			Males.	Females.	Children.	
April 27.	S. S. Austrian	Rev. Mr. Herring	34	5	2	41
	"	Lady Hatherton, Shanklin, Isle of Wight	15	8	15	38
" 28.	Ship " Lake Erie	Miss Logan	6			6
" 29.	S. S. Ottawa	Working Men's National Emigration Association	22	6	16	44
May 2.	" Medway	Paisley Society	15	9	25	49
" 5.	" European	British and Colonial Emigration Fund	230	173	97	500
" 5.	Ship Lake Superior	Hon. Mrs. Hobart's Committee	102	82	144	328
" 9.	"	Bristol Club	19	8	21	48
" 9.	S. S. Nestorian	Working Men's National Emigration Association	2	1	4	7
" 11.	" St. Andrew	British and Colonial Emigration Fund	10	10	26	46
" 16.	" Tweed	Rev. Mr. Herring	35	29	53	117
" 16.	"	Working Men's National Emigration Association	2	2	5	9
" 16.	"	Lady Spottiswood, Aberdeen	14	15	28	57
" 17.	" Scandinavian	British and Colonial Emigration Fund	98	100	278	476
" 17.	"	Indian Mutiny Fund	5			5
" 17.	"	Forest Gate Union	4			4
" 17.	"	British and Colonial Emigration Fund	26	20	58	104
" 17.	"	Rev. Mr. Herring	14	5	4	23
" 17.	"	Boys' Home, Southampton Street, London	62			62
" 19.	" Ganges	British and Colonial Emigration Fund	187	180	351	718
" 21.	"	Highgate Refuge	13			13
" 21.	" St. Patrick	Boy's Refuge, Whitechapel	5			5
" 24.	" Peruvian	Mrs. Thomas (Edinburgh)	4	4	17	25
" 30.	" Nova Sootian	Miss Macpherson	104	2		106
" 30.	"	Mrs. Thomas (Edinburgh)	6	3	5	14
" 30.	"	Rev. Mr. Herring	20			20
" 30.	" Moravian	Lady Spottiswood (Aberdeen)		3	5	8
" 30.	"	British and Colonial Emigration Fund	46	35	69	150
" 30.	"	Rev. Mr. Herring	14	6	11	31
" 30.	"	Ragged School, London	19	13		32
" 30.	"	Market Weighton Reformatory, Yorkshire	4			4
" 30.	"	Bristol Club	2	2	2	6
June 2.	" Avon	British and Colonial Emigration Fund	116	106	272	494
" 6.	" Austrian	British and Colonial Emigration Fund	69	58	143	270
" 6.	"	Bristol Club	6	5	11	22
" 9.	" Ottawa	Rev. Mr. Herring	9	7	7	23
" 13.	" Prussian	Mr. Shaw (Glasgow)	1	2	3	6
" 13.	"	Hon. Mrs. Hobart's Committee	96	87	157	340
" 13.	"	Rev. Mr. Herring	49	36	55	140
" 13.	"	British and Colonial Emigration Fund	26	15	25	66
" 13.	Ship Strathblane	Bristol Club	14	6	18	38
" 15.	S. S. St. David	Working Men's National Emigration Association	62	31	69	162
" 15.	"	Rev. A. W. Leet (Landford)		6		6

The following table gives the number of Emigrants assisted by various Societies in Great Britain, &c.—Continued.

Date of Arrival 1870.	Ships Name.	By whom Sent.	Sexes.			Total number of Souls.
			Males.	Females.	Children.	
June 16.....	H. M. S. Tamar ..	Emigration Board, London ..	184	114	203	501
„ 21.....	S. S. Nestorian ..	Rev. Mr. Herring.....	10	5	8	23
„	„	Hon. Mrs. Hobart's Committee.....	1			1
„	„	British and Colonial Emigration Fund.....	3	4	10	17
„ 24.....	„ St. Andrew ..	Mr. Shaw (Glasgow).....	8			8
„ 27.....	H. M. S. Crocodile ..	Emigration Board, London ..	291	233	387	916
„ 28.....	S. S. Scandinavian ..	Rev. Mr. Herring.....	26	20	26	72
„ 29.....	„ Medway ..	British and Colonial Emigration Fund.....	160	124	280	564
July 4.....	„ Peruvian.....	Rev. Mr. Herring.....	18	2	4	24
„	„	Ragged School (London).....	18			18
„ 11.....	„ Moravian ..	Rev. Mr. Herring.....	8	2		10
„ 13.....	„ Tweed ..	British and Colonial Emigration Fund.....	133	115	241	489
„ 14.....	„ Ganges.....	British and Colonial Emigration Fund.....	206	155	355	716
„ 18.....	„ Austrian ..	Rev. Mr. Herring.....	8	3	5	16
„ 25.....	„ Prussian ..	„	8	4	8	20
„	„	Miss Rye.....	10	20	120	150
„	„	Dungannon Union ..		4	4	8
„ 27.....	„ St. David ..	Mr. Shaw (Glasgow).....	5	3	6	14
„ 31.....	„ Nestorian ..	Rev. Mr. Herring.....	6	1	1	8
„	„	Miss Macpherson ..	64		5	69
August 3...	„ Atlas ..	British and Colonial Emigration Fund.....	83	62	122	267
„ 7...	„ Scandinavian ..	Hon. Mrs. Hobart's Committee.....	52	51	97	200
„	„	Mount St. Bernard Reformatory (Leicestershire).....	2			2
„	„	Market Weighton Reformatory (Yorkshire).....	6			6
„ 8...	„ Avon ..	British and Colonial Emigration Fund.....	52	42	71	165
„ 8...	Ship Lake Superior ..	Working Men's National Emigration Association.....	10	8	16	34
„ 10...	S. S. St. Patrick ..	Mr. Shaw (Glasgow).....	4	4	3	11
„ 15...	„ Peruvian.....	Rev. Mr. Herring.....	69	33	44	146
„ 20...	„ Medway ..	British and Colonial Emigration Fund.....	10	3	11	24
„ 22...	„ Moravian ..	Hon. Mrs. Hobart's Committee.....	17	21	33	71
„	„	Rev. Mr. Herring.....	14	6	12	32
„ 28...	„ Austrian ..	Rev. Mr. Nugent (Liverpool).....	13	8	13	34
September 3	„ Tweed ..	British and Colonial Emigration Fund.....	3	4	9	16
„ 4	„ Prussian ..	Miss Macpherson ..		37	32	89
„ 11	„ Nestorian ..	Hon. Mrs. Hobart's Committee.....	8	8	19	35
„ 12	Ship St. Leonards ..	Working Men's National Emigration Association.....	90	24	40	154
„ 20	S. S. Scandinavian ..	National Emigration League ..	17	12	14	43
October 3...	„ Moravian ..	„	5	3	10	18
„ 9...	„ Austrian ..	„	5	3	1	9
„ 17...	„ Prussian ..	„	4			4
„ 26...	„ Nestorian ..	Mount St. Bernard Reformatory (Leicestershire).....	3			3
November 9	„ Peruvian ..	Miss Rye ..		13	90	103
„ 13	„ Moravian ..	National Emigration League ..	4	4	6	14
			3,225	2,260	4,302	9,787

The whole of the above (with the exception of 38 souls, who were sent out by Lady Hatherton, whose passages were paid through to Toronto, and 38 children and 2 single women of Miss Rye's last lot, who went to St. John, N. B.) were assisted with free transport by the Department.

The sum of £1841 16s. 11*d.* sterling, equal to \$8,963.60 was remitted out to me by the British and Colonial Emigration Fund, and £388 5*s.* sterling, equal to \$1,889.19, by the Hon. Mrs. Hobart's Committee, for the use of the people sent out by them, which was paid to them on arrival.

The dockyard laborers and mechanics sent out in H.M.S. transports, received the sum of 10*s.* sterling per adult, and 5*s.* each child over one year of age from the paymasters of the vessels.

The assisted people of this year were, generally speaking, of a better class than those of former years. They were well selected, the heads of families, all in the prime of life, and many of the male and female children old enough to take situations as farm servants, &c. At present, when labor of all kind is in such demand, their accession must prove a great benefit to the country. A considerable number of those from the British and Colonial, the Hon. Mrs. Hobart and the Rev. Mr. Herring, were the wives and children of people assisted in former years, coming to join their husbands, many of whom remitted money home to assist the emigration of their families.

Those assisted from Aberdeen, Paisley, &c., through Mr. Shaw, were going to the Eastern townships, near Lake Megantic, where there is a Scotch settlement, and where arrangements had been made to receive and provide them with immediate employment. I am informed they are now all provided with farms and log houses, and have made considerable progress in clearing land for Spring operations.

The amount spent in free transport this season is larger than usual, which may be accounted for by the increased number of assisted emigrants, sent out by the various societies.

The total number assisted with free transport by this office was 11,491, viz. :—

Males	4,084
Females	2,686
Children	2,871
Infants	1,850

11,491 souls ;

Equal to 8,205½ adults, at a total cost of transport of \$25,971.43, averaging \$2.26 per capita or \$3.16½ per adult.

Their nationalities were—

English	11,070
Irish	162
Scotch.....	240
Germans.....	10
Norwegians	9

11,491

They were forwarded to the following places in the Dominion :—

Eastern Townships	313½	adults.
Montreal	818	”
Gaspé District	7	”
Central Districts east of Toronto.....	2,332½	”
Toronto	4,026½	”
West of Toronto	699½	”
Lower Provinces	7½	”
Liverpool, England	1	”

8205½ adults.

The total expenditure for immigration and quarantine purposes paid through this office was :—

Hamilton Agency, 6 months ending 30th June...	\$541 82	
Toronto " " " " ...	1,262 00	
Kingston " " " " ...	240 18	
Ottawa " " " " ...	600 34	
Montreal " " " " ...	1,206 98	
		3,851 32
Quebec Agency, year ending 31st December :		
Transport of immigrants.....	25,971 93	
Provisions and Board for do.	244 15	
Incidental expenditure	1,298 42	
Agency charges	835 80	
Salaries of officers.....	2,603 14	
		30,953 44
Quarantine Establishment, Grosse Isle	8,781 36	
Inspecting Physicians, Quebec	2,600 00	
		11,381 36
Paid on account of European Agencies		300 00
		<u>\$46,486 12</u>

The amount of emigrant tax collected at the Custom House, Quebec, was \$41,746.

The general destinations of the steerage passengers landed at Quebec in 1870, compiled from returns furnished by the Grand Trunk authorities at Point Levis was as follows :—

PROVINCE OF QUEBEC :—	Adults.	
Eastern Townships	512	
Montreal	2,063½	
Gaspé Districts.....	7	
		<u>2,582½</u>
PROVINCE OF ONTARIO :—		
Central Districts east of Toronto.....	3,238	
Toronto.....	6,068½	
West of Toronto	2,303½	
		<u>11,610</u>
LOWER PROVINCES		50
Total Canada.....		<u>14,242½</u>
EASTERN STATES	2,149	
WESTERN STATES	14,562	
		<u>16,711</u>
Unaccounted for		3,711
		<u>34,664½</u>

Of the 3,711 adults unaccounted for, we may fairly presume that the greater portion remained in Canada; parties destined for the United States generally hold through tickets and seldom remain over here, whilst many families and single men bound for places in Canada remain over a day or two at Point Levis, or cross over to Quebec for letters, &c., and either proceed on by boat or the usual local trains; they are consequently not included in the Grand Trunk returns which only gives those going by special emigrant trains.

We may therefore conclude that at least 3,000 of those unaccounted for in the returns given, remained in Canada, which would make 17,242 adults, equal to 22,122 souls as the approximate number remaining in the country, of the steerage passengers of 1870.

Several of our manufactories received a supply of skilled labor from the immigration of 1870. Our towns and villages have also received a large number of valuable mechanics and the ordinary laborers and navvies found ready employment on the various lines of Railways under construction in Ontario.

The demand for ploughmen, good farm hands, and female servants, however, was only partially supplied. The Eastern Townships, the Ottawa district, and other portions of Central Canada, (not to speak of Toronto and west of it) only received a few hundred each of this class, where many thousands were required.

If the farm laborers of Great Britain could be convinced of how much it would be to their advantage to transfer their labor to this country, I have no doubt much larger numbers would emigrate. On their arrival here they would be sure of immediate employment at wages far beyond what they could ever hope to obtain in the old country, and the certain prospect that, if steady and industrious they would, in a few years, become the owners of farms and employers of labor themselves. These and female farm servants are the classes most wanted, and whose introduction would confer the greatest benefit on the country.

The prospects for 1871 are very encouraging. At no period in the history of the country was there so great a demand for farm hands and male and female servants, whilst the various lines of railways now under construction, or proposed to be built, will, for years, absorb a vast amount of skilled and unskilled labor.

The whole respectfully submitted,

I have the honor to be, Sir,

Your obedient servant,

(Signed,) L. STAFFORD,

Emigration Agent

J. C. TACHÉ Esq.,

Deputy Minister of Agriculture and
Immigration, &c., Ottawa.

RETURN of the number of Emigrants embarked for Canada, with the number of Births and Deaths during the voyage and in quarantine; the total number landed at Quebec, distinguishing Males from Females and Adults from Children, with the number of souls from each country; also, the number of vessels arrived, their tonnage and average length of passage, during the season of 1870.

Whence. Class.	No. of Vessels.	Average No. of days of passage.	Tonnage	Numbers embarked.						Births.		Total No. of souls on board.	Deaths on passage.				
				Cabin Passengers.	Adults.		Children from 1 to 12 years.		Infants.	Total Steerage.	M.		F.	Adults.		Children.	
					M.	F.	M.	F.						M.	F.	M.	F.
England { Steamers	60	133	97,354	1,679	10,485	5,900	2,900	2,931	1,423	23,639	6	25,324	1	1	1	9	11
England { Sailing Vessels	17	34	17,501	18	975	353	220	194	117	1,859		1,877	1	2	3	6	6
Ireland { Steamers	.....	113	.....	194	1,827	742	124	96	74	2,353		2,517	.....	.....	.....	.....	.....
Ireland { Sailing Vessels*	5	38	3,744	.....	13	1	.....	2	1	17		17	.....	.....	.....	.....	.....
Scotland { Steamers	26	141	26,459	325	2,340	1,316	581	498	277	5,012	1	5,338	2	.....	.....	1	3
Scotland { Sailing Vessels	6	40	5,434	.....	16	1	2	2	.....	21		21	.....	.....	.....	.....	.....
Germany do	2	63	984	.....	132	122	60	65	23	412	2	416	3	.....	.....	.....	3
Norway & Sweden do	41	53	23,130	.....	3,019	2,762	1,418	1,339	447	8,985	18	9,023	3	2	10	6	16
Other Countries do	3	29	1,872	.....	6	.....	.....	.....	.....	6		6	.....	.....	.....	.....	.....
Total	160	.....	176,478	2,216	18,273	11,197	5,305	5,127	2,372	42,274	29	44,539	8	4	10	9	29

*Steamers touching at Irish Ports are included in English and Scotch steamers.

RETURN of the number of Emigrants embarked for Canada, with the number of Births and Deaths during the voyage and in quarantine; the total number landed at Quebec, distinguishing Males from Females and Adults from Children, with the number of souls from each country; also, the number of vessels arrived, their tonnage and average length of passage, during the season of 1870.—Continued.

Whence. Class.	Deaths in Quarantine.						Total landed at Quebec.						Grand Total landed at Quebec.				
	Adults.			Children.			Adults.			Children.				Total.			
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.					
															Total deaths.		
England { Steamers			1			1	2,900	2,930	5,899	2,900	2,930	13,385	8,829	1419	23,633	1,679	25,312
England { Sailing Vessels							220	192	352	220	192	1,195	544	114	1,853	18	1,871
Ireland { Steamers								96	742	124	96	1,411	838	74	2,323	194	2,517
Ireland { Sailing Vessels									13				3	1	17		17
Scotland { Steamers							561	498	1,316	561	498	2,919	1,814	277	5,010	325	5,335
Scotland { Sailing Vessels							2	2	16	2	2	18	3		21		21
Germany do			2			2	60	65	129	60	65	189	187	85	411		411
Norway & Sweden do			1			1	1,408	1,333	3,016	1,408	1,333	4,424	4,093	468	8,985		8,985
Other Countries									6			6			6		6
Total			4			4	5,295	5,118	18,265	5,295	5,118	23,560	16,311	2388	42,259	2,216	44,475

CLASSIFICATION OF CABIN PASSENGERS.

Males	1,214
Females	659
Children	343
Total	2,216

GOVERNMENT IMMIGRATION OFFICE,
 QUEBEC, 31st December, 1870.

(Signed),
 L. STAFFORD,
 Agent.

TABLE NO. 2.—STATEMENT of the number of Immigrants landed at the Port of Quebec, distinguishing the Countries and Ports from whence they sailed, during the season of 1869 and 1870.

—	1869.	1870.	—	1869.	1870.
ENGLAND.			NORWAY AND SWEDEN.		
Liverpool.....	24,547	20,400	Arendal		6
London.....	1,623	5,364	Bergen.....	1,525	2,201
Portsmouth.....	1,676	1,417	Christiania.....	3,855	3,410
Plymouth.....	30		Drammen.....	472	668
Shields.....		2	Drontheim.....	624	326
			Farsund.....		2
	27,876	27,183	Krageroe.....	88	
IRELAND.			Nanzos.....	240	263
Belfast.....		6	Porsgrund.....	349	353
Cork.....		4	Rusoer.....	73	68
Kingston.....	871	606	Skein.....	649	421
Londonderry.....	1,869	1,916	Stavanger.....	524	991
Warrenpoint.....	3	2	Ivedestrand.....	154	276
	2,743	2,534		8,553	8,985
SCOTLAND.			OTHER COUNTRIES.		
Glasgow.....	2,860	5,341	Marseilles (France).....	2	
Greenock.....	5	8	Rotterdam (Holland).....		1
Grangemouth.....		5	Harbor Grace (Newfound- land).....		4
Montrose.....		2	Barbadoes (West Indies).....		1
Troon.....	2			2	6
	2,869	5,356	RECAPITULATION.		
GERMANY.			England.....	27,876	27,183
Bremen.....	710	315	Ireland.....	2,743	2,534
Hamburg.....	363	96	Scotland.....	2,867	5,356
	1,073	411	Germany.....	1,073	411
			Norway and Sweden.....	8,553	8,985
			Other Countries.....	2	6
				43,114	44,475

TRADES and Callings of the Steerage Male Immigrants of 1870.

Bakers	34	Printers	18
Blacksmiths	47	Ploughmen	31
Boilermakers and Fitters	12	Quarrymen	1
Bookbinders	4	Ropemakers	8
Bricklayers	78	Salesmen	3
Braziers	4	Saddlers and Harness makers	7
Brewers	1	Sawyers	19
Builders	5	Sailmakers	3
Butchers	21	Schoolmasters	5
Carpenters and Joiners	471	Shipwrights	19
Cabinetmakers	18	Shopkeepers	22
Cartwrights	1	Servants (Domestic)	18
Carters and Cab-drivers	7	Shoemakers	80
Chemists and Druggists	2	Smiths	54
Cigar makers	1	Soldiers	1
Coachmakers	3	Stonecutters	4
Clerks and Accountants	120	Turners	4
Cloth Lappers	2	Tailors	44
Colliers	2	Tanners	3
Commercial Travellers	2	Tinsmiths	7
Confectioners	6	Upholsterers	2
Coopers	9	Waiters	2
Cork Cutters	2	Warehousemen	3
Cutters	1	Watch and Clock makers	7
Dairymen	2	Workers in Brass	1
Doctors	1	Working Jewellers	1
Drapers	10	Wheelwrights	3
Dyers	8	Weavers (Cloth)	23
Engine Drivers	20	Mechanics not specified	16
Engravers	1	No stated occupation	41
Farmers	4,144		
Farriers	7		
Flax dressers	1		
Gardeners	49		
Gasfitters	3		
Grocers	21		
Grooms	6		
Hatters	3		
Ironmongers	4		
Laborers	12,248		
Lithographers	2		
Mariners and Seamen	14		
Masons	123		
Millers	20		
Millwrights	10		
Missionaries	2		
Machinists	9		
Moulders and Foundrymen	13		
Miners	98		
Painters and Glaziers	56		
Paper makers	2		
Plasterers	25		
Platelayers	3		
Plumbers	19		
Potters	10		
Policemen	2		
Porters	26		
		Grand Total	18,265
		Recapitulation.	
		Farmers	4,144
		Laborers	12,248
		Mechanics	1,717
		Clerks, Traders, &c.	146
		Professional men	10
		Total	18,265

GOVERNMENT IMMIGRATION OFFICE,
Quebec, 31st December, 1870.

(Signed,)

L. STAFFORD,
Immigration Agent.

Comparative Statement of the Number of Immigrants arrived at the Port of Quebec
since the year 1829 until 1870 inclusive.

Years.	England.	Ireland.	Scotland.	Germany and Norway, &c.	Other Countries.	Total.
1829 to 1833	43,386	102,266	20,143	15	1,889	187,699
1834 to 1838	28,561	54,904	11,061	485	1,346	96,357
1839 to 1843	30,791	74,981	16,311	.....	1,777	123,860
1844 to 1848	60,458	112,192	12,767	9,728	1,219	196,364
1849	8,980	23,126	4,984	436	968	38,494
1850	9,887	17,976	2,879	849	701	32,292
1851	9,677	22,381	7,042	870	1,106	41,076
1852	9,276	15,983	5,477	7,256	1,184	39,176
1853	9,585	14,417	4,745	7,456	496	36,699
1854	18,175	16,165	6,446	11,537	857	53,180
1855	6,754	4,106	4,859	4,864	691	21,274
1856	10,353	1,688	2,794	7,343	261	22,439
1857	15,471	2,016	3,218	11,368	24	32,097
1858	6,441	1,153	1,424	3,578	214	12,810
1859	4,846	417	793	2,722	.....	8,778
1860	6,481	376	979	2,314	.....	10,150
1861	7,780	413	1,112	10,618	.....	19,923
1862	6,877	4,545	2,979	7,728	47	22,176
1863	6,317	4,949	3,959	4,182	12	19,419
1864	5,013	3,767	2,914	7,453	.....	19,147
1865	9,296	4,682	2,601	4,770	6	21,355
1866	7,235	2,230	2,222	16,958	3	28,648
1867	9,509	2,997	1,793	16,453	5	30,757
1868	16,173	2,585	1,924	13,607	11	34,300
1869	27,876	2,743	2,867	9,626	2	43,114
1870	27,183	2,534	5,356	9,396	6	44,475
	402,381	495,592	133,649	171,612	12,825	1,216,059
Grand total					1,216,059	
Yearly average					28,954	

(Signed,)

L. STAFFORD,
Emigration Agent.GOVERNMENT IMMIGRATION OFFICE,
Quebec, 31st December, 1870.

DETAILED Statement of Expenditure paid by the Quebec Agent for Immigration purposes at the various Agencies in the Provinces of Quebec and Ontario, for the year ending 31st December, 1870.

	\$	cts.	\$	cts.
<i>Hamilton Agency.</i>				
For Six Months, ending 30th June, 1870 :—				
Agency charges	51	82		
Salaries	490	00		
				541 82
<i>Toronto Agency.</i>				
For Six Months, ending 30th June, 1870 :—				
Transport	29	50		
Incidental	81	00		
Agency charges	651	50		
Salaries	500	00		
				1,262 00
<i>Kingston Agency.</i>				
For Six Months, ending 30th June, 1870 :—				
Agency charges	40	18		
Salary to 31st March	200	00		
				240 18
<i>Ottawa Agency.</i>				
For Six Months, ending 30th June, 1870 :—				
Incidental	62	74		
Agency charges	137	60		
Salaries	400	00		
				600 34
<i>Montreal Agency.</i>				
For Six Months, ending 30th June, 1870 :—				
Transport	373	98		
Agency charges	172	00		
Salaries	661	00		
				1,206 98
<i>Quebec Agency.</i>				
For Twelve Months, ending 31st December, 1870 :—				
Transport	25,971	93		
Provisions	244	15		
Incidental	1,298	42		
Agency charges	835	80		
Salaries	2,603	14		
				30,953 41
				34,804 76

(Signed),
 GOVERNMENT IMMIGRATION OFFICE,
 Quebec, 31st December, 1870.

L. STAFFORD,
 Immigration Agent.

DETAILED Statement of Expenditure, Inspecting Port Physicians at Quebec, during the year ending 31st December, 1870.

	\$	cts.	\$	cts.
Salary of Dr. L. J. Roy, for the year	1,200	00		
Salary of Dr. A. Rowand, for the year	600	00		
				1,800 00
Allowance granted for the maintenance of Boat and Crew				800 00
				2,600 00

(Signed),
 GOVERNMENT IMMIGRATION OFFICE,
 Quebec, 31st December, 1870.

L. STAFFORD,
 Immigration Agent.

STATEMENT of the amount paid by Quebec Agent, on account of the European Immigration Agencies, during the year ending 31st December, 1870.

1870.		\$ cts.	\$ cts.
March 31...	Payment to Mrs. Simays, on account of husband's salary	100 00	
May 4.....	Payment to Messrs. Barber Bros., of Georgetown, on account of J. G. Moylan.....	100 00	
"	Payment to the Editor of "Toronto Freeman," on account of J. G. Moylan.....	100 00	
			300 00

(Signed,)

L. STAFFORD,
Immigration Agent.GOVERNMENT IMMIGRATION OFFICE,
Quebec, 31st December, 1870.

DETAILED Statement of Expenditure at the Quarantine Station, Grosse Isle, during the year ending 31st December, 1870.

	\$ cts.	\$ cts.
Pay of Officers and wintering party.....	5,790 65	
Supplies.....	659 64	
Medicines.....	309 23	
Cartage, Washing, &c.....	380 40	
Printing and Stationery.....	99 11	
Contingencies.....	416 15	
Steamboat service.....	955 53	
Repairs.....	170 65	
		8,781 36

(Signed,)

L. STAFFORD,
Immigration Agent.GOVERNMENT IMMIGRATION OFFICE,
Quebec, 31st December, 1870.

SUMMARY Statement of Expenditure for Immigration purposes at Quebec Office, for the year ending 31st December, 1870.

	\$ cts.	\$ cts.
Transport of Immigrants.....	25,971 93	
Provisions and Board of do.....	244 15	
Incidental expenditure.....	1,298 42	
Agency charges.....	835 80	
Salaries of Officers.....	2,650 00	
		31,000 30

(Signed,)

L. STAFFORD,
Immigration Agent.GOVERNMENT IMMIGRATION OFFICE,
Quebec, 31st December, 1870.

No. 2.

ANNUAL REPORT OF THE TORONTO IMMIGRATION AGENT,

(MR. JOHN A. DONALDSON.)

TORONTO, 24th December, 1871.

SIR,—I have now the honor to transmit for your perusal, the Annual Report of this Agency, for the year ending 31st December, 1870, with Statements showing the number of Immigrants that arrived, and how disposed of.

The whole number which reached this Agency was 29,777—*via* the St. Lawrence route 29,117; and *via* New York and Boston, 660; of this number 11,120 were from England, 1,551 from Ireland, 1,239 from Scotland, and 15,857 from Norway and Germany.

With the exception of the death of one old man and a few children, all were of a healthy class.

Of the large number which came from the East End of London, many of them were unfit for Canadian life, yet they found ready employment at fair wages, owing to the great demand for labor in the agricultural districts, and by the Railway companies.

The capital brought in, as near as I could ascertain in round numbers, would amount to, at least, \$400,000. This has been expended in adjoining counties, principally in the purchase of lands. While it is observable one-half of the whole number of immigrants that remained in the country have been distributed from this Agency, yet the strictest economy has been studiously observed, the small sum of \$1,059.86, covering all expenses except my own salary, and a small allowance for the messenger, my only assistant.

From every information I have received of late, I am happy to be able to state the prospects for another year are very flattering. I have already had a number of communications from various parts of Europe, the United States, and several from California.

Many of those parties applying for information, intimate that they will bring considerable capital with them.

It is most desirable that some system should be adopted whereby a larger number of domestic servants could be induced to come to Canada; the demand for this class of people increases every year, and while we can find employment for any number of laborers and mechanics, boys of from 15 to 18 years of age are much wanted.

Trusting these few remarks may be satisfactory,

I have the honor to be, Sir,

Your Obedient Servant,

JOHN A. DONALDSON,

The Hon. Minister of Agriculture, &c., &c., Ottawa.

RETURN of the Toronto Agency for the year ending 31st December, 1870.

1. State the number and nationalities of the Immigrants that reached you, the route they came by, and their probable destination ?

Nationality.	Via St. Lawrence	Via States.	Total.	Remained in Canada.	Went to the States.
English	10,510	610	11,120	10,510	610
Irish	1,511	40	1,551	1,511	40
Scotch	1,239	.....	1,239	1,239	.....
Germans	15,857	10	15,857	10	15,857
Norwegians					
American citizens .....	.....	.....	.....	.....	.....
Other countries .....	.....	.....	.....	.....	.....
Total	29,777	660	29,777	13,270	16,507
Previously reported .....	.....	.....	.....	.....	.....

2. What was their general condition ? How many applied to you for relief ? How many were assisted, and in what manner did you dispose of them ?—Good ; with the exception of the death of one old man and a few young children, all were of a healthy class ; 8,500 applied for, and received necessary shelter, viz:—3,770 men, 1,332 women, and 3,395 children, all were sent to the nearest point of their destination, either by steamboat or rail.

3. What description of labor is most required in your district ? and how many persons of either sex could you probably find employment for ?—Farmers, laborers, mechanics, domestic servants, and boys from 15 to 18 years of age, any number of the latter two classes will find immediate employment.

4. Give the details of the expenditure at your Agency during the month :—

Details of Expenditure.	Amount.
	\$ cts.
Transport .....	.....
Provisions .....	.....
Medical aid .....	.....
Printing, Stationery, and Office Rent .....	.....
Incidental expenses	1,059 86
Total	1,059 86

5. State as near as you are able, what capital has been introduced into your district by immigrants, and how many have purchased land and settled, and in what localities? Also, add any remarks or suggestions which you may deem desirable.

No.—Families, and Single.		Amount.	Remarks.
	Capital to the amount of \$400,000 has been brought in, as near as I could ascertain, and has been expended principally in the purchase of Lands in adjoining Townships, viz.:—York, Peel, Halton, Wellington, Simcoe, and Waterloo...	\$ cts. 400,000 00	
	Total.....	400,000 00	

LIST of Retail Prices of ordinary articles of Food and Raiment required by the working classes.

Articles.	Prices.		Articles.	Prices.	
	From	To		From	To
	\$ cts.	\$ cts.		\$ cts.	\$ cts.
Provisions :—			Sugar, brown	do	0 10
Bacon	per lb	0 15	Salt	per bushel	1 00
Bread, best white brown		0 15	Tea, black	per lb	0 80
Butter, salt		0 20	do, green	do	0 80
Butter, fresh		0 25	Tobacco	do	0 30
Beef, Mutton, Veal, Pork		0 10			
Beer	per quart	0 06	Clothing, &c.:—		
Candles		0 20	Coats, under Tweed	4 00	8 00
Cheese		0 15	do over do	8 00	12 00
Coffee		0 25	Trousers do	4 00	6 00
Corn Meal	per 100 lbs	3 00	Vests	2 00	4 00
Eggs		0 25	Shirts, flannel	1 00	2 00
Flour, 1st quality	per barrel	7 00	do cotton		1 00
do 2nd do	do	6 00	do under "wove"	1 00	2 00
do Buckwheat	per 100 lbs.	3 00	Drawers, woollen, "wove"	1 00	2 00
Fish, dry or green cod	per cwt	6 00	Hats, felt	1 00	2 00
Firewood	per cord	8 00	Socks, worsted		0 50
Ham	per lb	0 15	do cotton		0 25
do Shoulders	do	0 12	Blankets	4 00	8 00
Herrings	per barrel	6 00	Rugs	2 00	4 00
Mustard	per lb	0 20	Flannel		0 50
Milk	per quart	0 05	Cotton Shirting		0 15
Oatmeal	per 100 lbs	3 00	Sheeting		0 50
Pepper	per lb	0 20	Canadian Cloth		1 00
Potatoes	per bushel	1 00	Shoes, men's 3, women's		2 00
Rice	per lb	0 05	Boots, do 4, do		3 00
Soap, yellow	per lb	0 05	India Rubber overshoes, men's do		0 75

No. 3.

ANNUAL REPORT OF MONTREAL IMMIGRATION AGENT.

(MR. JOHN J. DALEY).

GOVERNMENT IMMIGRATION OFFICE,
MONTREAL, 9th January, 1870.

SIR,—I have the honor to transmit herewith my Report of the operations of this agency for the year 1870.

I am, Sir,

Your obedient servant,

JNO. J. DALEY,
Government Immigration Agent.

To the Hon. the Minister of Agriculture,
Ottawa.

GOVERNMENT IMMIGRATION AGENCY,
MONTREAL, 31st December, 1871.

SIR,—I have the honor (since my appointment to the superintendence of this agency) a second time to forward my yearly return.

Embodied, are the annual statistics of the agency for the year ending 31st December, 1870.

In carrying out your instructions, both verbal and written, and in obeying, as I have understood them, the directions of the Department, I hope I have the approval of the Government.

In the execution of my duties, facts present themselves which demand notice. Remarks which I make, suggested by experience of the past year, are deferentially submitted.

Regardless of due order, perhaps, but with regard to matters of importance, as I view them, I proceed to give statistics of the year, with suggestions, humbly presented to your notice.

INDIGENT IMMIGRANTS.

Six hundred and sixty seven (667) souls, equal to five hundred and forty-eight (548) adults, applied to this agency for assistance during the past year. They were thus disposed of, with free transports :—

Sent to Central Canada and Toronto	269½
do Ottawa and to Ottawa District	45½
do St. John and Eastern Townships.	233
	548

At a cost of eight hundred and eighty-nine dollars and eighty-one cents (\$889 81), an average of one dollar and sixty-two cents (\$1 62) per adult. These may be thus classified :—

Males.....	337
Females.....	163
Children.....	96
Infants.....	71
	667

Equal to 548 adults.

English.....	510½
Irish.....	11½
Scotch.....	5
Germans.....	19
Danes.....	2
	548

I have assisted, by half fares, five hundred and sixty-four (564), mostly single men, whose means were inadequate to carry them to their destination. Some had friends whom they wished to join, others promise or assurance of employment, or were previously advised to pass westward. Such assistance, thanks to the cordial and ready help of the officers of the Grand Trunk Railway, the *Richelieu* and the Inland Navigation Co., has been no cost to me.

EMPLOYMENT FOUND.

Within the immediate supervision of my agency, say City and vicinity of Montreal (including twenty-four (24) sent to the Eastern Townships), I have found employment for nine hundred and eighty persons (980.)

RECAPITULATION.

Free assistance granted.....	548
Half fare.....	564
Employment found for.....	980
	2,092

NATIONALITIES.

English.....	1,939
Irish.....	89½
Scotch.....	42
Germans.....	19½
Danes.....	2
	2,092

Of which number eight hundred and eighty-one (881) went to Central Canada and Ontario, and twelve hundred and eleven (1,211) remained in the Province of Quebec.

The above statistics exhibit the number of immigrants assisted in their progress westward, and for whom I have found employment here; and do not include others in large numbers applying simply for such advice and direction as the office could give, from which many I hope have profited.

EXPENSES OF MONTREAL AGENCY, 1870.

For transport of indigent immigrants.....	\$889 81
For provisions to the indigent.....	107 15
Paid undertaker's bill.....	10 50
Paid printing, stationery, rent, taxes and fuel.....	293 35
Incidental expenses.....	144 30
	\$1,445 11

SALARIES (DEDUCTING SUPERANNUATION TAX.)

J. J. Daley, Immigration Agent.....	\$1,176 00	
P. S. Perrott, Assistant and Messenger.....	194 32	
		1,370 32
		\$2,815 43

Mr. T. B. Hawson, Auditor of the Grand Trunk Railway has kindly furnished me with the account as shewn by railroad returns of the immigrants passing over the Grand Trunk Railway, and of those remaining in and passing through the Dominion, thus:—

Immigrants through Port of Quebec.....	34,273
do United States' Ports.....	1,972
	36,245

Accounted for thus—

Remaining in Canada.....	16,852
Went to United States.....	19,393
	36,245

GENERAL HOSPITAL.

Hospital returns shew eighty-one (81) as having been admitted by ticket from this agency. Two (2) deaths have occurred; no epidemic diseases have been reported during the year.

DEATHS "EN ROUTE."

Three deaths—infants—have been reported as occurring in railway trains; for burial expenses, small calls have been made on me.

MISS MACPHERSON'S PROTÉGÉS.

Miss Macpherson arrived in Montreal from England on the 25th May, with emigrant boys. Twenty-three (23) found employment here, and, as I understand, have given satisfaction to their employers.

EMIGRANTS FROM EUROPE TO CANADA VIA UNITED STATES.

Last year, I took occasion to express my opinion on this matter. A sense of duty forces me to say that persons emigrating from Europe—and more especially authorities directing their shipment—should be warned of the difficulties in the way of the poor inexperienced stranger who endeavors to make his way to Canada through the United States. What proportion of the numbers taking this route succeed in arriving at the proposed end of their journey, it would be impossible to say. The few whom I see relate to me the insurmountable difficulties of others. In a word, the United States Government Immigrant authorities in New York have anything but an unprejudiced interest in giving honest advice or information to strangers wishing to pursue their route to Canada, and (from what I see) are strongly disposed to throw obstructions in their way—else why, when an immigrant holds a ticket to Montreal, should he be systematically (as I believe), and with unnecessary expense and delay, sent by way of Buffalo and elsewhere 600 or 700 miles out of his route? Not to reiterate what I said in my last Report, I would humbly suggest reference to it, as my further experience of the past season strongly confirms what I then said. This advice is earnestly given—*all immigrants to the Dominion should come by the St. Lawrence route*, they will find no annoyance or vexation (not incident to their inexperience) from the moment they reach shore, and will receive disinterested advice and assistance, and such aid as charitable societies on the one side of the Atlantic, and the Dominion Government on the other, have provided for their behalf; they will meet with no delay in event of wishing to pursue any predetermined course, nor can they, when acting under advice of a Dominion agent, be swindled or misinformed. They may husband their means, small or large; and, what is of importance, be not subjected to undue influence to lead them from allegiance to the land of their birth.

FARM HANDS.

Farm hands, male and female, are in great demand, single or married. Any number of agricultural laborers will get employment, and if active, willing and intelligent, will soon find themselves in independent and respectable positions. The same remarks apply with equal truth to female farm domestics. A competent dairymaid or general house-servant will at once get a place at excellent wages. A great portion of my time is occupied in answering applicants who desire servants of this class.

SERVANT GIRLS.

Good female domestics command high wages. Servant girls, even if inexperienced, will, if willing and honest, at once secure situations, and the certainty of, in a few years, improving their condition in life. Their prospects here in Canada probably exceed those of any portion of the globe. Honest persons of either of the classes last above-mentioned may feel confident of securing respectable and immediate employment.

INCOMPETENTS, &c.

What a pity it is that the incompetent and infirm should choose, either of their own accord, or at the suggestion of others, to emigrate. Surely such persons may reasonably look for assistance within the home circle of their relations and friends, rather than amongst strangers! The position of such persons *here* is really pitiable.

I have, and justly so, no authority to afford aid to other than able (or from youth prospectively able) immigrants, and that but to a definitely restricted limit. These regulations should be well known, so as to check the migration of a useless class whom their friends seem too willing to shake off, reckless as to whom their after support may fall upon.

We do not want superannuated professional men, dry goods assistants, or clerks, unless they have means to establish themselves—this rarely occurs—more particularly would I caution *married men with families*, who are neither mechanics nor laborers, from emigrating. We have professional men and non-producers in abundance, and *to spare*.

Men and women, single or married, accustomed to labor, able and willing to work, will find their services at a premium.

After reading what I have written, I fear I have made no remark in its nature original, or to which your attention has not been already drawn, not so much by suggestions of others as by your own experience and knowledge of the requirements of the Dominion.

The Grand Trunk Railroad, the Inland Navigation Co., and the *Richelieu* Steamship Co., have aided immensely this Department. I personally thank Mr. Brydges and all other officers of the Grand Trunk with whom I have come in official connection; and the old and valued friends of immigration, Messrs. Milloy of the Inland Navigation Co., and Lamère, of the *Richelieu* Steamboat Co., deserve especial thanks.

Our thanks are due to the St. George's Society, the St. Andrew's, the St. Patrick's, and the German. I have always found the officers of these societies willing to accord me a cordial reception, and disposed and anxious to forward the objects I have in view.

The statistics of the agency having been given, and such crude remarks which have suggested themselves to me having been noted, it is unnecessary to say more.

With respect and consideration, I have the honor, Sir, to submit to your notice the foregoing.

Most respectfully

Your obedient servant,

JNO. J. DALEY,
Government Immigration Agent.

To the Honorable the Minister of Agriculture,
Ottawa.

No. 4.

ANNUAL REPORT OF HAMILTON IMMIGRATION AGENT.

(MR. R. H. RAE.)

GOVERNMENT EMIGRATION OFFICE,
HAMILTON, 23rd January, 1871.

Sir,—I have now the honor to submit for the information of the Honorable the Minister of Agriculture and Immigration, my annual statements for the year ending 31st December, 1870. They embrace the varied transactions during that period; and I have endeavoured to make them as full and clear as possible, giving the number of emigrants arriving at this port and of those to whom Government aid has been dispensed at this agency; all of which I hope on perusal will be found satisfactory.

The general health of the emigrants has been very fair, considering the large numbers quartered in the sheds during the excessive hot summer months. Notwithstanding more than the usual amount of sickness prevailed, I am glad I have to remark, however, that there was not a single case resulting fatally. Dysentery, in a severe form, was very prevalent, among the grown up people as well as the children, but the latter suffered more severely. Two cases of *small pox* appeared, but as soon as ascertained the invalids were at once transferred to the Hospital for medical treatment.

I promptly adopted the most salutary measures, having the bedding of those infected thoroughly washed, and the sheds sprinkled with chloride of lime as a precaution to the further spread of the disease, and I feel satisfied that the ready means taken had the desired effect in preventing this loathsome malady from spreading; as not a symptom showed itself among those who remained in the building after the infected people left.

The disbursements have been in transport \$866.87, and provisions \$1,121.79, making in all the amount defrayed one thousand nine hundred and eighty-eight dollars and sixty-six cents, by which, temporary relief was afforded to 2,512 souls, equal to 1,931½ adults, entailing a cost of a fraction over 79 cents per capita, and nearly one dollar and four cents for each adult. Every economy has been observed in distributing assistance only to those who were in indigent circumstances and absolutely required it; numbers applied and were refused as not entitled to any aid.

The "*capital*" brought into the country the past year, was composed of emigrants of the following nationalities, viz., "from the old Country", 91 English families, \$117,150; 1 Irish, \$500; 20 Scotch, \$21,500; 49 Germans, \$38,850; 4 Welsh, \$4,000; 1 French, \$2,000; and from "United States:" 3 English, \$4,000; 1 Irish, \$1,000; 1 Scotch, \$2,000; and 3 Germans \$6,800, making in all 174 families with means summing up to \$197,800, against 219 families with \$298,750 in the preceding year; exhibiting an excess in favor of 1869 of \$100,950, as represented in Table No. 2. Every exertion was made to ascertain the most accurate information on this particular point.

I may mention that the demand in the summer season for good farm hands well versed in agricultural pursuits far exceeded the supply of that class and extending to such ordinary laborers as were disposed to devote their attention to farm work. The latter could find plenty of employment in the rural districts, provided they were inclined to work; but many, especially the single men, loiter about the cities in preference to earning their livelihood in the country. Servant girls are in much request, and it is to be regretted that greater exertions are not exercised to induce numbers of those to emigrate next season who are accustomed to general domestic work, as they could procure much higher wages here than they can possibly obtain in the old country.

In consequence of several railways being in process of construction, with other projected enterprises, combined with the general prosperity of the country, I consider it

reasonable to suppose that the prospects for the new arrivals this coming Spring are most encouraging, and have no doubt they can secure plenty of work if they are of the right class.* Trusting my suppositions on this important subject will be fully verified,

I have the honor to be, Sir,

Your obedient servant,

[Signed] R. H. RAE,

Emigrant Agent.

J. C. TACHÉ, Esq.,
Deputy Minister of Agriculture, &c., &c.,
Ottawa, Ont.

TABLE No. 1.—COMPARATIVE STATEMENT, showing the arrival and destination of Immigrants at Hamilton Agency for the years 1869-70.

Country.	1869.					1870.				
	Via St. Lawrence.	Via States.	Total.	Remained in Canada.	Went to the States.	Via St. Lawrence.	Via States.	Total.	Remained in Canada.	Went to the States.
English	1,705	3,697	5,402	3,102	2,299	3,457	5,432	8,889	5,404	3,485
Irish	266	463	729	545	184	179	478	657	355	302
Scotch	253	253	506	437	69	282	367	649	527	122
Germans	3	10,611	10,614	607	10,007	4	7,913	7,917	368	7,549
Norwegians	3,602	1,998	5,600	2	5,598	2,970	718	3,688	.....	3,688
Am'n. Citizens .....	.....	1,740	1,740	1,740	.....	.....	1,551	1,551	1,551	.....
French .....	.....	20	20	.....	20	1	36	37	5	32
Welsh	2	75	77	3	74	10	23	33	33	.....
Italians .....	.....	13	13	1	12	.....	12	12	.....	12
Danes .....	.....	884	884	.....	884	.....	330	330	.....	330
Swedes .....	.....	6,319	6,319	.....	6,319	.....	1,536	1,536	.....	1,536
Hollanders .....	.....	550	550	.....	550	.....	325	325	.....	325
Bohemians .....	.....	119	119	.....	119	.....	855	855	.....	855
Belgians .....	.....	24	24	.....	24	.....	.....	.....	.....	.....
Poles .....	.....	107	107	.....	107	.....	.....	.....	.....	.....
Total	5,831	26,873	32,704	6,438	26,266	6,903	19,576	26,479	8,243	18,236

TABLE NO. 2.—COMPARATIVE STATEMENT, displaying the Nationality and Number of Immigrants arrived at Hamilton Agency, who have brought money to the country during the years 1869-70.

No. Families and single.	Total.	1869.			No. Families and Single.	Total.	1870.		
		Nationality.	Amount	Total.			Nationality.	Amount	Total.
			\$	\$				\$	\$
27	.....	English, Qr. 31st March	117,100		17	.....	English, Qr. 31st March	20,500	
24	.....	do 30th June..	58,800		16	.....	do 30th June..	29,800	
21	.....	do 30th Sept...	20,900		29	.....	do 30th Sept...	27,650	
24	.....	do 31st Dec...	21,300		29	.....	do 31st Dec...	39,200	
	96			118,100		91			117,150
2	.....	Irish, Qr. 31st March...	800		.....	.....	Irish, Qr. 30th June....	500	
3	.....	do 30th June ...	11,000		1	.....			500
	5			11,800		3	.....	Scotch, Qr. 31st March.	1,500
2	.....	Scotch, Qr. 31st March.	1,000		5	.....	do 30th June ...	7,000	
13	.....	do 30th June ...	12,750		8	.....	do 30th Sept...	11,000	
11	.....	do 30th Sept...	7,100		4	.....	do 31st Dec....	2,000	
2	.....	do 31st Dec....	1,000		20	.....			21,500
	28			21,850		1	.....	Germans, Qr. 31st March	400
11	.....	Germans, Qr. 31st March	7,500		28	.....	do 30th June.	25,600	
29	.....	do 30th June.	15,700		12	.....	do 30th Sept...	6,800	
22	.....	do 30th Sept...	11,700		8	.....	do 31st Dec...	6,050	
23	.....	do 31st Dec...	108,500		49	.....			38,850
	85			143,400		1	.....	Welsh, Qr. 30th Sept...	2,000
	214			295,150		3	.....	do 31st Dec....	2,000
		<i>From United States.</i>				4	.....	French, Qr. 30th Sept...	2,000
3	.....	English, Qr. 31st March	2,000		166	.....			2,000
	3			2,000			<i>From United States.</i>		184,000
2	.....	Germans, Qr. 31st March	1,600		1	.....	English, Qr. 31st March	2,000	
	2			1,600		2	.....	do 31st Dec...	2,000
						3	.....		4,000
						1	.....	Irish, Qr. 31st Dec	1,000
						1	.....	Scotch, Qr. 31st March.	2,000
						1	.....		2,000
						3	.....	Germans, Qr. 31st March	6,800
							.....		197,800
							.....	Balance in favor of 1869	100,950
	219		298,750			174			\$298,750

Government Emigration Office,
Hamilton, 23rd January, 1871,
(Signed), R. H. RAE, Emigration Agent.

DOMINION STATEMENT, No. 1.—Shewing the arrival and destination of Immigrants at the Hamilton Agency, for the year ending the 31st December, 1870.

Country.	Via St. Lawrence.	Via States.	Total.	Remained in Canada.	Went to the States.
English	3,457	5,432	8,889	5,404	3,485
Irish	179	478	657	355	302
Scotch	282	367	649	527	122
Germans	4	7,913	7,917	368	7,549
Norwegians	2,970	718	3,688	.....	3,688
American Citizens .....	.....	1,551	1,551	1,551	.....
Welsh	10	23	33	33	.....
French	1	36	37	5	32
Italians .....	.....	12	12	.....	12
Swedes .....	.....	1,536	1,536	.....	1,536
Danes .....	.....	330	330	.....	330
Hollanders .....	.....	325	325	.....	325
Bohemians .....	.....	855	855	.....	855
Totals.....	6,903	19,576	26,479	8,243	18,236

DOMINION STATEMENT, No. 2.—Shewing the number and class of destitute Immigrants (for settlement in Canada), who have received Government assistance in Transport, and Provisions at the Hamilton Agency, for the year ending 31st December, 1870.

Country.	Men.	Women.	Children.	Total.	—
English	876	486	881	2,243	
Irish	54	44	78	176	
Scotch	45	18	24	87	
Germans	1	1	.....	2	
Welsh	1	.....	.....	1	
French	1	.....	.....	1	
Swedes .....	.....	1	1	2	
Total.....	978	550	984	2,512	

MEMORANDUM of those merely supplied with Provisions included in above Statement.

Country.	Men.	Women.	Children.	Total.	—
English	281	190	403	874	
Irish	8	9	21	38	
Scotch	5	5	5	15	
Total.....	294	204	429	927	Equal to 741 Adults.

DOMINION Statement No. 3, "Abridged."—Shewing the Number and Class of Indigent Immigrants (for settlement in Canada), who have received Government aid in Railway, Stage and Waggon Transport, and Provisions, at the Hamilton Agency, for the year ending 31st December, 1870.

Country.	Men.	Women.	Children.	Total.	No. Adults.
English	595	296	478	1,369	1,080
Irish	46	35	57	138	98½
Scotch	40	13	19	72	57
Germans	1	1	.....	2	2
Welsh	1	.....	.....	.....	1
French	1	.....	.....	.....	1
Swedes .....	.....	1	1	2	1
Total	684	346	555	1,585	1,190½

DOMINION Supplement to Statement No. 3.—Shewing the expense incurred in Railway and Stage Transport of Destitute Immigrants, at Hamilton Agency, for the quarter ending 30th September, 1870.

From.	To.	Route.	No. of Persons.	No. of Fares.	Rate.	Amount.	Total.
					\$ cts.	\$ cts.	\$ cts.
Hamilton.	Clifton	Great Western Railway	10	7	0 45	3 15	
"	Suspension Bridge	"	1	1	.....	0 44	
"	Thorold	"	22	13	0 34	4 42	
"	St. Catharines	"	55	46	0 32	14 72	
"	Grimsby	"	9	6	0 17	1 02	
"	Winona	"	1	1	.....	0 12	
"	Wellington Square	"	4	4	0 07	0 28	
"	Port Credit	"	1	1	.....	0 25	
"	Toronto	"	26	21	0 40	8 40	
"	Harrisburg	"	1	1	.....	0 20	
"	Branchton	"	1	1	.....	0 26	
"	Galt	"	3	3	0 32	0 96	
"	Preston	"	11	7	0 36	2 52	
"	Elora	"	1	1	.....	0 60	
"	Guelph	"	28	21	0 47	9 87	
"	Paris	"	105	75½	0 29	21 89	
"	Woodstock	"	11	11	0 48	5 28	
"	Ingersoll	"	17	14	0 57	7 98	
"	London	"	127	97	0 76	73 72	
"	Watford	"	10	6	1 10	6 60	
"	Petrolia	"	7	5	1 28	6 40	
"	Newbury	"	7	7	1 13	7 91	
"	Chatham	"	44	34	1 41	47 94	
"	Windsor	"	89	65	1 86	120 90	
			591	448½			345 83
Paris	Brantford	Grand Trunk Railway	49	.....	0 8	3 92	
"	Clinton	"	2	.....	0 64	1 28	
"	Seaforth	"	4	.....	0 55	2 20	
"	Onondaga	"	1	.....	.....	0 16	
			56				7 56
London	St. Thomas	London & Port Stanly Railway	15	.....	0 30	.....	4 50
Hamilton	Caledonia	Port Dover Stage	4	4	.....	.....	2 40
			595	452½			360 29

DOMINION Supplement to Statement No. 3.—Shewing the outlay incurred in Railway, Stage, and Waggon Transport to Pauper Immigrants, at the Hamilton Agency, for the year ending 31st December, 1870.

From.	To.	Route.	No. of Persons.	No. of Fares.	Rate.	Amount.	Total.
					\$ cts.	\$ cts.	\$ cts.
Hamilton.	Niagara	Great Western Railway Company	60	37½	0 56	21 00	
"	Clifton	" "	33	24	0 45	10 80	
"	Suspension Bridge ..	" "	6	5½	0 44	2 42	
"	Thorold	" "	46	33	0 34	11 22	
"	St. Catharines	" "	129	102	0 32	32 64	
"	Beamsville	" "	2	2	0 22	0 44	
"	Grimsby	" "	17	11	0 17	1 87	
"	Winona	" "	10	10	0 12	1 20	
"	Waterdown	" "	7	3	0 4	0 12	
"	Wellington Square ..	" "	6	6	0 7	0 42	
"	Bronte	" "	1	1	.....	0 14	
"	Oakville	" "	1	1	.....	0 18	
"	Port Credit	" "	1	1	.....	0 25	
"	Toronto	" "	118	92	0 40	36 80	
"	Dundas	" "	20	11	0 07	0 77	
"	Harrisburg	" "	2	2	0 20	0 40	
"	Branchton	" "	3	3	0 26	0 78	
"	Galt	" "	17	14	0 32	4 45	
"	Preston	" "	11	7	0 36	2 52	
"	Hespeler	" "	1	1	.....	0 39	
"	Guelph	" "	73	59	0 47	27 73	
"	Elora	" "	1	1	.....	0 60	
"	Paris	" "	309	215½	0 29	62 50	
"	Princeton	" "	5	5	0 36	1 80	
"	Eastwood	" "	1	1	.....	0 44	
"	Woodstock	" "	36	28	0 48	13 44	
"	Ingersoll	" "	50	35	0 57	19 95	
"	Dorchester	" "	6	6	0 67	4 02	
"	London	" "	267	208	0 76	158 08	
"	Strathroy	" "	5	3	0 97	2 91	
"	Watford	" "	10	6	1 10	6 60	
"	Petrolia	" "	18	16	1 28	20 48	
"	Sarnia	" "	5	3	1 38	4 14	
"	Newbury	" "	9	9	1 13	10 17	
"	Bothwell	" "	1	1	.....	1 17	
"	Thamesville	" "	5	3	1 26	3 78	
"	Chatham	" "	79	65	1 41	91 65	
"	Windsor	" "	186	138	1 86	256 68	814 95
Paris	Goderich	Grand Trunk Rail.	Souls. 3	Fares. 2½	.....	1 15	2 88
"	Onondaga	" "	1	1	.....	.....	0 16
"	Brantford	" "	194	127½	.....	0 08	10 20
"	Mitchel	" "	1	1	.....	.....	0 44
"	Clinton	" "	8	6	.....	0 64	3 84
"	Fort Erie	" "	1	1	.....	.....	0 82
"	Seaforth	" "	5	4	.....	0 55	2 20
"	Dunneville	" "	13	10	.....	.....	5 08
London	St. Thomas	Port Stanly Railway	39	35	.....	0 30	.....
Hamilton.	Nanticoke	Port Dover Stage	1	1	.....	.....	2 15
"	Caledonia	" "	9	9	.....	.....	5 65
"	Simcoe	" "	1	1	.....	.....	1 75
"	Ancaster	Waggon	3	2	.....	.....	1 75
"	Four miles beyond Dundas	" "	6	3	.....	.....	1 50
"	Alberton, 17 miles from Hamilton.....	" "	8	5	.....	.....	3 00
			1585	1190½			15 80
							866 87

No. 5.

ANNUAL REPORT OF OTTAWA IMMIGRANT AGENT.

(W. J. WILLS.)

GOVERNMENT IMMIGRATION OFFICE,
OTTAWA, 5th January, 1871.

Honorable C. Dunkin,
Minister of Agriculture, &c.

SIR,—I have the honor of presenting my annual report, accompanied by the usual statistical statements, which, I am much pleased to say, will show a considerable increase of arrivals as compared with the past year :—

Natives.	Via St. Lawrence.				Via United States.				Total.			
	Men.	Women.	Children.	Total.	Men.	Women.	Children.	Total.	Men.	Women.	Children.	Total.
England	388	225	335	948	50	9	18	77	438	234	353	1,025
Ireland	106	81	120	307	11	6	6	23	117	87	126	330
Scotland	36	2	4	42	6	4	4	14	42	6	8	56
Germany	30	29	35	94	7	14	20	41	37	43	55	135
France	1	1	1	3	.....	.....	.....	.....	1	1	1	3
	561	338	495	1,394	74	33	48	155	635	371	543	1,549

Assistance, in the shape of passage orders and temporary relief, was granted to the undermentioned indigent immigrants, 565 souls, equal to 454 adults, at a cost of nearly \$1 24 per adult :—

Natives of :	Province of Ontario.				Province of Quebec				Total.			
	Men.	Women.	Childr'n	Total.	Men.	Women.	Children	Total.	Men.	Women.	Children	Total.
England	138	65	119	322	30	16	29	75	168	81	148	397
Ireland	28	23	46	97	7	6	10	23	35	29	56	120
Scotland	3	4	2	9	1	1	2	4	5	4	4	13
Germany	8	5	8	21	3	2	5	11	11	8	13	32
France	1	1	1	3	.....	.....	.....	.....	1	1	1	3
	178	98	176	452	41	26	46	113	220	123	222	565

The expenses may be estimated thus :—

	Total indigent Immigrants.	Equal to Adults.	Salaries of agents and Interpre- ters.	Office expenses, sheds, and travelling ex- penses.	Medical aid Hos- pitals.	Transport.	Provisions.	Total expenses.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Dominion			818 75	418 68	107 30			1,344 73
Ontario	452	364				465 91	58 29	524 20
Quebec	113	90				23 81	12 65	36 46
	565	454	818 75	418 68	107 30	489 72	70 94	1,905 39

The immigrants who arrived at this Agency this season were disposed of in the following order, viz :—

Remained in the City of Ottawa	496
Sent to the County of Carleton	318
" " Renfrew	279
" " Lanark	117
" " Glengarry	4
" " Ottawa	109
" " Pontiac	88
Went to the City of Toronto	30
" " Kingston	5
" Town of Prescott	12
" " London	1
" " Belleville	37
" " Napanee	4
" " Kemptville	3
Left for the United States	19
Unaccounted for	27

Total arrivals

1549

The foregoing statement of emigrant arrivals at Ottawa this season shows an increase of 797 souls as compared with the previous year, and to this may be added about 175 sent direct from Quebec to Brockville and Pakenham, making in all 1724 souls who arrived within this Agency during 1870, and became permanent settlers in this immediate neighbourhood, thus tending to increase the population of this section of Canada ; some few may have left for the United States but their number is quite insignificant.

I have great satisfaction in being enabled to state that all who required employment were readily provided with work.

The demand for labor this season was much larger than during any previous year, owing in a great measure to the construction of the Canada Central Railway, in conjunction with the large breadth of country under cereal and other crops. Agricultural laborers readily commanded from \$144 to \$168 per year together with board, and in some few instances \$192 a year was agreed upon ; during harvest agricultural laborers found ready employment at \$1.00 per day and board, and ordinary laborers who were employed upon the Canada Central Railway were paid at the rate of \$1 per day with board, and \$1.25 without board.

About 1100 arrived here who were sent out from London, England, they were principally composed of dock yard and arsenal laborers, and consequently were totally ignorant of agricultural pursuits ; I found it most difficult to induce this class to go into the rural districts where employment awaited them ; 'tis true that some took my counsels, but the great majority insisted upon remaining in the city, where they were temporarily employed as builders' laborers.

From observations during the past season it was quite apparent that many had been led to believe, prior to their departure from England, that on arrival here they would be supplied with free furnished houses for themselves and families; they were also misled by the idea that extravagant wages would be paid them for their labor, say \$2.50 per day, and were greatly chagrined and disappointed when told that there were no such wages paid to common laborers. Nor was there any such provision made as furnished houses for themselves and families. About 20 of this class are at present out of employment in the city in consequence of the stoppage of buildings necessitated by the action of the weather; they were offered employment at \$1 per day on the canal works at present in course of construction at Grenville, which they declined to accept, preferring to remain in this city in the hope of securing temporary employment.

From those who proceeded into the rural districts I have heard satisfactory accounts.

30 compositors and printers arrived here from Liverpool, who were engaged there by an agent of I. B. Taylor, Esq., who are paid from \$8 to \$10 per week for their labor.

Several carpenters and joiners and other mechanics obtained at once on arrival here employment at fair wages.

During the year 31 persons calling themselves clerks, who had been unaccustomed to manual labor, with difficulty obtained employment.

Agricultural laborers have been much in request, but the supply fell far short of the demand throughout this Agency; I had many personal calls and numerous letters on the subject, but it was not in my power to fill more than one-third of the orders on my register.

It is a matter of surprise to me that so few comparatively of this class, who are so much needed, reach this country. If their number was increased four-fold they would be sure of ready and permanent employment at a remunerative rate of wages, and with frugality and industry in a few years they would be in a position to take advantage of the Free Grant Lands offered by the Government of Ontario, or purchase wild or partially cleared lands to commence for themselves.

Only 13 female domestics were available for service within this Ottawa District during the present year, although the demand was very large for this description of labor during the entire season, and it does seem most unfortunate that the requirements of this section of Canada, in respect to female labor, cannot be fully or even partially supplied through the instrumentality of emigration.

I deem it advisable that a visit should be made to the different localities in the Ottawa country, where emigrants have settled in the past; I would thus be enabled to obtain from ocular observation the true state of their present position which would materially aid me in the future, in advising those who may follow to localities where their predecessors may have been successful; it would also instruct me in an unmistakable manner as to where labor was most required and the kind of persons best adapted for the duties required to be performed in the respective localities. In every point of view I look upon it that personal enquiry can do much toward promoting the object of emigration, and if you concur with me in this view of the matter and desire my services to carry out the object in view, I am ready at any moment to proceed on a trip through the Upper Ottawa country, including the Gatineau, where a vast field is open for settlement of a large number of capable settlers for many years to come.

Should you acquiesce in this suggestion, the month of February is the most suitable time to make the tour. Circulars and pamphlets ought to be freely distributed; the old settlers are always ready to assist new comers and the aim would be to get their sympathies aroused, so as to secure for them a helping hand so soon as their limits are reached; connexions would thus be formed which must tend to facilitate operations hereafter for the furtherance of these desirable objects, and for these potent reasons I would strongly recommend this subject to your serious and favorable consideration.

All of which is most respectfully submitted,

By your obedient, humble servant,

W. J. WILLS,

Immigration Agent.

No. 6.**ANNUAL REPORT OF KINGSTON IMMIGRATION AGENT.****(MR. R. MACPHERSON.)**

**GOVERNMENT IMMIGRATION OFFICE,
KINGSTON, 29th December, 1870.**

SIR,—Herewith I have the honor of enclosing Annual Report of this agency for the present year shewing a large increase over that of last year.

1st. Statement shewing the number of Immigrants arrived within this agency during the year 1870, and their nationality; the number assisted with provisions and with free passes from this agency to their respective places of destination.

2nd. Statement shewing expenditure at Kingston Agency on account of Immigration for present year. Also amounts paid by Dominion and Ontario Governments respectively.

3rd. Statement shewing the number of Immigrants applied for within this agency during the year 1870, and class required.

The total number of Immigrants and settlers from the United States dealt with during the year, being 3,933, who were healthy and in general give but little trouble; of course there were occasional cases of dissatisfaction but not of any magnitude.

The demand for agricultural labor and female servants has been far beyond what I have been able to supply, and I trust the coming season will bring more of this class.

I have found it very difficult at times to get sufficient lodging accommodation for destitute Immigrants, the necessity of suitable buildings for their use being greatly felt here.

The expenses incurred for transport have been \$338.12, for provisions and lodgings \$164.52, and for incidental expenses (rent, fuel, stationery, cartage, postage, telegrams &c.) \$88.23, salary \$800, making a total of \$1,403.15.

All of which is respectfully submitted.

Your obedient servant,

R. MACPHERSON,

Acting Immigration Agent.

J. C. Taché, Esq.,

Deputy Minister of Agriculture, Ottawa.

KINGSTON AGENCY.

STATEMENT shewing the numbers of Immigrants arrived within the Kingston Agency, for the Twelve Months, ending 31st December, 1870, and their Nationality, the number assisted with provisions and with free passes from this Agency to their respective places of destination.

From what Country.	Via St. Lawrence.	Via United States.	Total.	Remained in Ontario.	Went on to the United States.	Number assisted with provisions.	Number assisted with free passes.
England.....	2,241	54	2,295	2,263	32	369	366
Ireland.....	47	25	72	72	.....	36	51
Scotland.....	94	5	99	99	.....	79	54
Germany.....	57	4	61	61	.....	4	5
Settlers from United States as per entries made at Custom Houses within this Agency.....	.....	1,406	1,406	1,406	.....	.....	.....
	2,439	1,494	3,933	3,901	32	488	476

KINGSTON AGENCY.

STATEMENT shewing expenditure at Kingston Agency, on account of Immigration for the Twelve Months ending 31st December, 1870, also amounts paid by Dominion and Ontario Governments respectively.

Service.	Amount paid by Dominion.	Amount paid by Ontario.	Total.
	\$ cts.	\$ cts.	\$ cts.
Transport.....	.....	338 12	338 12
Provisions and Lodgings.....	12 82	164 52	164 52
Salary.....	800 00	.....	800 00
Incidental, rent, fuel, stationery, postage, cartage.....	88 23	12 28	100 51
	888 23	514 92	1,403 15

STATEMENT shewing number of Immigrants applied for within Kingston Agency, during the year 1870, and class required.

Farm Laborers.	Female Servants.	Carpenters.	Masons and Bricklayers.	Machinists.	Blacksmiths.	Shoemakers	Masons' Laborers.	Plasterers.	Tanners and Curriers.	Coopers.	Carriage Makers.	Moulders.	Tailors.
3,095	1,795	95	54	31	38	22	20	12	5	3	10	4	13

Making a Total of 8,197 souls.

GOVERNMENT IMMIGRATION OFFICE,
KINGSTON, 31st December, 1870.

SIR,—When forwarding my returns I think I omitted mentioning value of the settlers' effects who arrived from United States during present year, as per entries made at the various Custom Houses within this agency. The value of their effects is \$60,521 (sixty thousand five hundred and twenty-one dollars). This should appear in my report, but in the hurry to get it off, was omitted. Please have it inserted.

Your obedient servant,

R. MACPHERSON,

Acting Immigration Agent.

J. C. Taché,
Deputy Minister of Agriculture, Ottawa.

No. 7.

ANNUAL REPORT OF HALIFAX IMMIGRATION AGENT.

(MR. EDWIN CLAY).

GOVERNMENT IMMIGRATION OFFICE, No. 46 BEDFORD Row.
HALIFAX, N. S., January 28th, 1870.

SIR,—I have the honor to transmit, for your information, a report of the operations of this office, for the calendar year ending 31st December, 1870.

The number of Immigrants from Great Britain amounts to,

Men.....	258
Women.....	101
Boys and girls.....	78
Total.....	437

Being five less than in the preceding year, and about the same style of Immigrants To give an opportunity to understand the class of persons now settling in this Province I have classified them so as to show their trades and callings, so far as known, and the part of Great Britain from which they came. A small number have applied for and received pecuniary aid.

I have succeeded in securing good situations and employment for many who came out entire strangers, with no friends or relations in the country.

Many needed information as to where to find their friends or employers, having been employed before leaving the old country.

In the early part of the season many inquiries were made by farmers, in this Province, and Prince Edward Island, as to the prospects before the new settler on the free grants in the Province of Ontario. Cards and pamphlets forwarded to this office by the Commissioner of Agriculture and Public Works for the Province of Ontario have all been distributed so as to spread the information as far as possible, which I have reason to believe has resulted in directing quite a number of provincial emigrants from the Western States to Ontario.

Information respecting Red River and the best and cheapest route has been much sought after; both from the old country and these two Lower Provinces, Prince Edward Island and Nova Scotia.

A few gardeners, skilled farm laborers, and servant girls have been sought after. A large number of young girls from eight to ten years of age could be provided with good homes, where they would be instructed and trained in the domestic customs and habits of the best families in our land.

A small number of women and children among those who applied for pecuniary aid, I found quite ill from the effects of the voyage; to these I gave the best medical attendance I could at the boarding houses without sending them to an hospital.

I beg now to enclose two statements of expenditure, one in detail for 1870, the other showing expenditure from 1st of July to 31st December, 1870.

I have the honor to be, Sir,

Your most obedient servant,

EDWIN CLAY.

IMMIGRATION OF 1870.

Total number of Immigrants by way of St. Lawrence.	Ditto, direct by Dominion Ports.	By United States.	Number remaining within limits of this country.	Number sent to other Agencies for settlement.	
	437	.....	431	6	
Country.		Men.	Women.	Children.	I have not included in the above Statement a number of Swedes en route for Maine, United States, as they landed and passed on.
English.....	214	258	101	78	
Scotch.....	102	.....	.....	.....
Irish.....	93	.....	.....	.....
Foreigners.....	28	.....	.....	.....
	437				

Trades and callings of the steerage male Immigrants landed in Halifax in 1870, as far as known.

Blacksmiths	3
Carpenters	23
Draper	1
Engineer	1
Farmers	28
Gardeners	4
Laborers	54
Mechanics	16
Merchants	2
Miners	61
Milliner	1
Missionaries	3
Painter.....	1
Porters	2
Shoemaker	1
Soldiers	5
Tailor	1
Weaver	1
Total	208

This leaves 229, including children, without having any given trade or calling.

EDWIN CLAY,
Immigration Agent.

N.B. As J. Outram, Esq., had full charge of the office as Deputy until July 1st, 1870, the statements of expenditure to that date are as kept by him; and I would here acknowledge the obligation I am under to Mr. Outram for his kindness and gentlemanly deportment in rendering me any assistance in his power when first taking charge of the office.

To J. C. Taché, Esq.,
Deputy Minister of Agriculture, &c., &c.

No. 8.

ANNUAL REPORT OF ST. JOHN, N. B., IMMIGRATION AGENCY.

(MR. R. SHIVES.)

GOVERNMENT IMMIGRATION OFFICE,
CUSTOM HOUSE BUILDINGS,
ST. JOHN, N. B.,
January 25th, 1871.

SIR,—I beg to inclose my Report for 1870 ; the number of Emigrants arrived last year is small ; but I trust there will be an increase during the coming season.

I have the honor to be, Sir,

Your obedient servant,

(Signed),

ROBERT SHIVES.

J. C. Taché, Esq.,

Deputy Minister of Agriculture, &c., &c., Ottawa.

GOVERNMENT IMMIGRATION OFFICE,
ST. JOHN, N. B., January 25, 1871.

SIR,—I have the honor to submit for the information of the Honorable the Minister of Agriculture, a Report of the operations of this Agency for the year 1870.

The number of Immigrants arrived at this Port has fallen off considerably from that of last year ; during the past season there arrived :—

By steamers from Glasgow and Liverpool.....	145
From Quebec, <i>via</i> Portland and the Gulf.....	63
From the United States by Steamers.....	11

Making in all 219 ; but to this there should be added those who come out to New York, and from thence to this Province *via* Boston ; but as correct information cannot be obtained it is impossible to state the number for years past ; the returns of the arrivals at Castle Garden, have shown an average of 150 annually whose destination was New Brunswick.

The arrivals of the past year have been chiefly of the agricultural classes, and are now settled in the Province. In former years, when immigration was on a large scale, St. John was in a great measure only a port of call, and three-fourths, or more, of the immigrants immediately proceeded to the United States. Those who of late years come to the Province, do so with the intention of remaining in it.

Either through design, or want of information, a woman, the wife of an employé on the European and North American Railway, and her two children, were subjected to severe hardship and great inconvenience. They arrived at New York in the steamer "Aetna," from thence they were sent to Quebec *via* Portland, and thence to St. John *via* the Gulf of St. Lawrence. Cases similar to this are of frequent occurrence, involving extra expense, loss of time and much inconvenience.

Notwithstanding the inducements which the Province offers, the number of arrivals is small. The government has recently issued a work entitled, "Facts for the Information of Intending Emigrants," which has been circulated in the old country ; and it is hoped that through this means, and letters in the newspapers, describing the country and its capabilities, this part of the Dominion may become better known. The soil is good ; there is abundance of ungranted government land, which may be had almost free, the cost of 100 acres being only \$20.00 ; or the settler may obtain that quantity without a money

payment, by performing work on the road in the neighborhood of his lot at the rate of \$10.00 a year for the period of three years, when the government gives him a deed devising the land to him and his heirs.

In the new settlements there are abundant evidences of prosperity, and this should prove an inducement not only to persons abroad, but to those in our midst who frequently as day-laborers, and particularly in times of depression, find it difficult to procure a comfortable subsistence, to become settlers on the government lands.

To the many letters from persons in the old country asking for information in regard to the capabilities and resources of the Province, I have returned answers, which it is hoped, will be satisfactory.

During the year, places in town and country, have been secured for over one hundred persons; some of these were farm-laborers, others mechanics. The demand, however, for farm-laborers, is much greater than the supply, and has been so for many years. The prices obtained for farm produce, and the very general prosperity of agriculturists, make it certain that large numbers of hands will find ready employment and remunerative wages.

Servant girls, dairywomen, men and boys over fourteen years of age, are sure to better their condition. Sobriety and industry invariably secure a comfortable subsistence and frequently independence.

Forty orphan girls, brought out by Miss Rye, have been provided with comfortable homes. They arrived at Quebec in the steamer "Peruvian," and were conveyed by the Grand Trunk Railway to Portland, and thence by steamer to St. John. The number fell short of the demand. The expense incurred in their transport and maintenance, was defrayed by the Local Government.

New Brunswick comprises an area of 17,347,360 acres; 7,584,497 have been granted or located; leaving 9,762,863 vacant. There are now surveyed and laid off in 100 acre lots, 231,162 acres which are ready for settlers. This surveyed land comprises blocks in nine counties, is easy of access, and the soil is well adapted for agricultural purposes.

The expenditure at this Agency, for the six months from 1st July 1870, to 31st December, is as follows:

Boat hire.....	\$ 01 00	
Books by Express.....	0 70	
Messenger.....	25 00	
Printing, Stationery, &c.....	21 89	
Postage and Stamps.....	8 50	
Window glass, 0.70; Stove pipe, 1.37.....	2 07	
Newspapers.....	5 50	
Directory, Maritime Provinces.....	3 00	
Scrubbing Office, 1.00; Year Book 0.25.....	1 25	
		\$ 68 91
Six month's salary.....		414 06

LOCAL GOVERNMENT.

Transport of 40 Immigrants from Quebec.....	195 50	
Provisions, &c.....	85 52	
Furnishing building, bedding, &c....	291 97	572 99
		\$1,055 96

IMMIGRATION FOR 1870.

Total number of Immigrants by way of the St. Lawrence.	Total number of Immigrants direct by Dominion Ports.	Total number of Immigrants by way of the United States.	Number remaining within limits of Agency.	Number sent to other Agencies for settlement.	Remarks.
63	208	11	219	None.	There is only one other Agency, viz. Miramichi. There is a large number, via the United States, but I can only vouch for 11.

I have the honor to be, Sir,

Your most obedient servant,

(Signed),

ROBERT SHIVES,

Immigration, Agent.

J. C. Taché, Esq.,

Deputy Minister of Agriculture, &c., &c., Ottawa.

No. 9.
**ANNUAL REPORT OF IMMIGRATION AGENT, CHATHAM, MIRAMICHI,
NEW BRUNSWICK:**

(J. G. G. LAYTON,)

CHATHAM, MIRAMICHI,
February 16th, 1871.

Sir,—I have the honor to enclose statement of the Immigration at this agency for the year 1870. It will be observed that the total number *reported* is only thirty-one. Many more have arrived within this district, but needing neither assistance nor advice, have not reported to me. Numerous arrivals have also taken place of young persons who had previously left the district for the United States, as they neither wanted aid nor advice, I cannot report the number, but know it to be considerable.

I may report that this part of the Province offers special inducements and advantages to the emigrating classes, just now. Large public works are in course of construction, common labor was never, at this season of the year, in greater demand or better remunerated. The demand will be much greater on opening of navigation, when wages will, in all probability, range from \$1 25 to \$2 00 per day. Quarrymen and store cutters are *now* receiving from \$2 to \$3 per day, and other mechanical labor is also in good demand.

I would venture to express an opinion that, in view of the present high rate of wages for common labor that, on the opening of navigation, when the numerous saw mills are in operation, ships arriving by scores, and the farmers begin to work, unless the supply is supplemented by a considerable immigration, these several interests must suffer very materially. There need be no fear of an augmentation of the supply materially reducing the rates of wages, as, but few, in this district, remain long in the condition of laborers.

I may report that a ship arrived during the season with emigrants from Ireland, that the Captain neglected to report at the Custom House, but upon my threatening him with a prosecution, he did so.

I beg further to report that in accordance with the verbal instructions I had the honor to receive from you at Ottawa, I named William Wilkinson, Esq., as sub-agent while I am employed under you as a Census Staff Officer, and trust this nomination will meet with your approval.

I have the honor to remain your obedient servant,

J. G. G. LAYTON.

Immigration Agent,

To The Honorable
The Minister of Agriculture, Ottawa.

IMMIGRATION AGENCY,

CHATHAM, MIRAMICHI.

IMMIGRATION OF 1870.

Total via St. Lawrence.	Total via Dominion Ports.	Total via United States.	Number remained within limits of Agency.	Number went to other Agencies.	Remarks.
Nine	Thirty-one	None, unless natives, who had previously emigrated and returned, may be so considered.	Twenty-one.	Nine went to St. John.	

(Signed), J. G. G. LAYTON,
Immigration Agent.

No. 10.

EUROPEAN AGENCIES.

ANNUAL REPORT OF LONDON EMIGRATION AGENT,

(MR. WM. DIXON.)

GOVERNMENT EMIGRATION OFFICES,

11 ADAM STREET, ADELPHI, W.C.,

LONDON, 28th January, 1871.

SIR,—I beg leave to enclose a report of the operations at my agency for the year 1870, which I hope will be satisfactory.

I have the honor to be, Sir,

Your obedient servant,

WM. DIXON,

Canadian Government Emigration Agent.

To the Hon.

The Minister of Agriculture,
Ottawa.

CANADIAN GOVERNMENT EMIGRATION OFFICES,

11, ADAM STREET, ADELPHI, LONDON,

December 31st, 1870.

SIR,—I have the honor to submit the following Report of the operations of my Agency for 1870, with a few remarks bearing generally on emigration.

The state of the labor market in the United Kingdom was apparently even more depressed than in the preceding season. Great anxiety was shown by Members of the two Houses of Parliament and other gentlemen to relieve by emigration the pressure caused by a redundant population. Societies and clubs were formed, not only in the Metropolis but in the provinces, to discuss the painful circumstances in which so large a number of industrious families were placed through inadequate employment, to obtain reliable information concerning the labor wants of the Colonies, and to devise means to assist those, who, from circumstances over which they had no control, were unable to remove to other places where they could by honest industry support their families in comfort.

The society which obtained the largest amount of support from the public was "The British and Colonial Emigration Fund" formed by a number of Noblemen and Gentlemen, whose position entitled them to unlimited confidence, and amongst whom you will recognize names that are ever forward in the promotion of good works. The meetings of the Society were held in the Mansion House, as in the preceding year, and were presided over by the Right Hon. Robert Besley, the Lord Mayor of London, the late Lord Mayor, Alderman Sir James C. Lawrence, Bart., who had held the same position in 1869, consenting to hold the office of Vice-President. The following are the names of the Committee:—

A. C. Barclay, Esq., M.P.,
 F. A. Bevan, Esq.,
 Revd. Canon Brown,
 Sir T. Fowell Buxton, Bart.,
 Henry Buxton, Esq.,
 The Hon. R. Capel,
 Philip Cazenove, Esq.,
 Lord A. Churchill,
 E. H. Currie, Esq.,
 C. D. Fox, Esq.,
 A. Green, Esq.,
 Sir George Grey, K.C.B.,
 Col. Henderson, C.B.,
 H. Kingscote, Esq.,
 Revd. J. Kitto,

General Lefroy, C.B.,
 A. McArthur, Esq.,
 Lord Northbrook,
 H. W. Prescott, Esq.,
 C. H. A'Court Repington, Esq.,
 A. de Rothschild, Esq.,
 Rev. S. Ruddick,
 Lord Cosmo Russell,
 J. D. A. Samuda, Esq., M.P.,
 A. Scott, Esq.,
 Earl Shaftesbury,
 W. H. Smith, M.P.,
 R. R. Torrens, Esq., M.P.,
 The Marquis of Westminster,
 C. H. Wigram, Esq.

TREASURERS:

The Hon. A. Kinnaird,

Sir David Salomons, Bart.

HON. SECRETARY:

J. Standish Haly, Esq.

The mode of action pursued by the Society was similar to that of 1869. When the Committee first commenced operations I was stationed in Wolverhampton; and had, consequently, a very imperfect knowledge of their inaugural transactions. Selection was made for the emigration,—in many instances—of those who were completely destitute; a few were taken from the Workhouses. On their arrival and distribution in Canada it was found, as might reasonably have been expected by those conversant with the circumstances, that there was a difficulty in settling and satisfying the newly arrived emigrants. Serious complaints were made, not only by the Immigration Agents of their listless and dissolute conduct, but by the President of the St. George's Society of Toronto, who made a claim upon the Department for £30, said to have been advanced by him for the assistance of these poor people, whom he also stated were induced to emigrate by the injudicious conduct of your Agents, though he did not consider it necessary to ascertain that he was making a charge which was absolutely without foundation in fact.

On my explaining to the Emigration Committee the dissatisfaction that existed in Canada about these shipments of destitute persons, it was arranged that a different system should be adopted in the future, and that the fund would help those only who showed a disposition to help themselves, each adult member of a family being required to provide at least £3 towards the expenses of passage and outfit, and a most careful mode of supervision was commenced. Each applicant was furnished with a printed form which he was required to fill up with his name, occupation, place of residence, the name of his last employer, how long he had been out of work, with other particulars and certificates of good character. On complying with these rules, he was instructed to present himself with all the members of his family at the offices of the Society before a Selection Committee, which I usually attended. Each individual case was carefully considered, and it was explained to the applicants what the prospects were, and the success they might reasonably hope to attain in Canada. Those who did not pass a satisfactory examination were immediately struck off the list, every precaution was taken that prudence could suggest in selecting those only who were likely to adapt themselves to Colonial life. Single men were obliged to pay £6 for passage and outfit, and in every instance the intending emigrant was required to enter into a written engagement that he would repay the Society the full amount advanced for his benefit, within three years of his arrival.

The total number assisted by the Society to emigrate to Canada in the year 1870, was 5,089 souls, as under, by the Steamships:—

Medway,	from	London,	April 14	...	508 souls.
Ganges,	"	"	" 27	...	747 "
Tweed,	"	"	" 28	...	480 "
Nestorian,	"	Liverpool,	" 28	...	49 "
Scandinavian,	"	"	May 5	...	106 "
Avon,	"	London,	" 12	...	498 "
Moravian,	"	Liverpool,	" 19	...	150 "
Austrian,	"	"	" 26	...	271 "
Prussian,	"	"	June 2	...	63 "
Nestorian,	"	"	" 9	...	15 "
Medway,	"	London,	" 11	...	561 "
Ganges,	"	"	" 25	...	702 "
Tweed,	"	"	" 25	...	480 "
Atlas,	"	"	July 9	...	247 "
St. David,	"	Glasgow,	" 12	...	32 "
Aven,	"	London,	" 21	...	152 "
Scandinavian,	"	Liverpool,	" 28	...	9 "
Medway,	"	London,	August 4	...	19 "

To meet the expenses necessarily incurred in carrying out so large a scheme of assisted emigration the Committee received in round numbers a sum of £23,500 of which £9,000 was contributed by public subscription, £2,500 by Kelsall's Emigration Charity, and about £12,000 by local emigration societies, the emigrants themselves, or their friends, in aid of their passages. Towards the public subscription £2,000 was contributed by the Manufacturer's Relief Committee, £1,000 by the Right Hon. G. J. Goschen, M.P., £1,000 by Messrs. Frühling and Goschen, £500 by Mr. W. H. Peck, M.P., £250 by Mr. S. Morley, M.P., with large sums also from Bankers, Merchants, and other gentlemen and ladies. A sum equal to about 10s per head was remitted to the Chief Agent at Quebec, for the use of the emigrants on arrival.

The Hon. Secretary, Mr. Standish Haly, was unremitting in his exertions and endeavored to meet my wishes in all instances.

Emigration Clubs were established in Torquay, Poplar, Clerkenwell, Southwark, Woolwich, Reigate, and Redhill, Blackheath, Greenwich, Brighton, Deptford, Westminster, St. John's, St. Olive's, Notting Hill, St. Saviour's, Lambeth, Sydenham, Richmond, Tellington and other places. Many of these Clubs worked in harmony with the British and Colonial Emigration Committee, drafting their members to that Society for shipment, when they were fully prepared for embarkation.

The principal of these Clubs operating during the season, were "The East End Emigration Clubs" of Poplar, and "The Royal Canadian Emigration Club" of Clerkenwell. The former was managed by a Committee, composed of the following gentlemen:—Mr. Blott, Mr. Currie, Rev. J. Kitto, Mr. Scrutton, Mr. Wigram and Mr. Young. The utmost care was taken in the selection of the families, consisting of 1,240 souls. I attended their meetings in Poplar, and accompanied them to Gravesend; their appearance was all that could be desired; in every respect they were a remarkably fine looking lot of people.

The Royal Canadian Emigration Club was managed by the Rev. A. Styleman Herring, Incumbent of St. Paul's, Clerkenwell; the meetings which I attended being held in the parish school-room, Allan-street, Goswell Road. In his intercourse with the Club, members and their families, Mr. Herring, particularly urged upon them the maintenance of temperance principles. The total number assisted to emigrate during the season by Mr. Herring was upwards of 1,200 souls; about half of these sailed under an arrangement entered into by him with the Steam Agents, direct to Quebec from Liverpool, while the remainder were merged in the shipments of the British and Colonial Emigration Committee.

Impressed by the grave responsibility of being instrumental in the removal from their native land of so great a number of souls, Mr. Herring determined to visit Canada and satisfy himself by personal observation of the well being of his people. After an absence

of three months he returned to London, with a high appreciation of the benefits accruing, and a determination to promote emigration in future to the extent of his power.

The management of the "East End Family Emigration Fund" was undertaken by the following Committee:—

The Countess of Ducie,
The Countess de Grey,
The Countess of Denbigh,
Lady Fielding,
Lady Charteris,
The Hon. Mrs. Hobart,
Hon. Elizabeth Waldegrave,
Hon. Mrs. Kinnaird.

Lady Burrell,
Charles, Hogg, Esq.,
Thomas Hughes, Esq., M.P.,
Lachlin Rate, Esq.,
Revd. S. Bardsley,
Revd. J. Trevitt,
Revd. J. Richardson,
Revd. T. Barnes.

TREASURER:

The Hon. F. Hobart.

This Association commenced operations in the summer of 1868, and shipped to Quebec 17 families, numbering 84 souls. The accounts received from these people were so extremely satisfactory that it was decided the movement should be continued on a more extensive scale. Through the extraordinary exertions of the Hon. Mrs. Hobart, who acted as Secretary, and other ladies, 1,035 were emigrated during the season of 1869, at an expense of £6,059 2s 10d. As the progress made by these emigrants quite equalled the expectations of the Committee, it was determined still to continue the movement, and a meeting was held at the Mansion of the Hon. Arthur Kinnaird, to devise ways and means for assisting more emigrants, the result being that a sum of £5,344 2s 1d was collected through private munificence and an appeal to the public through the Press, so that a total number of 1,012 souls was despatched to Canada during the season of 1870.

The emigrants who were selected without distinction of creed from the Isle of Dogs, Poplar, Limehouse, Bow, Stepney, Bethnal Green, Mile End, Whitechapel, St. George's East, St. Luke's, Clerkenwell, Shadwell, and Spitalfields,—by the clergy and others personally acquainted with them,—were people, who, though of good character and ready and willing to work, were not able in this country to obtain employment so as to support their families. Their state of destitution in fact was so great, that not only had their passages and outfits to be defrayed by the Committee, but in many instances their tools and a portion of their clothes had to be redeemed from pawn shops. A sum of money equal to about 10s per head was remitted to the Quebec Agent by the Committee for their use on arrival.

The emigrants were supplied with Bibles by the Society for promoting Christian Knowledge, and parcels of useful and interesting books by the Religious Tract Society, all of which were apparently received by them with great pleasure; an unlimited supply of toys being also provided for the recreation of the children, to wile away the tedium of the voyage.

"The National Emigration League" was formed by the Union of the "National Emigration Aid" and the "Workman's Emigration Society" a Committee being composed of the following gentlemen, under the Presidency of

His Grace the Duke of Manchester.

The Revd. J. Aston,
Mr. E. Bowring, M.P.,
Mr. Thomas Brassey, M.P.,
Mr. Thos. Brassey, sen.,
Mr. Henry Brassey, M.P.,
Mr. T. Chambers, M.P.,
Mr. W. Charley, M.P.,
Colonel Clarke, R.E.,

Sir J. Bowring, F.R.S.,
Mr. J. Holms, M.P.,
Sir J. C. Lawrence, Bart.,
Mr. Alderman Lusk, M.P.,
Sir F. Lycett,
Mr. Chas. McGarell,
Mr. Wm. McArthur, M.P.,
Mr. H. Marsh,

Sir D. Cooper, Bart.,
 Sir W. Dennison, K.C.B.,
 Mr. Eastwick, M.P.,
 Hon. C. Fitzwilliam, M.P.,
 Mr. Fowler, M.P.,
 Sir George Grey, K.C.B.,
 Mr. Wm. Gladstone, M.P.,
 Lord G. Hamilton, M.P.,
 Mr. W. T. M. Torrens, M.P.,
 Sir D. Wolf, K.C.M.G.,

Col. Maude, C.B., V.C.,
 Mr. S. Morley, M.P.,
 Sir C. Nicholson, Bart.,
 Mr. Chas. Reed, M.P.,
 Revd. W. Rogers,
 Dr. Richardson, F.R.S.,
 Mr. R. R. Torrens, M.P.,
 Mr. E. Wilson,
 Mr. Edward Jenkins,
 Sir E. Halse, Bart.

HON. SECRETARY :

Mr. E. Jenkins.

The objects of the League were :—

1. To urge by various Agencies upon the Home Government the consideration of a National Emigration Policy in co-operation with the Governments of the Colonies.

2. To promote emigration from those Districts of the Metropolis and of the Provinces where distress abounds through want of employment.

3. To raise funds to assist persons and families desirous of emigrating, with advances towards their passage and outfit.

4. To afford advice and information to intending emigrants and others, and to make arrangements for their passages and provide for their proper reception in the Colonies.

Active measures were immediately taken to place the subject of emigration before the authorities and the public, as a proposed means of relief for the suffering caused by a redundant population and a partial stagnation in trade ; important public meetings being held not only in the Metropolis, but in many of the great Provincial Towns.

On the 3rd of February an influential deputation waited upon the Prime Minister to present the following Memorial to the Government, respectfully submitting that :

“ 1st. There is a great and increasing depression in the condition of the industrial and other classes of this Country.

“ 2nd. This depression is chiefly due to, and is yearly intensified by, the numbers of the population for whom the field of employment is insufficient.

“ 3rd. The number of capable persons for whom no work is to be found in this Country is not the only evil observable in the circumstances of the industrial and other classes. The number of persons actually employed in work throughout the United Kingdom is in excess of the numbers necessary, in proper circumstances, to execute it.

“ 4th. The population of the United Kingdom is increasing at the rate of 240,000 per annum beyond the usual rate of emigration, and, apart from the other considerations offered by your Memorialists, it appears to them to be incumbent on the Government to use some means for preventing the inevitable aggravation by this increase of social conditions already charged with peril.

“ 5th. Without depreciating other remedies for the evil above mentioned, Your Memorialists strongly urge the necessity of supplementing those remedies by a large and comprehensive system of emigration under the auspices of the Government.

“ 6th. There are two branches of this question, both of which Your Memorialists beg to press upon your notice. The *First* concerns such immediate relief to existing distress as would remove persons now suffering for want of work, to colonies where there are present openings for employment. Such openings Your Memorialists are informed exist in Canada and in some other of the Colonies, and they implore on behalf of the sufferers some instant action of the Government in their favor, more especially as the noble efforts of a large private benevolence during two years have only diminished the surplus to the number of a few thousands, an extent almost inappreciable. The *Second* Branch relates to measures for the purpose of fostering the development of the Agriculture and other resources of the Colonies, with the consequent reflex benefit to trade and general prosperity at home and throughout the Empire.

"7th. While urging upon the Government the necessity of affording immediate help to supply competition for work to deficient labor markets in the Colonies, Your Memorialists earnestly direct your attention to this second and larger question. They suggest that nothing would so steadily conduce to the relief of the people, and the future extension of trade and manufactures in this country, to Colonial progress and to a closer union of the Empire, as an extensive settlement of unemployed labor on uncultivated lands.

"8th. Such a settlement assisted by Government and conducted in concert with the Colonial Executives would not be open to the objection that the burden of "paupers" or persons without resources was being transferred to the Colonies, would enable them to receive a larger number of emigrants, would for the present more equally, naturally and successfully relieve the existing pressure in the labor market of the British Islands, and would also have the effect of constantly enlarging the field for profitable employment.

"9th. Your Memorialists can produce evidence to show that there is a reasonable prospect of a full return with interest from the settlers, should the Government see fit to inaugurate a system of help to emigrants, for land settlement by loans, and that thus an emigration might be carried on without ultimate expense to the nation. They also call your attention to the fact that a system of loans would meet the objection, that persons would avail themselves of Imperial assistance who had means of their own, since it would be the obvious interest of all such persons, as soon as possible, to relieve themselves and their allotment of land from obligation. Precedents for the action of the Government in assistance to classes of Her Majesty's subjects exist in the loans for drainage and improvement of waste lands in England and Ireland, loans for piers and harbors, for railways in India, the grant during the Irish famine, and the assistance given to emigration from India to Burmah.

"10th. It cannot be necessary for Your Memorialists to remind the Government that one of the greatest benefits which would be conferred upon the people of these realms would be found in a large increase in the raw materials which form the great staples of our industry and food supply. It is evident that their production is capable of almost infinite extension in the colonies and possessions of this Empire, and that all that is required to ensure that production is the settlement of labor on land.

"11th. Your Memorialists are deeply impressed with the belief that fresh economical, social, moral and commercial advantages can be promoted by a well organized and comprehensive distribution of the surplus labor of these Islands upon the waste lands of the British Empire. Moreover, as regards the integrity of that Empire, to which no Government can be indifferent, they specially urge that a large emigration guided, by the hand of Government, would help to bind more closely to the Empire the Colonies to which it was directed, and would secure for this nation the lasting gratitude and loyalty, not only of the individuals immediately benefited, but also of the colonies to which they were sent."

In presenting the Deputation to Mr. Gladstone, His Grace the Duke of Manchester, in the course of a very able speech stated, that before the colonies could be over crowded they must have a population many times beyond what they have now, that the inhabitants of the colonies consume English manufactures at the rate of £6 per head, while others consume them at the rate only of a few shillings per head; that emigration would be putting people, who are now almost paupers, into a position where they would consume a large amount of the manufactures of the Mother Country, he thought it also a Christian duty as well as a political advantage to the country to establish an emigration movement in the present state of affairs. After remarks by other gentlemen, Mr. Gladstone stated, that the proposal would receive the respectful attention of his colleagues; and the deputation withdrew.

Subsequently an animated discussion arose in the House of Commons on the propriety of assisting with public money an emigration of the unemployed to the colonies. The motion was strongly opposed by the Government; and was thrown out upon a division by a considerable majority.

By various means the National Emigration League has assisted about 300 persons to emigrate to Canada this year.

In the early part of the season the Government having determined to send transports to Canada for the removal of troops, the Lords of the Admiralty following up the arrangements adopted last year, allowed the use of them for the conveyance to Quebec of discharged operatives from the Dockyards and others on condition that the expenses of provisions, &c., should be provided from other sources. The numbers thus conveyed to Canada, were, in H. M. S. Tamar 462 souls, and in the Crocodile 928 souls; the latter including 22 pensioners and their families.

The amount required to cover the expenses of provisions, landing money, &c., was £2 per statute adult, which was provided either by the people themselves, or by contributions from charitable associations. A large number of these people were from the vicinity of Deptford, and the vessels sailed with them from Portsmouth on the 1st and 8th of June.

Miss Macpherson, of the Revival Refuge and Home of Industry, Spitalfields, whose name is so well known in connection with philanthropic works in the most poverty stricken districts of East London, made arrangements to proceed to Canada with about 100 poor lads, averaging from 13 to 17 years of age, whom she had rescued from a state bordering on starvation in the streets. After a few months careful training to inculcate habits of obedience and industry, she sailed with the party for Quebec, each lad being well provided with clothing and other necessaries. On her arrival she had no difficulty in disposing of her venture; and so well satisfied was she with her progress, that she immediately desired an assistant in London to follow her with a consignment of 70 boys; meanwhile she secured a home for the reception of the boys, in the town of Belleville, capable of holding 200 inmates; all expense of rent and taxes being defrayed by the Town and County Council.

On her return to England she prepared and accompanied another party of emigrants to the home at Belleville, among whom were a few young widows who had been left in destitute circumstances with their children. The total number assisted by this lady to emigrate during the season was about 350. The Belleville Home is managed by a superintendent from England, who keeps a watchful eye over the boys placed in service.

His reports generally are of a satisfactory nature; in some instances exceedingly so, one lad having already remitted a sum of £20 to pay for his own passage, and to assist his poor relatives to follow him. At the same time I may mention, that four or five of them have by some means found their way back to London. Miss Macpherson is at present devising ways and means for next year's emigration, and purposes extending her sphere of action to other English and Scotch towns.

On the 4th May, Mr. W. Williams of the Boys' Refuge, Great Queen Street, sent forward 65 stout, fine-looking lads from the Society's farm at Risley, each supplied with an excellent outfit, consisting of working and Sunday clothes; they were consigned to gentlemen in Hamilton and Paris, who had kindly arranged for their reception and service. A further shipment of 17 was made in the middle of June.

The Ragged School Union under the patronage of Earl Shaftesbury, shipped by the Steamship Moravian, on 19th May, a party consisting of 12 girls and 20 boys, averaging about 15 years of age. Great care was taken in their selection, and each provided with an ample outfit. The squad was consigned to a gentleman in Hamilton for settlement.

The Revd. Father Nugent, Roman Catholic Prison Chaplain at Liverpool, accompanied a small party of boys to Canada, with whose antecedents he was well acquainted, and he found comfortable homes and employment for them all with little difficulty.

A very respectable party of artizans, laborers and their families were also emigrated, by and at the sole expense of the Right Hon. Lady Hatherton, from the Isle of Wight.

Another party of eight young farm laborers were assisted to emigrate by the Vicar of Tetworth. Other clergymen also forwarded emigration energetically, but it would be tedious perhaps to enumerate.

A movement was commenced in the early part of the season of 1869, by Miss Maria S. Rye, a lady engaged in the conduct of female emigration, who made an eloquent appeal to the public, through the leading journals, for means to enable her to transport to Canada the female waifs and strays of London and other large cities, aged from five to ten years, whom she designated "gutter children." The appeal was eminently successful, and she obtained a large amount of money. I strongly objected to this project, considering it would be prejudicial to our interests, and a bad precedent, and I called attention to the fact that our passenger laws were prohibitory of their landing; but as Miss Rye would not give any attention to my objections, I felt it necessary to serve the Steam Agents with a legal notice that they would be held responsible for an infraction of our laws if they persevered in their expressed intention of conveying these helpless little ones to Canada. I presume my protests had some effect as I found that the children shipped in October were of a somewhat superior class, and that they had not been taken from the streets as Miss Rye's appeal appeared to imply. Of the 92 souls of which the first party consisted, I am informed that 30 were taken from London, 5 from Brighton, 7 from Wolverhampton, and 50 from the Kirkdale Industrial Schools, near Liverpool. All those from Kirkdale, were under 12 years of age, but 22 of the London lot were over that age.

During the season of 1870, I received for distribution from the authorities of the Province of Ontario 67,931 publications of various descriptions connected with emigration, and in addition 52 cases containing 14,000 large placards for exhibition in the post offices of the United Kingdom, according to an arrangement I had previously made with the Right Hon. the Postmaster General.

From Nova Scotia I received 2,000 copies of an emigration pamphlet printed by order of His Honor the Governor, the quantity forwarded being quite inadequate for the purposes required.

I received also from the Province of New Brunswick on the 8th October, 100 copies of an emigration pamphlet, containing much practical information for emigrants to that Province. It appears to have been compiled with much care, but the paper and printing are inferior.

All the publications connected with emigration, received for distribution up to this date have been disposed of most carefully, with the exception of about 200 pamphlets now on hand.

Mr. Thomas White, a special Emigration Commissioner, from the Province of Ontario, arrived here in the beginning of the year, and returned to Canada in the latter part of June. During his visit to Great Britain he was actively and successfully engaged in promoting the object of his mission: as on a previous occasion, I furnished him with every assistance in my power.

In answer to an appeal made by Mr. White to the proprietors of newspapers in Canada during the autumn of 1869 for a supply of papers for the use of gentlemen frequenting this office, I have to acknowledge with many thanks the regular receipt of the following Journals:—

Daily Mercury,	Quebec,	Weekly Advance,	Barrie,
" Citizen,	Ottawa,	" Advertiser,	Guelph,
" Chronicle,	Quebec,	" The News,	Ingersoll,
" Spectator,	Hamilton,	" Reformer,	Galt,
The Weekly Courier,	St. Hyacinthe,	" Home Journal,	St. Thomas,
Weekly Chronicle,	Whitby,	" Advertiser,	London,
" Recorder,	Brockville,	" Observer,	Sarnia,
" Chronicle,	Ingersoll,	" Observer,	Elora,
" Enterprise,	Collingwood,	" Review,	Peterboro',
" The News,	St. John, Quebec,	" Advertiser,	L'Original,
" Gazette,	Montreal,	" Enterprise,	Aylmer,
" Chronicle,	Quebec,	" Spectator,	Hamilton,

Which was a source of gratification to Canadians in London, and to others interested in Canadian affairs. They also enable me on several occasions to make a profitable use of

home news. It would conduce greatly to our advantage were I regularly supplied with the other Dominion Journals.

In the month of May I thought it desirable to visit Mr. Simays, the Continental Agent at Antwerp. I found the books and papers kept with scrupulous care, and the agent enthusiastic about his work. As Mr. Simays was re-called during my absence in Canada, I am unable to give you full details of his progress.

Emigration agencies are established in Great Britain by the following Colonies:—South Australia, Victoria, Queensland, Tasmania, Canterbury, Nelson, Hawkes' Bay, Otago, Marlborough, Southland, and Auckland. The interests of the other colonies and British possessions being cared for in London by H. M. Emigration Commissioners.

The principal colonies having agencies in London are Queensland and Victoria, the former represented by Mr. John Douglas, who is styled Agent General of Emigration. The latter by Mr. George Verdon, who is called Agent General.

The population of Queensland is at present said to be rather over 110,000 souls and the number of persons who emigrated there from the United Kingdom and the Continent this year, under the supervision of the Agent General, was 2,988½ statute adults; 463½ adult emigrants paid their passages in full, the remainder were assisted free, and are what are called nominated or remittance passengers. Of the total number about 700 were Germans, Danes, Swedes and Norwegians.

Emigrants paying their passages to Queensland in full are entitled to a free grant of 40 acres of land, children under twelve years of age half that quantity, but they are required to pay the cost of the survey, and fees for a deed according to a scale which I shall give in another place.

Assisted emigrants, who must be approved by the Agent General, are required to pay a sum of £8 for each adult, and £4 for each child under 12 years of age, and to enter into an obligation to refund the amount advanced by the Government within two years of their arrival.

Free passages are occasionally granted to female domestics on payment of £1 to cover the cost of ship's outfit, and under exceptional circumstances to others who are specially required in the colony.

What are called Nominated Emigrants are arranged for by residents in the colony who desire to have relatives or friends sent out. The person nominating is required to deposit with the Immigrant Agent a sum of £8 for each person over 45 years of age, £6 for those over 12 and under 45, £4 for those under 12, and to enter into an engagement to pay the remainder of the passage money, which is estimated at £16 for each adult, within twelve months of their arrival.

Each nominated or assisted passenger is entitled to a free grant of 40 acres of land on refunding the full amount advanced by the Government.

The arrangements for the purchase of Government lands in Queensland and the areas allowed to be selected by any one person with the rate per acre are as follow:—

Agricultural land, not less than 40 acres, and not more than 640 at 15s per acre.

First class pasture land, not less than 80, nor more than 2,560 acres, at 10s per acre.

Second class pasture land, not less than 80, nor more than 7,680 acres at 5s per acre.

These are the maximum acres allowed for each class, which it is not permitted to exceed. The selection may be in one, or not more than three blocks; but provision is made for adjacent lands being selected, provided the boundaries are co-terminous, and the maximum area of each class is not exceeded.

The following scale of fees has to be paid by selectors and purchasers to defray the cost of survey:

40 acres and under	60 acres	£3	8	0
60 "	80 "	3	16	0
80 "	120 "	4	12	0
120 "	160 "	5	4	0
160 "	240 "	5	16	0
240 "	320 "	6	4	0

320	„	„	480	„	7	0	0
480	„	„	640	„	7	18	0
640	„	„		„	8	0	0

And for every additional 640 acres, or part of 640 acres after the first 640 acres £4.

In addition to the above, the followingscale of deed fees is payable on deeds of grant in fee simple :—

Not exceeding	50 acres	£1	0	0	
„	100	„	1	5	0
„	500	„	1	10	0
„	1,000	„	2	0	0
„	2,000	„	3	0	0
„	5,000	„	4	0	0
„	10,000	„	5	0	0

The emigration to Victoria from the United Kingdom during the present season was 4,396 souls, equal to 3,882 statute adults, all of whom came under the direct supervision of the Agent General for the Colony, who is now governed by regulations, dated at Melbourne, June 16th, 1870, which provide for the granting of free and assisted passages.

Free passages are granted to female domestic servants, of good character, who must be British subjects and between the ages of 18 and 35 years. At the discretion of the Agent General, he may also grant passages to a few married couples who have been accustomed to farm work, and who will act on the voyage in the capacity of Ship or Mess Constables, in looking after the welfare and convenience of the single women. Each free passage emigrant is required to pay a sum of 20s towards the expenses of the ship's outfit.

Assisted passages are granted to persons in the United Kingdom who have been nominated by their friends in Victoria, upon the payment to the Government of Victoria, at Melbourne, of deposits, according to the following scale,—males under 15 years of age, £2 each; over 15 and under 40 years, £5 each; and over 40 years, £8 each. Females under 15 years, £1 only; between 15 and 40 years, £2 each; and over 40 years, £5 each. Passage warrants are then issued to the depositor in Victoria, in favor of the persons nominated by him. The depositor forwards the warrant to the nominee in the United Kingdom, who, upon delivering it to the Agent General in London, and being approved by him, is provided with a passage subject to certain regulations.

Passage warrants are available for nine months from the date of their issue. If not used by the nominee, a passage warrant may be exchanged, or the money returned.

Neither the depositor in the Colony, nor the emigrant on arrival, is required to repay the amount advanced for his passage by the Government.

It may be said with propriety that the whole of the immigration to the Colony of Victoria has been conducted on these principles.

A commodious depot has been established by the Victoria Government at Plymouth for the reception and examination of the emigrants before their departure, and as a rule they are obliged to board and lodge in it (free of charge) for three days before the sailing of the vessel.

The rates of wages in Victoria are, for cooks, £30 to £35 sterling, per annum; housemaids, £25; laundresses, £20 to £25; nursemaids, £15 to £20; general servants £20 to £26. Farm servants, £18 to £25; farm laborers, married, with children £60 to £70; farm laborers, without children, £70 to £80 per annum with rations.

Concerning the expressed want in Canada of respectable female servants, there is, I am afraid, but little chance of obtaining them from this side of the water. The Colony of New South Wales has placed funds in the hands of Her Majesty's Emigration Commissioners with instructions to grant free passages, and ship to Sydney 200 respectable female domestics every month until further notice, but so difficult is it to obtain them, that even with the elaborate and very perfect machinery of the Emigration Board, I am informed that the Commissioners are unable to obtain more than about fifty every two months for shipment.

The following is a return of the number of emigrants who sailed from Ports in the United Kingdom, during the year 1870, with their destination and nationality.

	English.	Scotch.	Irish.	Foreigners.	Not known.	Total.
United States.....	68,935	16,640	67,891	38,281	4,328	196,075
British North America...	20,834	3,467	2,877	8,072	55	35,295
Australasia.....	11,165	2,192	3,169	491	48	17,065
All other ports.....	4,259	628	341	1,490	1,787	8,505
Total.....	105,183	22,927	74,278	48,334	6,218	256,940

The number of Emigrants who returned to the United Kingdom from abroad during the same period was as under :—

Port of Landing.	United States.	British North American Provinces.	Australasia.	All other places.	Total.
Liverpool.....	30,030	3,178	599	85	33,892
London.....	567	.....	1,940	28	2,535
Bristol.....	61	.....	.....	.....	61
Total, England.....	30,658	3,178	2,539	113	36,488
Ports of Clyde.....	4,692	380	.....	.....	5,072
Total, Scotland.....	4,692	380	.....	.....	5,072
Cork.....	5,998	355	.....	.....	6,353
Derry.....	1,213	.....	.....	.....	1,213
Total, Ireland.....	7,211	355	.....	.....	7,566
Grand Total.....	42,561	3,913	2,539	113	49,126

In an appendix marked A, I give the number of statute adults who emigrated from the United Kingdom in each of the fifty-six years, from 1815 to 1870. To these returns I would especially ask your attention, and without expressing an opinion on the bygone policy of the Imperial Government, which, with half the Continent of America at its disposal, has permitted more millions of people than would form an important Continental State to be lost to the Empire, without the least effort being made to retain them, I will hope confidently that Canadian Statesmen in consolidating the resources of the magnificent Dominion, now under their rule, will shortly show a different proportion in the relative destination of British emigrants.

Availing myself of your permission I visited Canada when the emigration season was drawing to a close, for the purpose of becoming better acquainted with some of the wants of the Dominion, and to make suggestions to you in person for an improved service. As I so recently went fully into those subjects with you, it will not perhaps be considered necessary that I should refer to them at present. I left Montreal to return on the 2nd December, and reached my office on the 19th.

Of the magnificence of the ships, and the general arrangements for the safety and accommodation of the passengers on the vessels of the Montreal Ocean Steamship Company,

it is superfluous to make any remarks. They are not excelled by those of any line leaving British ports, and I have no complaints from any of the emigrants who sailed by them. I had a few letters from emigrants who sailed by the vessels of other owners expressing dissatisfaction with their treatment, but there was nothing involving serious consequences.

Of the many emigrants who arrived in Canada the past season, you will perceive that a considerable number were of the poorer class of town-bred mechanics and laborers who had been assisted by charitable societies, and among them, I do not doubt were a few who possibly have proved helpless and troublesome in Canada, but I can assure you that the strictest investigation was made as to the character and antecedents of every candidate for free and assisted passages, and I have done all in my power to weed out those whom I had reason to think would prove objectionable; and will merely add that, of a free and assisted emigration, by benevolence, I do not think it will be possible to obtain more satisfactory results.

Several schemes for the formation of colonization societies have been advanced, but as they have not yet arrived at a practical stage, it is needless to enumerate them.

A few of the brokers engaged in the passenger traffic have been accustomed to promise free inland transit from Quebec to those who purchase from them their ocean steam tickets. As this system, if not checked, is likely to again lead to gross abuses, I would strongly urge that free passes should not be granted from Quebec, except to those who arrive with a recommendation from the agents in the United Kingdom.

All of which is respectfully submitted by your obedient servant,

(Signed), Wm. Dixon,
Canadian Government Emigration Agent.

The Hon. The Minister of Agriculture,
Ottawa.

APPENDIX A.

Total Emigration from the United Kingdom for each of the fifty-six years from 1815 to 1870.

Years.	North American Colonies.	United States.	Australia and New Zealand.	All other places.	Totals for each year.	Total for five years.
1815	680	1,209	*	192	2,081	97,799
1816	3,370	9,022	*	118	12,510	
1817	9,797	10,280	*	557	20,634	
1818	15,136	12,429	*	222	27,787	
1819	23,534	10,674	*	579	34,787	
1820	17,921	6,745	*	1,063	25,729	95,030
1821	12,955	4,958	*	384	18,297	
1822	16,013	4,137	*	279	20,429	
1823	11,355	5,32	*	163	16,550	
1824	8,774	5,152	*	99	14,025	
1825	8,741	5,551	485	114	14,891	121,084
1826	12,818	7,063	903	116	20,900	
1827	12,648	14,526	715	114	28,003	
1828	12,084	12,817	1,056	135	26,092	
1829	13,307	15,678	2,016	197	31,198	
1830	30,574	24,887	1,242	204	56,907	381,956
1831	58,067	23,418	1,561	114	83,160	
1832	66,339	32,872	3,733	196	103,140	
1833	28,808	29,109	4,093	517	62,527	
1834	40,060	33,074	2,800	288	76,222	
1835	15,573	26,720	1,860	325	44,478	287,358
1836	34,226	37,774	3,124	203	75,417	
1837	29,884	36,770	5,054	326	72,034	
1838	4,577	14,332	14,021	292	53,222	
1839	12,658	33,536	15,786	227	62,207	
1840	32,293	40,642	15,850	1,958	90,743	465,577
1841	38,164	45,017	32,625	2,783	118,592	
1842	54,123	63,852	8,534	1,835	128,344	
1843	23,518	28,335	3,478	1,881	57,212	
1844	22,924	43,660	2,229	1,873	70,686	
1845	31,803	58,538	830	2,330	93,501	1,029,209
1846	43,439	82,239	2,347	1,826	129,851	
1847	109,680	142,154	4,949	1,487	258,270	
1848	31,065	188,233	23,904	4,887	248,089	
1849	41,367	219,450	32,191	6,490	299,498	
1850	32,961	223,078	16,037	8,773	280,849	1,698,945
1851	42,605	267,357	21,632	4,472	335,966	
1852	32,873	244,261	87,881	3,749	368,764	
1853	34,522	230,885	61,401	3,129	329,937	
1854	43,761	193,065	83,237	3,366	323,429	
1855	17,966	103,414	52,309	3,118	176,807	800,640
1856	16,378	111,837	44,584	3,755	176,554	
1857	21,001	126,905	61,248	3,721	212,875	
1858	9,704	59,716	39,295	5,257	113,972	
1859	6,689	70,303	31,013	12,427	120,432	
1860	9,786	87,500	24,302	6,881	128,469	774,111
1861	12,707	49,764	23,738	5,561	91,770	
1862	15,522	58,706	41,843	5,143	121,214	
1863	18,083	146,813	53,054	5,808	223,758	
1864	12,721	147,042	40,942	8,195	208,900	
1865	17,211	147,258	37,283	8,049	209,801	1,064,988
1866	13,255	161,000	24,097	6,530	204,882	
1867	15,503	159,275	14,466	6,709	195,953	
1868	21,062	155,532	12,809	6,922	196,325	
1869	33,891	203,001	14,901	6,234	258,027	
1870	35,295	196,075	17,065	8,505	256,940	
Total ...	1,391,771	4,472,672	988,423	160,771	7,013,637	

*The Customs returns do not record any Emigration to Australia during these 10 years, but it appears from other sources, that there went out in 1821, 320; in 1822, 875; in 1823, 543; in 1824, 780; and in 1825, 496 persons. These numbers have not been included in the totals of this table.

CANADIAN GOVERNMENT EMIGRATION OFFICES,
11 ADAM STREET, ADELPHI, W. C.
LONDON, 31st December, 1869.

SIR :—In accordance with usual custom, I have the honor to submit the following report of the operations at this Agency for the past year, together with a few remarks, bearing generally on the subject of emigration, which I hope will meet with your approval.

Finding the position of my office at Wolverhampton extremely inconvenient, and at too great a distance from London for the satisfactory conduct of my business, I deemed it advisable to recommend a change, which, meeting with the approval of the Hon. Mr. Chapais, I was instructed to remove the Agency to suitable premises in London. After much careful enquiry as to the most eligible position, I decided on taking a suite of apartments in "Albion Chambers," 11 Adam Street, Adelphi, in which I opened my office on the 4th of March.

I had been in communication for some months previously, with the committees of the various societies formed in London for the relief by emigration of the deserving poor, and I found on arrival that their operations were so rapidly extending, that a constant and careful supervision for the protection of Canadian interests would be absolutely necessary.

The chief of these societies were :—

- "The Clerkenwell Emigration Society."
- "The Revival Refuge Fund."
- "The East London Family Emigration Fund."
- "The National Emigration Aid Society."
- "The Working Men's Emigration Society."
- "The British and Colonial Emigration Fund."
- "The Richmond Working Men's Society."
- "The Deptford and Greenwich Society."
- "The St. Pancras Emigration Society."
- "The Cow Cross assisted passages Canadian Emigration Society."
- "The Woolwich Emigration Society" with others of lesser note :—

In the Provinces,—Clubs and Societies, were formed at Portsmouth, Bristol, Bournemouth, Reigate, Red Hill, and Risley, also in Norfolk and other places. Some of these presently collapsed, whilst others merged their shipments, when the time of departure arrived, into those of the larger societies in London, whose extensive operations enabled them to make more favorable terms for the conveyance of passengers with the shipowners.

The Clerkenwell Emigration Society, originally organized through the indefatigable exertions of the Rev. A. Styleman Herring, Incumbent of St. Pauls, and his curate, the Rev. Mr. Hitchman, proposed in the earlier stages of its existence, to make requisition for a grant of land in the Province of Ontario, on which to form a Colony to be named "New Clerkenwell," in memory of their old homes.—Each member was required to make weekly subscription to the extent of his means, and the fund thus raised, they hope to augment by an appeal to the public.—I would here mention, to show the diversity of occupation in a crowded London parish, that the first list of subscribers actually represented eighty-four different branches of trade. The families generally appeared to be of a respectable, thrifty class, who were likely to prove an acquisition to Canada. I supplied them with all the information in my power for their guidance generally; but strongly objected to the colonization part of their scheme—pointing out many of the great hardships they would have to endure even supposing, which was not probable, that the public would furnish adequate means for the establishment of the proposed settlement; and eventually this proposition was abandoned. The total number of persons sent to Canada during the year by this Society, was 638 souls, and the reports of their progress in their new home, have been so generally satisfactory, that the Rev. Mr. Herring has reorganized the Society under the name of the "Royal Canadian Emigration Club," consisting already

of 427 souls ; their motto is "piety, sobriety, industry," to help those that help themselves. The Marquis of Northampton and other gentlemen of influence, are patrons of the undertaking, and the energy and perseverance of the Rev. Mr. Herring, have made him a valuable auxiliary in the promotion of Canadian emigration.

"The Revival Refuge Fund" collected and managed by the Misses Macpherson and Logan, ladies well known in the East of London for their efforts to ameliorate the condition of the poor, sent out upwards of 450 souls, but subsequently merged their society into that of the Family Emigration Fund. They supplied their emigrants with warm clothing, and remitted a considerable sum of money to the Agent at Quebec for their use on landing. Miss Macpherson contemplates shipping a number of stout London lads between the ages of thirteen and seventeen years, next season, whom she is now training in habits of industry in preparation for the new life that is dawning on them.

The "East London Emigration Fund," owes its success chiefly to the exertions of the Hon. Frederick and Wm. Hobart, the Countesses of Ducie, de Grey and Denbig', and other ladies of distinction, while the management falls chiefly on the Hon. Mrs. Hobart. The total number shipped by the Committee was 1035 souls, forty-eight of which did not belong to the East of London, and were specially provided for by persons interested in them.

Since their arrival in Canada excellent accounts have been received from all the emigrants, not one of whom has expressed a regret at having left England ; and even when difficulties have arisen, such as must naturally be expected from persons settling in a new country, there is a tone of hopefulness in their letters, which show the writers had no doubt of their ultimate success. These emigrants were selected without distinction of creed, by the clergy and others personally acquainted with them, and consisted of persons of good character, ready and willing to work, but who could not find employment in this country to enable them to support their families. They came principally from the districts of Poplar, Bow, Isle of Dogs, Limehouse, Stepney, Mile End, Whitechapel, Bethnal Green, Clerkenwell, Shadwell, St. George's East, and Spitalfields. Before leaving London they were invited to tea, for the purpose of explaining to them the final arrangements made for their departure to and reception in Canada, each head of a family being called upon to sign a paper promising to pay the amount advanced for his passage and outfit, as soon as he should be able to do so.

"The National Emigration Aid Society," was composed of a considerable number of influential gentlemen, presided over by His Grace the Duke of Manchester, whose object was to urge upon the Home Government the consideration of a National Emigration Policy in co-operation with the Government of the Colonies ; to promote emigration from those districts of the Metropolis and Provinces where distress abounds, through want of employment ; to assist persons and families desirous of emigrating with advances, whenever the funds of the society permit, towards their passage, outfit, &c., &c. With these views, agitation of the public mind was vigorously commenced. Public meetings were held in London and the provincial towns, and a deputation waited on the Right Honorable the Secretaries of State for the Home Department and the Colonies, which, however, failed to convince those officials of the propriety of their demands. During the season, one hundred and twenty-five souls were shipped to Canada in connection with this Society. In order to strengthen its position in a renewed agitation to secure State aid, the Committee deemed it advisable to unite with the Working Men's Emigration Society which is composed chiefly of persons connected with trades-unions, a combination said to represent upwards of 800,000 souls ; the united societies adopting the name of the "National Emigration League."

"The Working Men's National Emigration Association" is an offshoot from the Working Men's Emigration Society, and consists of nine clubs, which have been formed after considerable negotiation. Permission was granted, to make use of for this purpose the magnificent transports "Crocodile," "Serapis" and "Simoom," on condition that the Government should not incur the expenses of outfit, and provisions for the voyage, amounting to about 45s for each statute adult. The Society shipped in this way 386

souls in the "Crocodile," 706 in the "Serapis," and 601 in the "Simoom." In consequence of the short time elapsing between the decision of the Lords of the Admiralty and the sailing of the vessels, it was impossible to make so careful a selection of emigrants, with regard to the adaptability to a Canadian life, as might have been desirable. I, however, visited Portsmouth twice in the interval, and at the request of Sir James Elphinstone, M. P., for the borough, held meetings, at which I addressed the men on the various subjects on which they required information. Mr. Galt, the Mayor of Portsmouth, was indefatigable in his exertions for the benefit of these people and gave me every assistance in his power, accompanying me to the Port Admiral, Sir James Hope, who also gave much attention to the minutest details, and evinced a warm regard for Canadian interests by desiring to send out, only those men who would be likely to prove valuable members of society. His Excellency ordered a number of the leading dockyard men to be assembled at the house of one of the officials, that I might address them and answer any questions they might desire to ask.

Lord John Hay, at the Admiralty, and the Emigration Commissioners, Mr. Walcott and Mr. Murdoch, gave me much assistance in the promotion of our welfare in this matter. It will not be necessary that I should enter further into the detailed working of these numerous Committees; my intercourse with them has been invariably satisfactory and every disposition has been shown to meet my solicitations and follow my advice. I personally attended many of the selection Committees, where the antecedents of the emigrants were closely scrutinized, and although some have been sent who have proved dissolute and troublesome, it is not more than might reasonably be expected, considering the numbers sent out, and the entire absence of printed information which would have enabled the gentlemen engaged in the work, to form more correct notions of the wants of the Canadian labor market.

I am impressed with the conviction that it will not be possible to obtain more satisfactory results from an assisted emigration than those we have received this year; but it would be desirable, while assisted emigration is being carried on, that our Agents in Canada should report regularly to me the general character of the emigrants, the names of those who prove troublesome, together with the name of the vessel and association by which they were sent out, that I may be able to bring a pressure on those who have been perhaps innocently, the cause of the evil. Six of the emigrants assisted to Canada have saved sufficient money to enable them to return to London greatly dissatisfied with a Canadian life; but of the six, three have again gone out to the Dominion—the fourth applied to me for another free passage—the fifth committed suicide, having been denied admission into the workhouse, and the sixth I have lost sight of.

Being without printed matter in the early part of the season for the instruction of the various persons interested in emigration, I laid it down as a broad principle, that those only should be sent to Canada who were accustomed to such trades as are carried on in the agricultural districts of England, explaining that though our manufactures were of rapidly increasing importance, the demand for workmen in some branches of industry, was very limited, and the supply regulated to a great degree by the requisitions of our manufacturers for capable mechanics upon their English and Scotch correspondents. I also took pains verbally, and through the gentlemen acting with me, to impress upon the emigrants the desirability of placing themselves wholly in the hands of our Agents on their arrival, and to avoid wandering about on their own devices; also the absolute necessity, from the large number going out, of their accepting the first reasonable offer of employment. The free grants of land in the Province of Ontario possessed a wonderful charm in the minds of many of these people, whose practical knowledge of agriculture in most instances, consisted in the growth of a slip of geranium in an earthen vessel, or a few sprigs of mignonette in a pan full of mould. While holding out the liberal offer made by the Ontario Government, of 100 acres of land, free of charge to every settler over eighteen years of age, as a great boon, I have yet, in all instances, advised those in poor circumstances to take employment with a respectable farmer, for a year or two, before venturing to commence for themselves, while those with small means at their dis-

posal, I have recommended to purchase lands which have been partially improved, with buildings, &c.

On the arrival of Mr. Simays, the Agent appointed to promote emigration from the Continent, I furnished him with letters of introduction to gentlemen largely interested in the passenger traffic, who would aid him in the object of his mission. After due consideration, we decided that Antwerp would be a suitable position in which to establish his office. The letters I have received from Mr. Simays from time to time, evince an ardent desire to promote the best interests of the Dominion. His operations, however, have been hampered by the want of adequate material.

On the 18th of April, Mr. Thomas White, a Special Commissioner, from Ontario, introduced himself to me—the object of his mission being to promote identical interests. I explained my own proceedings in connection with emigration, and introduced him to Her Majesty's Emigration Commissioners, and to the various Committees and other gentlemen who were earnestly laboring to promote the welfare of the Dominion, furnishing him with any assistance and information in my power.

It would have been more conducive to our interests, had circumstances permitted Mr. White to commence operations early in the previous November, instead of just on the eve of May day, as the better class of emigrants generally decide on their destination during the winter months. He, however, set to work energetically, and addressed large meetings in London, Liverpool, Paisley, Glasgow, Dundee, Aberdeen, Derry, and other places, publishing laudatory letters concerning Ontario, in various papers in the towns he visited. His exertions were considerably marred by want of adequate material for distribution.

The loss sustained by the Dominion through the scanty supply of material, forwarded for use here, has been great indeed. I have not yet received any official, printed or written information from the authorities of Quebec, Nova Scotia or New Brunswick, and this has much impaired the usefulness of my agency. As a field for emigration the Province of Nova Scotia is perhaps as little known as any part of the British Possessions. I receive very few applications about it, and Mr. Walcott, the Emigration Commissioner, informs me that enquiries at his office are merely nominal. I would suggest, that in a new publication, considerable prominence should be given to its undoubtedly great resources—also that the advantages of New Brunswick should be clearly and pleasingly brought forward. These two Provinces labor under considerable disadvantages compared with Quebec and Ontario—owing to the very imperfect means of communication—it will require great exertions on our part to overcome this serious obstacle to the commencement of a healthy emigration. I was furnished by Mr. Shives, of St. John, with a copy of the New Brunswick land laws, which I had published in some thirty newspapers, and this brought me many applications for further information, on subjects which I was unfortunately not in a position to supply.

Concerning the emigration of female servants, I would observe that there is little prospect of obtaining an adequate supply for our wants. The demand here for those of good character, being nearly, if not quite equal to that of Canada. The wages offered in the Dominion present little inducement to respectable servants to proceed thither, and we shall have to depend upon the number of young women who accompany their parents in an increased emigration, when the advantages to be secured in Canada are brought more prominently before the notice of intending emigrants—an unlimited supply of girls reared in the lanes, and alleys of great towns and cities, who are entirely ignorant of the first principles of useful knowledge, might be had—but for these, funds would have to be provided for passage, and they would most certainly not prove an acquisition to Canada.

Mr. Walcott informs me that he has funds placed at his disposal for granting free passages to the Australian Colonies for respectable female servants, and although he has enlisted the services of many servants' agents, and recognised passenger brokers, he frequently fails in obtaining more than a sixth, or a fifth of the number desired for shipment.

The total number of emigrants, who sailed from ports of the United Kingdom during the year, was 258,057, and their destination, and nationalities, were as under :—

Destination.	English.	Scotch.	Irish.	Foreigners.	Unknown.	Total.
United States.....	63,044	17,226	66,467	51,359	4,905	203,001
North American Colonies..	*14,666	2,946	3,309	12,945	55	33,921
Australian Colonies.....	9,283	1,914	3,269	444	.....	14,901
All other places.....	3,423	473	289	1,034	1,015	6,234
Total.....	90,416	22,559	73,325	65,782	5,975	258,057

* As the troop-ships did not sail under the provisions of the Passenger Act, the nationality of the passengers was not taken, and all were classed English. I regret extremely that so large a proportion of the emigrants to Canada were of the poor artizan class, but as the various committees have now gained considerable experience in the work on which they are engaged, their future proceedings will not require so close a supervision, and I shall hope to devote a greater portion of my time to operations in the agricultural districts—after receiving an adequate supply of material with which to work, thinking it desirable if possible to infuse a larger proportion of the upper and middle class farming element into our emigration, so that a high tone may be given to our country district society, and thus render our social constitution a closer image in its best features to that which is to be found in the United Kingdom.

As the position of my office becomes better known, my business will doubtless be largely increased. This season I have had applications for information concerning Canada, from the West Indies, Egypt, "Central India," Australia, and even from Japan. Not having received permission to advertise in the rural districts, my applications by letter have not been so numerous as on previous occasions—the greatest number received in one day being one hundred and five. Personal applications were frequently over one hundred per day.

I have distributed a considerable number of pamphlets, and placards issued by the Local Government of Ontario. The pamphlets require alterations and improvements in some places which I pointed out to you in my communication of June 12th, also to Mr. White, the Ontario Commissioner, who promised to have them rectified in a subsequent edition. A good hand-book of the Dominion—including the Red River Territory—at a moderate price would be a valuable adjunct.

Much desire has been expressed for authentic information concerning the Red River Territory, and the terms on which land could be had. Five gentlemen have proposed to make up parties of not less than one hundred each among their friends, and proceed thither if satisfactory inducements were offered. I am persuaded, that when the magnificent resources of that great territory are fairly placed before the people of Great Britain, and the Continent, and a means of direct communication opened up, we shall be able to direct a stream of emigration there which will greatly diminish that now flowing into other places.

The arrangements made by the Montreal Steam Company for the comfort and convenience of the emigrants in transit have been in every respect satisfactory, and I have not received a single complaint. The price of passage for the season was £6. 6—each adult—children under eight years half price—but a reduction was made for those sent out by charitable institutions—the rate charged being £4. 10. A few complaints have been received of ill-treatment on board the vessels of other owners, but they were of little moment, and I have taken steps to prevent a recurrence of the alleged grievances.

My attention has been constantly drawn during the busy season by members of charitable societies, and others, to the almost universal complaints made by the emigrants in their letters home concerning the treatment and accommodation they received on the railways between Quebec, and places in Ontario. One of the emigrants writing from Hamilton to the Honorable Reginald Capel, says:—"The little unpleasant things on a sea-voyage, can well be put up with, but the horrid, dirty, filthy, jolting railway cars, made one say they wished they never had left the Old Country. We got into the cars on Monday afternoon, and got out on Wednesday afternoon—forty-eight hours packed together like a lot of pigs, without a chance to stretch one's legs, unless they laid on the dirty floor, where they stood a good chance of being trampled upon."

Complaints have also been frequently made of the want of buildings, and other necessary conveniences for the reception of emigrants at our Agencies (and most damaging comparisons are constantly made to our disadvantage) while at the same time the utmost gratitude has been expressed for the invariable attention and kindness received at the hands of the Agents. The officers of the troop-ships carrying emigrants to the port of Quebec, reported on their return that they had detained their passengers on the ships until conveyance was ready to take them into the interior, there being no place on shore for their reception. I would strongly urge the immediate erection of buildings suitable for the purpose, and the rigid exclusion from the premises of all Railway, and Steamboat Agents, for obvious reasons.

It is a matter of great importance to our interests that a system be adopted of furnishing correct information to the British and Irish Press. I would strongly recommend that writers of undoubted ability should be encouraged to send home letters for publication. Except in two or three instances, there is a miserable deficiency in this respect, though the best English papers are teeming with foreign correspondence. It would also conduce to our advantage if the Canadian intelligence for transmission by cable for publication, were prepared and dispatched from Canada.

I have opened a registry for Canadians at my office; also a "poste restante" for the reception of their letters, and I shall be pleased (with your permission) if Canadians visiting London would make my office a house of call, that I may become more intimately acquainted with the wants of the different places in which they reside.

After taking possession of these premises, I made the acquaintance of press gentlemen, and others of influence, who largely aided me in promoting our welfare. I have, however, comparatively failed in the object I had in view, from want of the latest and most authentic information on Dominion subjects. I would respectfully ask you to supply me with such official information as may be considered advisable to place before the British Public—also a full supply of maps, newspapers, blue books, and other works of reference, to form a small library for the use of Members of Parliament and other gentlemen who may call for information on subjects of vital importance.

Trusting that my exertions during the season may prove satisfactory to you.

I have the honor to be, Sir,

Your obedient servant
(Signed), Wm. DIXON,
Canadian Government Emigration Agent.

The Hon. the Minister of Agriculture, Ottawa.

No. 11

ANNUAL REPORT OF DUBLIN EMIGRATION AGENT,

(MR. J. G. MOYLAN.)

CANADIAN EMIGRATION OFFICE,
14 SOUTH FREDERICK STREET,
DUBLIN, NOVEMBER 16TH, 1870.

J. C. TACHÉ Esq.

Deputy of the Minister of Agriculture.

SIR,—In compliance with the instructions contained in your letter of the 17th ulto. I forwarded by the mail of the 10th inst, an account of expenditure and receipts from the date of my appointment, 15th June 1869, to the 30th September of the present year.

I have now the honor to subjoin the report, also asked for in your communication.

Upon my arrival in Ireland, I at once applied myself to the prosecution of the duties assigned to me. With this view, I travelled extensively through the three provinces which constitute the sphere of my exertions. By this means I had frequent and favorable opportunities of meeting and conversing with men of intelligence, and leading position, whose influence materially aided me in disseminating information regarding Canada, in their respective localities. I was also enabled, in this way, to make the acquaintance of newspaper Proprietors and Editors, throughout the country, from whose friendly and repeated notices much benefit has accrued. The distribution of such documents, as have been sent me, from time to time, by the different Provincial Governments, was greatly facilitated by my journeyings through the numerous Counties of my circuit.

I consider this extended personal intercourse with the people indispensable to the bringing about of anything approaching to a successful result of my presence in Ireland,—in that I soon ascertained that lectures would utterly frustrate the end to be accomplished. Had I appeared on the platform, I would have had arrayed against me the clergy of the various denominations who have been strongly opposed to the emigration of the people,—and also the National press, or at least an influential portion thereof,—which would have decried Canada as an objective point for the emigrating Irish. Besides, the hitherto unsettled state of the Land Question, upon the adjustment of which all the industrial classes had rested high hopes of an improved condition, rendered any public advocacy of Canada inopportune and impolitic.

Now, however, that the clergy are beginning to be convinced that the Land Bill is not calculated to effect all the good anticipated, and that the people will leave the country, I am sanguine in hoping that no further opposition need be apprehended from that quarter. Indeed, I am pleased to be able to record the fact, that I have met very many clergymen Catholic and Protestant—who endeavor to induce such members of their congregations, as are determined upon emigrating, to turn their steps towards Canada.

The press, too, of every shade, from having received more light, and reliable information, and from paying more attention to Canadian affairs, will, I have little doubt, greatly modify its former feeling of acerbity, and the extreme opinion set forth in reference to the Dominion.

It is but proper to state, that I found among the peasantry a great disinclination towards settlement in Canada to exist. This mainly arises from three causes:—First, a strong objection to select a British dependency for their future home, upon leaving the Fatherland; secondly, the ties of kindred and of race forcibly draw them to the United States; and thirdly, they are deterred from going to Canada by the grossly exaggerated notion they entertain of its rigorous climate. The first and last mentioned prejudices are

gradually losing their force, and can be entirely dissipated through the medium of the press and other vehicles of information. The second is, I apprehend likely to continue a formidable impediment to desirable and successful results. .

Meanwhile, I have to state that the number of applicants, personally and by letter to this agency, as well as those who consulted me through the country during the last twelve months, has been very considerable. I am also in a position to say that the emigration from that portion of Ireland, through which I have been operating, to Canada, through the direct instrumentality of this agency, is far in excess of what my most sanguine hopes, when accepting the appointment, could have led me to expect. If the anticipations of the country or of individuals be not realised in this regard, it is not from want of effort on my part, and *time* may prove that my exertions have not been fruitless. Considering the prejudice, nay, the hostility that existed towards Canada, in the portions of Ireland to which I am accredited, it is no small achievement to have secured even a *locus standi* whereon to advance Dominion interests.

I am of opinion, that lectures delivered in some of the important and wealthy provincial towns would *not* be serviceable. The class of people who would attend such lectures, in this, or any other populous city, is composed of such persons as would be by no means useful or profitable in a new country.

As on former occasions, I would earnestly recommend a judicious system of advertising, in the leading provincial journals, in addition to what has been done in Dublin.

For the proper and satisfactory adjustment of expenses connected with lecturing and advertising,—should my suggestions in those particulars be adopted,—I would venture to recommend that the Department allocate a certain definite amount to be applied solely to these purposes.

As it is likely a considerable number of small farmers, having some capital, and experienced agricultural laborers will leave Ireland next year, it were worthy, it appears to me, the serious consideration of the Local Governments to devise some better means, to attract to our shores, a class so useful and so much needed, than is now in operation.

A suggestion which has been discussed by some Canadian journals, if carried into execution, would be, I feel confident, found eminently advantageous. I have reference to the clearance of ten or twenty acres of land, and the erection of a house for each settler, at the expense of the Local Government,— a mortgage on the whole lot, or the retainment of the patent being a security for repayment.

Until this, or some similar inducement be held out for settlers, we may work in vain, for any sensible diversion of the great tide of emigration from Ireland in the direction of the New Dominion.

In reference to expenditure, I have only to say none was incurred that could be avoided, or that was not essential to the proper conducting of this agency.

I await your further instructions and have the honor to be Sir,

Your most Obedient Servant.

(Signed),

J. G. MOYLAN.

No. 12.

ANNUAL REPORT OF GLASGOW EMIGRATION AGENT.

(MR. D. SHAW.)

GLASGOW, 11th November, 1870.

To the Honorable the Minister of Agriculture.

SIR,—I have the honor to report as follow the proceedings of my agency for the year 1870:—

As a practical agriculturist I made it my special business to see as many of the agricultural exhibitions of this country as possible. Among these were:—The Royal Society's (of England) Show at Oxford, the Highland Society's (of Scotland) Show at Dumfries, the great Sheep Trysts of Falkirk, the Horse Fairs of Rutherglen, together with horses, sheep and cattle, implements and dairy produce exhibitions at Glasgow, Kilmarnock, Barrhead, Paisley, Kilbride, &c., where, while possessing myself, of much valuable agricultural knowledge, I observed the opportunities taken advantage of, to bring Canada into notice as a great and inexhaustible opening for a farming population.

1. On this head, I have just to say further at this stage, that while there is undoubtedly much to be seen here better than the same may be in Canada, yet it was also gratifying to find that in many things of absolute utility, Canada was far in advance of anything of the kind produced here.

The most of the other places enumerated in the account were visited to ascertain *what was what* in the localities, where important letters had been received from the quarter desiring information. I found personal intercourse to do a great amount of good, and would have done much more in this way had time permitted.

2. Generally it may be mentioned that on a visit to a large public work, I found that a certain kind of wood, extensively used in manufacturing establishments, might be got better in Canada, than elsewhere; a number of pieces were sent for, and proved the correctness of my suppositions; a Company was at once formed, "The Canada Timber Company," and is now at work in the Canadian woods. A new source of wealth has thus been opened up to Canadian commerce, never before thought of.

3. Another Company, "The Scottish Canadian Land Company" is in course of formation. There are 100,000 able-bodied respectable working men in Scotland, who desire with their families to emigrate, but for want of means, beyond their daily requirements, cannot get away. These don't care much where they go, if only away.

The Company proposes to pay the passage money of these, and settle them on land in Canada,—such advances to them to be repaid in labor.

If I am supported by the Local Governments, this Company will go on with a capital of £100,000.

The Scottish Canadian Land Company, however, as a commercial enterprise, would first see that the emigrants were healthy and respectable, and such as there would be little danger of failure to perform their agreement; besides, the Company would have actual supervision in Canada of the settlements, and conduct the business in the ordinary mercantile way, which no Government, however well disposed, could do half so well, if at all.

I am now in communication with the several Local Governments on the subject.

4. During the season I have provided employment beforehand for a considerable number of emigrants, who would not have gone otherwise. I wish to extend this system as much as possible, and am ready to work it out all over Canada, as already reported if permitted, and without any expense to the Department.

One instance only will I give of the good results of this plan, which may be of advantage to the Department to know :—

▲ father, son, and son-in-law, representing three large families, who are poor but able-bodied and willing to work, called on me to know about Canada, and how they would do to get there, &c. I recommended them, as they had not enough money to take them all out, to send two of them out at once, for whom I would secure good places on their arrival, and they could make arrangements for the rest to follow; it was agreed to. I consigned them to the Hon. Robt. Reid, Belleville, for employment, telling them that if he had none himself he would find places for them; they went, and wrote back for all to follow, the letter sent was, however, handed to me by the father before he sailed. The copy of it is now attached to this report, which is well worth a careful perusal, and is a perfect proof of what may be done in this way with the most satisfactory results.

This is but one instance of many of a similar kind that has passed through my hands during the past season.

5. There is also attached a scale of wages made out for the information of emigrants, who in all cases have been quite satisfied with it.

6. Superior mechanics or high-classed workmen or others, who have no aptitude for land operations, I do not much encourage; they grumble too much and know too little, and do harm to others. Land, labor and certain wealth is the text,—the sum and substance of all my public or private exhortations regarding Canada.

In conclusion, the lever is now firmly planted in Scotland, and in a little time, with a reasonable amount of money, I have no doubt Scotland will transfer to the Dominion a large and invaluable class of loyal enterprising settlers.

All of which is most respectfully submitted.

(Signed), DAVID SHAW.

SIDNEY, BY BELLEVILLE.

MY DEAR FATHER AND MOTHER,—It is now some time since I last wrote to you during which time our experience has been somewhat chequered. When we arrived at Belleville, Hon. Robt. Reid was requiring no hands; but he got us places. We are separated, however, we can see each other often enough. We like it very well, and only wish that you were cared for as we are. I am with Reid's brother, and Charles is with a Munroe. We are both more comfortable than ever we were. We are intending to go to the bush during the winter, as we are only hired for six months, and it is only in winter and in the fall of the year that any land can be cleared. We are, as emigrants, entitled to 200 acres each, and in fact, we will be prepared to undertake the cultivation of any Canadian farm at the expiration of our engagement, and we are bound to succeed,—let these words act as an incentive for you to prepare to come out immediately, as we are sure that you will be a great deal more comfortable (no matter what your circumstances may now be) than what you are in Scotland,—this is the place for you to get all the necessaries of life, and to the back of it, every one is vying with each other who will be most civil. Depend upon it, I could, if I had any time, give you the greatest inducements to come out here, without using any exaggeration. If you can manage to come out before the month of August, we could manage to get you comfortably placed, and every one of you places where you could make double the wages you do in Scotland (old dingy Scotland). I am glad I came out of it, for I never got my dinner till I came to Canada. Bear in mind it is your own benefit we seek by pressing you to come out here,—don't think we are homesick; we are nothing of the kind, only I am anxious about your welfare, and so is Charles. I feel that I did very little for you in Scotland, and I am sure I can almost make you independent here. Really, considering the way I was led in my departure from Scotland, and also here, I can say that indeed the finger of God was in it. So cheer up, make an endeavor just now to come out here, and you are all right. Don't bother yourself about getting too many clothes, as they are almost as cheap here as where

you are. I must hurry away now to feed my horses. I have been harrowing all this week, and will be ploughing 'ere long. Charles is also getting on well ; there is a great change in him

(Signed),

JAMES ANDERSON,
CHARLES MAGUIRE.

Memorandum of wages to be obtained from farmers for first year's work :—
For the second year much more may be expected.
Wages payable in cash, at such times as may be agreed upon.
These wages are in addition to board and lodging.

	Stg.	
Men used to manual labor,.....about	£20 00	= \$100 00
„ not so used,.....	17 10	= 87 50
Lads used to manual labor,.....	15 0	= 75 00
„ not so used,.....	12 10	= 62 50
Boys about 10 years of age,.....	2 10	= 12 50
„ „ 12 „ „ „	5 0	= 25 00
„ „ 14 „ „ „	7 10	= 37 50
Girls „ 12 „ „ „	2 10	= 12 50
„ „ 15 „ „ „	4 0	= 20 00
„ „ 18 „ „ „	6 0	= 30 00
Women,.....	7 10	upwards.

Married men will get a higher rate of wages, say from £25 to £35 sterling a year with a free house, fire wood, and a bit of land for potatoes, &c., but not board from the farmer.

No. 13.

ANNUAL REPORT OF BELFAST EMIGRATION AGENT.

(MR. C. FOY.)

CANADIAN GOVERNMENT EMIGRATION OFFICE,
11, CLAREMOUNT STREET,
BELFAST, 22nd December, 1870.

To the Honorable the Minister of Agriculture.

SIR:—I have the honor to submit Report of the duties performed at this Agency for the past year.

I lectured in different parts of the rural districts in the North of Ireland, twenty-six times. I spent, as authorized, thirty pounds (£30) in the printing, in pamphlet form, also in placards, two of my lectures, and had them distributed. Of the service they proved I may merely say that at the suggestion of their Agents, Messrs. Allan, Montreal Steamship Company, had them reprinted and circulated amongst their Agents.

I obtained all the letters favorable to Canada received from emigrants, and had them published in twenty of the most influential newspapers in Ireland.

I kept a careful look-out for all speeches favorable to Canada, published in Canadian or other papers, and had them copied into Irish papers. I also published them in handbills, which I had distributed in the different fairs and markets in the North of Ireland.

On referring to balance sheet furnished me on the 10th ult., you may perceive, that the very moderate amount spent in advertising and printing was divided amongst a large number of newspapers, thereby securing their good offices in the cause of emigration.

I sent, some months since, the names of 267 emigrants from the County Armagh, many of whom had intended to go to the States, until Messrs. Allan Brothers' Agent in Portadown gave them the pamphlets written by me. For Tapscott, Smith & Co's sailing packets to Quebec I booked a large number.

All the emigrants from the North of Ireland remained in Canada, and many of them have sent for friends and relations. I may repeat my confirmed conviction, that the North of Ireland is the best field in the world for a Canadian Emigration Agent. The people are predisposed in favor of Canada. They are an industrious, self-reliant people. They are an affectionate people, and every emigrant who went this year will, I calculate, represent at least two, whom he or she will send for next year.

I travelled 84 days through the rural districts of this Province. I talked of Canada to men at the plough, to farmers in their houses. I visited the different fairs and markets, and advised the people of my intended visits by handbills distributed at the previous fairs or markets, generally having something favorable to Canada inserted in the handbills.

I wrote over 100 letters to the Irish press on "The Climate of Canada," "The prices of food in Canada," "Wages in Canada," "Canada contrasted with the States," &c. I had to have the assistance of a friend, a young gentleman attending the Queen's University, to copy letters, as the amount of correspondence was more than any man could attend to.

I have every reason to anticipate a very large emigration next spring. I am convinced the publication and distribution—very liberally—of copies of pamphlets, same as manuscript I had the honor to submit by mail of the 1st inst., would greatly increase the number. But if it could possibly be arranged for cheaper passages, crowds of able farming hands, unable to pay £6 6s. 0d. for their passages, would go if they could get out for

£4. We have no Emigration Aid Leagues in Ireland, which makes the number less than from England, but the class of emigrants is much superior.

I circulated some of the 4000 pamphlets received from the Government of Ontario; also, a large number received from the Province of Quebec Government. I have no doubt but that they will do good; but a pamphlet written in the simple style of the manuscript I forwarded to your Department, would be better understood by the working classes.

Though it would impose great labor on myself, I would strongly advocate continuous travelling through the rural districts, and visits to as many fairs and markets as practicable, and having *viva voce* communications with the farmers.

I hope that the Dominion Government may see their way to giving assisted passages. If so, crowds of the best class of emigrants will go from the North of Ireland.

I am proud and pleased of my success, and particularly pleased with receipt of letters from farmers in Canada thanking me for the class of men I have sent—men ready at once to go into the plough handles.

I have the honor to be, Sir,

Your very obedient Servant,

(Signed), CHARLES FOY,

No. 14.

ANNUAL REPORT OF ANTWERP EMIGRATION AGENT.

(MR. E. SIMAYS.)

[*Translation.*]CANADIAN GOVERNMENT EMIGRATION OFFICE,
ANTWERP, December, 1870.

SIR,—The work I began last year has been carried on by me with all the energy and zeal in my power, despite the difficulties of my mission and the small apparent results which have hitherto followed from it, up to the moment when I had to prepare for my return to Canada, in conformity with the instructions contained in your letter of the 27th October, received by me in the last days of November.

During my stay in Belgium, I put myself in a position of daily communication with the population of the Country, of all classes; my knowledge of the languages spoken and of the habits of the people, rendering this a matter of comparative facility for me.

There are in Belgium, and particularly in Flanders, a tolerably large number of families disposed to emigrate, and to emigrate to Canada. It is well known that this is about the most thickly populated part of the continent of Europe; but, as extreme destitution does not prevail, the people of the lower classes being poor, but not absolutely destitute, are not willing to leave what little they possess, without receiving some guarantee of an undoubted amelioration of their condition by a change of Country.

This is the great difficulty as regards this industrious, orderly and economical population, who would form a most desirable class of emigrants. These people require from the Government of Canada assurances, and in many cases advances, which up to the present time, Canada has not consented to embody in its measures for the encouragement of emigration.

By dint of efforts, nevertheless, I have induced a certain number of farmers skilled in every species of culture, and more especially in the cultivation and treatment of flax, to prepare to come to Canada at their own expense, and without the guarantees they at first required. But in order to avoid any disappointment, several of these intending settlers, who are in circumstances above present want, have decided to send with me, on my return, two of their number deputed by their fellows, to enquire as to the conditions attached to grants of lands in various sections of the Country, to examine the lands, and in case of a favorable result, to select with the consent of the local authorities a tract such as they may consider suitable.

You, Sir, will at once appreciate the importance of the mission entrusted to these two delegates of the Belgian emigrants. On the report to be made by them depends the creation of a current of emigration from Belgium to Canada. Belgians who have emigrated to other Countries—I mean the agricultural classes of Belgium, such as those Belgians who now manifest some wish to proceed to Canada—like to settle in groups, and my opinion is that we shall never succeed in attracting a Belgian agricultural emigration, unless we facilitate this equally natural and legitimate tendency to settle thus, as it were in families.

The foregoing is a brief but complete exposition of matters as they stand, and a longer report would be quite useless in the way of adding anything of importance to the consideration of the question of Belgian emigration.

I do not fear to assert that all the zeal and labor that a man could exert in the discharge of a mission, such as you confided to me, have been by me exerted. No one could

have been more anxious to succeed than I was, and I sincerely believe that I have planted in the midst of the people of my country, Belgium, germs which time, renewed efforts and some measure of encouragement involving little expense, would in my opinion develop.

On my arrival in Canada, I purpose to harbor in my own home the two pioneer settlers who are to accompany me, and with your permission, to direct them in the search they must make in the discharge of the trust confided to them by their associates.

I have the honor to be, Sir,

Your obedient Servant,

E. SIMAYS.

To the Honorable the Minister of Agriculture and Immigration.

No. 15.

ANNUAL REPORT OF GROSSE ISLE QUARANTINE OFFICES.

(F. MONTIZAMBERT, Esq., M.D.)

SIR,—I have the honor to submit herewith, in tabular form, the Annual Returns of the proceedings and expenditure of the Quarantine Station at Grosse Isle, for the year 1870.

The return of vessels inspected shows an increase over last year of nine vessels and more than 3000 passengers.

Nine vessels had to be detained to perform a regular Quarantine, and one other was kept under Quarantine of observation for a short period.

2,717 Immigrants were landed from these infected vessels, and they and their effects cleansed, purified and disinfected at the Healthy Division.

The Immigrants from the United Kingdom were, generally speaking, healthy. One British vessel only—the S. S. *Ganges*—had to land her passengers. This was in consequence of the breaking out of measles and modified small pox during the voyage.

In addition to the vessels reporting the forms of contagious disease usually met with at the station, the ship *Golden Age* performed Quarantine for yellow fever, from which disease there had been three deaths on the voyage from Rio de Janiero.

The season, however, has been a comparatively healthy one. The admissions to hospitals were 392, and the deaths 6, whilst last year the admissions were 495 and the deaths 44.

The small pox cases were very severe, especially amongst the Germans and Prussian Poles, but the other contagious diseases were of a less virulent type than last year, and the malignant typhus, then so prominent, was fortunately absent this season.

Of the \$200 granted for repairs, \$161.15 were expended in completing the ceilings of the fever and measles hospitals, Nos. 1 and 2, and in providing them with short chimneys.

By the action of the proper authorities, with your sanction, the able-bodied men at the station, to the number of 21, were formed into a detachment of the Quebec Brigade of Garrison Artillery, for service at Grosse Isle alone. Having qualified myself for the purpose by obtaining certificates at the military school at Quebec last winter, I received the command of the Detachment as a Commissioned Officer of the Brigade.

The Detachment, in addition to being armed with breech loading rifles, has charge of a battery of three guns in position, which were left when the last of the Royal Artillery were withdrawn from the station. It has already acquired such proficiency in drill as to have received the approval of the inspecting staff officer, and is now therefore in fair way to become equal to the duties, for the performance of which, in cases of emergency, a force of Royal Artillery was for so many years maintained at the station.

I have further to report that the house which I occupied during the season is so placed that the anchorage cannot be seen from it. I was thereby precluded from maintaining that vigilant oversight of vessels in Quarantine which the position of the former house enabled me to exercise, and which is essential to the due performance of my duties.

The present house is now also the only one available for the residence of a medical officer, so that there is no provision—as there has always hitherto been—for an augmentation of the medical staff being required by the occurrence of an epidemic, or the inordinate increase, from any cause, of the work to be performed.

I therefore beg leave respectfully to draw your attention to the urgent necessity that exists that a house be built without delay on the site of the one destroyed by fire in October, 1869.

I have the honor to be, Sir,

Your obedient servant,

(Signed),

FREDERICK MONTIZAMBERT, M.D., Edin., &c.

Medical Superintendent.

The Honorable the Minister of Agriculture, Ottawa.

STATEMENT of Expenditure, in all details : Quarantine Station, Grosse Isle, for calendar year, 1870.

1870.		\$	cts.	\$	cts.
April 25	Balance pay list for wintering party				339 70
30	Pay list for April	243	95		
	Cartage, Edouard Jolicœur		15 00		
May 31	Pay list for May	774	32		258 95
	Cartage, Ed. Jolicœur	\$57	00		
	Hospital washing, Hurst	3	20		
	Medicines, J. E. Burke	74	30	60	20
	Medical comforts, R. Shaw	89	75		
	Printing and Stationery, Middleton and Dawson			164	05
	Steamboat service, P. Turgeon			71	26
	Repairs—To Hospitals, Mathieu	161	15	232	25
	Oven, G. Boulet	5	00		
	Contingéncies—Orderly sent up with seamen, &c.			166	15
	Supplies—Flour, M. Connolly	61	45	5	95
	Dry Goods, Hamel Frères	67	26		
	Coal Oil, Vallerand & Co.	17	20		
	Hardware, Ghinic & Beaudet	10	98		
	Cordage, J. Gaudray	4	02		
	Paint and Oils, J. Fiset	16	67		
	Straw, F. Verzina	26	25		
	Meat and Vegetables, W. Doran	31	80		
	Milk and Butter, J. Anderson	15	97		
		251	60		
	Credit by sales of sundry stores	64	53	187	07
June 30	Pay list for June	772	32		1,661 25
	Cartage, E. & M. Jolicœur	78	00		
	Hospital washing, E. Hurst	18	00		
	Medicines, J. E. Burke	15	18	96	00
	Medical comforts, R. Shaw	35	80		
	Printing, Middleton and Dawson			50	98
	Steamboat service, P. Turgeon			17	30
	Contingent allowance for conveyance	200	00	128	80
	do do Orderly	2	00		
	Supplies—Flour, M. Connolly	66	37	202	00
	Stoves, Mrs. A. Kane	50	40		
	Office Furniture, W. Drum	63	50		
	do Leger and Rinfret	34	44		
	Iron Safe, J. W. Reid	33	25		
	Sundries, Hamel Frères	7	70		
	Lime, F. Bedard	7	38		
	Shingles, J. Pickard	4	40		
	Lamp Chimneys, Vallerand	3	40		
	Meat and Vegetables, W. Doran	48	50		
	Milk and Butter, J. Anderson	42	95		
		362	29		
	Credit by sales of bread, &c., &c.	36	90	325	39
July 31	Pay list for July	774	36		1,592 79
	Cartage, E. M. Jolicœur	48	00		
	Hospital washing, E. Hurst	16	80		
	Medicines, J. E. Burke	24	35	64	80
	Medical comforts, R. Shaw	54	85		
	Steamboat service, P. Turgeon			94	20
				150	40
	Carried forward				

STATEMENT of Expenditure, in all details: Quarantine Station, Grosse Isle, for calendar year, 1870.—Continued.

		\$	cts.	\$	cts.
		<i>Brought forward</i>			
July 31	Contingencies—Orderly sent with seamen.....		2 20		
	Supplies—Flour, M. Connolly.....	\$69	85		
	Hardware, Chinic and Beaudet.....	4	22		
	Blacksmiths' sundries, Vezina.....	1	30		
	Meat, &c., W. Doran.....	31	50		
	Milk and Butter, J. Anderson.....	45	87		
		152	74		
	Credit by sales of sundries.....	70	90		
				81	84
August 31	Pay list for August.....		774 32	1,167	80
	Cartage, E. Jolicœur.....	46	50		
	Hospital washing, E. Hurst.....	6	40		
				52	90
	Steamboat service, P. Turgeon.....		121 83		
	Stationery, Brousseau, (1868).....		10 55		
	Contingencies—Policeman sent with seamen.....		2 00		
	Supplies—Flour, M. Connolly.....	39	85		
	Meat, &c., W. Doran.....	11	00		
	Milk and Butter, J. Anderson.....	7	77		
	Coffins, M. Jolicœur.....	2	50		
	Copper Tacks, S. J. Shaw.....	0	60		
		61	72		
	Credit by sales of sundries.....	32	07		
				29	65
September 30	Pay list for September.....		772 32	991	25
	Cartage, Ed. Jolicœur.....		45 00		
	Steamboat service, P. Turgeon.....		122 25		
	Contingencies—Roman Catholic Missionary.....	100	00		
	Protestant do.....	100	00		
	Expenses of boatmen at St. Jean.....	4	00		
				204	00
	Repairs—Jeandreault, St. Jean, to boat.....		4 50		
	Supplies—Flour, M. Connolly.....	26	40		
	Hardware, J. Fiset.....	9	93		
	Cordage, J. Gaudry.....	4	39		
		40	72		
	Credit by sales of bread and sundries.....	25	66		
				15	06
October 31	Pay list for October.....		774 36	1,163	13
	Cartage, Ed. Jolicœur.....		46 50		
	Steamboat service, P. Turgeon.....		200 00		
	Supplies—Hardware, Chinic and Beaudet.....	26	75		
	Meats, &c., W. Doran.....	12	00		
	Hardware, J. Fiset.....	3	51		
	Felt, &c., J. & W. Reid.....	5	50		
	Boards, &c., J. Vezina.....	1	82		
		49	58		
	Credit by sales of sundries.....	28	95		
				20	63
October 31	Advances, pay list for wintering party.....			1,041	49
				565	00
	Total.....			\$8,781	36

ANNUAL RETURN—Quarantine Hospital, Grosse Isle, 1870.

Countries.	Distribution.			Admissions.							Deaths.							Discharged Convalescent.			Religions.					
	Men.	Women.	Children.	Cholera.	Diarrhoea and Dysentery.	Fever.	Small Pox.	Scarlet Fever.	Measles.	Non contagious Diseases.	Cholera.	Diarrhoea and Dysentery.	Fever.	Small Pox.	Measles.	Non contagious Diseases.	Scarlet Fever.	Total.	Men.	Women.	Children.	Total.	Roman Catholic.	Protestant.	Total.	
England.....	5	30	42	77	6	20	16	35	77	1	1	1	1	1	1	1	1	1	5	30	41	76	4	73	77	
Ireland.....	2	.....	.....	2	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....	.....	2
Scotland.....	1	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1
Germany.....	9	15	12	36	2	26	.....	8	36	.....	1	.....	.....	2	.....	.....	.....	.....	9	14	10	33	8	28	36
Norway.....	6	99	170	275	5	2	159	109	275	.....	.....	.....	.....	.....	.....	1	.....	.....	6	99	169	274	.....	275	275
Canada.....	.....	1	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Totals.....	23	145	224	392	13	50	175	153	392	6	1	.....	.....	2	.....	3	.....	6	23	143	220	386	15	377	392

Births: One, Male, Norwegian.

(Signed), F. MONTIZAMBERT, M.D., Edin,
L. R. C. S., &c., Medical Superintendent.

Quarantine Station, Grosse Isle, for 1870.

Passengers		Crew.	Born.	Died.	Sick.	Consigned to.	Discharged.	Remarks.
C.	S.							
.....	37	29	.....	.....	.....	Coalthurst & McPhie	April 21	All well.
1	233	36	.....	.....	.....	.....	27	.....
2	309	38	.....	1	1	Thompson & Murray	May 4	An infant died of cerebral effusion. One seaman with fever.
2	537	46	2	1	.....	Ross & Co.	15	An infant born prematurely, died three days afterwards.
8	749	49	1	1	24	Order	19	Measles & modified small pox. Landed.
5	92	14	.....	1	.....	Beling & Lamothe	31	A man at 58 died of pneumonia.
.....	247	19	.....	2	.....	.....	June 1	Two infants died of bronchitis.
32	328	16	1	1	4	Falkenberg & Co.	2	An infant died of bronchitis. Four cases severe diarrhoea.
7	306	15	1	1	7	.....	5	Measles. Landed.
10	263	16	.....	2	.....	Hans Hagens	3	2 children died from cold and debility.
2	313	15	4	1	20	Beling & Lamothe	10	Small pox. Landed.
1	148	16	.....	.....	.....	Order	6	All well.
18	333	16	3	2	12	Falkenberg & Co.	12	Measles. Landed.
4	300	18	.....	2	.....	Order	9	A man aged 74 died of pneumonia, and a child from the effects of a fall.
.....	286	15	2	.....	.....	Falkenberg & Co.	10	All well.
.....	509	43	.....	3	.....	Allans, Rae & Co.	12	Three infants died of tabes mesenterica.
.....	298	16	1	1	.....	Falkenberg & Co.	18	A woman aged 71 died of dysentery.
.....	367	17	1	.....	.....	Order	19	All well.
.....	274	14	2	.....	.....	Falkenberg & Co.	19	.....
7	321	16	1	.....	.....	Hans Hagens	19	.....
13	405	22	4	3	.....	Falkenberg & Co.	19	3 children died of diarrhoea and debility.
.....	159	12	.....	.....	.....	.....	19	All well.
3	308	17	2	1	65	Order	22	Measles. Landed.
.....	307	14	2	.....	1	.....	19	An infant dying of diarrhoea.
.....	67	15	1	.....	.....	.....	19	All well.
1	270	12	1	.....	.....	Falkenberg & Co.	20	.....
.....	175	13	.....	1	.....	Hans Hagens	21	An infant died of bronchitis.
10	310	19	1	.....	.....	Order	21	All well.
6	278	15	.....	1	.....	.....	21	A child died from cold and debility.
.....	180	14	1	1	.....	.....	23	An old man died of phthisis.
4	258	13	1	2	.....	.....	23	An infant born May 9, died May 19. A seaman died of phthisis.
2	266	13	1	4	40	.....	28	Measles and varioloid. Landed.
.....	402	19	6	5	15	Falkenberg & Co.	29	Measles. Landed.
3	262	15	1	.....	.....	Order	29	All well.
.....	270	13	.....	.....	.....	Order	29	.....
.....	.....	23	.....	2	.....	Benson & Co.	29	2 seamen convalescent from small pox.
.....	281	22	1	.....	.....	Falkenberg & Co.	July 8	All well.
5	720	49	1	1	.....	Ross & Co.	13	An infant died of tabes mesenterica.
.....	343	17	.....	1	.....	Order	14	A child died with pneumonia.
6	176	33	.....	1	1	Cuthbert & McPhie	25	A woman died of general debility. A man with constricted hernia.
.....	186	39	.....	.....	.....	Allans, Rae & Co.	30	All well.
.....	.....	23	.....	3	1	Order	August 2	Three deaths from yellow fever. One ill with jaundice.
8	200	12	1	8	.....	Falkenberg & Co.	5	Eight children died from diarrhoea, cold and debility.
.....	245	12	2	.....	.....	Shipman	8	All well.
.....	234	14	.....	.....	.....	Falkenberg & Co.	27	.....
35	112	19	1	1	.....	Orders	September 2	A child died of scrofulous encephalitis.
8	269	36	.....	1	.....	Pemberton & Co.	11	A child died of spinal disease.
.....	.....	18	.....	1	.....	Dewolf & Powell	11	A seaman died of disease of the heart.
.....	.....	9	.....	1	.....	J. Mitchell & Co.	12	An infant child of the master died of diarrhoea.
203	12,933	1,016	46	54	194	.....	.....	.....
.....	203	.....	.....	.....	.....	.....	.....	.....
.....	13,136	.....	.....	.....	.....	.....	.....	.....

(Signed),

F. MONTIZAMBERT, M.D., EDIN., &c.,

Medical Superintendent.

No. 16.

ANNUAL REPORT OF HALIFAX QUARANTINE OFFICE.

(CHAS. J. GOSSIP, M.D.)

QUARANTINE OFFICE,
HALIFAX, N.S.,

February 24th 1871.

J. C. Taché, Esq.,
Deputy Minister of Agriculture,
Ottawa.

SIR,—In accordance with your request, I beg leave to forward for the information of your Department, the following Report of the proceedings of the Quarantine Office, Halifax, N.S., for the calendar year of 1870.

During the year 1870, I have boarded and examined the following vessels, besides keeping up the usual inspection of steamers and sailing vessels carrying steerage passengers.

March 23rd, steamship *City of Brussels*, from Liverpool, G.B., bound to New York, put into this harbor for a supply of coals; one of the cabin passengers (Mr. Tilton, of Boston) was sick with small pox. By permission of His Worship, the Mayor of the City and the City Medical Officer, the case was removed to the City Hospital for contagious diseases, where he ultimately recovered. The steamship having neither passengers nor cargo for Halifax, was allowed to coal under proper guards, and she left for New York the same night.

April 16th, R.M.S. *Delta*, (Mara) mate in charge—the Captain (Shaw) having been left at Bermuda on account of an accident—owned by Messrs. Cunard & Co., of Halifax, from St. Thomas via Bermuda, with one of the firemen sick with small pox. I at once ordered the steamer from the wharf, where the mate had brought her, not knowing, as he alleged, that the case was one of small pox, or of a contagious nature. On the 18th (Monday), by permission of the Board of Health the case was removed to the City Hospital, from whence he was subsequently discharged, cured. After the removal of the case, the *Delta* was thoroughly cleansed and fumigated, and the crew vaccinated. The *Delta* was detained in Quarantine until the 22nd (Friday), when she was allowed pratique.

June 1st, R.M. steamship *City of Antwerp* (Inman Line), from Liverpool, G.B., via Queenstown, with mails, &c. for Halifax, with a case of small pox. The City Authorities refused permission to have the case removed to the City Hospital. I at once took every precaution to keep the case isolated, and by proper guards to prevent any persons from visiting or leaving the steamer, and then allowed the mails and cargo to be landed. The *City of Antwerp* left this port at 3 o'clock on Friday morning (June 3rd), taking with her the small pox case.

June 7th, R.M.S. *Alpha*, owned by Messrs. Cunard & Co., of Halifax, from St. Thomas via Bermuda. On the voyage to St. Thomas, after leaving Bermuda, three cases of small pox occurred. The cases were landed at St. Thomas, and the steamer was thoroughly cleansed and fumigated. Twelve days after leaving St. Thomas the *Alpha* arrived here, and as no new cases had occurred in the meantime, she was admitted to pratique.

July 11th, brig *Jno. McDonald*, from Philadelphia, with a case of bilious remittent fever. The case was sent to Hospital.

July 13th, American schr., *Frank A. Williams*, from fishing, with a case of typhoid

fever. Rendered medical assistance, and the schr. sailed next morning, the master having refused to allow the case to be sent to Hospital.

July 19th, barque *Prima Donna*, from New Orleans, bound to Havre. The master, (Perkins) was suffering from hæmoptysis, and wished to be landed at Halifax.

July 24th, brig *Marcella* (McEachren, master), owned by Messrs. T. Butler & Co., of Halifax, from Cuba. The master's wife died on the passage, ten days before the arrival of the brig at Halifax. Disease not contagious.

August 2nd, brig *Ruth* (Allan, master), from San Iago de Cuba, bound to Montreal; S. McLean, master, and two seamen died at San Iago. One seaman sick on board with bilious remittent fever, was sent to Hospital.

August 5th, steamer *Carlotta* (Colby, master), from Portland; a child two years of age, died on the passage to Halifax, from convulsions.

August 9th, brig *Mirella*, (Smith, master), from Falmouth, Jamaica, with a case of bilious remittent fever. The case was sent to Hospital. One seaman died on the passage from Jamaica.

August 11th, H.M.S. *Lapwing*, from Jamaica, *via* Bermuda; cases of bilious remittent fever were all convalescent before arrival at Bermuda, but the vessel had been Quarantined there, and therefore showed the flag for inspection when entering this port.

August 12th, H.M. gun vessel *Dart*, from Havana, with a case of yellow fever convalescent.

August 31st, H.M.S. *Racoon*, from the West Indies, with cases of yellow fever convalescent.

October 10th, brig *Kingston* (Woods, master), owned by Messrs. Kinnear & Co., of Halifax, from Cuba. Two seamen died of yellow fever on the passage to Halifax.

From the foregoing statement it will be seen that, although a considerable number of deaths have occurred on board of vessels bound to this port, I have no deaths to report during the past year. I have been given to understand that the Honorable the Minister of Public Works has completed the purchase of Lawlor's Island as a Quarantine station. I trust that steps will be taken during the summer of 1871, to erect the proper buildings, &c. upon the island, and thus prevent the recurrence of the inconvenience caused by the want of a Quarantine Hospital in this port during the past year.

During the very heavy gale of the 4th September last (Sunday morning), the large boat belonging to this office broke from her moorings at the Queen's wharf, and was so badly damaged, that I fear it will be found impossible to repair her. Should any works be undertaken on Lawlor's Island during next summer, it will be necessary to have a large boat fit for work in a heavy sea. I would therefore suggest that the present boat be sold and a new one procured—(a boat such as is wanted would probably cost between \$80 and \$100). The sails, oars, &c., are all safe and in good order. The small boat, after the usual spring repairs, will be in an efficient state. The property of the Department mentioned in my Report of last year, still remains on Lawlor's Island, in charge of Mr. Devlin, the steward who resides on the Island.

I have the honor to be, Sir,

Your obedient servant,

CHAS. J. GOSSIP, M. D.,

Inspecting Physician,

Port of Halifax, N. S.

No. 17.

ANNUAL REPORT OF ST. JOHN, N.B., QUARANTINE OFFICE.

(G. J. HARDING, Esq., M.D.)

St. John, New Brunswick,
Dominion of Canada,
January 23rd, 1871.

Sir,—I have the honor in forwarding to His Honor the Minister of Agriculture, a statement in full of the proceedings of the Quarantine Station, Partridge Island, with all expenses incurred for quarantine at this Port during the calendar year 1870. Also the account of my contingencies since the first of July last, with vouchers. As there was no order here for the Dominion Paymaster since the 1st of July to pay the contingencies of my office, which amounted to \$34.29, I arranged them with my own funds, and now forward receipts.

I have the honor to be, Sir,
Yours most obediently,
(Signed), G. HARDING, M.D.,
Inspecting Physician.

J. C. Taché, Esq.,
Deputy Minister Agriculture.

Sir,—I herewith forward a report to the Honorable the Minister of Agriculture and Immigration of the proceedings of the Quarantine Station, Partridge Island, for the calendar year 1870, with a statement in all details, including salaries :—

Report for the year ending 31st December, 1870.

During the year, the shipping that arrived had no infected persons on board that required to be landed at the quarantine station, nor did I deem it necessary for the safety of the city to detain any vessels arriving, further than for purification, which is an unusual occurrence where there is such a continual ingress of shipping from different ports. My services and boatmen were employed in having a surveillance over the vessels arriving, in order to be certain that the quarantine law was not in any way infringed by carelessness or neglect of those responsible under the Act. And in all cases the regulations were observed, both by masters of vessels and pilots, unless in one instance on the 18th of February last. The international steam vessel *New Brunswick* landed two passengers from Portland, Maine, who afterwards broke out with "Varioloid." One shewed the pustules shortly after arrival; the other ten days after. Not having been observed to exist on the vessel, the master and crew were not aware of the infection with those persons, nor could I find sufficient cause in proceeding against the master, who had previously received the quarantine Acts. The sick men were placed in isolated apartments under strict regulations, and no farther cases occurred. During the prevalence of the small pox in the United States, the passengers of those steamers were afterwards inspected previous to landing. I have every reason to believe that the owners and officers of the International line make every effort to prevent infected persons coming in their boats from the United States. Every precaution is now used by them in bringing the corpses of persons who were formerly sent here without such, or a knowledge of the disease the person died of. At present they cannot be forwarded unless with a certificate

of two medical men, that their disease was not infectious, or if infectious, permission is required; that the necessary precaution may be taken by hermetically sealing. Since the first of December last, in compliance with these instructions, several corpses have arrived by this conveyance.

During the period the small pox was epidemic in New York, at the commencement of the year, I visited the several vessels coming direct; they were all allowed to proceed, not having any sickness. On the 21st of April, the steamship *Syrian* arrived from Glasgow and Liverpool *via* Halifax, with 18 passengers on board in good health; the first passenger vessel for the year allowed to proceed.

On the 3rd of May, the ship *Abyssinian* arrived from Savannah, and anchored out, side of Partridge Island with a quarantine flag. The mate had dysentery on leaving, and one of the crew was ill with the same disease during the passage. I found, on inspecting the vessel, the men had both recovered, except from the debility, that no danger was to be apprehended. The vessel was therefore discharged after purification.

The steamship *Syrian* arrived again on the 29th of July, second voyage from Glasgow and Liverpool, *via* Halifax, with 30 passengers. Allowed to proceed after purification.

The steamship *Dorion* arrived on the 12th of September from Glasgow and Liverpool *via* Halifax, with 25 passengers. Allowed to proceed and enter the Custom House after inspection.

The brig *Maggie Cross*, was inspected on the 24th of November, from Havana, sailed on the 2nd. Two of the crew had yellow fever at Havana; none sick during the passage nor on arrival. Allowed to proceed after purification.

At the commencement of the summer, with the probability that a number of immigrants might arrive, I made some additional preparation at the quarantine station, Partridge Island, but with little expense, in order to be prepared for any sick. Some new stovepipe was put up (the old pipe being unsafe) and some straw was sent to the Island, which remains in store, the expenses of which were all arranged for on the 1st of July last, ending the fiscal year. Since that period little or no expense has been incurred at the establishment further than additional supports placed under the shed, or receiving house for healthy immigrants, purification, which will preserve the building during the winter. I would recommend that the new sills be put under the building the coming season.

I have also most respectfully to inform the Hon. the Minister of Agriculture, that the Hospitals at the station for sick immigrants and infected seamen are in readiness for any sick; some additional bedding would be required for the immigrants if many should arrive the coming season or hereafter.

I have the honor to be, Sir,

Your most obedient servant,

G. J. HARDING, M.D., L.R.C.S.E.
Inspecting Physician, Port St. John.

Quarantine Station, St. John, N.B.,
January 23rd, 1871.

J. C. Taché, Esq., M.D.,
Deputy Minister of Agriculture, Ottawa.

No. 18.

ANNUAL REPORT OF MARINE AND EMIGRANT HOSPITAL, QUEBEC.

(P. WELLS, Esq.)

Marine Hospital,
Quebec, 13th February, 1871.

The Trustees of the Marine and Emigrant Hospital, Quebec, have the honor to submit their annual Report as follows:—

The expenditure incurred for the maintenance of the Hospital during the year 1870, amounted to \$20,016.03. Of this amount, \$15,500.03 was defrayed by the Dominion Government; the balance, namely \$4,516, was provided for as follows:—

By grant from Province of Quebec.....	\$4,000 00	
„ Rent of beach.....	160 00	
„ Board of House-Surgeon.....	200 00	
„ „ Matron's Son.....	30 00	
„ „ Patients.....	117 50	
„ Sale of Ashes.....	8 50	
		\$4,516 00

The several statements herewith furnish all requisite information as to the details of this expenditure.

The annual Report of the House-Surgeon may be summarized as follows:—

Number of Patients remaining in Hospital, 31st Dec., 1869	53	
„ Admitted.....	1,421	
		1,474
„ Discharged.....	1,375	
„ Deaths.....	51	
„ Patients remaining in Hospital, 31st Dec., 1870	48	
		1,474
Average duration of stay in Hospital.....	18½ days	
Total number of days in Hospital.....	27,063	
Percentage of mortality.....	3¾	

The Trustees, in relation to their administration, have but little to add to the remarks embodied in their previous annual Reports; nevertheless, as a consequence of the system of control adopted by them, they have been enabled this year to reduce the expenditure for alimentation to within a trifle of the same amount as the previous year notwithstanding that the price of groceries, meat and provisions generally underwent a marked advance, and that the number of days stay in Hospital somewhat exceeded that of 1869.

The expenditure for spirits and wine will perhaps seem high in proportion to the number of Patients, but the increase in this item is due to the fact that one of the Contractors to the Hospital neglected last year to send in his account, amounting to some \$200, in time for insertion in the statements of 1869.

In pursuance of instructions transmitted to them, the Trustees have been compelled to pay certain arrears, and notably \$200 due to the Quebec Corporation on the contract entered into with that body for water supply.

The work done by order of the Trustees, in connection with the heating and venti-

lating of the hospital, accounts for the increase in the items for carpenters' and tinsmiths' work.

The Department of Public Works caused to be constructed, some years ago, a hot air heating apparatus, which appeared to consume a quantity of fuel quite disproportional to the amount of heat produced; this apparatus, moreover, had become, owing either to the mode of its construction or to usage, a source of danger to the hospital it was intended to heat. This year, the Board have had one constructed on an entirely new principle, which seems to give no reason whatever to apprehend danger of fire. It works in a most satisfactory manner, and will probably be a considerable source of economy.

The Trustees had long pointed out the dangers that might result at any moment, from the total absence of artificial ventilation in the hospital, but their representations produced no result. During the summer they caused to be constructed, in one of the wings, a ventilator similar to one used in an important educational establishment in this city, which had given the most satisfactory results. The Trustees were confident of success, and were not deceived in their expectations. The change which has been effected has been such as to decide them to ventilate in a similar way the other parts of the building; nevertheless, these ventilators have not as yet been long enough in operation to enable them to ascertain the amount of influence which this step must produce in the hygienic condition of the hospital.

The whole respectfully submitted.

P. WELLS,
Secretary.

To the Honorable the Minister of Agriculture, &c.,
Ottawa.

ALPHABETICAL LIST OF GROCERIES, 1870.

	\$ cts.
Almonds, 2 lbs.....	0 60
Arrowroot, 7 lbs.....	1 40
Bacon, 23½ lbs.....	4 35½
Baking Powder, 3 pts.....	0 37½
Barley, 2,407 lbs.....	80 21
Bathbrick, 12.....	0 36
Blacking, 7 bot.....	1 85
Blacklead, 6 lbs.....	0 60
Blue, 10 lbs.....	2 90
Brandy, 25½ gallons.....	70 05
Brooms, 9 doz.....	24 00
Butter, 3,091 lbs.....	492 29½
Candles, Belmont, 44 lbs.....	12 52
do Tallow, 90 lbs.....	10 80
Cheeze, 66½ lbs.....	21 97
Chocolate, 5 lbs.....	3 20
Clothes Pins, 6 doz.....	1 00
Cod Liver Oil, 20 gallons.....	50 00
Coffee, 150 lbs.....	37 30
Figs, 5 boxes.....	2 10
Finnan Haddies, 15.....	3 58
Fish, dry, 162 lbs.....	6 48
Flour, 21 bags, 1 barrel.....	25 90
Gin, ½ gallon.....	0 80
Grapes, 4½ lbs.....	2 30
Ham, 180½ lbs.....	34 38½
Honey, 8½ lbs.....	2 13
Lard, 48 lbs.....	9 60
Lemons, 9 dozen.....	2 05
do Essence of, 11 bottles.....	3 75
Linseed Meal, 420 lbs.....	25 20
Lobsters, 20 tins.....	6 30
Maccaroni, 1 lb.....	0 25
Matches, 11 gross.....	3 50
Mustard, 8 bottles, 21½ lbs.....	7 59
Nuts, 4 lbs.....	0 60
Oatmeal, 1,402 lbs.....	42 06
Oranges, 17 dozen.....	7 10
Orange Peel, 2½ lbs.....	1 55
Pails, 1 dozen.....	1 80
Peas, ½ bushel.....	0 60
Pepper, 19 lbs.....	5 05
Pickles, 27 bottles.....	7 70
Raisins, 54 lbs.....	9 45
Rice, 41 lbs.....	1 71
Sago, 12 lbs.....	1 20
Salt, 4 bottles, 6 bushels.....	6 57
Scrubbers, 3 dozen.....	9 90
Sea Moss Farine.....	0 25
Soap, Brown, 1,664 lbs.....	66 56
do Windsor, 20 lbs.....	4 75
Soda, Washing, 26 lbs.....	0 78
Spices.....	5 16
Starch (Corn), 404 lbs.....	48 48
do Washing, 9 lbs.....	1 70
Sugar, Crushed, 446 lbs.....	58 61
do Ground, 83 lbs.....	12 55
do Loaf, 35 lbs.....	4 58
do Muscovado, 2,633 lbs.....	248 88
Tea, 537 lbs.....	256 88
Vermicelli, 3 lbs.....	0 75
Vinegar, 1 gallon.....	0 50
Whiskey, 8½ gallons.....	97 90
Whitening, 24 lbs.....	0 90
Wine, White, 188 gallons.....	290 55
do Port, 3 gallons, 1 bottle.....	10 00
Wine, Spirits of, 10 gallons.....	14 00
Worcester Sauce, 15 bottles.....	7 80
	\$2,183 57

ALPHABETICAL LIST OF EXPENDITURE, 1870.

	\$	cts.
Advertising	43	80
Ale, 1,128 P. B., 888 Q. B.	149	20
Allowance to Clergy for Vehicles.....	288	00
Apples.....	28	25
Biscuits, 112 lbs.....	15	52½
Bread, 36,539 lbs.....	823	22
Butter, Fresh, 310½ lbs.....	76	60
Cartage.....	58	60
Children left at the Hospital to provide for.....	400	00
Crockery.....	81	18
Cutlers' work.....	5	00
Deeds.....	12	00
Dry Goods.....	957	07
Drugs.....	481	79
Ducks, 4.....	1	70
Eggs, 287½ dozen.....	60	10½
Firewood, 344½ cords.....	1,152	91
Fish.....	75	17
Fowls, 119.....	37	40
Freight for Drugs.....	29	60
Furniture.....	19	50
Gas.....	637	28
Gas-fitter's work.....	90	81
Geese, 10.....	6	05
Groceries.....	2,183	57
Hardware.....	151	55
Ice.....	17	00
Insurance Premiums.....	270	00
Interments.....	129	00
Joiner's work.....	830	70
Meat, 29,064 lbs.....	1,490	61
Milk, 5,270½ gallons.....	790	57
Pigeons, 6 dozen.....	6	00
Plants and Trees.....	18	66
Plumber's work.....	345	68
Post Office Box.....	1	50
Potatoes, 467½ bushels.....	242	77
Printing.....	46	00
Salaries.....	5,592	79
Sausages, 63 lbs.....	9	45
Sewing.....	70	95
Smith's work.....	227	30
Stationery.....	80	45
Straw, 224 bundles.....	41	20
Surgical Instruments.....	95	50
Sundries.....	54	23
Tinsmith's work (one new Furnace, &c).....	291	60
Turkeys.....	17	75
Vegetables.....	72	32
Washing.....	760	12
Water, (18 months).....	600	00
Wood-cutting.....	958	00
	\$20,016	03

SUMMARY OF EXPENDITURE, 1870.

	\$ cts.	\$ cts.
Salary of Officers and Servants	5,592 79	
Allowance to Chaplains for Vehicles	288 00	
Provisions supplied to Officers and Servants	1,579 95	7,460 74
Dieting of the sick	3,595 56	
Medical comforts	35 66	
Wine, Beer, Spirits	618 50	
Drugs and Surgical Instruments	639 56	4,889 28
Cartage	58 60	
Fuel	1,310 91	
Ice	17 00	
Interments	129 00	
Light	669 10	
Straw	11 20	
Washing	877 22	
Water, 18 months	600 00	3,673 03
Advertising, Printing and Stationery	170 25	
Children born in the Hospital to provide for	400 00	
Crockery	81 18	
Dry Goods	957 07	
Furniture	19 50	
Hardware	151 55	
Insurance Premiums	270 00	
Sewing	70 95	
Sundries	86 39	2,206 89
Gas-fitter's work	90 81	
Joiner's work	830 70	
Plumber's work	345 68	
Smith's work	227 30	
Tinsmith's work, (including new furnace)	291 60	1,786 09
		20,016 03

RETURN of Sick in the Marine and Emigrant Hospital, from the 1st January, to the 31st December, 1870.

Diseases.	Men.	Women.	Children.	Total.	Diseases.	Men.	Women.	Children.	Total.
Abcessus	28	2	1	31	Scarlatina			3	3
Asthma	2			2	Scrofula	4			4
Arthritis	1			1	Syphilis	89	14		103
Ascites	2			2	Scabies	8	8		16
Ambustio	8			8	Strictura	9			9
Amaurosis	2			2	Subluxatis	10			10
Auramia	5	2		7	Tumor	4	2		6
Bronchitis	39	4		43	Ulcers	34	5		39
Bubo	24			24	Variola	2			2
Cancer	4	5		9	Varix	1	2		3
Constipatio	2			2	Vulnus	56	2		58
Catarrhus	13	4	1	18	Adenitis	11			11
Cephalalgia	9			9	Aneurismus	1			1
Comp-cerebri	1			1	Balanitis	2			2
Conc-cerebri	2		1	3	Butancephalus	1			1
Contusio	73	3		76	Bright's dis	1			1
Cyanche	10	2		12	Bronchoale	1			1
Conjunctivitis	6			6	Broncho-pneumonia	1			1
Colica	10			10	Congestion of the Lungs	2			2
Diarrhoea	84	5	8	97	Cystitis	2			2
Dysenteria	12			12	Debilitas	8	3		11
Dyspepsia	31	2		34	Del. Tremens	7	4		11
Erysipelas	8	3		11	Dislocatio	4			4
Epilepsia	4			4	Ebristas	4	1		5
Epididymitis	3			3	Erythema	4			4
Fibris	36	22	6	64	Ecthyma	2			2
Fibris-inter	18			18	Eczema	6	2		8
Febricula	25	7		32	Gastrodynia	6	2		8
Fistula	3			3	Gestatio		48		48
Fractura	38	1		39	Haematuria	1			1
Gangraena	1	1		2	Haemoptisis	1			1
Furuncul.	9			9	Hepatitis	1			1
Gelatio	3			3	Herpes	2			2
Gastritis	2			2	Hydrothorax	2			2
Gonorrhoea	35	2		37	Hypochondriasis	1			1
Hemorroides	5			5	Insanitas	5	3		8
Hernia	15			15	Lymphangitis	1	1		2
Hydrocele	5			5	Nephritis	2			2
Inflammation of the Brain			1	1	Neuralgia	2			2
Inflammation of the Bowels	1			1	Not classified and nil	26	18	18	62
Iritis	7	1		8	Of the Bladder	3			3
Leucorrhoea		1		1	Of the Skin	7			7
Lumbago	30			30	Odontalgia	4			4
Morbus coxae		2		2	Oedema	2			2
Morbus cordis	16	1		17	Olitis	3	1		4
Morbus hepatis		2		2	Partus		50		50
Necrosis	2	1		3	Pernio	5			5
Ophthalmia	6			6	Purpura	1			1
Orchitis	19			19	Spermatorrhoea	5			5
Paralysis	4	2		6	Stomatitis	1			1
Palpitatio	2			2	Synovitis	5			5
Peritonitis	1			1	Tuberculosis	1			1
Phtthisis	20	1		21	Urethritis	1			1
Pleurisia	2			2	Vermes			2	2
Pneumonia	5			5	Vulvitis		1		1
Paronychia	18			18	Of the Spine	1			1
Prurigo	4			4	White Swelling	1			1
Pleurodynia	15			15					
Rheumatismus	94	4		98					
Rubeola			3	3					
					Total	1185	245	44	1474

RETURN of Sick in the Marine and Emigrant Hospital, from the 1st January to the 31st December, 1870.—*Continued.*

Description.	Remained.	Since admitted.	Total.	Discharged.	Died.	Remaining.
Men.....	30	1155	1185	1118	34	33
Women.....	20	225	245	222	11	12
Children.....	3	41	44	35	6	3
Total.....	53	1421	1474	1375	51	48
<i>Seamen.</i>						
Seamen.....	8	880	888	869	12	7
<i>Emigrants.</i>						
Men.....	1	50	51	49	2	
Women.....	2	35	37	36	.....	1
Children.....	2	34	36	33	3	
Total.....	5	119	124	118	5	1
<i>Citizens and Strangers.</i>						
Men.....	21	225	246	200	20	26
Women.....	18	190	208	186	11	11
Children.....	1	7	8	2	3	3
Total.....	40	422	462	388	34	40

NO. OF DAYS IN HOSPITAL.

Seamen.....	13,245
Emigrants.....	2,384
Residents.....	11,434
	<hr/> 27,063

RELIGIONS.

Protestants.....	809
Catholics.....	665
	<hr/> 1,474

COUNTRIES.

1	Austria	4	17	Newfoundland	5
2	Australia	2	18	Norway	68
3	Belgium	4	19	Nova Scotia	14
4	Canada	309	20	Portugal	3
5	Denmark	7	21	Prussia	16
6	England	301	22	Russia	6
7	Finland	5	23	Scotland	210
8	France	28	24	South America	4
9	Germany	27	25	Spain	4
10	Greece	5	26	Sweden	47
11	Hanover	2	27	United States of America	17
12	Holland	9	28	Wales	48
13	Ireland	298	29	West Indies	7
14	Italy	6			
15	Jersey and Guernsey	12		Total	1,474
16	New Brunswick	6			

DEATHS.

Description.	Men.	Women.	Children.	Total.	Description.	Men.	Women.	Children.	Total.
Aneurismus	1			1	Fractura Co.	1			1
Ascitis	1			1	Gangraena	1	1		2
Asphyxia	1			1	Fractura-cranii			1	1
Bronchitis		1		1	Gastritis	1			1
Broncho-pneumonia	1			1	Gelatio	1			1
Carcinoma	2	3		5	Hernia	1			1
Concussio-cerebri	1		1	2	Inflammation of the Bowels	1			1
Congestion of the Lungs	2			2	Inflammation of the Brain			1	1
Convulsions			1	1	Morbus-cordis	2	1		3
Debilitas	2	2		4	Nephritis	1			1
Diarrhoea	3		3	5	Partus	1	1		2
Epilepsia	1			1	Phthisis, Pneumonia, &c.	6			6
Erysipelas	1	1		2					
Febris	3	1		4	Total	34	11	7	51

L. CATELLIER,

Resident Physician.

No. 19.

THE CENSUS.

REPORT BY THE MINISTER OF AGRICULTURE.*

To His Excellency the Right Honorable Lord Lisgar, Governor General of the Dominion of Canada, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY :—

I have the honor to submit the following Report to be laid before Parliament, in terms of "*The Census Act.*"

By Proclamation, under date of the 23rd of January last (copy of which is hereto appended), it has been declared, subject always to any modifications which may hereafter be duly authorized and proclaimed in respect of any specified localities, that the details of the information to be sought by means of the Enumerators to be appointed for the taking of the Census, and the forms to be used, and procedure to be followed for the obtaining thereof, shall be, as indicated by certain schedules, nine in number, therein embodied, and by such instructions as the Minister of Agriculture shall issue in explanation thereof; that with the exception of so much of such information as purports to be thereby taken, with reference to the year previous, the same shall be taken with reference to the 2nd of April, 1871; that the Enumerators shall commence their domiciliary visits for ascertainment of the same, on the 3rd of April, 1871, or as soon thereafter as possible, and shall continue such visits uninterruptedly until completed; and that the details of the supplementary information to be sought, otherwise than by means of the Enumerator, and the forms to be used and procedure to be followed for the obtaining thereof, shall be as indicated by the instructions of the Minister of Agriculture in that behalf to be issued.

The work of printing and issuing the nine schedules thus adopted and promulgated is in active progress.

A manual of instructions in full explanation of them, accompanied by a set of printed specimen schedules filled up by way of practical illustration, has been prepared and issued for the use of the officers to be employed in the taking of the Census.

An issue of the schedules themselves, in a condensed form for popular distribution, as an important means of preparing the people generally for the visits of the Enumerators, and so aiding the latter in the work, is also in progress.

Copies of the manual, with its specimen schedules, and of these People's Schedules, and of the working schedules themselves, are hereto appended.

By Proclamation, under date of the 31st of December last (copy of which is thereto appended), the four Provinces of Ontario, Quebec, Nova Scotia and New Brunswick have been divided, as shewn in the accompanying map, into Census Districts, 206 in number, corresponding as nearly as was found convenient, with their existing Electoral Districts, under "*The British North America Act, 1867.*"

The Proclamation for further dividing these Census Districts into Census Sub-Districts, corresponding as nearly as may be with the municipal or other recognized divisions thereof, has been ordered by Your Excellency in Council, and will issue in a few days.

Census Commissioners have been named for all but two of the Census Districts. A list of the Commissioners so named is hereto appended.

By Order in Council, under date of the 16th of January last, the following rules have been laid down in reference to the appointment of Enumerators :—

* This Report was written and presented to Parliament subsequently to the period referred to in the Report of the Minister of Agriculture to His Excellency.

1. For each Census Sub-District there will be appointed either one Enumerator, or so many Enumerators as the Minister of Agriculture shall direct or authorize.

2. The selection of the persons to be so appointed, will, in all cases, be such as the Minister of Agriculture shall direct or authorize.

3. Each Enumerator will be appointed by a letter, to be signed by the Census Commissioner in such form as the Minister of Agriculture shall direct or authorize.

The work of examining into the recommendations made by the Commissioners and others, as to the number of Enumerators to be employed in the various Census Sub-Districts, and as to their selection, is far advanced towards completion. The Commissioners will receive their final instructions on these points in a few days.

By Order in Council, under date of the 16th of January last, provision has been made that the form of Oath to be taken and subscribed by every Census Commissioner, Enumerator, and other person employed in the execution of this Act, whether for the obtaining in the first instance of any information sought by the Census, or for revising or compiling the same, or otherwise dealing therewith, or for enquiring into any matter connected with the taking of the Census, before entering on his duties, shall be the following:—

“ I (A.B.), duly appointed under the ‘Census Act’ to be (name the office or employment of the person taking the oath), solemnly and sincerely swear that I will, to the utmost of my skill and ability, faithfully and exactly discharge all and every my duties as such, in conformity with the requirements of the said Act, and of all Proclamations, Orders in Council, and instructions issued in pursuance thereof. So help me God.”

Also, that such oath be taken before the Minister of Agriculture, or his Deputy, or before any Judge, Prothonotary, or Clerk of any Court of Record, or before any duly qualified Justice of the Peace, or before any Census Staff Officer or Census Commissioner who has himself first duly taken such oath.

And also, that every oath so taken be returned into and recorded in the Department of Agriculture, in such manner as, by Departmental regulation or special instruction, the Minister of Agriculture shall from time to time direct.

As required by the twenty-fourth section of the Census Act, certain tables, which I had caused to be prepared, setting forth the rates of allowances or remuneration for the several Census Commissioners and Enumerators were duly approved by Order in Council, under date of the 4th instant, and are hereto appended.

As required by the twenty-seventh section of the Census Act, an account of all monies expended to date under the authority thereof, is also hereto appended.

The whole respectfully submitted.

CHRISTOPHER DUNKIN,
Minister of Agriculture.

Department of Agriculture,
Ottawa, 1st March, 1871.

PROCLAMATION OF JANUARY 23RD.

LISGAR,

[L. S.]

CANADA.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, &c., &c., &c.

To all whom these presents shall come, or whom the same may in any wise concern.

GREETING :

A PROCLAMATION.

JOHN A. MACDONALD,)
Attorney General,)
CANADA.)

Whereas in and by “The Census Act,” it is amongst other things in effect enacted,

that the first Census of Canada to be taken in the year of Our Lord one thousand eight hundred and seventy one, shall be so taken as to ascertain and show, with the utmost accuracy possible, in respect in each of the then four Provinces of Canada, and of each of the Electoral Districts and other recognised sub-divisions thereof, all statistical information which can conveniently be obtained and stated in tabular form, touching the several matters in the said Act specified, and whatever other matters may be specified in the forms and instructions to be issued as in the said Act is after provided ;

And Whereas it is therein further in effect enacted, that the details of such information, the forms to be used, and procedure to be followed for the obtaining thereof, and the period at which, and the date or dates with reference to which the Census shall be taken, whether generally or for any specified localities requiring to be exceptionally dealt with in any of these respects, shall be such as Our Governor in Council by Proclamation shall direct ; provided always that such period for taking the Census shall not be later than the first of May, to wit, in the year one thousand eight hundred and seventy-one ;

And Whereas it is therein further in effect enacted, that the Minister of Agriculture shall cause all such forms, and also all instructions which he shall deem requisite in respect of the Census, to be duly prepared, printed and issued, and shall obtain, so far as possible, by such ways and means as may be deemed convenient, any statistical information requisite for the due completion of the Census, which cannot be or is not obtained with the required fulness and accuracy by means of the Enumerators under the said Act to be employed ;

Know Now Ye that We, by and with the advice of Our Privy Council for Canada, do, by this Our Proclamation, hereby *proclaim* and *direct* that—subject always to any modification which may hereafter be duly authorised and proclaimed in respect of any specified localities—the details of the information required by “The Census Act” to be obtained by means of the said Enumerators, and the forms to be used and procedure to be followed for the obtaining thereof, shall be as indicated by the Schedules following, and by the instructions to be issued by the Minister of Agriculture in explanation thereof, that is to say :—

Page } Province of District No. Sub-District
Census of 1871. } Schedule No. 1.—Nominal Return of the Living.

Columns.		
1	Numbered in the order of visitation.	
2		Vessels
3		Shanties
4		Dwelling houses in construction.
5		Dwelling houses uninhabited.
6		Dwelling houses inhabited.
7	Families.	
7	Names.	
8	Sex.	
9	Age.	
10	Born within last twelve months.	
11	Country or Province of Birth.	
12	Religion.	
13	Origin.	
14	Profession, Occupation or Trade.	
15	Married or Widowed.	
16	Married within last twelve months.	
17	Instruction.	
18		Going to school.
19		Over 20 unable to read.
20	Infirmities.	
21		Over 20 unable to write.
22		Deaf and dumb.
21	Blind.	
22	Unsound mind.	
23	Dates of operations and remarks.	

Page } Province of District No. Sub-District
 Census of 1871. } Schedule No. 2.—Nominal Return of the Deaths within last 12 months.

Columns.	
1	Names of Deceased.
2	Sex.
3	Age.
4	Born within last twelve months.
5	Religion.
6	Country or Province of Birth.
7	Profession, Occupation or Trade.
8	Married or Widowed.
9	Married within last 12 months.
10	Month of Death.
11	Disease or other cause of Death.
12	Remarks.

Page } Province of District No. Sub-District
 Census of 1871. } Schedule No. 4.—Return of Cultivated Land, of Field Products and of
 Plants and Fruits.

Columns.	Reference to Schedule No. 1.			
1	Reference to Schedule No. 1.	Page.		
2		Number.		
3		Range or Concession.	Occupied Lands.	
4		Number of Lot.		
5		Owner, Tenant or Employé.		
6		Total Number of Acres occupied.		
7		Number of Acres improved.		
8		Number of Acres in pasture.		
9		Number of Acres of Salt or Dyked Marsh.		
10		Number of Acres in Gardens and Orchards.		
11	Wheat.	Acres.		Field Productions.
12		Spring Wheat.—Bushels.		
13		Fall Wheat.—Bushels.		
14		Bushels of Barley.		
15		Bushels of Oats.		
16		Bushels of Rye.		
17		Bushels of Peas.		
18		Bushels of Beans.		
19		Bushels of Buckwheat.		
20		Bushels of Corn.		
21	Root Crops.	Potat's { Acres.		
22			Bushels.	
23			Bushels of Turnips.	
24		Bushels of Mangel-Wurzel and other Beets.		
25		Bushels of Carrots and other Roots.		
26	Hay Crop.	Acres.		
27		Tons of 2,000 lbs. or bundles of 16 lbs. of Hay.		
28		Bushels of Grass and Clover Seed.		
29		Bushels of Flax Seed.		
30		Pounds of Flax and Hemp.	Plants, Fruits and other Products.	
31		Pounds of Hops.		
32		Pounds of Tobacco.		
33		Pounds of Grapes.		
34		Bushels of Apples.		
35		Bushels of Pears, Plums and other Fruits.		
36		Pounds of Maple Sugar.		

Page
Census of 1871. } Province of District No. Sub-District
Schedule No. 5.—Live Stock, Animal Products, Home-made Fabrics
and Furs.

Columns.	Reference to Schedule No. 1.	Page.		
1				
2		Number.		
3		Horses over 3 years old.	Live Stock.	
4		Colts and Fillies.		
5		Working Oxen.		
6		Milch Cows.		
7		Other Horned Cattle.		
8		Sheep.		
9		Swine.		
10		Hives of Bees.		
11		Cattle killed or sold for slaughter or export.		Annual Products.
12		Sheep killed or sold for slaughter or export.		
13		Swine killed or sold for slaughter or export.		
14		Pounds of Butter.		
15		Pounds of home-made Cheese.		
16		Pounds of Honey.		
17		Pounds of Wool.		
18		Yards of home-made Cloth and Flannel.	Home-made Fabrics.	
19		Yards of Home-made Linen.		
20		Beaver's Skins.	Furs.	
21		Musk Rats.		
22		Minks.		
23		Otters.		
24		Seals.		
25		Martins.		
26		Foxes.		
27		Bears.		
28		Moose, Cariboo and Deer.		
29		Number of all other Furs.		

Page } Province of District No. Sub-District
 Census of 1871. } Schedule No. 6.—Return of Industrial Establishments.

Columns.		
1	Kind of Industrial Establishments, Name of Proprietor or Company and others such information	
2	Fixed capital invested, in dollars.	
3	Floating capital employed, in dollars.	
4	Number of working months in the year.	
5	Average number of people employed. { Over 16 years. { Under 16 years. {	Male.
6		Female.
7		Boys.
8		Girls.
9	Aggregate amount of yearly wages, in dollars.	
10	Moving Power. {	Kind.
11		Nominal force.
12	Raw Material {	Kind.
13		Quantities.
14		Aggregate value, in dollars.
15	Products. {	Kind.
16		Quantities.
17		Aggregate value in dollars.
18	Remarks.	

Page } Province of District No. Sub-District.
Census of 1871. } Schedule No. 7.—Return of Products of the Forest.

Columns.	Reference to Schedule No. 1.	
1	}	Page.
2		Number.
3	Square Pine. Number of cubic feet.	White.
4		Red.
5		Cubic feet of square Oak.
6		Cubic feet of square or sided Tamarac.
7		Cubic feet of square or sided Birch and Maple.
8		Cubic feet of square Elm.
9	Cubic feet of Walnut.	Black.
10		Other species.
11		Cubic feet of Hickory.
12		Cubic feet of all other square or sided timber.
13		Number of Census Standard Pine Logs.
14		Number of Census Standard Spruce and other Logs.
15		Number of Spars and Masts.
16		Thousands of Staves.
17		Cords of Lath-wood.
18		Cords of Tan-bark.
19		Cords of Fire-wood.
20		Remarks.

Page } Province of District No. Sub-District
 Census of 1871. } Schedule No. 8.—Return of Shipping and Fisheries.

Columns.	Reference to Schedule No. 1.			
1	Reference to Schedule No. 1.	Page.		
2		Number.		
3	Steam Vessels.	Number of Shares.	Shipping.	
4		Tonnage owned.		
5	Sailing Vessels.	Number of Shares.		
6		Tonnage owned.		
7	Barges.	Number.		
8		Tonnage owned.		
9	Vessels and Boats employed fishing.	Vessels. Number.		Fisheries,
10		Men.		
11	Boats.	Number.		
12		Men.		
13	Number of shoremen or graviers.			
14	Number of fathoms of Nets and Seines of all sorts.			
15	Number of Weir or Fascines fisheries.			
16	Quintals of Cod.			
17	Quintals of Haddock, Hake and Pollock.			
18	Barrels of Sounds and Tongues.			
19	Barrels of Herring.			
20	Barrels of Gaspareaux.			
21	Barrels of Mackerel.			
22	Barrels of Sardines.			
23	Barrels of Halibut.			
24	Barrels of Salmon.			
25	Barrels of Shad.			
26	Barrels of Eels.			
27	Barrels of White Fish.			
28	Barrels of Trout.			
29	Other fishes per barrel.			
30	Barrels of Cured Roes.			
31	Barrels of Oysters.			
32	Gallons of Medicinal Cod Liver Oil.			
33	Gallons of all other fish oil.			

Page } Province of District No. Sub-District
 Census of 1871. } Schedule No. 9.—Return of Mineral Products.

Columns.	Reference to Schedule No. 1.	Page.	Number.
1	}		
2			
3		Ounces of Gold.	
4		Ounces of Silver.	
5		Tons of Copper Ore per Standard of 25% of Metallic Copper.	
6		Tons of Iron Ore per Standard of 25% of Metallic Iron.	
7		Tons of Pyrites per Standard of 50% of Sulphur.	
8		Tons of Manganese Ore.	
9		Lead and other Ore per ton or otherwise,	
10		Tons of Coal.	
11		Tons of Peat.	
12		Tons of Plumbago.	
13		Tons of Lump Gypsum.	
14		Tons of Phosphate of Lime.	
15		Pounds of Mica.	
16		Gallons of Crude Petroleum.	
17		Barrels of Salt.	
18		Cubic feet of Grained Marble.	
19		Cubic feet of Building Stone for Dressing.	
20		Squares of Roofing Slate.	
21		Remarks.	

And We do further proclaim and direct, subject always as aforesaid to any modification which may hereafter be duly authorized and proclaimed in respect of any specified localities, that the date with reference to which the Census shall be taken as in the said Act mentioned,—with the exception of so much of such information and the details thereof, as purport to be thereby taken with reference to the year previous,—shall be taken with reference to the SECOND DAY of APRIL next thereafter ensuing, and that each enumerator shall commence his domiciliary visits for ascertainment of the same on the THIRD DAY of APRIL next hereafter ensuing, or as immediately thereafter as may be possible, and shall continue such domiciliary visits as afore-said uninterruptedly until completed; and that the details of such supplementary information as may require to be obtained otherwise than by means of the said Enumerators, and the forms to be used and procedure to be followed for the obtaining thereof, shall be as indicated by the instructions of the Minister of Agriculture in that behalf to be issued.

OF ALL which Our Loving Subjects and all others whom these presents may concern, are hereby required to take notice, and to govern themselves accordingly.

IN TESTIMONY WHEREOF, We have caused these Our Letters to be made Patent, and the Great Seal of Canada to be hereunto affixed: WITNESS, Our Right Trusty and Well Beloved, the Right Honorable JOHN BARON LISGAR, of Lisgar and Bailieborough, in the County of Cavan, Ireland, in the Peerage of the United Kingdom of Great Britain and Ireland, and a Baronet, one of Our Most Honorable Privy Council, Knight Grand Cross of Our Most Honorable Order of the Bath, Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, Governor General of Canada, and Governor and Commander-in-Chief of the Island of Prince Edward. At Our Government House, in Our CITY of OTTAWA, this TWENTY-THIRD day of JANUARY, in the Year of Our Lord, One thousandeight hundred and seventy-one, and in the Thirty-fourth year of Our Reign.

By Command,

J. C. AIKINS,

Secretary of State.

MANUAL CONTAINING "THE CENSUS ACT," AND INSTRUCTIONS TO OFFICERS EMPLOYED IN THE TAKING OF THE FIRST CENSUS OF CANADA, 1871.

CAP. XXI.

An Act respecting the First Census.

[Assented to 12th May, 1870.]

Preamble.

HER Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

What shall be ascertained and shown by the Census.

1. The first Census of Canada, to be taken in the year 1871, hereinafter termed "The Census," shall be so taken as to ascertain and show, with the utmost accuracy possible, in respect of each of the four Provinces, and of each of the Electoral Districts, and other recognised subdivisions thereof, all statistical information which can conveniently be obtained and stated in tabular form, touching their population and the classification thereof, as regards age, sex, social condition, religion, education, race, occupation, and otherwise; the houses and other buildings therein, and their classification as dwellings, inhabited, uninhabited, under construction, and otherwise; the occupied land therein, and the condition thereof, as town, village, country, [cultivated,

uncultivated, and otherwise ; the aggregate valuation of property, real and personal therein ; the produce, state, and resources of the agricultural, fishing, lumbering, mining, mechanical, manufacturing, trading and other industries thereof ; the municipal, educational, charitable and other institutions thereof ; and whatever other matters may be specified in the forms and instructions to be issued, as hereinafter is provided.

2. The details of such information, the forms to be used, and procedure to be followed for the obtaining thereof, and the period at which, and date or dates with reference to which the Census shall be taken ; whether generally, or for any specified localities, requiring to be exceptionally dealt with in any of these respects, shall be such as the Governor in Council by proclamation shall direct ; provided always, that such period for taking the Census shall not be later than the first of May.

Details, forms, and procedure to be such as the Governor in Council may direct.
Proviso.

3. The Minister of Agriculture shall cause all such forms, and also all instructions which he shall deem requisite in respect of the Census, to be duly prepared, printed and issued, for use by the persons to be employed in the taking thereof.

Minister of Agriculture to prepare forms.

4. The Governor in Council, by Proclamation, shall divide each of the four Provinces into Census Districts, to correspond as nearly as may be with the several Electoral Districts under "The British North America Act, 1867;" but subdividing any thereof, or adding adjacent territory to any thereof, or grouping together any thereof, or any parts thereof, wherever such subdivision, addition, or grouping may be deemed convenient ; and forming all other territory not comprised within an Electoral District, into so many and such Census Districts as may be deemed convenient.

Governor in Council to divide each Province into Census Districts.

5. The Governor in Council, by Proclamation, shall further divide every Census District into Census Sub-Districts, to correspond as nearly as may be with the Municipal or other recognized divisions thereof ; but subdividing any thereof, or adding adjacent territory to any thereof, or grouping together any thereof, or any parts thereof, wherever such sub-division, addition, or grouping may be deemed convenient ; and forming all other territory not comprised within such Municipal or other divisions, into so many and such Census Sub-Districts, as may be deemed convenient.

And the Council to divide each Census District into Census Sub-Districts.

6. The Governor in Council shall appoint for each Census District, one Census Commissioner.

Census Commissioner for each District.

7. In any case where it may be deemed convenient, there may be appointed by or under authority of the Governor in Council, in such manner, and with such relative powers and duties, and such share of emoluments, as shall be laid down by Order in Council, one or more Deputies for the purpose of aiding any of such Census Commissioners.

And deputies when necessary.

8. There shall be appointed, by or under the authority of the Minister of Agriculture, in such manner and subject to such rules in that behalf as shall be laid down by Order in Council, one or more Enumerators for every Census Sub-District ; and in every case where more than one Enumerator is appointed, the powers and duties of such Enumerators shall be such as the instructions of the Minister of Agriculture shall assign to each, whether territorially or otherwise.

One or more Enumerators for each Census Sub-District.

Minister of Agriculture to cause forms to be distributed.

9. The Minister of Agriculture shall cause the requisite supply of forms and instructions to be duly distributed, through the several Census Commissioners, to every Enumerator.

Commissioners to instruct and oversee Enumerators.

10. Each Census Commissioner shall further see that every Enumerator under his superintendence thoroughly understands the manner in which the duties required of him are to be performed, and uses due diligence in the performance thereof.

Duties of Enumerators in taking the Census.

11. Every Enumerator, by domiciliary visits to every house, and careful personal inquiry, shall ascertain, in detail, with the utmost accuracy possible, all the statistical information with which he is required to deal, and no other; and shall make an exact record thereof, and attest the same under oath; and shall see that such attested record is duly delivered to the Census Commissioner, under whose superintendence he is placed; the whole, in all respects, as by the forms and instructions issued to him, shall be required.

Commissioners to examine the work of Enumerators, and correct it, and return it attested.

12. The Census Commissioner shall examine all such records, and satisfy himself how far each Enumerator has performed the duties required of him; and shall note all apparent defects and inaccuracies in such records, and require the several Enumerators concerned therewith, to assist him in respect thereof; and with their assistance, shall correct the same, so far as may be found requisite and possible, noting always whether such corrections are concurred in by them or not, and shall make return—attested under oath, of his doings in the premises—and shall transmit the same, together with all the records in question, to the Minister of Agriculture; the whole, in all respects, as by the forms and instructions issued to him, shall be required.

Duty of Minister of Agriculture in examining Returns, and causing them to be corrected and completed and laid before Parliament.

13. The Minister of Agriculture shall cause all such returns and records to be examined, and any defects or inaccuracies discoverable therein to be corrected so far as possible; and shall obtain, so far as possible, by such ways and means as may be deemed convenient, any statistical information requisite for the due completion of the Census, which cannot be or is not obtained with the required fulness and accuracy by means of such returns and records; and shall cause to be prepared, that the same may be laid before Parliament, with all practicable despatch, abstracts and tabular statements, shewing the results of the Census as fully and accurately as possible.

Commissioners and other Census Officers to take an oath of office.

14. Every Census Commissioner, Enumerator, and other person employed in the execution of this Act—whether for the obtaining in the first instance of any information sought by the Census, or for revising or compiling the same, or otherwise dealing therewith, or for enquiring into any matter connected with the taking of the Census; before entering on his duties, shall take and subscribe an oath binding him to the faithful and exact discharge of such duties, in such form, before such person, and returned and recorded in such manner, as by Order in Council shall be prescribed.

Any wilful neglect, or false return, etc., to be a misdemeanor.

15. Any such Census Commissioner, Enumerator, or other person employed in the execution of this Act, making wilful default in any matter required of him by this Act, or making any wilfully false declaration touching any such matter, shall be guilty of a misdemeanor.

16. Every person having custody or charge of any Provincial, Municipal, or other public records or documents, or of any records or documents of any Corporation, from which information, sought by the Census, or which would aid in the completion or correction thereof, can be obtained, shall grant to any Census Commissioner, Enumerator, or other person deputed to that end by the Minister of Agriculture, reasonable access thereto for the obtaining of such information therefrom; and every such person wilfully or without lawful excuse, refusing or neglecting so to do, and every person wilfully hindering or seeking to prevent or obstruct such success, or otherwise in any way wilfully obstructing or seeking to obstruct any person employed in the execution of this Act, shall be guilty of a misdemeanor.

Census Commissioners and others, acting under this Act, to have access to public records, etc.
Penalty for refusing such access.

17. Every person who wilfully or without lawful excuse, refuses or neglects to fill up, to the best of his knowledge and belief, any schedule which he shall have been required to fill up by any Enumerator, or other person employed in the execution of this Act; or refuses or neglects to sign and deliver back or otherwise return the same when and as so required; or makes, signs, delivers or returns, or causes to be made, signed, delivered or returned, any false answer or statement as to any matter specified in such schedule, shall thereby incur a penalty of not less than ten nor more than forty dollars.

Penalty for neglecting to fill up any Schedule., etc.

18. Every person who, without lawful excuse, refuses or neglects to answer, or who wilfully answers falsely, any question requisite for obtaining any information sought by the Census or pertinent thereto, which shall have been asked of him by any Enumerator or other person employed in the execution of this Act, shall, for every such refusal or neglect or wilfully false answer, incur a penalty of not less than five nor more than twenty dollars.

And for refusing to answer lawful questions, etc.

19. The penalties hereinbefore imposed may be recovered in a summary manner at the suit of any Census Commissioner, Enumerator, or other person employed in the execution of this Act, before any one Justice of the Peace having jurisdiction in the place where the offence has been committed, on the oath of the prosecutor or of one credible witness; and one moiety thereof shall belong to the Crown for the public uses of the Dominion, and the other moiety to the prosecutor, unless he has been examined as a witness to prove the offence, in which case the whole shall belong to the Crown for the uses aforesaid.

Penalties—how to be recovered and appropriated.

20. Whenever the Minister of Agriculture deems it convenient, he may, by special letter of instruction, direct any Census Commissioner, or other person employed in the execution of this Act, to make enquiry under oath, as to any matter or matters connected with the taking of the Census, or the ascertaining or correcting of any supposed defect or inaccuracy therein; and such Census Commissioner or other person shall then have the same power as is vested in any Court of Law in civil cases, of summoning any party or witnesses, of enforcing their attendance, and of requiring and compelling them to give evidence on oath, whether orally or in writing, and to produce such documents and things as he deems requisite to the full investigation of such matter or matters.

Minister of Agriculture may direct enquiry into matters connected with the Census; Powers, etc., of the Census Commissioners or other person making such enquiry.

21. Any letter purporting to be signed by the Minister of Agriculture, or by his Deputy, or by any other person thereto authorised under Order in Council, and notifying any appointment or removal of, or setting

Certain letters and documents to be *prima facie* evidence

of appointment, removal, etc. forth any instructions to, any person employed in the execution of this Act ; and any letter signed by any Census Commissioner, or other person thereto duly authorized, notifying any appointment or removal of, or setting forth any instructions to any person so employed under the superintendence of the signer thereof, shall be, respectively, *prima facie* evidence of such appointment, removal, or instructions, and that such letter was signed and addressed as it purports to be.

And so of forms and instructions.

22. Any document or paper, written or printed, purporting to be a form authorized for use in the taking of the Census, or to set forth any instructions relative thereto, which is produced by any person employed in the execution of this Act, as being such form, or as setting forth such instructions, shall be presumed to have been supplied by the proper authority, to the person so producing the same, and shall be *prima facie* evidence of all instructions therein set forth.

Leaving a schedule by Enumerator to be sufficient requirement to fill up the same.

23. The leaving, by any Enumerator, at any house or part of a house, of any schedule purporting to be issued under this Act, and having thereon a notice requiring that the same be filled up and signed within a stated delay by the occupant thereof, or in his absence by some other member of the family, shall be a sufficient requirement as against such occupant, though not named in such notice, nor personally served therewith, so to fill up and sign such schedule.

Minister of Agriculture to prepare tables of allowances as remuneration under this Act, to be laid before Parliament when approved by Governor in Council.

24. The Minister of Agriculture shall cause to be prepared one or more tables, setting forth the rates of allowances or remuneration for the several Census Commissioners and Enumerators employed in the execution of this Act, not, however, to exceed, in the aggregate, a total amount of three dollars for each day of proved effective service for any Enumerator, or of four dollars for each day of like service for any Census Commissioner ; and the same, when approved by Order in Council, shall be laid before Parliament, on or before the first day of March, 1871, if Parliament be sitting, or if Parliament be not sitting, then within the first fifteen days of the Session next ensuing.

To whom and when payable.

25. Such allowances or remuneration shall be paid to the several persons entitled thereto, in such manner as the Governor in Council shall direct ; but shall not be payable, until the services required of the person receiving the same have been faithfully and entirely performed.

To be paid out of monies to be provided by Parliament.

26. Such allowances and remuneration, and all expenses to be incurred in carrying this Act into effect, shall be paid out of such monies as shall be provided by Parliament for that purpose.

Full reports of things done under this Act to be laid before Parliament.

27. A full report of all things done under this Act, and an account of all monies expended under the authority thereof, shall be laid before Parliament within the first fifteen days of the next Session thereof, and of each Session thereafter, until such time as all things requiring to be done under this Act, shall have been fully completed.

Interpretation.

28. The word "house" in this Act includes all ships, vessels and other dwellings or places of abode of any kind.

Civil Service Act not to apply.

29. Nothing in "The Canada Civil Service Act, 1868," contained,

shall be held applicable to any appointment, employment, or service, under this Act.

30. The first twenty-four Sections of the Act, Chapter thirty-three, of the Consolidated Statutes of the late Province of Canada, so much of Chapter thirty-five of the Revised Statutes of Nova Scotia as relates to the taking of a Census, and all other Acts and parts of Acts in force in any of the Provinces relative to a Census, are hereby repealed. Repeal of inconsistent enactments.

31. This Act may be cited as "*The Census Act*," and all things law-fully done or required to be done, by or under authority of any Proclamation, Order in Council, or instruction by this Act provided for or contemplated, shall be held to be done or required, and may be set forth as done or required, under authority of this Act. Short title of this Act, etc.

INSTRUCTIONS TO OFFICERS.

CHAPTER I.

PREFATORY REMARKS.

A CENSUS is taken for the purpose of ascertaining, as exactly as possible, the population and resources of a country, and thereby furnishing a sufficiently correct idea of its strength and capability.

A Census is not taken for purposes of *taxation*, as, unfortunately, many persons imagine. None of the information contained in it could be turned to such account. The results it exhibits, like those of any other statistical enquiries, are directly connected with the science of Government; which pre-supposes a general knowledge of the wants and capabilities, the defects and advantages, numerically presented, of the population and the country.

It follows that it is the duty of every person in the Dominion, as well as his interest, to assist in obtaining a true and honest statement of facts as they are.

Many persons imagine that Census schedules may be in some way used as a sort of advertisement for them, or as a reflection upon them. The fact is, that these schedules are *never* seen, except by the Commissioners and others engaged in taking and compiling the Census, who, besides that they are sworn officers, bound not to divulge any individual information, care very little for, and have no interest in, the individual statements contained in them. The names are taken in the Census schedules simply for a check upon the returns, and to afford opportunity to correct any palpable error. In other words, the enumeration by names is a necessary guarantee of good faith and correctness, and it has no other object.

It must further be borne in mind, that the questions put cannot embrace everything of interest, but must, on the contrary, be limited to matters of leading importance to the whole Dominion. There are even many matters of general interest which must be omitted, as well because of the intricacies they present, as of the necessity there is to limit the number of the questions asked.

Such facts, if of sufficient importance to be recorded, must be obtained by special enquiries, which may be made in connection with a Census, but yet separate from the general schedules. Such are, for instance, medical statistics, comprising the appearances and prevalence of disease, the hygienic conditions of tenements and public places of resort, the study of the relative proportion of infirmities, insanity in various forms, &c., &c. Such also are detailed trade statistics, comprising shipping, railways, canals, &c., &c.

Individuals and localities have their own preferences and their own special interests; but, in every case, it must be remembered that the Census operations are intended to deal

generally with very broad information, and that, therefore, many interesting products must be left out of the schedules. Products of great importance to particular localities may appear relatively insignificant, when viewed in connection with, and simply as forming part of the entire products of the country at large. To take every detail, and make every enquiry, is an impossibility.

As regards property, real and personal, values are not to be taken by the schedules, except in the case of manufacturing industry, where, as a general rule, a simple enumeration of quantities and kinds would not give an accurate or intelligible result, and would be impossible because of intricacies and multiplicity of details. In other cases it is obvious that if values of property were taken in the schedules, the valuation must always be set down as given by each interested party. Enumerators are not assessors, and cannot be made to act as such. No reliance could safely be placed on values so taken, nor would there be uniformity even in the same locality, as the experience of the past has proved. It is, therefore, better on all accounts to ascertain values, except for manufactures, not by questions put through the Enumerators, but by careful enquiries in reference to average market prices, and otherwise.

Whatever plan is adopted for taking a Census, whatever are the enquiries proposed to be made, and whatever care is bestowed in preparing the schedules, or filling in the answers, there will still be difficulties to be met, and defects found in practice. These must be recognized, and overcome by the best attainable means.

The success of a Census depends upon obtaining an honest return, which shall be as accurate as possible, of the facts asked for in the schedules; and this success is dependent on three conditions, the absence of any one of which would render the result of the whole defective in a proportionate degree. These *desiderata* are—

1st. The adoption of a good system, with an honest, intelligent, well-instructed and painstaking administrative staff.

2nd. A good selection of honest, intelligent, well-instructed and painstaking enumerators.

3rd. An honest, willing and painstaking people to answer the questions put to them.

Census operations are more difficult on this continent than in many European countries, on account of differences of social organization and administrative machinery; and further, on account of the different proportions of territorial area to population. More painstaking application is, therefore, required in this country, on the part of the Census Officers of all grades, and a more active aid on the part of the people at large.

CHAPTER II.

THE SYSTEM.

A SERIES of nine schedules has been adopted, on moderate sized sheets of paper, with only twenty lines to write on each page, each schedule being devoted to a particular class of information. The facility of handling, writing, and compiling thus obtained, has permitted an increase of the number of headings of enquiry, without adding unduly to the time necessary for taking the answers to the questions put.

The schedules, arranged in order, will be placed in a portfolio, to be easy of carriage, as well as easily handled, affording facilities for writing in the answers, and for compiling from them.

The schedules are explained by this Manual, in which are given (illustrated by a set of specimen filled schedules), remarks upon almost every column, and instructions intended to aid the officers to overcome the difficulties which necessarily arise in practice.

These specimen schedules are simply intended to indicate the manner of filling up the working schedules, and to illustrate the way in which the Census is to be taken; but there is no intention of conveying by them any idea of the ratio of things, such as ages,

sex, births, deaths, establishments, &c., nor any relation between the localities mentioned at the head of each page, with the imaginary facts entered on the page; the whole being simply for example, and not for showing any connection, except in so far as is indicated by the references, from one schedule to another.

The schedules will be communicated to the public in a condensed form, some time before the taking of the Census, in order to allow every one to acquaint himself with the questions which he is compelled by law to answer, and to prepare himself, whether by writing down or charging his memory, or by leaving orders at his house, for the visit of the Enumerator, thus helping to avoid the mistakes that would be sure to arise from sudden questioning, as well as shortening the time necessary for taking down the answers.

Thirteen officers have been selected from the Dominion, viz.:—Five from Ontario, four from Quebec, two from Nova Scotia, and two from New Brunswick. These have spent a considerable time at the seat of Government, in studying Census matters generally, assisting in the final consideration of the schedules and instructions, and specially pointing out the circumstances and requirements of the several sections of their respective Provinces. They are to go, each in the Census Districts set apart as his field of operations, to confer with the Commissioners, to impart to each of these the advantage of their labors and studies, and to represent the Department in the territorial divisions assigned to each of them.

When the Commissioners shall have gone through their conferences with the Staff Officers, and become fully imbued with a knowledge of the schedules, instructions and details of the Census-taking, they, in their turn, are to hold conferences with the Enumerators of their respective Census Districts, in order to put them (the Enumerators) through the same process of instruction.

It is hoped that, by the aid of these preliminary studies, and the working of this system of graduated instruction, every officer connected with the Census will be fully prepared for his task when the day comes to take it.

The duty devolved on the Department, by law, of dividing the several Provinces into Census Districts, and of sub-dividing these again into Census Sub-Districts, has necessitated much enquiry and labor; in which the Staff Officers have borne their part. Every effort has been made to lay out the country in the most convenient manner possible, not only with a view to the present Census, but also (so far as may be) for future statistical purposes. And for more perfect assurance of accuracy, each Census Commissioner is furnished with a sketch map of his District, on which not only the Sub-Districts, but also the limits specially to be assigned to each Enumerator, are or will be carefully laid down.

CHAPTER III.

GENERAL DIRECTIONS.

THE principle adopted for the registration of the population is that which is called, by statisticians, the *population de droit or de jure*; that is, the population legally domiciled within the territory of the Dominion, and including all persons who may be temporarily absent from their place of abode, whether at the fisheries, at sea, or in the forest, wilderness, &c.

All persons are to be registered in the province and particular locality in which their home, family dwelling, or place of abode is situate, although they may happen to be in other parts of the Dominion,—in the forest, or at sea, or in foreign parts, on the day with reference to which the Census is taken.

In order to make the details of this system of registration very clearly understood, cases that will occur in practice are furnished in the form of instruction, as follow:—

Sea-faring men or fishermen at sea on the coast, lumbermen or hunters in the forest, merchants, or tradesmen, or laborers, or travellers, or students, or any others happening to be temporarily absent from home and not permanently settled elsewhere, are not to be considered as absent for the purpose of the Census; but their names are to be registered by the enumerator as being present.

Therefore the names of seamen at sea, college students and school children, of the sick in hospitals, of inmates temporarily present in educational, charitable or penal institutions, are to be taken down in their own Provinces, at their own domiciles or homes, and not at temporary abiding places or institutions. In other words, all living members of one family are to be registered as being present at the family abode, unless they are settled in homes of their own, or have left the country with intention not to return.

When, therefore, an Enumerator finds any person in one Province of the Dominion, whose home or dwelling is in another, he is to be careful not to make any entry in his schedules; as the registration is to be made in the province where his home is.

Servants come under three categories, and are to be dealt with in the following manner:—

1. Those having, or belonging to families or homes of their own within the Dominion, are to be taken with their own families.

2. Those not having, or belonging to, families or homes of their own within the Dominion, are to be taken as part of the families with whom they may happen to be living.

3. Those in settled employment and resident with any family are to be taken as not having or belonging to a family or home of their own.

Persons having no family abode and no fixed domicile of any kind are, of course, to be registered wherever met with, whether on board of ship, in shanties, public institutions, or private houses. Orphans kept in public institutions or private families are, accordingly, to be taken with such institutions or families. Homeless, sick or destitute persons in asylums and hospitals, and prisoners without family abode, or sentenced for life, are to be taken in the institutions or prisons where they happen to be.

A *Family*, as understood for the purpose of the Census, may consist of one person living alone, or of any number of persons living together under one roof, and having their food provided together. For example: One man, say a shop-keeper, or one woman, say a seamstress, living alone in a separate house, or in a distinctly separate part of a house, would constitute a Census family; but any number of persons living together in a boarding-house, several of them being parents, having children and servants, would only constitute one Census family, provided they had no home elsewhere.

The Census returns of *Population and Property* are to consist of the statement of facts as they actually exist on the 2nd day of April, 1871.

Returns, which are to embrace a *Yearly Period*, such as the numbers of births and deaths, the enumeration of products, &c., are to be counted for the twelve months immediately preceding the 2nd of April. The headings of the columns afford a clear indication of the nature of each category.

Therefore, any person who was alive on the 2nd of April, 1871, although he may have died between that date and the date of the Enumerator's visit, is to be recorded as if living; and, for the same reason, infants who may have been born after the 2nd of April, 1871, are not to be recorded, whether dead or alive.

The Duties of each class of officers employed are defined by the Census Act, herewith published.

The remuneration of Commissioners and Enumerators will be as settled by His Excellency in Council, pursuant to the 24th section of the Census Act; no payment can legally be made until the whole of their work is completed in a satisfactory manner.

The Explanations hereinafter given respecting each schedule, and each heading of the schedules, accompanied by the specimen schedule for an illustration, will indicate to the several officers how practical questions are to be met and solved.

The Enumeration, as the law prescribes, must be taken down in writing by the Enumerator himself, he going personally from house to house, and writing in the schedules, in the most scrupulous manner, the answers given to the questions arising out of the headings, in order of their numbering.

The information, which is in every case recorded, must be the definite answer of the person to whom the question is put; and the Enumerator is never to take upon himself

to insert anything which is not stated and distinctly acknowledged by the person giving the information. It would be criminal to insert anything contrary to the declaration of such person.

But it is the duty of the Enumerator so far to assist the person giving the information, as to point out to him any apparent error, or indicate any apparent fact omitted. In every case he must carefully read over the facts he has taken to the person from whom he has obtained them, for checking the correctness of his entries.

In case of refusal of any person to answer questions put, which are necessary to obtain information required for filling the schedules, or of the Enumerator receiving any information which is apparently untrue, it is his duty to warn such person against the consequences of such criminal course; and if it is persisted in, his duty then will be to bring the offender to justice, as provided by the Act.

In other words, the Enumerator is the recorder of answers to questions put by authority of the Executive, under the sanction of law; but it is required that he be an intelligent and conscientious officer, not a mere machine; and his duty is to guard himself and all concerned against errors and frauds.

In all cases of difficulty—and such cases will occasionally arise—the Enumerator must deal with them in the best possible manner, taking for his guide the spirit of the law, and the general tenor of this Manual. He must endeavor—

1. Not to omit anything of importance.
2. Not to record the same thing twice.
3. Not to exaggerate anything.
4. Not to under-rate anything.

The very best way of fulfilling these conditions, and fairly and properly performing his duties, is for the Enumerator to make a painstaking study of his schedules and this Manual, and to thoroughly acquaint himself with all the particulars and peculiarities of his division.

An intelligent and well-trained Enumerator, will, in fact, generally speaking, know beforehand what are, as a whole, the conditions of every family in his division.

It is necessary, for the success of the Census, that the intercourse of the Enumerators with the public be characterised, on the part of these officers, with discretion and forbearance. Every objection made, or question put to the Enumerators, must be met with proper, satisfactory and courteous explanations.

Persons having apprehensions, or showing hesitation in giving their answers, must be assured that no information they may give, and that nothing taken down in the schedules, can, by possibility, injure, or in any way affect their standing or their business. The Enumerator will act under oath, and his duty will be to preserve the strictest secrecy, as well with respect to any verbal statements made to him as to his enumeration records. He is not permitted to show, or in any way communicate these, to any person whatever, except to the Commissioner of his own District, or to the Staff Officer in charge thereof; both of whom also act under oath, and are forbidden, under any circumstances, to communicate anything therein contained to any person whatever, except to other sworn officers of the Department, all bound by the like prohibition.

The Commissioners and Enumerators are forbidden to give any synopsis of the result of the Census, or any part thereof, to any one. Partial communication of information is calculated to produce mischief, if not to mislead, and may be made subservient to purposes totally unconnected with the Census, and detrimental to it. The result will be given by the Department in a careful and comprehensive manner, at the earliest possible period.

It is required of all officers connected with taking the Census, that they bring to the accomplishment of their task that discretion generally necessary on the part of all public servants, but especially so where duties of great trust and delicacy are to be performed.

It is further specially required of every Census officer, that he is to make himself thoroughly acquainted with the whole matter before his actual work commences. It is not the time for study or enquiry after the work commences, but for action. If an Enumerator finds difficulties after the commencement of his travels, he must bring to their

solution his best intellectual faculties, aided by his previously acquired information respecting Census matters; and he should consult the Manual and specimen schedules, which he must always keep in his portfolio. When commencing his actual duties, the Enumerator is recommended to make his first entries with the greatest care, spending more time upon these than will be subsequently required.

In case an Enumerator meets a difficulty of a special and exceptional character, he is required to make a short notice in the column of remarks of the schedule in which it occurs, explaining the manner in which he has met it.

All documents sent to the officers, Commissioners and Enumerators, are, in their nature, *private*, with the exception, of course, of "The Census Act," and such as have been published in the "*Canada Gazette*."

CHAPTER IV.

THE SCHEDULES.

General Remarks.

The nine schedules for the taking of the Census, consist of a regular series. They are all to be taken up, one after the other, in the order of numbering, at every visit made by each Enumerator.

These schedules have been printed on paper of superior quality, manufactured expressly for this purpose, and bearing the water-mark—"Canada, First Census." It is required that the whole returns be made in a creditable as well as intelligible manner, and Commissioners and Enumerators will see that the best materials of pen and ink are employed in filling in the schedules; that they are kept clean and in good order, without any folding or bruising; and that the writing and figures are neatly made.

The schedules will be delivered to each Enumerator in a *Portfolio*, and they are not to be carried anywhere without this. After use, they are to be returned to the Commissioners in the same order, in the portfolios; and the Commissioners, in like manner, are to deliver them in the portfolios to the Department, of the archives of which they are to form a part.

As there are no reasons for the Enumerators or the Commissioners to acquaint themselves with the aggregate results, they are not to make the additions at the foot of the columns of the schedules. The lines placed in these, for that purpose, are to be left blank for the compilers in the Department to fill in. Revision and corrections when required to be made in the returns by the Enumerators and the Commissioners, conjointly, as provided by law, refer to statements attached to each of the details inscribed, and not to the general results.

The nine schedules are to be paged separately, each one being marked page 1, page 2, &c., in regular order to the end, without interruption, each by itself. Schedule No. 1 will, of course, contain a much larger number of pages, and Schedule No. 2 a much smaller number, than any of the others.

Any error committed (but with proper care there should be none or very few) or any omission made, should be corrected or supplied by drawing a faint ink line through the erroneous entry, and any correction or addition must be supplied by writing in an interline. There must be no erasure of any kind, nor yet any such obliteration of any entry made, as shall render the same illegible.

Every entry must be confined to its own column, and the writing or figures of each answer are not to interfere with any adjoining space in the schedule; the figures are to be entered in regular rows to facilitate compilation.

The Enumerator must himself, in every case, go in person to every dwelling or industrial establishment in each district or division at which enquiry is to be made. Every heading of every schedule, with the exceptions hereinafter specified, is to be read over at every visit. The Enumerator is not to take for granted that any person addressed can only supply answers to the questions arising from the headings of part of the schedules.

He must, with the exceptions referred to, ask every question. And for proof that this requirement has been systematically fulfilled, it is ordered that an entry be made at every column in every case, whether negative or affirmative, in the manner hereinafter indicated, and as illustrated in the specimen schedules.

The exceptions are :—the 2nd, the 6th, and 9th Schedules relating to “Deaths,” “Industrial Establishments,” and “Mineral Products;” which may be laid aside without making any entry, on the answer “No,” being given to the question whether any death has occurred in the family during the last twelve months ; or whether there is any “Industrial Establishment,” carried on by the family; or whether they have lands or mines yielding “Mineral Products.” But, in the case of “Industrial Establishments,” it must be remembered that many farmers or others have attached to their ordinary industries, a lime-kiln, a saw-mill, a tannery, &c. ; and, with respect to “Mineral Products,” that the same class of persons are often engaged in quarrying, or other mining operations.

If a boarder has any industry, or produces anything himself, entirely separate from the family in which he is domiciled, a separate entry must be made of his products ; but if he only works with the family, there must only be one entry.

In other words :—Schedule No. 1 will contain as many lines written as there are living persons recorded ; No. 2, as many lines as there have been deaths during the twelve months ; No. 3, as many lines as there are families and public institutions met with ; No. 4, as many lines as there are families visited ; No. 5, the same ; No. 6, as many lines as there are industrial establishments visited ; No. 7, as many lines as families visited ; No. 8, the same ; and No. 9, as many lines as there are persons met with, who have been carrying on any mining or quarrying operations.

As some abbreviations are necessary, and others convenient for saving time, it is requisite that some rules should be given respecting them :—

Every abbreviation of one letter must be by a capital letter, such as M. for male, F. for female, M. for married, W. for widowed, &c. ; and very carefully written.

The negative sign, to be written in every column in which there is nothing to be entered, or when the answer “No” is given, is to be in the form of a dash, written thus —.

The affirmative sign, equivalent to the answer “Yes,” to a question, will be made by writing the figure 1 in the column ; or, in other words, the entering of this figure will indicate that the person or thing is to be counted in the enumeration.

This sign „ may be made for *idem* or *ditto*, under a plainly written item of information, and provided it is not carried from one page to another without a repetition of the item.

Recapitulation of the conventional signs :—

— “Nothing,” “no,” “not concerned,” or “unknown.”

1 “Yes,” “to be counted.”

„ “Idem” or “ditto.”

To fill the columns where the calendar months are to be entered, the following abbreviations may be used :—

Jany. for January.	Jul. for July.
F. „ February.	Ag. „ August.
Mar. „ March.	S. „ September.
Ap. „ Aprii.	O. „ October.
My. „ May.	N. „ November.
Jun. „ June.	D. „ December.

The following abbreviations may be used instead of the full names of the Provinces of the Dominion :—

O. for Ontario.	N. S. for Nova Scotia.
Q. „ Quebec.	N. B. „ New Brunswick.

The information sought for in this Census relates solely (with the exception of the returns of population and deaths) to the amount of property held at the time for taking the census, and to the total amount of products of the last twelve months before such taking. Each family, so far as the Census is concerned, is therefore to appear in the capacity of a holder of property, or of a producer, or in both capacities; and as regards production, the quantities given are to comprise the grand quantity produced, whether consumed by the producer himself, sold, exported, or still on hand.

A few examples may illustrate this rule:—

A farmer reports having grown a total of 500 bushels of wheat, of which he has consumed 100 bushels, sold 200 bushels, and has still in hand 200 bushels. The whole 500 bushels must be set down in the Census, because he is not here to appear as a consumer, a vendor, or a storeman, but simply as a producer. The merchant who may have purchased the 200 bushels, has nothing to enter in the Census for this; but if he is, at the same time, a farmer, and has grown 300 bushels, he is to report such 300 bushels, as being the producer of them.

A manufacturer has manufactured, during the last twelve months, 10,000 yards of cloth. He is to enter the 10,000 yards; no matter what quantity he has sold, or what quantity he has in stock.

A storekeeper has nothing to enter in any of these schedules as a purchaser or vendor, any more than a forwarder has to enter the goods which he has transported; but if a storekeeper has produced anything, either as a farmer or manufacturer, or otherwise, he is to give the quantities thus produced by him, quite irrespective of anything that has passed through his hands as a dealer in products.

In every case, in the information relating to products or property (with the exception of real estate and ownership of shipping) the quantities must be ascertained and recorded on the spot where they are found or have been extracted, raised or manufactured; with a reference to the name of the informant, in Schedule No. 1, whether such informant be the proprietor or producer himself, or his representative or employé.

The initiatory filling up of the blanks at the head of each of the nine schedules left for indication of the several Provinces, Districts and Sub-Districts, is to be done by the Commissioner; and the continuation of this process, by the Enumerator. The name of the Enumerator is to be written on the first page of the first schedule of each set, by the Commissioner.

The paging of each book of schedules is to be continuous, without any interruption or interpolation, and without any double paging.

Both the Commissioners and Enumerators are required to return every sheet of the working schedules, whether filled or not, and whether spoiled or not.

The original schedules must be returned to the Department; and no copy of them is to be made.

Any deviation from these rules will be a presumption of error.

The Commissioners and Enumerators, in the transmission and use of schedules, are to take all necessary measures to protect them against inclemency of the weather, or from any kind of injury, or from any alteration, interference, or inspection, by any other than the proper officers.

When two or more Enumerators are appointed for one Sub-District, the Commissioner will distinguish the separate portions of these Sub-Districts, as Division 1, Division 2, &c.; and in his final report he will give a topographical description of each. When, on the contrary, one Enumerator is appointed for two Sub-Districts, separate sets of schedules are to be prepared for him; one set for each Sub-District.

The date of each day's enumeration is to be entered by the Enumerator on the last line filled of Schedule No. 1, opposite the last name registered, and only at the end of each day; and each such record is to be signed by the Enumerator, as per specimen schedule.

CHAPTER V.

DIRECTIONS CONCERNING THE SEPARATE SCHEDULES.

SCHEDULE No. 1.

Nominal Return of the Living.

This schedule refers to The Living, and will contain the actual population, registered name by name, family by family, taken from house to house. The population is to be recorded as it will exist on the 2nd day of April, 1871.

Column 1. Every vessel being the abode and domicile of a family, or on board which there may happen to be any person or persons belonging to our population, not having a domicile on shore, or not forming part of any family having a domicile on shore, is to be registered in this column. When registering a vessel as a domicile, it must be ascertained that it has not been previously registered elsewhere. Every vessel is to be numbered in this column in the order of visitation, as shown in specimen schedule, from 1 to the last vessel so met in the Enumerator's Sub-District, in consecutive series. If, however, the Enumerator is entrusted with the taking of two Sub-Districts, he is required to act the part of two distinct Enumerators, as hereinbefore explained.

Column 2. In this column are to be numbered, in the same manner, all dwellings of a temporary character, only inhabited for a part of the year, such as lumbering shanties, Public Works' shanties, fishermen's huts, Indian wigwams, &c.

Columns 3 and 4, are to record the houses in construction, and those uninhabited, as they are met with,—without reference to the names recorded; as will be seen in perusing the specimen schedules. If houses in construction, or uninhabited, are met with in rows, as is often the case in towns, then the recording is to be written by giving the number in the row, 2 or 5, as the case may be; when met with singly, by the number 1.

Column 5. Dwelling houses inhabited are to be numbered in this column, in order of visitation, in consecutive series, from the beginning to the end of each Enumerator's division.

There may be several families in the same house; but the house, would, nevertheless, only constitute one house, as shown in the specimen schedule.

A separate house is to be counted, whenever the entrance from the outside is separate, and there is no direct and constant communication in the inside, to make it one.

Column 6. Every family is to be numbered in this column in the order of visitation, in consecutive series, as illustrated in the specimen schedule.

Column 7. The names of every living person, belonging to each family (according to the rules hereinbefore laid down) are to be entered in full, in the following manner, and as shown in the specimen schedule:—

Jones William.

“ Mary.

The family name being first given, and then the Christian name.

Column 8. The sex is inscribed in this column, by inserting the letter M for masculine, and F for feminine.

Column 9. The filling of this column needs no explanation, except in the case of infants under one year; when the number of months is to be recorded in fractions, thus: $\frac{1}{12}$, $\frac{2}{12}$, $\frac{3}{12}$, &c., up to $\frac{11}{12}$, as shown in specimen schedule.

Column 10. Infants born within the last twelve months, and still alive, whose names are entered in the seventh column of this schedule, must be recorded in this column. The entry is made by inserting the month of birth as before directed herein, and shown in specimen schedule.

Column 11 explains itself; and the entry must be made by writing such information as “England,” “France,” “Germany,” “O.,” “N.S.,” &c., as the case may be.

Column 12. In writing down the religion, the enumerator must be very careful to enter the information given by the person questioned, with precision; and to be sure that

the denomination is well defined, especially when making use of abbreviations, such, for instance, as are shown in the specimen schedule.

There are separate religious denominations bearing nearly the same names, and it is not only desirable but necessary that they should be carefully distinguished in this column. The Enumerators will, therefore, be careful when writing down the information, to do so in a manner to show clearly the result desired.

In thus recording the religious denominations, it will, in many cases, be necessary to make use of abbreviations to save space; but in doing so the principal or key word should be sufficiently written, as:—

C. Presb.	for	Canada Presbyterian Church.
R. Presb.	„	Reformed Presbyterian.
W. Meth.	„	Wesleyan Methodist.
Meth. N. C.	„	Methodist New Connexion.
I. Meth. E.	„	Independent Methodist Episcopal.
F. W. C. Bapt.	„	Free-Will Christian Baptist.

And so on for other denominations which may be designated by a title too long to be recorded in full.

Column 13. Origin is to be scrupulously entered, as given by the person questioned; in the manner shown in the specimen schedule, by the words English, Irish, Scotch, African, Indian, German, French, and so forth.

Column 14. The profession, trade, or occupation, must be entered in full, as given. When two of these are united in one person, both may or may not be given; the point being decided by the importance attached to the fact by the person himself. When sons follow the professions or occupations of their fathers, and are associated with them, the same description is to be inserted. For instance, a farmer's son, working on his father's farm, is a farmer; a carpenter's son, in the same way, a carpenter; and so other young men, when studying professions, are to be inscribed as, *Medical Student, Law Student, &c.*; and when apprenticed to trades, are to be entered in a similar way. Young men at colleges, but not school children, are to be entered as students.

In the case of women, unless they have a definite occupation besides their share in the work of the family or household, the column is to be filled with the sign —; as also in the case of children. If they have a special occupation, such as seamstress, clerk, factory hand, &c., then it should be entered accordingly.

Column 15. The information is to be recorded by using the letter M for married, W for widow, and the sign — for all others, including children.

Column 16, is to record marriages during the last twelve months, by inserting the month, in the manner before described, and as shown in the specimen schedule. With very few exceptions, this entry will be double each time, the married couple being together; and the sign „ may be written for the wife, as shown in the specimen schedule.

Columns 17, 18, 19, 20, 21 and 22, are sufficiently explained by their headings; and the entries therein are to be made by the sign I.

The heading "*unsound mind*" is intended to include all those unfortunates who are plainly deprived of reason. As the enquiry on this head may be for many persons very painful, the Enumerator, if he is acquainted with the fact beforehand, must approach it with great delicacy, taking care, however, not to omit the entry of any such case. No attempt is made to distinguish between the various maladies affecting the intellect; as experience proves that the result of such enquiries made under such circumstances is perfectly worthless.

Column 23. In this column is to be entered any remark which may be found necessary; but in general, enumerators should not have resort to explanations, unless in special cases. This column is also to receive the date of each day's operation, as hereinbefore explained.

SCHEDULE No. 2.

Return of Deaths.

This schedule of the Deaths of the twelve months ending the 2nd of April, 1871, is rendered necessary from the absence, in the largest part of the Dominion, of other returns. The Enumerator must be very particular in enquiring of every family whether any death has occurred in it during the last twelve months, never failing to explain that deaths of newly-born infants are to be given, as well as all other deaths whatever.

The necessity for extreme care and attention, and even of searching industry, on the part of the Enumerator, as regards the schedule of deaths, cannot be too strongly impressed. The ratio of deaths is a most important test of the accuracy of statistical returns of population.

The enumerators are not required to put questions for every column in this schedule (No. 2), unless the answer to the general question: "Has any Death occurred in this family or house during the last twelve months?" is in the affirmative; as shown in the filling of specimen schedule No. 2, in connection with No. 1.

Columns 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. The answers are to be entered here in the same manner as the corresponding answers in schedule No. 1 of the living.

It may be well to explain, that columns 4 and 9, concerning the births of infants who have died during the last twelve months, and persons who have both married and died during the last twelve months, are necessary to make up, with the analogous columns of schedule No. 1, the total number of births, and the total number of persons who were married during the same period.

Column 11. When the death has been caused by accident, or such well-known diseases as small pox, consumption, senile debility, &c., there is no difficulty in ascertaining the fact. But, in many cases, it is very difficult to give a definite account of the disease causing death. The Enumerators are to do their best, however, to ascertain it, without losing too much time in doing so; and without any attempt to enter into any theoretical medical classification. In every case, the entry should be as short as possible, and general in its bearing. Such entries for instance, as "disease of the heart," "disease of the brain," "disease of the bowels," &c., may suffice, in the absence of more definite information from a medical source. When there is nothing certain about the disease, it is better to enter the sign —, the meaning of which will be, in this instance, "not ascertained."

Column 12. This column need not be filled by any entry, unless there is something to note, of special interest, or some particular explanation to be made, as exemplified in the specimen schedule.

SCHEDULE No. 3.

Public Institutions, Real Estate, Vehicles and Implements.

This schedule has two objects, which are brought together for the sake of saving space and time. One is, to record facts connected with the public institutions of the country; the other is, to set forth the fact of the distribution of property, real or personal, amongst the population. The schedule is divided into four sub-titles, namely:—"Reference to Schedule No. 1," "Public Institutions," "Real Estate," and "Vehicles and Implements."

Columns 1 and 2. These columns are for reference by page and number or line to Schedule No. 1, in order to save repetition of the names therein written.

Taking, for illustration, the first entry in them, "Page 1, Number 1," refers back to William Jones, the first name entered on page 1 of Schedule No. 1. The personal particulars respecting him are given after the entry of his name in that schedule. From Schedule No. 3 we learn further, that he is owner of 200 acres of land, of 1 dwelling house, 2 barns, 2 carriages, &c. The second entry in the same columns, referring to the same entry in Schedule No. 1, carries us back to the same William Jones. It is, how-

ever, an entry relative to a "Methodist Episcopal Church." Mr. Jones is described as an Episcopal Methodist in Schedule No. 1; and as being the nearest person met with, belonging to the church in question, he gives the particulars respecting it, which are entered in this schedule (No. 3); namely, that the church is a single building, having no inmates, and with three acres of land attached to it. For this description his name is only referred to for authentication of his statement.

Taking another case:—The fifth entry in Schedule No. 3, relative to a "Common School" refers to page 1, No. 15, of Schedule No. 1, where we find the name of Lucinda Biddell, a schoolmistress, who has no home of her own, and lives with Charles Russell, a hotel and store keeper. The reference to her name is to authenticate the particulars given by her respecting that school, she being the nearest person of authority in it with whom the Enumerator happens to meet.

Taking again another instance:—The twelfth and thirteenth entries in Schedule No. 3 refer back to Francis Ellis, the fourteenth name on page 2 of Schedule No. 1. We find there that his occupation is that of a General Manager. In Schedule No. 3, entry No. 12, he answers for himself as a proprietor of three town lots. In entry 13 of the same schedule, he answers for the "Coal Mining and Navigation Company," of which he is the Manager, to authenticate the information given respecting it. It has 10 buildings, in which there are 20 inmates; it owns 2,000 acres of land, &c.

All the references to Schedule No. 1, in columns Nos. 1 and 2, are made in the same way, throughout the whole of the six schedules in which they occur; and they will appear very plain if traced throughout the specimen schedules by the aid of the above explanation.

Columns 3, 4 and 5, relate exclusively to public institutions, and are to be passed over by making the sign —, whenever the information to be entered refers to individuals, as exemplified in specimen schedule.

Column 3. There are to be entered in this column all institutions of a public character, such as churches, convents, universities, colleges, academies, schools of all sorts, public and private, asylums, refuges, hospitals, charitable and benevolent institutions of all sorts, prisons and other penal institutions; as also institutions of a commercial character, such as banks, and other joint stock companies. These and all other institutions, relate to this schedule, and are to be registered in it by the enumerator of the sub-district or division where they happen to be; and whenever such institution is attached to or dependent on any religious denomination, mention is to be made of the fact in the manner pointed out in the Specimen Schedule.

Whenever an Enumerator meets, within his division, with a church, a school, or any other building belonging to an institution, but at the time having no one residing in it, he must make inquiry, and get the information required, from the best and nearest informant, referring to such informant by entering his page and number, as already directed.

Column 4. The number of buildings immediately attached to the institution is here to be recorded. For instance, if a church has a parsonage connected with it, this fact is to be recorded by inserting the figure 2; if an educational institution has separate buildings, by the figure 3; as shown in the specimen schedule.

Column 5. The number of inmates mentioned in the heading of this column means the number of persons residing at the time under the roof of the institution, irrespectively of the number who may frequent it during the day-time. This head of information is unconnected with the question of permanent domicile of persons, and has no relation to the total number of the population.

The remainder of this schedule relates both to institutions and to individuals; each, of course, having a separate line, as already explained, and as illustrated in the specimen schedule. The addition of these columns is intended to exhibit the grand total of real and personal estate, held within the Dominion, by institutions and individuals.

Column 6. Here is to be entered the total number of acres of land held by the person or institution concerned, no matter where situate in the territory of the Dominion. This, with the remainder of the schedule, is intended to give, as a result, the division of property in Canada, taken as a whole.

For instance, let us suppose the case of a man living in Halifax, owning 1,000 acres of land in each of the four Provinces, whether cultivated or uncultivated, the entry must be 4,000.

Columns 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18. The same remark is to be made for the filling of these columns, which are to contain the total amount of the kinds of property mentioned, held by the individual or institution referred to.

All properties belonging to the same family are to be entered under one reference to the head of the family; properties of minors or orphans under a reference to the tutor or guardian; undivided properties held in common by several institutions or families by shares, must be recorded in such manner as not to run the risk of omitting or recording twice the same properties.

A careful study of these lines, in connection with the specimen schedule, will make this matter easily understood; though at first it may appear complicated.

The oral instructions of both Staff Officers and Commissioners will aid in mastering some difficulties, and in rendering easy the practical working of this schedule.

SCHEDULE No. 4.

Cultivated Lands, Field Products, Plants and Fruits.

In the preceding schedule landed property was entered as connected with ownership, as well by individuals as institutions, irrespectively of situation or actual occupancy; the schedule embracing within the scope of its inquiry all land held in the Dominion. This (No. 4) schedule, on the contrary, refers to land in actual occupancy within the Enumerator's division.

This schedule, mainly devoted to the ordinary products of the soil, is naturally more crowded than any other of the whole series; but as it will be otherwise generally better understood, and is less complicated, it will be found easy in practical working. Very few of its columns, in fact, require any explanation.

Enumerators must not forget that the products recorded in this schedule may be, and often are, raised by families not engaged in carrying on farming,—say, on patches of land or gardens attached to tenements, even in the middle of large cities. The facts must, therefore, be ascertained in every case, and entered.

The sub-titles inserted in this schedule are simply for the purpose of classification, and to show the order adopted.

Columns 1 and 2, are for the usual reference to Schedule No. 1.

Columns 3 and 4, cannot always be filled; on account of absence, in some instances, of the land-marks and indication mentioned. Where such marks and indication exist, however, they are to be carefully recorded.

In the Province of Quebec, the ranges and concessions are sometimes recognised by a name instead of a number. In such cases, the indication may be given by writing lengthwise the name, such as "*Côte St. Antoine,*" "*Rang Beauséjour, &c.,*" from the first line where it commences to that where it ends.

Column 5. In this is to be entered the capacity in which the person occupying the property holds it. If owner, put the letter "O" (whether such proprietor is an individual or a company); if tenant, the letter "T"; and if an employé of the proprietor, the letter "E."

Column 6. In this column is to be entered the number of acres of land which the Enumerator finds occupied in his division. In the preceding schedule he had to ask the total number of acres each informant holds in the whole Dominion; but in this, he must be careful to ask, not for the whole number of acres held, but for those only actually occupied within his division. For instance, his informant might own 2,000 acres of land in various parts of the Dominion, and yet only occupy 100 acres within the division; these alone would be entered in this schedule.

Column 7. The number of acres improved means that portion of land on which some

work of measurable importance has been done, such as, for instance, under-brushing or chopping trees, or breaking up marshes, meadows, pastures or plains.

Column 8 explains itself.

Column 9 refers to very valuable land in the Provinces of Quebec, Nova Scotia, and New Brunswick, a great part of which has been redeemed from the sea by dykes.

Column 10 refers to gardens and orchards. Under this latter term is comprehended any plantation of fruit trees. In recording the land in this column no fractional parts of an acre are to be written, except $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$, whether the quantity is over or under one acre.

Columns 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26. These columns need no special explanation. In the French Districts of the Province of Quebec, where the *arpent* is used instead of the acre, and the *minot* instead of the bushel, the Enumerator is simply required to enter the quantity given by the informant, the reduction will be made in the compiling.

Column 27. The Recording likewise of the hay crop either by tons, or by bundles of 16lbs., is allowed, as it was on previous occasions of taking the Census in the former Province of Canada. The quantities given will always indicate to the compiler the mode of reckoning; and the reduction will be made in the Department. It is a matter of paramount importance, as well for economy of time as for securing accuracy, to avoid leaving any calculations to be made by the Enumerators when it can possibly be avoided.

Columns 28, 29, 30, 31, 32, 33, 34, 35 and 36, need no special remark.

SCHEDULE NO. 5.

Live Stock, Animal Products, Home-Made Fabrics and Furs.

Columns 1 and 2 contain the same references to Schedule No. 1, as in previous schedules.

The remainder of this schedule is so clear and definite that there is no need of any special explanation for any of the 32 columns therein contained. Of all the information called for in a Census, that which is the subject of this schedule, is, on the whole, the easiest to obtain and the easiest to record.

The following remarks, however, may be made:—The *home-made cheese*, mentioned in column 15, is here entered as in contradistinction to cheese made in cheese-manufacturing establishments, which is to be entered in Schedule No. 6. In the same way home-made fabrics are to be kept distinct from those made in cloth and linen factories. As regards column 18, it must be remembered that cloth and flannel are to include blankets, shawls, &c., and all other such articles reckoned by the yard.

SCHEDULE NO. 6.

Industrial Establishments.

This schedule is one of the three, of which it is not required that all the questions be put to every head of family; or negative answers recorded.

There is in it, moreover, no reference to Schedule No. 1; the proprietor's or company's name being here entered with the name of establishment in *column 1*. Entries in this schedule are only to be made when an industrial establishment of some kind is met with, but the Enumerator is required to ask whether such does or does not exist, at every visit he makes.

An industrial establishment is a place where one or several persons are employed in manufacturing, altering, making up, or changing from one shape into another, materials for sale, use, or consumption, quite irrespectively of the amount of capital employed or of the products turned out.

A lime kiln, a cheese factory, a brick-yard, a ship-building yard, a grinding-stone factory, a sulphuric acid manufactory, a saw-mill, a marble cutter's shed, a wheel factory, a pottery, a foundry, a meat-curing or "packing" establishment, an establishment to manufacture copper regulus, or purify plumbago, a cloth manufactory, a carding mill, a grist

mill, a planing and dove-tailing mill, a sash factory, as well as a shoe-making, harness-making, dress-making, tailor's, or blacksmith's shop, or carpenter's or joiner's shop, &c., are all industrial establishments. Any establishment, we repeat, where materials are manufactured, made up, changed or altered from one form into another, or sale, use, for consumption, is an industrial establishment. All repairs, mending, or custom work, are understood to be industrial products; and are to be entered accordingly, by value, in the returns of industrial establishments. It must be well understood that hands employed on hire in such industrial establishments are not to give the result of their labor separately.

The returns of industrial establishments are to be recorded in the District, Sub-District, and Division where the Enumerator finds the establishment, and nowhere else. This principle is essential in every case. The production is attached to the locality.

It matters not whether the raw material is in the ownership of the manufacturer or not, whether it is transformed on account of one or another person, whether the working is a profitable or losing business; the information required is the result from the establishment, so far as requested. For instance, a saw mill may saw logs and other lumber for a great number of persons; the working may cost more than the returns bring to the owner; but, nevertheless, the amount of raw material has changed form, and so much value has been added to it; and this is the fact to be recorded.

All entries in *columns 2, 3, 9, 14, and 17* are to be made in dollars (\$). The number of people employed may be made up exclusively with members of the family of the proprietor; in other places the proprietor and family may not form part of the people employed. In many instances, the raw materials, or articles manufactured are of such a multifarious character that they must be lumped together, and entered by the value. All these circumstances are illustrated in Specimen Schedule No. 6, pages 1 and 2. The word *quintal* (Q) made use of, means 112 lbs.; the word *toise* about 20 horse loads or 10 team loads of common stone; the words *board measurement*, so many superficial feet of sawed lumber once inch thick; 1,000 feet being equal to what is called in some parts one hundred boards.

Apart from these general remarks, this schedule does not require any special explanations; every heading being in itself sufficiently explicit, and the practical working being illustrated in the specimen schedule.

SCHEDULE No. 7.

Products of the Forest.

This schedule relates to the products of the forest, in the state in which they are got out simply, and must not be confounded with returns of saw mills, ship-building yards, or other industrial establishments; the returns of which, with their raw material, are to be entered in Schedule No. 6.

The reason of this is obvious, and applies equally to products of farms, as to products of the forest. In the same way that pounds of wool are to be recorded as articles produced in the district of their production, so must lumber of the forest be, no matter what transformation it may afterwards undergo, or how many miles away from the place of growth it may be taken, and irrespectively of its being also recorded in part as the raw material of industrial establishments.

Part of the products recorded in this schedule will be, of course, entered as part of the raw material of different industrial establishments; but in these they do not appear as products, but as raw material, to which value is added by the process of manufacture.

In this schedule is to be recorded the total quantity of forest products got out, and where got out; notwithstanding that part of them have been consumed or made use of on the spot, or whether they have been sold, or are still on hand.

The quantities here to be recorded must be taken in the Census District, and on the spot where they are produced, and not at the distant office of the merchant who may happen to have furnished the capital or engaged the men to do the work. The informa-

tion is to be had from the farmer who hauled the lumber; or from the contractor or foreman in shanties, on the spot.

Columns 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 require no special explanation; although they may give some labor to the Enumerator in obtaining the information.

Care must be taken that everything be recorded without diminution or exaggeration, always explaining that the quantities employed on the spot for the use of the producer himself are to be taken as well as those still on hand.

Columns 13 and 14. The method of counting logs in different localities of the Dominion presents so great a variety, that it has been found necessary to adopt a *Census Standard* for registering this important product.

The Census Standard is made equal to 100 superficial feet of sawed lumber, commonly called board measurement (B.M.); in other words, the standard is to count one log for every 100 feet of board measurement; which is equal to half the standard adopted by the Department of Crown Lands of the Province of Ontario; equal to ten pieces of boards as counted in Quebec and parts of the United States; and equal to the tenth part of the 1,000 feet by which logs are counted in Nova Scotia and New Brunswick.

The Enumerator is therefore to count two logs for every Crown Land Standard, as adopted in the Province of Ontario; ten logs for every quantity capable of producing 100 boards in Quebec; and ten logs for every quantity capable of producing 1,000 feet of lumber in Nova Scotia and New Brunswick.

Columns 15, 16, 17, 18 and 19. These columns require no explanation; further than to remind the Census Officers that the quantities consumed or employed by the producer are to be counted as an essential part of the aggregate to be recorded; which, in all cases, is to comprise the total haul or quantities extracted.

SCHEDULE NO. 8.

Shipping and Fisheries.

This schedule is perhaps the most intricate of the whole series, consequently, the Census Officers cannot take too much care in studying it beforehand, as well in the Manual as in the Specimen Schedule. It is divided into two sub-titles "*Shipping*" and "*Fisheries*."

Columns 1 and 2, are for the same purpose of reference to Schedule No. 1, as explained in the notes on other schedules.

In the cases, very numerous indeed, in which the person referred to in these columns is interested only in part of this schedule, the remainder of the columns are, as regards him, to be filled with the sign —, according to the general rule given.

Columns 3, 4, 5 and 6 are all to the same effect. The explanations required are therefore applicable to the four.

The columns headed "*Number of Shares*" are intended to exhibit the number of Canadian ship owners in each place, each one being referred to as named in Schedule No. 1. These columns are intended to enable the compiler of the returns to give at the same time the number of vessels owned in the Dominion.

The ownership of shipping is to be recorded by shares, in accordance with the principle laid down in the "*Merchant Shipping Act*," each ship being equal to 64 shares; so that when compiling the Census the total number of vessels will be ascertained by dividing the total number of shares by 64.

It is needless to add, however, that whenever one or more ships are owned wholly by one person, or one institution or company (*as illustrated in Specimen Schedule*), the number to inscribe will be 64 for one, and as many times 64 as there are ships so owned; and that, in cases where parts of one or more ships are owned, the total number of shares so owned is to be recorded by figures representing the aggregate number of shares.

There will be no difficulty in recording by shares in this way, whenever the requirements of the "*Merchant Shipping Act*" have been complied with; but some instructions are necessary for the direction of the Census Officers, in the very numerous cases in which partnership in vessels is reckoned by fractions of the unit 1. In these cases, the officer is

to reduce the fractions to shares. For example, a $\frac{1}{4}$ of a ship is to be recorded by the figures 16 ; $\frac{1}{2}$ by 32 ; and so on.

The tonnage to be recorded here is not the tonnage of any given ship, but the aggregate tonnage of the *shares owned* by the party referred to. For example, the tonnage of a ship owner who has 32 shares of a ship of 1,000 tons, is 500, which figure is to be entered in the column of tonnage.

In cases of persons answering for institutions or companies, and being, besides, themselves ship-owners, the entries are to be made on two lines, as explained in reference to real estate, in Schedule No. 3.

Columns 7 and 8. In these columns, it is merely the actual number of *barges* which is to be recorded ; any fractional ownership having to be entered as $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{3}{4}$. This mode of reckoning relates to barges, including trading scows, canal boats, and other such vessels, or *bateaux*, fishing smacks and boats—except pleasure and common private boats not employed in trade or fishing, which are recorded in Schedule No. 3.

In the case of shipping companies, such as the "*Richelieu Company*," for instance, of which the members are not, properly speaking, ship-owners, but simply stock-holders of a joint-stock company, the total amount of shipping is to be recorded in the Enumerator's division in which is located the head office of the company, taking care to make a note in the column of remarks.

Columns 9, 10, 11 and 12. In these columns are to be entered the actual number of vessels and boats employed in fishing, irrespectively of the entry of such vessels or boats in the columns of shipping, and irrespectively of ownership.

For instance, a vessel owned by A. B., who does not carry on any fishing, is entered in this schedule, as owned by the said A. B. ; but the same vessel is chartered to C. D., who employs it in fishing. This vessel is therefore to be inscribed again in column 9, on the line referring to C. D., by the mark 1 ; and in column 10, is to be entered the figure representing the number of the vessel's crew.

Column 13. This column is to be filled by the number of fishermen known on the coast as *graviers* or *shoremen*, as distinguished in fishing establishments from the line or outgoing men.

Columns 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 and 33 do not require any special observation ; the headings being of themselves almost all that can be said. The remarks to be made are of a general character :—

The different varieties of fish, except cod, haddock, hake, and pollack, are to be recorded in barrels ; each equal to a capacity of two bushels and a half, or an average weight of 200 lbs.

The variety of measures adopted in different parts of the Dominion, from the Gulf and Lower St. Lawrence Fisheries to the Great Western Lakes, is such that it becomes an absolute necessity to adopt a Census Standard ; and the quantities of fish taken are such as to render it equally necessary to avoid a small standard, the adoption of which would bring out lines of figures of enormous amount for no reasonable purpose.

The Enumerators, therefore, must be prepared beforehand, to make a quick reduction of the special measures employed for each kind of fish in their respective localities, into this Census Standard barrel measure.

It must be well kept in mind by the Census officers, that the quantities to be recorded are to comprise the whole catch ; no matter how made, in boats or vessels, or without either, in *fascinés*, or weir standing fisheries, or by the hook or otherwise ; and whether for home consumption, for sale, for bait, or for manure.

There are on the coast very many instances of two or more fishermen working together as associates "*on shares*." In these cases, while the Enumerator sees that the whole catch is recorded, he must be careful that it is not recorded twice.

In the shipping and fishing districts, considerable judgment will be required on the part of the Enumerators, as well as knowledge of circumstances of their localities, to avoid omissions as well as double entries.

SCHEDULE No. 9.

Mineral Products.

This schedule is the last of the series, and the last of the three, of which it is not necessary to read over the whole of the headings of columns at every house; the two others partaking of this partial exemption being No. 2 and No. 6. But in putting the general question (in no case to be omitted) whether there are any mineral products to record, care should be taken to add, that peat fuel, and the quarrying of gypsum, phosphate of lime, marble and other stones for dressing, are among the subjects to be enquired of in this schedule. In it, in the same way as in the analogous case in Schedule No. 6, it must be remembered that it may be necessary to record the operations of farmers and others, who, in addition to their ordinary operations, carry on gold or other mining or quarrying.

No special explanations are required for the working of this schedule; but it may be remarked that the standards adopted for columns 5, 6 and 7, are purely arbitrary, and adopted simply because they seem to be the easiest to compute, and the nearest to an average, everything being considered. For example, any quantity of iron ore capable of producing 1,000 tons of metallic iron is to be entered as 4,000 tons of ore extracted, irrespectively of the bulk or weight of the matter extracted.

It is hardly necessary to explain that this schedule relates exclusively to the extraction of mineral products, and does not in any way refer to the quantity manufactured into any article of use or consumption; such transformation of raw products being the subject of entries in Schedule No. 6, relating to industrial or manufacturing establishments.

CONCLUDING REMARKS.

The instructions and directions contained in this Manual, and in all circulars, emanating from the Department, are to be strictly adhered to by all officers employed in taking of the census. There may arise special cases requiring to be specially dealt with by particular instructions addressed to the officers concerned; but no officer is to take anything of this kind for granted. In other words, every officer is bound to discharge his duties in accordance with the directions contained in this Manual, unless he can show distinct orders, emanating from the Department, authorizing deviation therefrom.

LISGAR.

[L. S.]

CANADA.

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland,
Queen, Defender of the Faith, &c., &c., &c.

To all to whom these presents shall come, or whom the same may in any wise concern.

GREETING :—

A PROCLAMATION.

JOHN A. MACDONALD, }
Attorney-General, }
CANADA. }

WHEREAS in and by the Census Act, *it is*, amongst other things in effect *enacted*, that the first Census of Canada to be taken in the year of Our Lord One thousand eight hundred and seventy-one, shall be so taken as to ascertain and show, with the

utmost accuracy possible, in respect of the four Provinces of Canada, and of each of the Electoral Districts and other recognized sub-divisions thereof; all such information as is in the said Act specified: *And further* that the Governor in Council, by Proclamation, shall divide each of the four Provinces into Census Districts, to correspond, as nearly as may be, with the several Electoral Districts under "The British North America Act, 1867," but sub-dividing any thereof; or adding adjacent territory to any thereof; or grouping together any thereof; or any parts thereof, wherever such sub-division, addition or grouping may be deemed convenient, and forming all other territory not comprised within an Electoral District into so many and such Census Districts as may be deemed convenient.

Now know Ye, that We, by and with the advice of the Privy Council of Canada, Do, by this Our Royal Proclamation, so divide each of the four Provinces of Canada, into so many, and such Census Districts as are hereinafter severally and respectively numbered, designated and bounded, as follows, that is to say:—

THE PROVINCE OF ONTARIO, INTO—

1. Essex, being the Electoral District of the County of Essex.
2. Kent, Ontario, being the Electoral District of the County of Kent, in Ontario.
3. Bothwell, being the Electoral District of the County of Bothwell.
4. Lambton, being the Electoral District of the County of Lambton.
5. West Elgin, being the Electoral District of the West Riding of Elgin.
6. East Elgin, being the Electoral District of the East Riding of Elgin.
7. West Middlesex, being the Electoral District of the West Riding of Middlesex.
8. North Middlesex, being the Electoral District of the North Riding of Middlesex.
9. East Middlesex, being the Electoral District of the East Riding of Middlesex.
10. London, being the Electoral District of the City of London.
11. South Norfolk, being the Electoral District of the South Riding of Norfolk.
12. North Norfolk, being the Electoral District of the North Riding of Norfolk.
13. South Oxford, being the Electoral District of the South Riding of Oxford.
14. North Oxford, being the Electoral District of the North Riding of Oxford.
15. South Brant, being the Electoral District of the South Riding of Brant.
16. North Brant, being the Electoral District of the North Riding of Brant.
17. Haldimand, being the Electoral District of the County of Haldimand.
18. Monck, being the Electoral District of the County of Monck.
19. Welland, being the Electoral District of the County of Welland.
20. Niagara, being the Electoral District of the Town of Niagara, with the Township of Niagara thereto attached.
21. Lincoln, being the Electoral District of the County of Lincoln.
22. South Wentworth, being the Electoral District of the South Riding of Wentworth.
23. North Wentworth, being the Electoral District of the North Riding of Wentworth.
24. Hamilton, being the Electoral District of the City of Hamilton.
25. South Huron, being the Electoral District of the South Riding of Huron.
26. North Huron, being the Electoral District of the North Riding of Huron.
27. South Bruce, being the Electoral District of the South Riding of Bruce.
28. North Bruce, being the Electoral District of the North Riding of Bruce.
29. South Perth, being the Electoral District of the South Riding of Perth.
30. North Perth, being the Electoral District of the North Riding of Perth.
31. South Waterloo, being the Electoral District of the South Riding of Waterloo.
32. North Waterloo, being the Electoral District of the North Riding of Waterloo.
33. South Wellington, being the Electoral District of the South Riding of Wellington.
34. Centre Wellington, being the Electoral District of the Centre Riding of Wellington.

35. North Wellington, being the Electoral District of the North Riding of Wellington.
36. South Grey, being the Electoral District of the South Riding of Grey.
37. North Grey, being the Electoral District of the North Riding of Grey.
38. Halton, being the Electoral District of the County of Halton.
39. Peel, being the Electoral District of the County of Peel.
40. Cardwell, being the Electoral District of the County of Cardwell.
41. South Simcoe, being the Electoral District of the South Riding of Simcoe.
42. North Simcoe, being so much of the North Riding of Simcoe as comprises the Township of Nottawasaga, the Town of Collingwood, the Townships of Sunnidale and Vespra, the town of Barrie, the Townships of Flos, Tiny, Tay, Medonte, Ora, Orillia and Matchedash, and the Village of Orillia.
43. North York, being the Electoral District of the North Riding of York.
44. West York, being the Electoral District of the West Riding of York.
45. East York, being the Electoral District of the East Riding of York.
46. West Toronto, being the Electoral District of West Toronto.
47. East Toronto, being the Electoral District of East Toronto.
48. South Ontario, being the Electoral District of the South Riding of Ontario.
49. North Ontario, being the Electoral District of the North Riding of Ontario.
50. West Durham, being the Electoral District of the West Riding of Durham.
51. East Durham, being the Electoral District of the East Riding of Durham.
52. South Victoria, being the Electoral District of the South Riding of Victoria.
53. North Victoria, being so much of the Electoral District of the North Riding of Victoria, as comprises the Townships of Eldon, Fenelon, Carden, Dalton, Bexley, Somerville, Laxton, Digby, Longford, Lutterworth, Anson and Hindon.
54. West Northumberland, being the Electoral District of the West Riding of Northumberland, excepting therefrom the Township of South Monaghan.
55. East Northumberland, being the Electoral District of the East Riding of Northumberland.
56. West Peterborough, being the Electoral District of the West Riding of Peterborough.
57. East Peterborough, being so much of the Electoral District of the East Riding of Peterborough, as comprises the Township of Otonabee, the Village of Ashburnham, and the Townships of Douro, Asphodel, Dummer, Belmont and Methuen.
58. North Peterborough, being so much of the Electoral District of the East Riding of Peterborough, as comprises the Townships of Harvey, Galway, Cavendish, Burleigh, Anstruther, Chandos, Monmouth, Cardiff, Glamorgan, Minden, Stanhope, Sherborne, Snowden, Dysart, Dudley, Harcourt, Guilford, Harburn and Bruton.
59. Prince Edward, being the Electoral District of the County of Prince Edward.
60. West Hastings, being the Electoral District of the West Riding of Hastings.
61. East Hastings, being the Electoral District of the East Riding of Hastings.
62. North Hastings, being so much of the Electoral District of the North Riding of Hastings, as comprises the Township of Rawdon, the Village of Sterling, and the Townships of Huntingdon, Marmora, Lake, Madoc, Elzevir, Grimsthorpe, Tudor, Wollaston, Limerick, Cashel, Mayo, Carlow, Faraday, Dungannon, Herschel, Monteagle, M'Clure, Wicklow and Bangor.
63. Lennox, being the Electoral District of the County of Lennox.
64. Addington, being the Electoral District of the County of Addington.
65. Frontenac, being the Electoral District of the County of Frontenac.
66. Kingston, being the Electoral District of the City of Kingston.
67. South Leeds, being the Electoral District of the South Riding of Leeds.
68. Brockville, being the Electoral District of the Town of Brockville, with the Township of Elizabethtown thereto attached.
69. South Grenville, being the Electoral District of the South Riding of Grenville.
70. North Leeds and Grenville, being the Electoral District of the North Riding of Leeds and North Riding of Grenville.

71. Dundas, being the Electoral District of the County of Dundas.
72. Stormont, being the Electoral District of the County of Stormont.
73. Cornwall, being the Electoral District of the Town of Cornwall, with the Township of Cornwall thereto attached.
74. Glengarry, being the Electoral District of the County of Glengarry,
75. Prescott, being the Electoral District of the County of Prescott.
76. Russell, being the Electoral District of the County of Russell.
77. Ottawa City, being the Electoral District of the City of Ottawa.
78. Carleton, Ontario, being the Electoral District of the County of Carleton, in Ontario.
79. South Lanark, being the Electoral District of the South Riding of Lanark.
80. North Lanark, being the Electoral District of the North Riding of Lanark.
81. South Renfrew, being the Electoral District of the South Riding of Renfrew.
82. North Renfrew, being so much of the Electoral District of the North Riding of Renfrew, as comprises the Townships of Ross, Bromley, Westmeath and Pembroke, the Town of Pembroke and the Townships of Stafford, Wilberforce, Algona, Alice, Fraser, Petawawa, Rolph, Buchanan, Wylie, McKay and Head.
83. South Nipissing, being the Territory bounded to the southward by the Census Districts of North Peterborough, North Hastings and South Renfrew, to the eastward by the Census District of North Renfrew ; to the northward by the Census District of North Nipissing, hereinafter described, and to the westward by the line surveyed for the continuation of the Bobcaygeon Road, and by the Census District of North Peterborough.
84. North Nipissing, being so much of the Province of Ontario, as is bounded to the eastward by the Census District of North Renfrew, and to the southward and westward by the line running westwardly from the western boundary of the Township of Head, and dividing the timber berths, on or appertaining to, the River Petawawa, or any tributary thereof, from those on, or appertaining to the River Ottawa, or any tributary thereof above the River Petawawa ; thence to and along the line of watershed between the streams falling into the Rivers Petawawa and Maganatawan, respectively, on the one hand, and those falling into the River Mattawa, Lake Nipissing and French River, respectively, on the other, to the first intersection therewith of a line running north-westwardly to cross French River five miles below the Indian Reserve number nine, set apart by treaty for Chief Dokis and his band ; thence along such line to the line of watershed between the streams falling into Lake Nipissing or French River, above such point of crossing on the one hand, and those falling into French River below such point of crossing, or into Georgian Bay, on the other, and thence along such last mentioned line of watershed, to and along the eastern boundary of the Census District of East Algoma, hereinafter described.
85. Muskoka, being the Territory bounded to the southward and eastward by the Census Districts of North Simcoe, North Ontario, North Victoria, North Peterborough and South Nipissing ; to the northward by the southerly boundary of the Territorial District of Parry Sound, as established by the Act of the Province of Ontario, passed in the thirty-third year of Her Majesty's reign, and intitled "An Act to provide for the organization of the Territorial District of Parry Sound ;" and to the westward by the Census Districts of North Bruce and North Gray, including all waters and islands of Georgian Bay opposite thereto, and not appertaining to the Census Districts of North Bruce, North Grey and North Simcoe, respectively.
86. Parry Sound, being the Territory bounded to the southward by the Census District of Muskoka ; to the eastward, northward, and north-eastward by the Census Districts of South Nipissing and North Nipissing ; and to the westward by the Census Districts of East Algoma and Manitoulin, hereinafter described, and by the Census District of North Bruce, including all waters and islands of Georgian Bay opposite thereto, and not appertaining to the Census Districts of East Algoma, Manitoulin, North Bruce and Muskoka, respectively.
87. Manitoulin, being so much of the Electoral District of Algoma as comprises the Great Manitoulin Island, and all waters and other islands forming part of the said

Electoral District, and being nearer to the said Island than to the mainland of the said Electoral District.

88. East Algoma, being so much of the Electoral District of Algoma as is bounded to the southward by the Census District of Manitoulin, and to the westward by a line drawn due north and south from a point on the north shore of Lake Huron, two miles east of the mouth of Thessalon River.

89. Centre Algoma, being so much of the Electoral District of Algoma as is bounded to the eastward by the Census District of East Algoma, and to the westward by a line drawn through the middle of Goulais Bay, up Goulais River, and thence prolonged to the north-eastward.

90. West Algoma, being so much of the Electoral District of Algoma as is not comprised within the Census Districts of Manitoulin, East Algoma, and Centre Algoma.

THE PROVINCE OF QUEBEC, INTO—

91. South Pontiac, being so much of the Electoral District of the County of Pontiac as comprises the Townships of Onslow, Aldfield, Bristol, Clarendon, Thorne, Leslie and Litchfield, the Village of Portage-du-Fort, the Townships of Calumet and Mansfield, that part of the Township of Pontefract lying south of the line between the ninth and tenth ranges thereof, and the Townships of Waltham, Allumette, Chichester and Sheen.

92. North Pontiac, being so much of the Province of Quebec as is bounded to the southward by the Census District of South Pontiac; and to the Eastward by the western boundaries of the most westerly timber berths on or appertaining to tributaries of the River Gatineau, commencing on the line between the ninth and tenth ranges of the Township of Pontefract, at or about five miles east from the River Coulonge; thence passing northward along the westerly boundaries of the timber berths on or appertaining to the River Picanok, Eagle River, Hibou Creek, Ignace Creek, River Tomasine, Island Lake and Lac des Rapides, to Lac la Barrière below the Mission Station, and thence by a line drawn due north to the boundary of the Province.

93. West Ottawa, being so much of the Province of Quebec as is bounded to the southward and westward by the Census Districts of South Pontiac and North Pontiac; and to the eastward and northward, by the eastern and part of the northern boundaries of the Township of Templeton, and the eastern boundary of the Townships of Wakefield and Denholm; thence by a line through White Fish Lake and its outlet to and along the River au Lièvre to the southern boundary of the Township of Wabasee; thence by such last-mentioned boundary to the height of land forming the eastern watershed of the River Gatineau and its tributaries; thence by the line of watershed between the streams falling into the River Gatineau on the one hand, and the streams falling into the Rivers au Lièvre and St. Maurice, respectively, on the other, to the main source of the River Gatineau eastward of the Census District of North Pontiac, and thence by a line drawn due north to the boundary of the Province.

94. Centre Ottawa, being so much of the Province of Quebec as is bounded to the westward and north-westward by the Census District of West Ottawa; and to the eastward and northward by the eastern boundary of the Township of Buckingham, and the eastern and part of the northern boundaries of the Township of Derry; thence by the westerly boundaries of the timber berths on or appertaining to the Rivers Blanche and Petite Nation, and their tributaries, and thence by the line of watershed between the streams falling into the River au Lièvre on the one hand, and the streams falling into the Rivers Rouge and St. Maurice, respectively, on the other.

95. East Ottawa, being so much of the Province of Quebec as is bounded to the westward and north-westward by the Census District of Centre Ottawa; and to the eastward and north-eastward by the western boundary of the Census District of Argenteuil, hereinafter described, and thence by the line of watershed between the River Rouge and its northerly tributaries on the one hand, and the streams falling from such watershed towards the south and east on the other.

96. Argenteuil, being the Electoral District of the County of Argenteuil.
97. Two Mountains, being the Electoral District of the County of Two Mountains.
98. Laval, being the Electoral District of the County of Laval.
99. Terrebonne, being the Electoral District of the County of Terrebonne.
100. L'Assomption, being the Electoral District of the County of L'Assomption.
101. Montcalm, being so much of the Electoral District of the County of Montcalm as is bounded to the north-westward by the Census District of East Ottawa.
102. Joliette, being so much of the Electoral District of the County of Joliette, as is bounded to the north-westward by the line of watershed between the streams falling through the River Mattawa into the River St. Maurice on the one hand, and those falling into the River St. Lawrence above the River St. Maurice on the other.
103. Berthier, being so much of the Electoral District of the County of Berthier as is bounded to the north-westward by the line of watershed between the streams falling through the River Mattawa into the River St. Maurice on the one hand, and those falling into the River St. Lawrence above the River St. Maurice on the other.
104. Centre Montreal, being the Electoral District of Montreal Centre.
105. East Montreal, being the Electoral District of Montreal East.
106. West Montreal, being the Electoral District of Montreal West.
107. Hochelaga, being the Electoral District of the County of Hochelaga.
108. Jacques Cartier, being the Electoral District of the County of Jacques Cartier.
109. Vaudreuil, being the Electoral District of the County of Vaudreuil.
110. Soulanges, being the Electoral District of the County of Soulanges.
111. Beauharnois, being the Electoral District of the County of Beauharnois.
112. Chateauguay, being the Electoral District of the County of Chateauguay.
113. East Huntingdon, being so much of the Electoral District of the County of Huntingdon as comprises the Townships of Hemmingford, Havelock, Franklin, Hinchinbrooke (exclusive of the Village of Huntingdon), and Elgin.
114. West Huntingdon, being so much of the Electoral District of the County of Huntingdon as is bounded to the eastward by the Census District of East Huntingdon.
115. Laprairie, being the Electoral District of the County of Laprairie.
116. Napierville, being the Electoral District of the County of Napierville.
117. St. John's, Quebec, being the Electoral District of the County of St. John's in Quebec.
118. Chambly, being the Electoral District of the County of Chambly.
119. Verchères, being the Electoral District of the County of Verchères.
120. Richelieu, being the Electoral District of the County of Richelieu.
121. St. Hyacinthe, being the Electoral District of the County of St. Hyacinthe.
122. Bagot, being the Electoral District of the County of Bagot.
123. Rouville, being the Electoral District of the County of Rouville.
124. Iberville, being the Electoral District of the County of Iberville.
125. Missisquoi, being the Electoral District of the County of Missisquoi.
126. Brome, being the Electoral District of the County of Brome.
127. Shefford, being the Electoral District of the County of Shefford.
128. Maskinongé, being so much of the Electoral District of the County of Maskinongé as is bounded to the north-westward by the line of watershed between the streams falling through the River Mattawa into the River St. Maurice on the one hand, and those falling into the River St. Lawrence above the River St. Maurice on the other.
129. South St. Maurice, being so much of the Electoral District of the County of St. Maurice as is bounded to the north-westward by the line of watershed between the streams falling through the River Mattawa into the River St. Maurice on the one hand, and those falling into the River St. Lawrence above the River St. Maurice on the other.
130. North St. Maurice, being so much of the Province of Quebec as is bounded to the westward and southward by the Census Districts of West Ottawa, Centre Ottawa, East Ottawa, Montcalm, Joliette, Berthier, Maskinongé and South St. Maurice, and by the Parish of Ste. Flore, in the Electoral District of the County of Champlain, and to the

eastward and north-eastward by the main channel of the River St. Maurice, from the intersection therewith of the north-western boundary of the said Parish of St. Flore, to the Great River Pierriche ; thence by the Great River Pierriche to its source, and thence by the line of watershed between the streams falling into the River St. Maurice on the one hand, and those falling into the River Saguenay on the other.

131. Three Rivers, being the Electoral District of the City of Three Rivers.

132. South Champlain, being so much of the Electoral District of the County of Champlain as comprises the Parishes of Cap de la Magdeleine, St. Maurice, La Visitation de Champlain, St. Luc, St. François Xavier de Batiscan, Ste. Geneviève de Batiscan, Ste. Anne de la Pérade and St. Prosper.

133. North Champlain, being so much of the Province of Quebec as is bounded to the westward by the Census Districts of North St. Maurice and South St. Maurice ; and to the southward, eastward and north-eastward by the Census District of South Champlain, and the Census Districts of Portneuf, Quebec and Chicoutimi, hereinafter described.

134. Yamaska, being the Electoral District of the County of Yamaska.

135. Nicolet, being the Electoral District of the County of Nicolet.

136. Drummond, being so much of the Electoral District of Drummond and Arthabaska as comprises the County of Drummond.

137. Arthabaska, being so much of the Electoral District of Drummond and Arthabaska as comprises the County of Arthabaska.

138. Richmond, Quebec, being so much of the Electoral District of Richmond and Wolfe as comprises the County of Richmond in Quebec.

139. Wolfe, being so much of the Electoral District of Richmond and Wolfe as comprises the County of Wolfe.

140. Sherbrooke, being the Electoral District of the Town of Sherbrooke.

141. Stanstead, being the Electoral District of the County of Stanstead.

142. Compton, being the Electoral District of the County of Compton.

143. Portneuf, being so much of the Electoral District of the County of Portneuf as is bounded to the north-westward by the north-westerly and north-easterly boundaries of the Parish of St. Ubalde, to the line of watershed between the streams falling into the River Batiscan on the one hand, and those falling into the River St. Lawrence below the River Batiscan on the other, and thence by the said line of watershed.

144. Quebec County, being so much of the Electoral District of the County of Quebec as is bounded to the north-westward by the line of watershed between the streams falling into the Rivers Batiscan and St. Maurice respectively on the one hand, and those falling into the Rivers St. Lawrence and Saguenay respectively on the other.

145. West Quebec, being the Electoral District of Quebec West.

146. Centre Quebec, being the Electoral District of Quebec Centre.

147. East Quebec, being the Electoral District of Quebec East.

148. Montmorency, being the Electoral District of the County of Montmorency.

149. Charlevoix, being the Electoral District of the County of Charlevoix.

150. Chicoutimi, being so much of the Province of Quebec as is bounded to the south-westward and southward by the Census Districts of North St. Maurice, North Champlain, Quebec, Montmorency and Charlevoix, and to the south-eastward and eastward by the Census District of Saguenay hereafter described.

151. Saguenay, being so much of the Electoral District of Chicoutimi and Saguenay as is bounded to the north-westward and westward by the Census District of Chicoutimi ; and to the north-eastward by a line drawn up Betsiamites River, and along the western boundary of the Indian Reserve situate thereon, to the north-western angle of the said Reserve, and thence by a line drawn due north to the boundary of the Province.

152. Labrador, being so much of the Electoral District of Chicoutimi and Saguenay as is bounded to the south-westward by the Census District of Saguenay.

153. Lévis Town, being so much of the Electoral District of the County of Lévis as comprises the Town of Lévis, the Villages of Bienville and Lanzon, and the Parishes of Notre Dame de la Victorie and St. Joseph de Lévis.

154. Lévis County, being so much of the Electoral District of the County of Lévis as is not comprised within the Census District of Lévis Town.

155. Lotbinière, being the Electoral District of the County of Lotbinière.

156. Megantic, being the Electoral District of the County of Megantic.

157. West Beauce, being so much of the Electoral District of the County of Beauce as comprises that part of the Township of Broughton which is not within the Parish of St. Frédéric de Beauce, the Townships of Tring, Shenley, Adstock, Forsyth, Price, Lambton, Aylmer, Dorset, Gayhurst, Spalding and Ditchfield, that part of the Township of Clinton which is within the said Electoral District of Beauce, and the Township of Woburn.

158. East Beauce, being so much of the Electoral District of the County of Beauce as is bounded to the south-westward by the Census District of West Beauce.

159. West Dorchester, being so much of the Electoral District of the County of Dorchester as comprises the Parishes of St. Bernard, St. Isidore, Ste. Hénédine, Ste. Marguerite and St. Edouard, that part of the Township of Cranbourne which is not within the Ecclesiastical Parish of St. Germain du Lac Etchemin, and the Townships of Watford and Metgermette.

160. East Dorchester, being so much of the Electoral District of the County of Dorchester as is bounded to the south-westward by the Census District of West Dorchester.

161. North Bellechasse, being so much of the Electoral District of the County of Bellechasse, as comprises the Parishes of Beaumont, St. Charles, St. Gervais, St. Michel, St. Raphael and St. Vallier.

162. South Bellechasse, being so much of the Electoral District of the County of Bellechasse, as is bounded to the north-westward by the Census District of North Bellechasse.

163. Montmagny, being the Electoral District of the County of Montmagny.

164. L'Îlet, being the Electoral District of the County of L'Îlet.

165. Kamouraska, being the Electoral District of the County of Kamouraska.

166. Temiscouata, being the Electoral District of the County of Temiscouata.

167. West Rimouski, being so much of the Electoral District of the County of Rimouski, as is bounded to the north-eastward by the south-westerly boundary of the Parishes of Ste. Flavie and St. Angele de Merici; thence by the south-easterly boundary of the last named Parish, and thence by the south-westerly boundary of the Townships of Cabot, Awantjish and Nemtaye, and the prolongation thereof to the boundary of the said Electoral District of Rimouski.

168. East Rimouski, being so much of the Electoral District of the County of Rimouski, as is bounded to the south-westward by the Census District of West Rimouski.

169. Bonaventure, being the Electoral District of the County of Bonaventure.

170. West Gaspé, being so much of the Electoral District of the County of Gaspé, as is bounded to the eastward and south-eastward, by the easterly boundary line of the Seigniorie of Grande Vallée des Monts to the south-eastern angle thereof, and thence by a line therefrom to the northern angle of the Electoral District of Bonaventure.

171. Centre Gaspé, being so much of the Electoral District of the County of Gaspé, as is bounded to the westward and north-westward by the Census District of West Gaspé; and to the southward by the southerly boundary line of the Townships of Douglas, York, Baillargeon and Laforce, and thence by a line therefrom to the northern angle of the Electoral District of Bonaventure.

172. South Gaspé, being so much of the Electoral District of the County of Gaspé, as is bounded to the northward by the Census District of Centre Gaspé.

173. Magdalen Islands, being so much of the Electoral District of the County of Gaspé, as comprises the Magdalen Islands.

THE PROVINCE OF NEW BRUNSWICK, INTO—

174. St. John, New Brunswick, being the Electoral District of the City and County of St. John in New Brunswick.

175. Charlotte, being the Electoral District of the County of Charlotte.
 176. King's, New Brunswick, being the Electoral District of the County of King's in New Brunswick.
 177. Queen's, New Brunswick, being the Electoral District of the County of Queen's in New Brunswick.
 178. Sunbury, being the Electoral District of the County of Sunbury.
 179. York, New Brunswick, being the Electoral District of the County of York in New Brunswick.
 180. Carleton, New Brunswick, being the Electoral District of the County of Carleton in New Brunswick.
 181. Victoria, New Brunswick, being the Electoral District of the County of Victoria in New Brunswick.
 182. Restigouche, being the Electoral District of the County of Restigouche.
 183. Gloucester, being the Electoral District of the County of Gloucester.
 184. Northumberland, New Brunswick, being the Electoral District of the County of Northumberland in New Brunswick.
 185. Kent, New Brunswick, being the Electoral District of the County of Kent in New Brunswick.
 186. Westmoreland, being the Electoral District of the County of Westmoreland.
 187. Albert, being the Electoral District of the County of Albert.

AND THE PROVINCE OF NOVA SCOTIA, INTO—

188. Hants, being the Electoral District of the County of Hants.
 189. King's, Nova Scotia, being the Electoral District of the County of King's in Nova Scotia.
 190. Annapolis, being the Electoral District of the County of Annapolis.
 191. Digby, being the Electoral District of the County of Digby.
 192. Yarmouth, being the Electoral District of the County of Yarmouth.
 193. Shelburne, being the Electoral District of the County of Shelburne.
 194. Queen's Nova Scotia, being the Electoral District of the County of Queen's in Nova Scotia.
 195. Lunenburg, being the Electoral District of the County of Lunenburg.
 196. West Halifax, being so much of the Electoral District of the County of Halifax, as comprises the City of Halifax, and the twelve Electoral Districts in the said County subsisting for polling purposes, and numbered seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, thirty-two and thirty-four west, respectively.
 197. East Halifax, being so much of the Electoral District of the County of Halifax, as is bounded to the north-eastward by the Census District of West Halifax.
 198. Cumberland, being the Electoral District of the County of Cumberland.
 199. Colchester, being the Electoral District of the County of Colchester.
 200. Pictou, being the Electoral District of the County of Pictou.
 201. Antigonish, being the Electoral District of the County of Antigonish.
 202. Guysborough, being the Electoral District of the County of Guysborough.
 203. Inverness, being the Electoral District of the County of Inverness.
 204. Victoria, Nova Scotia, being the Electoral District of the County of Victoria in Nova Scotia.
 205. Cape Breton, being the Electoral District of the County of Cape Breton.
 206. Richmond, Nova Scotia, being the Electoral District of the County of Richmond in Nova Scotia.

OF ALL which Our Loving Subjects, and all others whom these presents may concern, are hereby required to take notice and to govern themselves accordingly.

IN TESTIMONY WHEREOF, We have caused these Our Letters to be made Patent, and the Great Seal of Canada to be hereunto affixed; WITNESS, Our Right Trusty and Well Beloved, the Right Honorable JOHN BARON LISGAR, of Lisgar and Bailieborough, in

the County of Cavan, Ireland, in the Peerage of the United Kingdom of Great Britain and Ireland, and a Baronet, one of Our Most Honorable Privy Council, Knight Grand Cross of Our most Honorable Order of the Bath, Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, Governor-General of Canada, and Governor and Commander-in-Chief of the Island of Prince Edward. At Our Government House, in Our CITY of OTTAWA, this THIRTY-FIRST day of DECEMBER, in the year of Our Lord, One thousand eight hundred and seventy, and in the Thirty-Fourth year of Our Reign.

By Command,

J. C. AIKINS,
Secretary of State.

LIST OF CENSUS COMMISSIONERS IN THE PROVINCE OF ONTARIO.

FOR CENSUS DISTRICT,—

- No. 1, Essex,—Thomas H. Wright, of Sandwich, Esquire.
- No. 2, Kent, Ontario,—Wm. Watson Holmes, of Raleigh, Esquire.
- No. 3, Bothwell,—Robert Gunne, of Florence, Esquire.
- No. 4, Lambton,—Stuart A. Macvicar, of Sarnia, Esquire.
- No. 5, West Elgin,—George Munro, of Aldborough, Esquire.
- No. 6, East Elgin,—Isaac Connor, of Corinth, Esquire.
- No. 7, West Middlesex,—Angus Campbell, of Longwood, Esquire.
- No. 8, North Middlesex,—Lachlan McIntyre, of West Williams, Esquire.
- No. 9, East Middlesex,—William McMillan, of London, Esquire.
- No. 10, London,—William Horton, of London, Esquire.
- No. 11, South Norfolk,—John Decow, of Port Dover, Esquire.
- No. 12, North Norfolk,—Thomas W. Walsh, of Simcoe, Esquire.
- No. 13, South Oxford,—Daniel Phelan, of Ingersoll, Esquire.
- No. 14, North Oxford,—William H. Landon, of Princeton, Esquire.
- No. 15, South Brant,—Henry Lemmon, of Brantford, Esquire.
- No. 16, North Brant,—William Matthews, of Brantford, Esquire.
- No. 17, Haldimand,—Thomas Pyne, of Hagersville, Esquire.
- No. 18, Monck,—Martin Campbell, of Upper Dunnville, Esquire.
- No. 19, Welland,—George Hill, of Thorold, Esquire.
- No. 20, Niagara,—Frederick Pafford, of Niagara, Esquire.
- No. 21, Lincoln,—Robert Laurie, of St. Catharine's, Esquire.
- No. 22, South Wentworth,—Thomas W. McMurray, of Ancaster, Esquire.
- No. 23, North Wentworth,—William F. Miller, of Flamborough, Esquire.
- No. 24, Hamilton,—Charles A. Sadlier, of Hamilton, Esquire.
- No. 25, South Huron,—Benjamin Vallack Elliott, of Exeter, Esquire.
- No. 26, North Huron,—Thomas Holmes, of Blythe, Esquire.
- No. 27, South Bruce,—Joseph Lang, of Kincardine, Esquire.
- No. 28, North Bruce,—Wm. Gunn, of Walkerton, Esquire.
- No. 29, South Perth,—Peter Robinson Jarvis, of Stratford, Esquire.
- No. 30, North Perth,—Edward Winstanley, of Moncton, Esquire.
- No. 31, South Waterloo,—Richard Jaffray, of Galt, Esquire.
- No. 32, North Waterloo,—John Zoeger, of Wellesley Village, Esquire.
- No. 33, South Wellington,—William S. G. Knowles, of Guelph, Esquire.
- No. 34, Centre Wellington,—James Fletcher Cross, of Fergus, Esquire.
- No. 35, North Wellington,—James Cross of Peel, Esquire.
- No. 36, South Grey,—James Brown, of Durham, Esquire.
- No. 37, North Grey,—John Albery, of Meaford, Esquire.

- No. 38, Halton,—Jasper Martin, of Milton, Esquire.
 No. 39, Peel,—Robert C. McCollum, of Campbell's Cross, Esquire.
 No. 40, Cardwell,—Richard Corbet, of Rosemont, Esquire.
 No. 41, South Simcoe,—Robert Thompson Banting, of Essa, Esquire.
 No. 42, North Simcoe,—Angus Bell, of Nottawasaga, Esquire.
 No. 43, North York,—Arthur Armstrong, of Brockton, Esquire.
 No. 44, West York,—Æmilius Baldwin, of the Township of York, Esquire.
 No. 45, East York,—Joseph Jacques, of the Township of York, Esquire.
 No. 46, West Toronto,—James Moffat, of Toronto, Esquire.
 No. 47, East Toronto,—William R. Orr, of Toronto, Esquire.
 No. 48, South Ontario,—Richard T. Harrison, of Brooklin, Esquire.
 No. 49, North Ontario,—Edward Majors, of Port Perry, Esquire.
 No. 50, West Durham,—Frederick Cubitt, of Bowmanville, Esquire.
 No. 51, East Durham,—William S. Sowden, of Cavan, Esquire.
 No. 52, South Victoria,—Christopher Knowlson, of Omemeë, Esquire.
 No. 53, North Victoria,—Joseph Staples, of Oak Hill, Esquire.
 No. 54, West Northumberland,—William Sykes, of Hamilton, Esquire.
 No. 55, East Northumberland,—Carmen Magnus Gould, of Castleton, Esquire.
 No. 56, West Peterborough,—John Joseph Hall, of Peterborough, Esquire.
 No. 57, East Peterborough,—Peter Pierce, of Havelock, Esquire.
 No. 58, North Peterborough,—Samuel Stanley Peck, of Minden, Esquire.
 No. 59, Prince Edward,—William Young, of Wellington, Esquire.
 No. 60, West Hastings,—John T. Huffnan, of Wallbridge, Esquire.
 No. 61, East Hastings,—Nathaniel S. Appleby, of Shannonville, Esquire.
 No. 62, North Hastings,—Alpheus Field Wood, of Madoc, Esquire.
 No. 63, Lennox,—Matthew William Prunyn, of Napanee, Esquire.
 No. 64, Addington, — John D. Ham, of Newburg, Esquire.
 No. 65, Frontenac,—Edward John Barker, of Kingston, Esquire.
 No. 66, Kingston,— John Shaw, of Kingston, Esquire.
 No. 67, South Leeds,—John Layng, of New Boyne, Esquire.
 No. 68, Brockville,—Stafford McBratney, of Elizabethtown, Esquire.
 No. 69, South Grenville,—William Jackson, of Edwardsburg, Esquire.
 No. 70, North Leeds and Grenville,—John Johnston, of Oxford, Esquire.
 No. 71, Dundas,—George Dillon, of Morrisburg, Esquire.
 No. 72, Stormont,—Isaiah R. Ault, of Aultsville, Esquire.
 No. 73, Cornwall,—Alexander A. Macdonald, of St. Andrew's, Esquire.
 No. 74, Glengarry,—Peter Stewart, of Rivière au Raisin, Esquire.
 No. 75, Prescott,—Richard D. Byers, of Longueuil, Esquire.
 No. 76, Russell,—Hugh McDougall, of Clarence, Esquire.
 No. 77, Ottawa City,—Horace Lapierre, of Ottawa, Esquire.
 No. 78, Carleton, Ontario,—John Huston, of Huntley, Esquire.
 No. 79, South Lanark,—George Kerr, of Perth, Esquire.
 No. 80, North Lanark,—William Templeman, of Almonte, Esquire.
 No. 81, South Renfrew,—John Quealy, of Eganville, Esquire.
 No. 82, North Renfrew,—Francis Scott, of Pembroke, Esquire.
 No. 83, South Nipissing,—John McMullen, of Eganville, Esquire.
 No. 84, North Nipissing,—John Shaw, of Lake Dorie, Esquire.
 No. 85, Muskoka,—George Gow, of Bracebridge, Esquire.
 No. 86, Parry Sound,—Alexander George Stephens, of Parry Sound, Esquire.
 No. 87, Manitoulin,—Alexander McGregor Ironside, of Manitowaning, Esquire.
 No. 88, East Algoma,—Robert David Perry, of Spanish River Mills, Esquire.
 No. 89, Centre Algoma,—James Bennetts, of Wellington Mines, Esquire.
 No. 90, West Algoma,—Edward Barnes Barron, of Fort William, Esquire.

IN THE PROVINCE OF QUEBEC.

FOR CENSUS DISTRICT,—

- No. 91, South Pontiac,—George Mark Judgson, of Clarendon, Esquire.
 No. 92, North Pontiac,—James E. Judgson, of Hargrave, Esquire.
 No. 93, West Ottawa,—John Delisle, of Aylmer, Esquire.
 No. 94, Centre Ottawa,—Edmund W. Murray, of Buckingham, Esquire.
 No. 95, East Ottawa,—Francis Samuel McKay, of Papineauville, Esquire.
 No. 96, Argenteuil,—Edward Jones, of St. Andrew's, Esquire.
 No. 97, Two Mountains,—Antoine Fortier, of Ste. Scholastique, Esquire.
 No. 98, Laval,—Jean Théodule Pominville, of St. Vincent de Paul, Esquire.
 No. 99, Terrebonne,—Joseph C. Auger, of Terrebonne, Esquire.
 No. 100, L'Assomption,—Dennis Lamarche, of St. Roch, Esquire.
 No. 101, Montcalm,—Joseph Edouard Beaupré, of Ste. Julienne, Esquire.
 No. 102, Joliette,—Maxime Crépeau, of St. Félix de Valois, Esquire.
 No. 103, Berthier,—Timothée D. Latour, of Lanoraie, Esquire.
 No. 104, Centre Montreal,—William Busby Lambe, of Montreal, Esquire.
 No. 105, East Montreal,—Nazaire Bourgouin, of Montreal, Esquire.
 No. 106, West Montreal,—John Joseph Curran, of Montreal, Esquire.
 No. 107, Hochelaga,—Louis Napoléon Dumouchel, of St. Jean Baptiste de Montreal, Esquire.
 No. 108, Jacques Cartier,—Joseph Henri Roy, of Ste. Genevieve, Esquire.
 No. 109, Vaudreuil,—L. Antoine Phaneuf, of Rigaud, Esquire.
 No. 110, Soulanges,—Olivier François Prieur, of St. Zotique, Esquire.
 No. 111, Beauharnois,—Joseph Abraham Massé, of Ste. Cécille de Valleyfield, Esquire.
 No. 112, Chateauguay,—Charles Mentor Lebrun, of Ste. Martine, Esquire.
 No. 113, East Huntingdon,—Daniel Macfarlane, of Elgin, Esquire.
 No. 114, West Huntingdon,—Augustin Dupuis, of St. Anicet, Esquire.
 No. 115, Laprairie,—Louis Coutlée, of Laprairie, Esquire.
 No. 116, Napierville,—Joseph Gaspard Laviolette, of Napierville, Esquire.
 No. 117, St. John's, Quebec,—Jean U. Tremblay, of Lacolle, Esquire.
 No. 118, Chambly,—Napoléon Mongeau, of Longueuil, Esquire.
 No. 119, Verchères,—Joseph Napoléon Azarie Archambeault, of Varennes, Esquire.
 No. 120, Richelieu,—Pierre Gelina, of St. Aimé, Esquire.
 No. 121, St. Hyacinthe,—J. Adolphe Chicoine, of St. Hyacinthe, Esquire.
 No. 122, Bagot,—John Henderson, of St. Liboire, Esquire.
 No. 123, Rouville,—Solyme Bertrand, of St. Mathias, Esquire.
 No. 124, Iberville,—Didace Tassé of Iberville, Esquire.
 No. 125, Missisquoi,—David Thacher Rhodes Nye, of Phillipsburg, Esquire.
 No. 126, Brome,—Thomas Anson Knowlton, of Knowlton, Esquire.
 No. 127, Shefford,—Michel Adrien Bessette, of North Stukely, Esquire.
 No. 128, Maskinongé,—George Fleury, of St. Léon, Esquire.
 No. 129, South St. Maurice,—Jean Baptiste Lemâitre Duaine, of St. Barnabé, Esquire.
 No. 130, North St. Maurice,—Magloire McLeod, of Three Rivers, Esquire.
 No. 131, Three Rivers,—Nazaire Lefebvre Denoncourt, of Three Rivers, Esquire.
 No. 132, South Champlain,—Joseph Onésime Méthot, of Ste. Anne de la Pérade, Esquire.
 No. 133, North Champlain,—Narcisse Pierre Massicotte, of Ste. Genevieve de Batis-can, Esquire.
 No. 134, Yamaska,—Joseph Lemâitre, of Pierreville, Esquire.
 No. 135, Nicolet,—Joseph Ignace Leconte, of St. Jean Baptiste de Nicolet, Esquire.
 No. 136, Drummond,—Edmond Cox, of Drummondville, Esquire.
 No. 137, Arthabaska,—James Goodhue, of Arthabaskaville, Esquire.
 No. 138, Richmond, Quebec,—James Boutelle, of Danville, Esquire.

- No. 139, Wolfe,—Joseph Zoel Cyr Maquelon, of St. Camille, Esquire.
 No. 140, Sherbrooke,—George Lanigan, of Sherbrooke, Esquire.
 No. 141, Stanstead,—Increase Bullock, of Georgeville, Esquire.
 No. 142, Compton,—Lewis McIvor, of Robinson, Esquire.
 No. 143, Portneuf,—Charles Marcotte, of Deschambault, Esquire.
 No. 144, Quebec County,—Tiburce Charest, of Beauport, Esquire.
 No. 145, West Quebec,—John Doyle, of Quebec, Esquire.
 No. 146, Centre Quebec,—Guillaume Amyot, of Quebec, Esquire.
 No. 147, East Quebec,—Jean Baptiste Hamel, of Quebec, Esquire.
 No. 148, Montmorency,—Francis Xavier Turcotte, of St. Jean, Isle d'Orleans, Esquire.
 No. 149, Charlevoix,—Joseph Hamel, of Malbaie, Esquire.
 No. 150, Chicoutimi,—Ovidé Bossé, of Chicoutimi, Esquire.
 No. 153, Lévis Town,—L. J. Augure Bernier, of Lévis, Esquire.
 No. 154, Lévis County,—Adelstan Lemoyne De Martigny, of St. Romuald d'Etchemin, Esquire.
 No. 155, Lotbinière,—Louis Lemay, of Ste. Croix, Esquire.
 No. 156, Megantic,—Charles Pezard de Champlain, of St. Ferdinand of Halifax, Esquire.
 No. 157, West Beauce,—Gustave Taschereau, of St. Joseph la Beauce, Esquire.
 No. 158, East Beauce,—Henri J. J. Duchesnay, of Quebec, Esquire.
 No. 159, West Dorchester, Daniel Trachy, of Ste. Hénédine, Esquire.
 No. 160, East Dorchester,—Nicodème Audet, of St. Anselme, Esquire.
 No. 161, North Bellechasse,—Louis Nazaire Roy, of St. Valier, Esquire.
 No. 162, South Bellechasse,—Pantaléon Forgues, of St. Michel, Esquire.
 No. 163, Montmagny,—James Oliva, of Montmagny, Esquire.
 No. 164, L'Islet,—Louis Eugène Tremblay, of St. Roch des Aulnets, Esquire.
 No. 165, Kamouraska,—Louis Begin, of Kamouraska, Esquire.
 No. 166, Temiscouata,—Jean Baptiste Beaulieu, of St. George de Kakouna, Esquire.
 No. 167, West Rimouski,—P. Louis Gauvreau, of Rimouski, Esquire.
 No. 168, East Rimouski.—George Sylvain, Jun., of Bic, Esquire.
 No. 169, Bonaventure,—Louis Robitaille, of New Carlisle, Esquire.
 No. 170, West Gaspé,—John Ferrée, of Ste. Anne des Monts, Esquire.
 No. 171, Centre Gaspé,—George Dumaresq, of Gaspé Basin, Esquire.
 No. 172, South Gaspé,—L. George Harper, of Percé, Esquire.
 No. 173, Magdalen Islands,—Jean Baptiste Felix Painchaud, of Amherst Island, Esquire.

IN THE PROVINCE OF NEW BRUNSWICK.

FOR CENSUS DISTRICT,—

- No. 174, St. John, New Brunswick,—James Gerow, of St. John, Esquire.
 No. 175, Charlotte,—Arthur M. Hill, of St. Stephen, Esquire.
 No. 176, King's, New Brunswick, David Sinnott, of Studholm, Esquire.
 No. 177, Queen's, New Brunswick,—James Reid, of Gagetown, Esquire.
 No. 178, Sunbury, Reuben Hoben, of Burton, Esquire.
 No. 179, York, New Brunswick,—Alfred F. Street, of Fredericton, Esquire.
 No. 180, Carleton, New Brunswick,—John T. Allan, of Woodstock, Esquire.
 No. 181, Victoria, New Brunswick,—Robert Caldwell, of Grand Falls, Esquire.
 No. 182, Restigouche, David Sadler, of Dalhousie, Esquire.
 No. 183, Gloucester,—Samuel H. Napier, of Bathurst, Esquire.
 No. 184, Northumberland, New Brunswick,—John Maltby, of Newcastle, Esquire.
 No. 185, Kent, New Brunswick,—Théophile Bilodeau, of Cocaigne, Esquire.
 No. 186, Westmoreland,—Robert A. Chapman, of Dorchester, Esquire.
 No. 187, Albert,—John A. Beatty, of Hillsborough, Esquire.

IN THE PROVINCE OF NOVA SCOTIA.

FOR CENSUS DISTRICT,—

- No. 188, Hants,—Charles Cochran, of Scotch Village, Esquire.
 No. 189, King's, Nova Scotia,—George Wentworth Barnaby, of Cornwallis, Esquire.
 No. 190, Annapolis,—James Monaghan, of Annapolis, Esquire.
 No. 191, Digby, Laughlin McKay, of St. Mary's Bay, Esquire.
 No. 192, Yarmouth,—Forman Hatfield, of Yarmouth, Esquire.
 No. 193, Shelburne,—Francis Homer, of Shelburne, Esquire.
 No. 194, Queen's, Nova Scotia,—Joshua N. Freeman, of Liverpool, Esquire.
 No. 195, Lunenburg,—Robert Lindsay, of Lunenburg, Esquire.
 No. 196, West Halifax,—William M. Brown, of Halifax, Esquire.
 No. 197, East Halifax,—John D. Tupper, of Middle Musquodoboit, Esquire.
 No. 198, Cumberland,—John D. Kinnear, of Amherst, Esquire.
 No. 199, Colchester,—George Reading, of Truro, Esquire.
 No. 200, Pictou,—Simon H. Holmes, of Pictou, Esquire.
 No. 201, Antigonish,—Alexander McIntosh, of Antigonish, Esquire.
 No. 202, Guysborough, Thomas Condon, of Guysborough, Esquire.
 No. 203, Inverness,—John D. Cameron, of Mabou, Esquire.
 No. 204, Victoria, Nova Scotia,—Donald McLean, of Baddeck, Esquire.
 No. 205, Cape Breton,—Thomas C. Hill, of Sydney, Esquire.
 No. 206, Richmond, Nova Scotia,—Edward E. Binet, of Arichat, Esquire.

Copy of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 16th January, 1871.

On the recommendation of the Hon. the Minister of Agriculture, dated 11th January, 1871, the Committee advise that in terms of the 14th section of "The Census Act," the form of oath to be taken and subscribed as thereby is required, by every Census Commissioner, Enumerator and other person employed in the execution of this Act, whether for the obtaining in the first instance of any information sought by the Census, or for revising or compiling the same, or otherwise dealing therewith, or for enquiring into any matter connected with the taking of the Census, before entering on his duties, shall be the following:—

I, (A. B.), duly appointed under "The Census Act" to be (name the office or employment of the person taking the oath), solemnly and sincerely swear that I will, to the utmost of my skill and ability, faithfully and exactly discharge all and every my duties as such, in conformity with the requirements of the said Act, and of all Proclamations, Orders in Council, and instructions issued in pursuance thereof. So Help Me God.

Also, that such oath be taken before the Minister of Agriculture, or his Deputy, or before any Judge, Prothonotary, or Clerk of any Court of Record, or before any duly qualified Justice of the Peace, or before any Census Staff Officer, or Census Commissioner who has himself first duly taken such oath.

Also, that every oath so taken be returned into, and recorded in the Department of Agriculture, in such manner as by Departmental regulation or special instruction the Minister of Agriculture shall from time to time direct.

(Certified),

WM. H. LEE,
 Clerk, Privy Council.

To the Honorable
 The Minister of Agriculture, &c., &c., &c.

Copy of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 16th January, 1871.

On the recommendation, dated 14th January, 1871, of the Hon. the Minister of Agriculture, the Committee advise, with reference to the Eighth Section of "The Census Act," that the appointment of the Enumerators to be named in terms thereof, be made by the several Census Commissioners under authority of the Minister of Agriculture, in the manner and subject to the rules following:—

1. For each Census Sub-district there will be appointed either one Enumerator, or so many Enumerators as the Minister of Agriculture shall direct or authorize.

2. The selection of the persons to be so appointed will, in all cases, be such as the Minister of Agriculture shall direct or authorize.

3. Each Enumerator will be appointed by a letter, to be signed by the Census Commissioner, in such form as the Minister of Agriculture shall direct or authorize.

(Certified,)

WM. H. LEE,
Clerk Privy Council.

To the Honorable
The Minister of Agriculture, &c., &c., &c.

Copy of a Report of a Committee of The Honorable the Privy Council, approved by His Excellency the Governor General in Council on the 4th February, 1871.

The Committee of Council have had before them the Memo., dated 30th January, 1871, from the Hon. The Minister of Agriculture, submitting certain Tables which he has caused to be prepared under the twenty-fourth section of "The Census Act," setting forth the rates of allowances or remuneration for the several Census Commissioners and Enumerators employed in the execution of the said Act, and on the Report of the Treasury Board they respectfully advise that the same be approved by Your Excellency under the said 24th section of "The Census Act."

Certified.

WM. H. LEE,
Clerk Privy Council.

To the Honorable
The Minister of Agriculture, &c.

RATES OF ALLOWANCES OR REMUNERATION FOR THE SEVERAL CENSUS COMMISSIONERS

1. For correspondence with the Department and Staff Officers,—personal studies,—instruction of Enumerators,—examination and correction of Enumerators' records,—and making up a return for transmission to the Minister of Agriculture,—

To the Commissioner for each Census District, an allowance of fifty dollars, and also a further allowance at the rate of four dollars for every one hundred families recorded.

2. For all other duties, and to cover expenses, including specially apportionment and distribution of documents, travelling expenses in his District, and other charges of office,—

a. To the Commissioner for each of the following Census Districts, viz:—

No. 90. West Algoma,

No. 152. Labrador,

151. Saguenay, and

An allowance, to such amount as may hereafter be specially accorded by order in Council;

b. To the Commissioner of for each of the following Census Districts, viz: :

No. 84. North Nipissing,

No. 93. West Ottawa,

88. East Algoma,

130. North St. Maurice, and

92. North Pontiac,

150. Chicoutimi.

An allowance of One Hundred and Seventy-Five Dollars ;

c. To the Commissioner of each of the following Census Districts, viz :—

No. 83. South Nipissing,	No. 170. West Gaspé,
94. Centre Ottawa,	177. Queen's, New Brunswick,
95. East Ottawa,	179. York, New Brunswick,
133. North Champlain,	181. Victoria, New Brunswick, and
168. East Rimouski,	184. Northumberland, New Brunswick,
169. Bonaventure,	

An allowance of One Hundred and Fifty Dollars ;

d. To the Commissioner for each of the following Census Districts, viz :—

No. 28. North Bruce,	No. 185. Kent, New Brunswick,
36. South Grey,	186. Westmoreland,
37. North Grey,	187. Albert,
58. North Peterborough,	188. Hants,
62. North Hastings,	189. King's, Nova Scotia,
64. Addington,	190. Annapolis,
85. Muskoka,	191. Digby,
86. Parry Sound,	192. Yarmouth,
87. Manitoulin,	193. Shelburne,
89. Centre Algoma,	194. Queen's, Nova Scotia,
142. Compton,	195. Lunenburg,
166. Temiscouata,	196. West Halifax,
167. West Rimouski,	197. East Halifax,
171. Centre Gaspé,	198. Cumberland,
172. South Gaspé,	199. Colchester,
174. St. John, New Brunswick,	200. Pictou,
175. Charlotte,	201. Antigonish,
176. King's, New Brunswick,	202. Guysborough,
178. Sunbury,	203. Inverness,
180. Carleton, New Brunswick,	204. Victoria, Nova Scotia,
182. Restigouche,	205. Cape Breton, and
183. Gloucester,	206. Richmond, Nova Scotia.

An allowance of One Hundred and Twenty-Five Dollars ;

e. To the Commissioners for each of the following Census Districts, viz :—

No. 1. Essex,	No. 82. North Renfrew,
2. Kent, Ontario,	91. South Pontiac,
3. Bothwell,	96. Argenteuil,
4. Lambton,	97. Two Mountains,
25. South Huron,	99. Terrebonne,
26. North Huron,	101. Montcalm,
27. South Bruce,	102. Joliette,
35. North Wellington,	103. Berthier,
41. South Simcoe,	112. Chateauguay,
42. North Simcoe,	113. East Huntingdon,
43. North York,	125. Missisquoi,
49. North Ontario,	126. Brome,
53. North Victoria,	127. Shefford,
75. Prescott,	128. Maskinongé,
76. Russell,	129. South St. Maurice,
78. Carleton, Ontario,	135. Nicolet,
79. South Lanark,	136. Drummond,
80. North Lanark,	137. Arthabaska,
81. South Renfrew,	138. Richmond, Quebec,

- No. 139. Wolfe,
 141. Stanstead,
 143. Portneuf,
 144. Quebec County,
 148. Montmorency,
 149. Charlevoix,
 155. Lotbinière,

- No. 156. Megantic,
 157. West Beauce,
 158. East Beauce,
 163. Montmagny,
 164. L'Islet, and
 165. Kamouraska.

An allowance of One Hundred Dollars ;

f. To the Commissioner for each of the following Census Districts, viz :—

- No. 5. West Elgin,
 6. East Elgin,
 7. West Middlesex,
 8. North Middlesex,
 9. East Middlesex,
 11. South Norfolk,
 12. North Norfolk,
 13. South Oxford,
 14. North Oxford,
 15. South Brant,
 16. North Brant,
 17. Haldimand,
 18. Monck,
 19. Welland,
 21. Lincoln,
 22. South Wentworth,
 23. North Wentworth,
 29. South Perth,
 30. North Perth,
 31. South Waterloo,
 32. North Waterloo,
 33. South Wellington,
 34. Centre Wellington,
 38. Halton,
 39. Peel,
 40. Cardwell,
 44. West York,
 45. East York,
 48. South Ontario,
 50. West Durham,
 51. East Durham,
 52. South Victoria,
 54. West Northumberland,
 55. East Northumberland,
 56. West Peterborough,
 57. East Peterborough,
 59. Prince Edward,

- No. 61. East Hastings,
 63. Lennox,
 65. Frontenac,
 67. South Leeds,
 69. South Grenville,
 70. North Leeds and Grenville,
 71. Dundas,
 72. Stormont,
 74. Glengarry,
 98. Laval,
 100. L'Assomption,
 107. Hochelaga,
 108. Jacques Cartier,
 109. Vaudreuil,
 110. Soulanges,
 111. Beauharnois,
 114. West Huntingdon,
 115. Laprairie,
 116. Napierville,
 117. St. John's, Quebec,
 118. Chambly,
 119. Verchères,
 120. Richelieu,
 121. St. Hyacinthe,
 122. Bagot,
 123. Rouville,
 124. Iberville,
 132. South Champlain,
 134. Yamaska,
 140. Sherbrooke,
 151. Lévis County,
 159. West Dorchester,
 160. East Dorchester,
 161. North Bellechasse,
 162. South Bellechasse, and
 173. Magdalen Islands.

An allowance of Seventy-Five Dollars ;

g. And to the Commissioner for each of the following Census Districts, viz :—

- No. 10. London,
 20. Niagara,
 24. Hamilton,
 46. West Toronto,
 47. East Toronto,

- No. 60. West Hastings,
 66. Kingston,
 68. Brockville,
 73. Cornwall,
 77. Ottawa City,

No. 104. Centre Montreal,
 105. East Montreal,
 106. West Montreal,
 131. Three Rivers,

No. 145. West Quebec,
 146. Centre Quebec,
 147. East Quebec, and
 153. Lévis Town.

An allowance of Fifty Dollars.

3. The whole, however, subject to reduction, so as not to exceed, in the aggregate, a total amount at Four Dollars for each day of proved effective service.

RATES OF ALLOWANCES OR REMUNERATION FOR THE SEVERAL ENUMERATORS.

1. For due filling up, revision and correction (so far as may be requisite) of all the Schedules,—

To each Enumerator, an allowance at the rate of Three dollars for every eighteen families,—and also to each Enumerator, in respect of all Territory not being comprised within the limits of any city having ten thousand inhabitants or upwards, a further allowance at the rate of Three Dollars for every eighteen miles of continuous distance by travelled road or way needing to be gone over by him for the making of his enumeration ; but not allowing, as part of such distance, for any returning or second or after journey over any part thereof, or for ingress to or egress from private property.

2. For all other duties, including specially conferences for instruction with and delivery of records to Commissioner, and to cover all expenses,—

To each Enumerator, an allowance of Twenty Dollars.

3. The whole, however, subject to reduction, was not to exceed, in the aggregate, a total amount of Three Dollars for each day approved effective service.

MONTHLY STATEMENT and Account of all Monies expended under the Authority of
 "The Census Act," from the 1st July, 1870, to the 28th February, 1871.

		\$	cts.	
1870.				
July	Remuneration of officers and employés.....		513 08	
	Travelling expenses of the same.....		270 08	
	Purchase and copying of general and section maps.....		86 00	869 16
August.....	Remuneration of officers and employés.....	1,552	00	
	Travelling expenses of the same.....	332	60	
	Printing.....	1	25	
	Purchase and copying of general and section maps.....	396	00	2,281 85
September..	Remuneration of officers and employés.....	1,327	50	
	Travelling expenses of the same.....	322	79	
	Stationery.....	149	13	
	Printing.....	19	50	
	Purchase and copying of maps.....	79	00	1,897 92
October	Remuneration of officers and employés.....	1,470	00	
	Travelling expenses of the same.....	575	17	
	Purchase and copying of maps.....	424	35	2,469 52
November..	Remuneration of officers and employés.....	2,547	50	
	Travelling expenses of the same.....	926	11	
	Stationery.....	86	85	
	Purchase and copying of maps.....	364	10	
	Contingencies.....	10	50	3,935 06
December ..	Remuneration of officers and employés.....	2,545	00	
	Travelling expenses of the same.....	1,036	83	
	Stationery.....	985	54	
	Printing.....	383	05	
	Purchase and copying of maps.....	494	50	
	Contingencies.....	8	40	5,453 32
1871.				
January....	Remuneration of officers and employés.....	2,807	91	
	Travelling expenses of the same.....	1,063	23	
	Stationery.....	6,253	05	
	Printing.....	991	88	
	Purchase and copying of maps.....	24	55	11,140 62
February....	Remuneration of officers and employés.....	2,801	16	
	Travelling expenses of the same.....	960	23	
	Stationery.....	1,838	90	
	Printing.....	2,007	62	
	Purchase and copying of maps.....	163	50	
	Contingencies.....	104	96	7,876 37
				35,923 82

RETURN

To an Address of the HOUSE OF COMMONS, dated 6th April, 1871, for a Return shewing the Amount distributed under Seigniorial Act to each Municipality, according to Returns made in 1864. The Amount distributed according to Returns made up to January 1st, 1871. The Amount placed to the credit of the several Municipalities indebted to the Government on account of the Municipal Loan Fund. The reasons for any change in the distribution.

By Command,

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
OTTAWA, 12th April, 1871.

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, according to the Return made to the Audit Office and printed in the Public Accounts of 1866, and as finally settled, 1st January, 1871, with remarks stating the reasons for the changes made.

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Abercrombie (East part)		495	Transferred from St. Sauveur.
Aston, St. Wenceslas	339	339	
Aberdeen	65		Transferred to Sheen and Aberdeen.
Aberford		191	Omitted in 1866.
Aldfield and Onslow	1,796	1,796	
Allumette Island	1,518	1,518	
Ashford (Ste. Louise des Aulnets)	77	77	
Aylmer Village	1,585	1,585	
Aylwin	349	349	
Aylmer and Gayhurst	935	636	Difference transferred to Lambton and Price.
Alton and Montauban	1,303	1,303	
Arundel	26		Transferred to Harrington and Union.
Adstock	58		do to Forsyth, St. Evariste de.
Addington	65	65	
Arthabaskaville	809	809	
Aumond	131	131	
Ascot	2,200	2,200	
Acton	2,703	2,703	
Anse à Griffons		351	Transferred from Cap des Rosiers.
Auckland		4	do Newport and Auckland.
Bristol	2,021	2,021	
Beresford, Ste. Agathe	380	380	
Begon	205	205	
Brompton	711	711	
Bury	989	989	
Barnston	3,147	2,663	Difference transferred to Coaticook.
Buckingham Village	1,173	1,173	
Broughton	1,689	1,240	do do St. Frederick.
Barford	690	690	
Brandon, St. Gabriel de	2,738	2,568	do do St. Jean de Matha.
Buckland	800	800	
Bouchette	400	400	
Brome	3,136	3,136	
Bulstrode, St. Valere de	510	510	
Buckingham	2,401	2,401	
Bidwell	23	23	
Bigelow	197	197	
Blake	70	70	
Boroman	232	232	
Bouthillier	59	59	
Bagot	503	503	
Bagotville	1,194	1,194	
Blandford, Gentilly	197	197	
Blandford, South	310	310	
Bolton	2,526	2,526	
Chester, West	1,876	1,876	
Chester, East	1,524	1,524	
Clarendon	2,358	2,358	
Chichester	538	538	
Calumet Island	1,050	1,050	
Chertsey	927	927	
Callieres	273	273	
Cleveland	1,910	1,910	
Cox	2,142	2,142	

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, &c.—*Continued.*

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Carleton.....	950	950	
Cranbourne.....	415	415	
Clifton.....	544	544	
Cap des Rosiers.....	1,060	709	Difference transferred to Anse à Griffons.
Caxton, St. Barnabe.....	860	741	do do Caxton, St. Elie.
Cameron.....	237	237	
Chatham.....	3,754	3,754	
Chicoutimi.....	3,177	3,177	
Cap Chat.....	450	450	
Cathcart (part).....	252	.....	Transferred to St. Come.
Compton.....	2,986	2,986	
Cawood.....	.....	186	Omitted in 1866.
Clapham.....	.....	87	do
Chenier.....	.....	1,135	Transferred from Tingwick.
Caxton, St. Elie.....	.....	119	do Caxton, St. Barnabe.
Cape Cove.....	.....	1,134	do Perce.
Coaticook.....	.....	484	do Barnston.
Dudley.....	65	65	
Denonville.....	150	159	
Dundee.....	2,091	2,091	
Danville.....	535	535	
Dudswell.....	726	726	
Durham.....	796	796	
Douglas.....	989	989	
De Sales.....	398	398	
Dunham.....	3,882	3,597	Difference transferred to Dunham Village.
Denholm.....	213	213	
Durham, South.....	816	816	
Dunham Village.....	.....	285	Transferred from Dunham.
Derry, East and West.....	258	.....	do to Mulgrave and Derry.
Dorset.....	8	.....	do to Forsyth, St. Evariste de.
Egan.....	140	.....	do to Egan and Kensington.
Elgin.....	1,069	1,069	
Bardley.....	1,003	1,003	
Eaton.....	1,905	1,905	
Escoumins.....	1,696	1,696	
Egan and Kensington.....	.....	293	Transferred from separate accounts.
Ely, North and South.....	1,748	1,748	
Fournier.....	277	277	
Franklin.....	1,549	1,549	
Frampton, West.....	1,621	1,621	
Forsyth, St. Evariste de.....	676	742	Difference transferred from Dorset and Adstock.
Frampton, East.....	1,351	1,351	
Fox and Sydenham, North.....	683	683	
Farnham, East.....	1,924	1,924	
Farnham, West.....	2,508	2,508	
Frelighsburg.....	.....	258	Transferred from St. Armand, East.
Grenville.....	2,171	2,171	
Garthby and Stratford.....	677	677	
Godmanchester.....	2,194	2,194	
Gaspé Bay, South.....	520	520	
Gaspé Bay, North, and Sydenham, South.....	478	478	
Gore.....	793	793	
Grande Baie.....	1,366	1,366	
Grantham, Wendove, and Simpson.....	1,404	1,404	
Gosford, Colbert, and Roguement.....	899	899	
Granby.....	2,559	2,559	
Granby Village.....	700	700	
Horton, St. Clotilde de.....	191	191	

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, &c.—Continued.

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Ham, North	605	605	
Halifax, North	2,470	2,470	
Halifax, South	2,342	2,342	
Hunterstown	716	716	
Hinchinbrooke	2,722	2,722	
Hemmingford	4,007	2,630	
Havelock		1,377	
Hull	3,710	3,710	
Hope	992	992	
Hereford	365	365	
Hamilton	1,300	1,300	
Hincks	263	263	
Hatley	2,279	2,279	
Hebertville	1,225	1,225	
Harrington and Union	311	347	Difference transferred from Arundel and Montcalm.
Huntingdon Village	684	684	
Ham, South	222	222	
Huddersfield		244	Omitted in 1866.
Hartwell and Suffolk		307	Transferred from Ripon and Hartwell, and from Suffolk Wells and Villeneuve.
Ixworth, St. Onizeme de	784	784	
Inverness	2,481	2,481	
Ireland and Coleraine	990	990	
Kilkenny, St. Calixte de	1,493	1,493	
Kingsey, St. Felix	2,403	2,106	} Difference transferred from Warwick.
Kingsey Falls		468	
Killaly and Siette	35	35	
Kiamica	218	218	
Kensington	153		Transferred to Egan and Kensington. do separate accounts. do from Leslie and Thorne.
Leslie and Thorne	735		
Leslie		285	
Litchfield	1,044	1,044	
L'Avenir	1,540	1,540	
Leeds and Thetford	2,831	2,831	
Lochaber	2,099	2,099	
Lowe		819	
Lambton	880		Transferred to Lambton and Price. do from Lambton, Aylmer, Gayhurst, and Price.
Lambton and Price		1,229	
Lingwick	563	563	
Laterriere	816	816	
Lessard, St. Cyrille	102	102	
Linere (Marlow and Jersey)	587	587	
Mulgrave and Derry		258	Transferred from Derry, East and West.
Magog	1,108	1,108	
Maddington (part)	39	39	
Montcalm	10		Transferred to Harrington and Union.
Morin	460	460	
Malbaie	1,067	1,067	
Milton	2,790	2,790	
Mansfield	502	502	
Montmini, St. Paul de	600	600	
Masham	1,761	1,761	
Macnider	1,235	1,235	
Melbourne and Brompton Gore	2,067	2,067	
Mann	782	782	
Melbourne Village	243	243	
Maria	1,811	1,811	
Metapedia	309	309	
Maniwaki and McGill	222	222	
Macpes	55	55	

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, &c.—Continued.

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Magdalen Islands		2,643	Omitted in 1866.
Newport, Ditton, Chesham, and Clinton		399	Transferred from Newport and Auckland.
Newport and Auckland	403		do to preceding entry and to Auckland.
New Richmond	1,510	1,510	
Newport	415	415	
Nelson	1,078	1,078	
Northfield	206	206	
Newton	1,023	1,023	
Orford	725	725	
Port Daniel	1,150	1,150	
Pontefract	127	127	
Preston	165	165	
Price	50		Transferred to Lambton and Price.
Polton	1,984	1,984	
Perce	2,717	1,583	Difference transferred to Cape Cove.
Plessisville Village	686	686	
Philipsburgh Village	393	393	
Portland	427	427	
Portage du Fort	742	742	
Princeville Village	567	567	
Restigouche	519	519	
Roberval	769	769	
Rawdon Ste. Julienne de	613	1,038	Difference omitted in 1866.
Ripon and Hartwell	892		Transferred to Ripon, Hartwell, and Suffolk.
Ripon		604	Transferred from Ripon and Hartwell.
Rawdon, St. Patrick de	1,991	1,991	
Roxton	3,401	3,401	
St. Christophe	608	608	
St. Norbert	910	910	
Stanford	1,583	1,583	
St. Ephrem d'Upton	962	962	
Shenley	242	242	
St. Felix de Valois	625	586	Difference transferred to St. Jean de Matha.
Shoolbred and Nouvelle	589	589	
Sutton	3,141	3,141	
Settrington	540	540	
St. Jean and Tableau	366	366	
Sherbrooke (town)	2,974	2,974	
Standon	426	426	
St. Germain de Grantham	1,595	1,595	
St. Anicet	3,154	3,154	
St. Ambroise de Kildare	2,189	2,189	
Ste. Agathe (Leeds and Nelson)	790	790	
St. Didace	470	470	
St. Etienne	2,064	2,064	
St. Boniface (Shawinegan)	1,010	1,010	
Somerset, North	1,398	1,398	
St. Armand, East	1,811	1,553	Difference transferred to Frelighsburg.
St. Armand, West	1,330	1,330	
Stanbridge	5,517	5,517	
St. Alphonse de Signori	563	563	
St. Patrick, Sherrington	2,054	2,054	
St. Gertrude, Maddington	200	473	Difference omitted in 1866.
Suffolk Wells and Villeneuve	139		Transferred to Hartwell and Suffolk, a Wells and Villeneuve.
Sheen	389		Transferred to Sheen and Aberdeen.
Sheen and Aberdeen		454	do from separate accounts.
Stoneham and Tewkesbury	689	689	

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, &c.—*Continued.*

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Sipton	2,129	2,129	
Stoke	97	97	
St. Ulric de Matane	549	549	
Shefford	3,703	3,703	
Stukeley, South	900	900	
Stukeley, North	1,920	1,920	
Stanstead and Plains	4,966	4,966	
St. Sauveur	1,275	474	Difference transferred to East part Abercrombie, and undistributed account.
St. Camille	486	486	
St. Cajetan d'Armagh	648	648	
Somerset, South	1,911	1,911	
Ste. Modeste	634	634	
Ste. Adele	1,450	1,450	
St. George de Windsor	1,167	620	Difference transferred to Windsor.
St. Alphonse Rodriguez	1,657	1,657	
St. Denis and Augmentation	540	540	
Stanhope		146	Omitted in 1866.
St. Frederick		449	Transferred from Broughton.
St. Albert de Warwick		128	do Warwick.
St. Bonaventure d'Upton		726	do Upton.
St. Guillaume d'Upton		2,216	do do
St. Jean de Matha		515	306 omitted in 1866; difference transferred from St. Gabriel de Brandon and St. Felix de Valois.
St. Ursule		66	Omitted in 1866.
St. Come		232	Transferred from Cathcart (part of).
St. Margaret of Wexford		351	do Wexford.
St. Celestin		779	Omitted in 1866.
Tingwick	2,227	1,092	Difference transferred to Chenier.
Tring, St. Victor de	1,525	1,525	
Tring, St. Ephrem de	550	550	
Tremblay, Simard, Harvey, and Bougette	1,049	1,049	
Templeton	2,644	2,644	
Tadoussac, Albert, and Saguenay	466	466	
Thorne		450	Transferred from Leslie and Thorne.
Upton	2,942		Transferred to St. Bonaventure and St. Guillaume.
Viger	1,097	1,097	
Victoriaville	600	600	
Wentworth	343	343	
Warwick	1,380	716	Difference transferred to Warwick Village, St. Albert de Warwick and Kingsey Falls.
Warwick Village		365	Transferred from Warwick.
Weedon	808	808	
Wotton	1,526	1,526	
Wolfestown	1,471	1,471	
Winslow, North	663	663	
Winslow, South	946	946	
Westbury	297	297	
Whitton, Hampden, and Marston	512	512	
Ware	25	25	
Wickham	856	570 $\frac{5}{6}$	Difference transferred to Wickham, West.
Wickham, West		285 $\frac{1}{6}$	Transferred from Wickham.
Woodbridge	499	499	
Wexford	702	351	Difference transferred to St. Margaret, of Wexford.
Wakefield	927	927	
Wright	362	362	
Wabasse	137	137	

STATEMENT No. 1, showing the Population in 1861 of the Municipalities entitled to Seigniorial Indemnity, &c.—*Continued.*

Municipalities.	Population in 1861.		Remarks.
	As stated in Public Accounts of 1866.	As now finally settled.	
Waltham	400	400	Transferred from St. George de Windsor. do Suffolk Wells and Ville- neuve.
Whitworth, St. Antonin	558	558	
Windsor		547	
Wells and Villeneuve		120	
York	205	205	
Total	281,058	286,098	

JOHN LANGTON,

Per J. SIMPSON, *Auditor.*

AUDIT OFFICE, OTTAWA, 11th April, 1871.

STATEMENT No. 2, showing the Amount annually distributed under the Seigniorial Act to the several Municipalities from 1860 to 1870, inclusive; the Amount distributable from 1871 onwards (except where capital has been or may be withdrawn); and the Sums credited to Municipalities indebted to the Lower Canada Municipal Loan Fund.

Municipalities.	Annual Interest.		To Credit on Account Municipal Loan Fund.	Remarks.
	From 1860 to 1870, inclusive.	Per Final Settlement in 1871.		
	\$ cts.	\$ cts.	\$ cts.	
Abercrombie (East part)	79 20	78 55		
Aston, St. Wenceslas	54 24	53 80	802 12	
Aberford	30 56	30 31		
Aldfield and Onslow	287 36	285 02		
Allumette Island	242 88	240 90		
Ashford Ste. Louise des Aulnets	12 32	12 22		
Aylmer Village	253 60	251 53		
Aylwin	55 84	55 38		
Aylmer and Gayhurst	101 76	100 93		
Alton and Montabaun	208 48	206 78		
Addington	10 40	10 32		
Arthabaskaville	129 44	128 39	1,561 39	
Aumond	20 96	20 79		
Ascot	352 00	349 13	4,256 48	
Acton	432 48	428 96	4,938 74	
Anse à Griffons		55 70		
Auckland		0 64		
Bristol	323 36	320 72		
Beresford (St. Agathe)	60 80	60 30		
Begon	32 80	32 53		
Brompton	113 76	112 83		
Bury	158 24	156 95		
Barnston	503 52	422 61		See Coaticook.
Buckingham Village	187 68	186 15		
Broughton	198 40	196 78		
Barford	110 40	109 50		
Brandon, St. Gabriel de	410 88	407 53		See St. Jean de Matha.
Buckland	128 00	126 96		
Bouchette	64 00	63 48		
Brome	501 76	497 67		
Bulstrode, St. Valère de	81 60	80 94	802 20	
Buckingham	334 16	381 03		
Bidwell	3 68	3 65		
Bigelow	31 52	31 26		
Blake	11 20	11 11		
Boroman	37 12	36 82		
Bouthillier	9 44	9 36		
Bagot	80 48	79 82		
Bagotville	191 04	189 48	2,309 88	
Blandford, Gentilly	31 52	31 26		
Blandford, South	49 60	49 20		
Bolton	404 16	400 87	4,887 48	
Chester, West	300 16	297 71	245 58	
Chester, East	243 84	241 85		
Clarendon	377 28	374 20		
Chichester	86 08	85 38		
Calumet Island	168 00	166 63		
Chertsey	148 32	147 11		
Callieres	43 68	43 32		
Cleveland	305 60	303 11		
Cox	342 72	339 93		
Carleton	152 00	150 76		
Cranbourne	66 40	65 86		
Clifton	87 04	86 33		
Cap des Rosiers	169 60	112 52		See Anse a Griffons.
Caxton, St. Barnabe	118 56	117 59		
Cameron	37 92	37 61		

STATEMENT No. 2, showing the Amount annually distributed under the Seigniorial Act to the several Municipalities, &c.—Continued.

Municipalities.	Annual Interest.		To Credit on Account Municipal Loan Fund.	Remarks.
	From 1860 to 1870, inclusive.	Per Final Settlement in 1871.		
	\$ cts.	\$ cts.	\$ cts.	
Chatham	600 64	595 74		
Chicoutimi	508 32	504 18	2,411 45	
Cape Chat	72 00	71 41		
Compton	477 76	473 87		
Cawood	29 76	29 52		
Clapham	13 92	13 81		
Chenier	181 60	180 12		
Caxton, St. Elie	19 04	18 89		
Cape Cove	181 44	179 96		
Coaticook		76 81		
Dudley	10 40	10 32		
Denonville	25 44	25 24		
Dundee	334 56	331 83		
Danville	85 60	84 90		
Dudswell	116 16	115 21		
Durham	127 36	126 32		
Douglas	158 24	156 95		
De Sales	63 68	63 16		
Dunham	575 52	570 83		
Denholm	34 08	33 80		
Dunham, South	130 56	129 50		
Dunham, Village	45 60	45 23		
Elgin	171 04	169 65		
Eardley	160 48	159 17		
Eaton	304 80	302 32		
Escoumins	271 36	269 15		
Egan and Kensington	46 88	46 50		
Ely, North and South	279 68	277 40	3,382 12	
Fournier	44 32	43 96		
Franklin	247 84	245 82		
Frampton, West	259 36	257 24		
Forsyth, St. Evariste	118 72	117 75		
Frampton, East	216 16	214 40		
Fox, and Sydenham North	109 28	108 39		
Farnham, East	307 84	305 33		
Farnham, West	401 28	398 01	4,852 56	
Frelighsburgh	41 28	40 94		
Grenville	347 36	344 53		
Garthby and Stratford	108 32	107 44		
Godmanchester	351 04	348 18		
Gaspé Bay, South	83 20	82 52		
Gaspé Bay, North, and Sydenham, South	76 48	75 86		
Gore	126 88	125 85		
Gran de Baie	218 56	216 78	2,297 53	
Grantham, Wendover and Simpson	224 64	222 81	2,716 20	
Gosford, Colbert, and Roguement	143 84	142 67		
Granby	409 44	406 10	4,950 96	
Granby Village	112 00	111 09	1,354 04	
Horton, St. Clotilde de	30 56	30 31		
Ham, North	96 80	96 01		
Halifax, North	395 20	391 98		
Halifax, South	374 72	371 66		
Hunters own	114 56	113 63		
Hinchinbrooke	435 52	431 97		
Hemmingford	420 80	417 37		
Havelock	220 32	218 52		
Hull	593 60	588 76		
Hope	158 72	157 43		
Hereford	58 40	57 92		
Hamilton	208 00	206 51		

STATEMENT No. 2, showing the Amount annually distributed under the Seigniorial Act to the several Municipalities, &c.—*Continued.*

Municipalities.	Annual Interest.		To Credit on Account Municipal Loan Fund.		Remarks.
	From 1860 to 1870, inclusive.	Per Final Settlement in 1871.	\$	cts.	
Hincks.....	42 08	41 74			
Hatley.....	364 64	361 67			
Hebertville.....	196 00	194 40			
Harrington and Union.....	55 52	55 07			
Huntingdon Village.....	109 44	108 55	1,322 64		
Ham, South.....	35 52	35 23	323 16		
Huddersfield.....	39 04	38 72			
Hartwell and Suffolk.....		48 72			
Ixworth, St. Onizeme de.....	125 44	124 42			
Inverness.....	396 96	393 72	4,799 64		
Ireland and Coleraine.....	158 40	157 11	1,915 20		
Kingsey, St. Felix.....	336 96	334 21			
Kingsey Falls.....	74 88	74 27			
Kilkenny, St. Calixte de.....	238 88	236 93			
Killaly and Scotte.....	5 60	5 56			
Kiamica.....	34 88	34 60			
Leslie.....	117 60	45 23			See Thorne.
Litchfield.....	167 04	165 68			
L'Avenir.....	246 40	244 39			
Leeds and Thetford.....	452 96	449 27			
Lochaber.....	335 84	333 10			
Lowe.....	131 04	129 97			
Lambton and Price.....	196 64	195 04			
Lingwick.....	90 08	89 35	1,089 16		
Laterriere.....	130 56	129 50	1,578 72		
Lessard, St. Cyrille.....	16 32	16 19			
Linere, Marlow and Jersey.....	93 92	93 16			
Mulgrave and Derry.....	41 28	40 94			
Magog.....	177 28	175 84	2,143 40		
Maddington (part).....	6 24	6 19			
Morin.....	73 60	73 00			
Malbaie.....	170 72	169 33			
Milton.....	446 40	442 76	5,048 01		
Mansfield.....	80 32	79 67			
Montmini, St. Paul de.....	96 00	95 22			
Masham.....	281 76	279 46			
Macnider.....	197 60	195 99			
Melbourne and Brompton Gore.....	330 72	328 02			
Mann.....	125 12	124 10			
Melbourne Village.....	38 88	38 56			
Maria.....	289 76	287 40			
Metapedia.....	49 44	49 04			
Maniwaki and McGill.....	35 52	35 23			
Macpes.....	8 80	8 73			
Magdalen Islands.....		419 43			
Newport, Ditton, Chesham and Clinton..	64 48	63 32			See Auckland.....
New Richmond.....	241 60	239 63			
Newport.....	66 40	65 86			
Nelson.....	172 48	171 07			
Northfield.....	32 96	32 69			
Newton.....	163 68	162 35	132 30		
Orford.....	116 00	115 05			
Port Daniel.....	184 00	182 50			
Pontefract.....	20 32	20 15			
Preston.....	26 40	26 18			
Polton.....	317 44	314 85			
Perce.....	253 28	251 22			
Plessisville.....	109 76	108 87	674 73		
Philipsburg Village.....	62 88	62 37	738 31		
Portland.....	68 32	67 76			

STATEMENT No. 2, showing the Amount annually distributed under the Seigniorial Act to the several Municipalities, &c.—*Continued.*

Municipalities.	Annual Interest.		To Credit on Account Municipal Loan Fund.	Remarks.
	From 1860 to 1870, inclusive.	Per Final Settlement in 1871.		
	\$ cts.	\$ cts.	\$ cts.	
Portage du Fort	118 72	117 75		
Princeville Village	90 72	89 98	1,069 12	
Restigouche	83 04	82 36		
Roberval	123 04	122 04		
Rawdon, Ste. Julienne	166 08	164 73		
Ripon	142 72	95 85		See Hartwell and Suffolk.
Rawdon, St. Patrick	318 56	315 96		
Roxton	544 16	539 72	6,277 26	
St. Christophe	97 28	96 49	363 71	
St. Norbert	145 60	144 41		
Stanford	253 28	251 22	1,691 24	
St. Ephrem d'Upton	153 92	152 67		
Shenley	38 72	38 40		
St. Felix de Valois	93 76	93 00		
Shoolbred and Nouvelle	94 24	93 47		
Sutton	502 56	498 46		
Settrington	86 40	85 70		
St. Jean and Tableau	58 56	58 08	114 00	
Sherbrooke	475 84	471 96	5,753 72	
Standon	68 16	67 60		
St. Germain de Grantham	255 20	253 12		
St. Anicet	504 64	500 53		
St. Ambrose de Kildare	350 24	347 39		
St. Agathe (Leeds and Nelson)	126 40	125 37		
St. Didace	75 20	74 59	321 87	
St. Etienne	330 24	327 55		
St. Boniface (Shawinegan)	161 60	160 28		
Somerset, North	223 68	221 86	2,462 56	
St. Armand, East	248 48	246 46		
St. Armand, West	212 80	211 07	2,573 00	
Stanbridge	882 72	875 52	10,674 36	
St. Alphonse de Signori	90 08	89 35		
St. Patrick, Sherrington	328 64	325 96		
St. Gertrude, Maddington	75 68	75 06		
Sheen and Aberdeen	72 64	72 05		
Stoneham and Tewkesbury	110 24	109 34		
Shipton	340 64	337 86		
Stoke	15 52	15 39		
St. Ulric de Matane	87 84	87 12		
Shefford	592 48	587 65	7,164 20	
Stukely, South	144 00	142 83	1,740 60	
Stukely, North	307 20	304 70	3,715 08	
Stanstead and Plains	794 56	788 08	9,608 48	
St. Sauveur	75 84	75 22		
St. Camille	77 76	77 13	207 36	
St. Cajetan d'Armagh	103 68	102 84		
Somerset, South	305 76	303 27		
Ste. Modeste	101 44	100 61		
Ste. Adele	232 00	230 11		
St. George de Windsor	99 20	98 39		
St. Alphonse Rodriguez	265 12	262 96		
St. Denis and Augmentation	86 40	85 70		
Stanhope	23 36	23 17		
St. Frederick	71 84	71 25	329 53	
St. Albert de Warwick	20 48	20 31		
St. Bonaventure d'Upton	116 16	115 21		
St. Guillaume d'Upton	354 56	351 67		
St. Jean de Matha	82 40	81 73		See St. Gabriel de Brandon and St. Felix de Valois.
St. Ursule	10 56	10 47		
St. Come	40 32	39 99		

STATEMENT No. 2, showing the Amount annually distributed under the Seigniorial Act to the several Municipalities, &c.—*Continued.*

Municipalities.	Annual Interest.		To Credit on Account Municipal Loan Fund.	Remarks.
	From 1860 to 1870, inclusive.	Per Final Settlement in 1871.		
	\$ cts.	\$ cts.	\$ cts.	
St. Celestin		123 62		
Tingwick	174 72	173 30		
Tring, St. Victor de	244 00	242 01	2,950 76	
Tring, St. Ephrem de	88 00	87 28	1,064 12	
Tremblay, Simard, &c.	167 84	166 47	1,157 94	
Templeton	423 04	419 59		
Tadoussac, Albert and Saguenay	74 56	73 95		
Thorne		71 41		
Viger	175 52	174 09		
Victoriaville	96 00	95 22	915 85	
Wentworth	54 88	54 43		
Warwick	114 56	113 63	363 69	
Warwick Village	58 40	57 92		
Weedon	129 28	128 23		
Wotton	244 16	242 17	5 79	
Wolfestown	235 36	233 44		
Winslow, North	106 08	105 22		
Winslow, South	151 36	150 13		
Westbury	47 52	47 13	574 56	
Whitton, Hampden, and Marsten	81 92	81 25		
Ware	4 00	3 97		
Wickham	91 31	90 57		
Wickham, West	45 65	45 28		
Woodbridge	79 84	79 19		
Wakefield	148 32	147 11		
Wright	57 92	57 45		
Wabasse	21 92	21 74		
Waltham	64 00	63 48		
Whitworth, St. Antonin	89 28	88 55		
Windsor	87 52	86 81		
Wells and Villeneuve	22 24	19 04		See Hartwell and Suffolk.
Wexford		55 70		
Wexford, Ste. Margaret de	112 32	55 70		
Undistributed Account	174 44			Absorbed by the new ad- missions.
York	32 80	32 53		
Total	45,402 60	45,402 60	122,132 80	

MEMORANDUM.—From the Distribution for 1871, the sum of \$4501.41 will be deducted to make good the advances to the Magdalen Islands, and other Municipalities now admitted to participation in the Fund.

JOHN LANGTON,

Per J. SIMPSON, Auditor.

AUDIT OFFICE, OTTAWA, 11th April, 1871.

No. 66.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 8th March, 1871; For copies of Engineer's Reports and all correspondence with Hamilton and Port Dover Plank and Stone Road Company, since the last Return; also, Statement shewing amount paid by such Company on account of purchase money, and amount still due.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 13th April, 1871.

No. 67.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 9th March, 1871; For a Return of all Tenders and other papers connected with letting the contract for the construction of a new Post Office in the City of Toronto.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 13th April, 1871.

[In accordance with the recommendation of the Joint Committee on Printing, the above Returns are not printed.]

No. 68.

RETURN

To an Address of the HOUSE OF COMMONS, dated the 6th April, 1871; For copies of all correspondence between the Government of the Dominion of Canada and the Government of any of the Provinces, or between the Government of Canada and the Attorney General of any of the Provinces, respecting the duty or liability of the Dominion or local Governments to defray the cost of criminal prosecutions.

By Command.

J. C. AIKINS,
Secretary of State.

DEPARTMENT OF THE SECRETARY OF STATE,
Ottawa, 13th April, 1871.